**CHAPTER TWO**

1. **REVIEW OF RELATED LITERATURE**
   1. **Theoretical Literature Review**

Rural transformation is a process of comprehensive change where rural societies diversify their economies and minimize their dependence on agriculture. It is the restructuring of societies in their original area with economic activity and happened within the larger process of structural change that brings a decline in the relative weight of agriculture in the national economy. The change is coupled with an increase in industry and services, migration of rural people to cities, and a temporary rapid demographic growth (Timmer & Akkus, 2008). Rural transformation is a process of growth in rural incomes, diversification of rural economy, and development of linkages with urban and peri-urban areas. It is a long-term process of change in essential structures of the establishment of rural people to live and act economically, considering societal and global dynamics (Kruseman et al., 2020)

Rural finance describes financial intermediation outside of urban areas, including deposits, loans, payment and money transfer systems, trade credit, and insurance, to rural households as well as to farm and non-farm enterprises(World Bank, 2003a). Microfinance means financial services (savings, credit, payment transfers, and insurance) for poor and low-income people. Rural finance refers to financial services offered and used in rural areas by people of all income levels. Agricultural finance is a sub-set of rural finance dedicated to financing agriculture-related activities, such as input supply, production, distribution and wholesaling, and marketing(Turvey, 2017).

* + 1. **Financial Services**

Financial services access has two dimensions: demand and supply. The demand side examines the choice made by individuals with regard to services provided by financial institutions, while the supply side relates to financial services provision or financial intermediation. Theories on access to financial services provide a general framework for demand for financial services (demand dimension of access) and financial intermediation (supply dimension of access to financial services)(Zhang, 2020).

The important theories that relate to decision making in the economic literature are rationality theory, bounded rationality theory, theory of satisficing, prospect theory, and intertemporal theory, delegated monitoring theory, information asymmetry theory, and transaction cost theory(Scholtens & Wensveen, 2003). Scholtens & Wensveen (2003) categorized that the delegated monitoring and the rational choice theory, explain demand for financial services, while the information asymmetry and the transaction cost theory explain financial intermediation, or the supply side-dimension of access to financial services.

The theory of delegated monitoring claims that financial institutions possess the ability to act as delegated monitors for net savers. Depositors have delegated the role of safekeeping of their savings to the financial intermediaries as well as entrusting them to invest their savings prudently for better returns. It is linked to the demand side of access to financial services because, based on the theory, individual savers see the financial intermediaries as their delegated entity (Diamond, 1984).

The rational choice theory is propounded by neo-classical economists. It starts with the consideration of the choice behavior of the individual farmers making the decision. According to the theory, the individual making the decision is a “representative” of a group in a financial market, such as farmers. The analysis of rational choice theory of demand for financial services generally involves a description of the following: (i) the desire for financial services (savings, credit, and money transfer services); (ii) nature and type of services provided by the financial institutions; (iii) the condition under which these services are provided. The demand for financial services is a function of the service characteristics, the attributes of the provider of the service, and the decision-making unit (Zhang, 2020).

New institutional economists modify and extend neo-classical theory to explain the supply dimension of access to financial services. New institutional economists retain the fundamental assumption of scarcity, and hence competition that underlies micro-economics and, introduce the theory of information asymmetry and transaction cost. The information asymmetry theory postulates that there is imperfect information resulting in an information problem. The consequences of information problems within the financial market can be classified as either ex-ante or ex-post. The ex-ante problems associated with information within the financial market result in adverse selection and moral hazard, while information problems that relate to ex-post leads to assurance services or expensive compliance verifications (Brealey et al., 1977).

The transaction cost theory argues that financial intermediaries emerged to utilize economies of scale as well as transaction technology. The key element of transaction cost theory includes costs associated with gathering and processing information that is needed to reach a decision during the transaction process, successful contract negotiation, and policing and enforcement of contracts. Thus, financial institutions convert one financial claim into another and offer liquidity and the opportunity of diversification to their customers. The ease or difficulty used in achieving these objectives is determined by the level and nature of the cost of the transaction (Scholes et al., 1976).

* + 1. **History of Agricultural Finance** 
       1. **Agricultural Credit**

The food shortages after Second World War in Europe, led to focus to the issue of agricultural development. High yielding varieties (HYVs) and new agricultural technologies such as fertilizers and agrochemicals were advanced to increase global food production. In order to engage in intensive agriculture, smallholder farmers had to be supported in terms of loan with assumption that the provision of subsidized credits would induce farmers to apply fertilizer, to irrigate, and to adopt HYVs. For the purpose of providing credit, large state agricultural banks or agricultural credit programmers were found that received concessionary credits for lending to smallholders looking for adopting new agricultural technologies, new plant varieties, chemical fertilizers, and agro-chemicals. The loans were highly subsidized to speed up farmers' adoption of the Green Revolution production packages.

SSA was mostly bypassed by the introduction of HYVs and other Green Revolution technologies.16 However, after their independence most African countries were also aware of the importance of smallholder agriculture for development and keen to develop their agricultural sector. Thus, even though the Green Revolution technology was not widely implemented in SSA, SSA countries followed the state-led development paradigm prevalent at this time and state-led agricultural banks, donor-funded agricultural credit programmes, and parastatal marketing boards became widespread in SSA. (IFAD 2003, 5; Jayne et al. 2010, 1393; Kherallah et al. 2000, 8ff.; Adams/von Pitschke 1992, 1463ff.)

In the late 1970s and early 1980s, scientists of the Rural Finance Program at Ohio State University started to heavily criticize government-led banks and subsidized agricultural credit programmes.17 They argued that the little productivity increase that could be found in some Asian countries was largely offset by the high costs as well as the long-term unsustainability of these subsidized state-led agricultural finance institutions (Binswanger/Khandker 1995, cited after Armendáriz/Morduch 2010, 11). Additionally, the old paradigm did not meet its objectives of income expansion and poverty reduction (Yaron et al. 1997, 3). Since the market rate of interest as a rationing mechanism was lacking, money was often allocated on the basis of social and political concern and not to those with the most worthy projects. Additionally, loans were often badly monitored, because the institutional success was measured by issued credits and not by repayment rates, and many times loans were excused before elections.

In the years following the 1980s, a number of parallel developments took place: (1) Criticism of the old paradigm grew. (2) MFIs (at this time mostly micro-credit institutions) emerged and had some innovative approaches to managing the risks and costs associated with low-income clients. Because of the bad reputation of the state-led model, early MFIs turned to the private sector for inspiration and tried to run their MFIs as businesses and not as a channel for donated money. Their success showed that low-income people can be creditworthy, when using the right lending techniques and are able to pay market-interest rates. (3) The paradigm of privatization and free markets emerged globally. Many SSA countries had to implement structural adjustment programmes (SAPs) and international donors promoted the privatization or dismantling of agricultural marketing parastatals, the deregulation of (agricultural) credit markets, and the elimination of credit and other subsidies. Consequently, most governments and donors stopped their funding, agricultural banks were either closed or privatized, and many agricultural credit programmes imploded as a result. (Adams/von Pitschke 1992, 1466; Dorward et al. 2009, 15; Meyer 2011, 12)

At the same time and influenced by all these changes, a new paradigm called the financial system approach developed and provided a new framework for development finance (Table 2).(Roettger et al., 2015).

* + - 1. **Agricultural Insurance**

Crop insurance is widely researched aspect of agricultural insurance due to the fact that growing of crops remains the principal feature of agriculture. Nevertheless, agricultural insurance is wide and comprises horticulture, plantations, forestry, viniculture, rearing of animals such as livestock, aviculture (including poultry), aquaculture, sericulture, and apiculture are all related to agricultural activities. In its broad sense agricultural insurance is provided to the whole production process including post-harvest storage, processing and transportation of produce to end markets. The capital assets engaged in the production processes such as dwellings, machinery, draught animals, equipment and tools, processing plants, etc. are also need to be covered(UNCTAD, 1994)

Hazell and Hess (2016) estimate that the total number of insured smallholders in 2014 in the developing world is 198 million, with approximately 650,000 in Africa, 3.3 million in Latin America and the Caribbean, and about 194 million in Asia, including 160 million in China and 33 million in India. Other estimates are provided by the regional landscape studies conducted by the Micro Insurance Centre, as part of the Micro insurance Network’s World Map of Micro insurance (Micro insurance Network n.d.). A total of 1.1 million Africans were identified as being covered by agricultural micro insurance as of the end of 2014 (Micro Insurance Center 2016). In Latin America and the Caribbean; the number of people covered by agricultural insurance has increased by 129 percent, from 35,000 in 2014 to 80,000 in 2017 (A2F Consulting 2018). In Asia and Oceania the number of people covered by agricultural micro insurance in 2012 is estimated at 23.8 million, and agricultural products were registering the highest growth of all micro insurance product types(Robles, 2020).

The most comprehensive study assessing the extent of agricultural insurance around the world was conducted by Mahul and Stutley (2010) based on a survey of 65 countries and showing the situation through 2007. Hazell and Hess (2016) summarize very well the most salient facts of this study, among them: Lower-middle-income and low-income countries accounted for only 7.5 percent of the total agricultural insurance premiums (including premium subsidies) of US$15.1 billion. Market penetration remains small, even in rich countries. 82 percent of countries offered both crop and livestock insurance, but crop insurance accounted for 90 percent of the premium(Robles, 2020).

* + 1. **Global Value Chains** 
       1. **Concepts and Definition**

Since its foundation, the classical theory of international trade theory has hinged on three premises; markets are perfectly competitive and producers operate at constant returns to scale, an industry consists of homogeneous producers, and countries trade only final products.

The first premise was shaken in the 1970s and 1980s with the emergence of New Trade Theory. , Pioneered by Krugman (1979, 1980) and generalized by Helpman and Krugman (1985), a theoretical scope for considering production technology with increasing returns to scale and under imperfect competition was founded. The second classic premise of homogeneous producers was reconsidered following evidence in the late 1990s. Bernard and Jensen’s (1995, 1999) detailed examination of firm-level microdata revealed substantial heterogeneity in firm productivity between exporters and non-exporters in a given industry. Melitz (2003) pioneered an explanation for these observations, advancing in the quest for what was later called New-New Trade Theory. A third wave of reconstructing classical theory is now under way, and the literature on GVCs is generally linked to this development strand. With the dramatic advance of transportation modes and information and communication technology, production processes can now be “sliced” into several production segments, each corresponding to a particular task—such as design, parts procurement, assembly, and distribution. These segments are relocated, often across national borders, to the places where the tasks can be performed most efficiently. Thus the core subject of the literature today is not only the movement of final products, as classical theories have focused on (under the third premise), but also the cross-national transfer of tasks, or the value added generated by these tasks(Inomata, 2017)

* + - 1. **Participation in Global Value Chains**

National input‐output account data describes value‐chain linkages across industries within in a country, a multi‐region input‐output table allows to track all value‐added activities by industry in a country involved in global production(Lim & Kim, 2022). AGVC participation is measured by adopting a new conceptual framework proposed by(Borin & Mancini, 2019).The framework captures all complicated sources of value‐added activities across more than two countries, which are often missing in other measures of GVCs. It also provides an empirical method to extract value‐added exports from gross exports that enable users to recover each value‐added activity by using cross‐country input‐output data. A GVC can be decomposed into forward linkages and backward linkages. Forward linkages refer to exported raw products that are later used in another country and are exported once more to a third country. Backward linkages refer to the use of imported intermediate inputs in the production of exported products. Per GVC literature (Belotti et al., 2020; Koopman et al., 2014; Los & Timmer, 2018; Wang et al., 2017) gross exports can be decomposed into three broad value‐added activities, including domestic value‐added (DVA), foreign value‐added(FVA), and domestic value‐added embedded in other countries' exports (DVX)(Lim & Kim, 2022). DVA refers to the value of exports that is created by domestic production factors and contributes to GDP for each country. FVA refers to the value of exports that originates from imported inputs and is a component measuring upstream GVC participation (i.e., backward linkages). DVX refers to the domestic value‐added in intermediate goods further re-exported by the partner country and is a component measuring downstream GVC participation (i.e., forward linkages)(Lim & Kim, 2022).

To measure GVC participation (Dit) for country *i* in year *t*, the study will follow Borin & Mancini (2019):

**GVC Participationit = DVXit + FVAit / Gross Exportit**

The upstream participation is measured by **DVXit/Gross Exportit** and downstream participation is measured by **DVXit/Gross Exportit.**

In order to calculate total AGVC participation, it will be applied the agriculture industry classification to measure agricultural GVCs and the food & beverage industry classification to measure food GVCs, respectively. The total AGVC participation is defined as:

**(DVXagrit + DVXfoodit + FVAagrit + FVAfoodit )/(Gross Exportagrit + Gross Exportfoodit )**

Using the general cross-country input-output table from the UNCTAD-Eora Global Value Chain Database, country-level GVC participation for Ethiopia will be measured in the given period.

* + 1. **Agricultural Productivity** 
       1. **Theories and Concepts**

Agricultural development can be characterized according to the following models: the frontier; the urban industrial impact; the diffusion; the high pay-of; the induced innovation; and the conservation(Jc & Eg, 2018). The frontier model or the resource exploitation model involves an approach to agricultural growth through the expansion of the area cultivated or grazed.

Initially, the urbanindustrial impact model was formulated (by Von Thunen) to explain geographic variations in the intensity of farming system and in the productivity of labour in an industrialized society. Later this model was expanded to explain the more effective performance of the factor and product markets linking the agricultural and nonagricultural sectors in regions characterized by rapid urban-industrial development

The diffusion approach to agricultural development rests on the empirical observation of substantial differences in land and labour productivity among farmers and regions. The route to agricultural development, in this view is through more effective dissemination of technical knowledge and a narrowing of the productivity differences among farmers and among regions.

The high pay-of model, which is also known as “the transformation approach” or “the quick-fx approach”, is based upon investment designed to expand the diffusion and adoption of the high-yielding varieties.

The conservation model of agricultural development, according to Ruttan [14], “evolved from advances in crop and livestock husbandry associated with the English agricultural revolution and the notions of soil exhaustion suggested by the early German chemists and soil scientists. It was reinforced by the application to land of the concept, developed in the English classical school of economics, of diminishing returns to labour and capital”. Te essence of this model is explained by the evolution of a sequence of increasingly complex land- and labor-intensive cropping systems, the production and use of organic manures, and labor-intensive capital formation in the form of drainage, irrigation and other physical facilities to more effectively utilize land and water resources [14]. Te strength of this model emanates primarily from the fact that “the inputs used in this conservation system of farming (the plant nutrients, animal power, land improvements, physical capital and agricultural labour force) were largely produced or supplied by the agricultural sector itself”(Welteji, 2018)

* + - 1. **Measuring Agricultural Productivity**
    1. **Economic Growth**

According to(Thirtle et al., 2003), agriculture contributes to the economic growth and development through five inter-sectorial linkages. These linkages are (i) supply of surplus labour to firm in the industrial sector, (ii) supply of food for domestic consumption, (iii) provision of market for industrial output, (iv) supply of domestic savings and industrial investment and (v) supply of foreign exchange from agriculture export earnings to finance import intermediate and capital goods. (Timmer, 1995) adds to the five sectorial linkages that agriculture indirectly enhance economic growth via its provision of improved caloric intake by the poor, food availability, food price stability and poverty reduction.

* + - 1. **Theories and Concept of Economic Growth**

Early growth theories emphasized on different factors that lead to economic growth. Mercantilists underscored surplus balance of trade, Physiocrats prioritized agriculture as growth and wealth. Under the classical models of Smith and Malthus, economic growth is explained by fixed land and growing population. Mainstream growth models follow Say‟s Law and focus on the supply side of income growth through some engine of growth. In such framework, however, there is no fundamental role for aggregate demand since, from the beginning it is assumed that supply creates its own demand (Jarra, 2013).

In contrast to the above, Keynesian models gives great value for effective demand and, therefore, weight to sources of aggregate demand. It is clear that in Keynesian models, growth is a demand-led process. This demand is classified into external and domestic demand. In economics literature domestic demand is best proxied by household and government consumption. Export-led growth follows a high rate of export to achieve a high growth in GDP. Domestic demand-led growth hypothesis advocates that, it is an increase in domestic demand that needs to be considered as major driving force for economic growth (Jarra, 2013).

* + - 1. **Measuring Economic Growth**

Economic growth is defined as the increase in a country’s Gross Domestic Product, GDP from one year to another. Seeing that GDP is a measure of the value of the total productivity in a country it therefore illustrates the total national income, - the wealth of a country. The economic growth is always displayed a percentage of the annual change in GDP and indicates how fast the wealth increases (Hansson 2010).

However, the annual growth rate may fluctuate depending on where the economy is situated in the conjuncture cycle. If the economy of the country is experiencing some bad years, the growth slows down and can even become negative. The opposite then occur when experiencing some good years. The size of the conjuncture is measured as the total divergence from the potential GDP, which is an estimation of how the economy would have grown if no conjunctures accrued (Hansson 2010). Because the conjuncture fluctuations only reflect resent policies or shocks it is necessary to leave them out when trying to understand growth and determining what causes growth in the long run. For this reason economic growth is seen, in the long run, as a change in the potential GDP. In the economic growth literature and when modeling economic growth it is consequently the long run potential GDP that is being used (ibid).

* + 1. **Domestic Consumption** 
       1. **Theories and Concepts**

Household consumption expenditures comprise of the market prices of all goods and services purchased by the households to satisfy the household’s needs and wants that includes all durable and non-durable goods. This consumption expenditures excludes purchases of residences but includes owner-occupied residences imputed rent. It has a share of two-thirds in GDP, so changes in consumption are important elements of booms and recessions of the business cycle. The decision of households’ on consumption is also essential for long-run analysis because of its role in economic growth due to the fact that consumption expenditures, investment, public expenditures and net export are the components of GDP(Hone & Marisennayya, 2019).

The Domestic Demand-Driven Growth hypothesis expansion of private investment, government expenditure, consumption, etc. would lead to an economic growth. It emphasizes that economic growth can sustain with the developing and increase of domestic demand. According to this hypothesis, growth in output can be triggered by growth of aggregate demand. The main theme of this approach is to enhance production capacity that is parallele with effective demand(Mohanty, 2012).

* + - 1. **Agricultural Finance and Domestic Consumption**
    1. **Poverty and Income Inequality** 
       1. **Poverty and Income Inequality in Developing Countries**
       2. **Poverty Level and Measurement**

Conceptualizing Poverty and Its Measurement

There is no universally accepted definition of poverty. Scholars agree that poverty is a phenomenon that is complex and has multidimensional features and dimensions. It involves people experiencing various degrees of deprived access and possessions. The concept is used to cover a wide-ranging set of interrelated needs in life. There is great variation in the manner in which poverty is being defined and measured in developing countries (May,2001).

Poverty is a persistent feature of socioeconomic stratification throughout the world. Over the last three decades, the understanding of poverty has advanced and become more holistic (Dercon et al., 2005). From having been understood almost exclusively as inadequacy of income, consumption and wealth with the use of monetary approach, multiple dimensions of poverty and their complex interactions are now widely recognized in relation to the global development programmes like MDGs and the present sustainable development goals which target diverse dimensions other than the monetary tool.

In defining poverty (Dercon et al., 2005b), we usually make distinctions between absolute and relative poverty. Relative poverty measures the extent to which a household’s income falls below an average income threshold for the economy. And, absolute poverty measures the number of people below a certain income threshold or unable to afford certain basic goods and services. Absolute poverty is a state in which one’s very survival is threatened by lack of resources.

From this concept, poverty measurement assumes that there is a well-defined level of standard of living, called the “poverty line,” below which a person is deemed to be poor (Foster et al., 1984). A welfare-approach sets this in terms of a reference utility level that can be thought of as a poverty line in utility space. In consumption space, the poverty line is the point on the consumer’s cost function corresponding to that reference utility that is the minimum expenditure needed to attain 4 that utility (Ravallion,1992). Accordingly, the identification of a criterion of poverty to select “poverty line” in terms of real income per head, and then ascertaining this to satisfy the criterion to show fall below the “poverty line”) and those who do not” will be done (Sen 1976). This choice takes a lot of processes to identify the basic elements which need to be combined to obtain an assessment of poverty.

Monetary Approach to Poverty Measurement: The Basics The monetary approach has conventionally been used to identify and measure monetary poverty (Booth, 1887; Rowntree, 1902). Using this approach, an individual is considered to be living in absolute poverty if one is unable to obtain the minimum necessities to maintain a physical existence (Rowntree, 1902). The most important component of a basic needs’ poverty line is the food expenditure necessary to obtain some recommended food energy intake and a modest allowance for non-food goods (Ravallion, 1992:25-26). Monetary approach bases its measurement of poverty on a measure of income, consumption or expenditures, and are underpinned by the rationale that if individuals have a certain degree of purchasing power they will be able to fulfil their basic needs (Thorbecke, 2008). Money-metric definitions and measures of poverty are the most recognized methods in the world. In fact, they are the basis by which official poverty rates are calculated on global and national levels.

* + - 1. **Income Inequality and Measurement**

The Gini coefficient is widely used to measure inequality in the distribution of income, consumption, and other welfare proxies. Decomposing this measure can help you understand the determinants of inequality. The techniques used more often decompose inequality either by subpopulations or by income source. This article describes a userwritten command, descogini, that decomposes the Gini coefficient by income source and allows the calculation of the impact that a marginal change in a particular income source will have on inequality.

There are other user-written commands available for Stata that decompose inequality. For example, ineqdeco and ginidesc decompose inequality by subpopulation groups, whereas ineqfac does so by factor components of total income. descogini complements the commands that do subpopulation decompositions and is an alternative to ineqfac. The main difference between ineqfac and descogini is that descogini allows the estimation of the marginal effects that every income source has on inequality by using the approach proposed by Lerman and Yitzhaki (1985). Furthermore, this command can be used with bootstrap to obtain standard errors and confidence intervals.

* 1. **Poverty and Income Inequality in Ethiopia** 
     1. **Rural Poverty and Income Inequality in Ethiopia**
  2. **Empirical Literature Review**

According to Turvey (2017), both marginal and intra marginal credit provides positive returns. Access and use of credit is correlated with higher incomes and asset values, and RCTs at the margin indicate that the link is causal. However, there is still a way to go. The evidence through regional studies at the macro level and household studies at the micro level show that there are still small farm and gender biases. One of the key points raised was that the liberalization of financial markets did not have the desired spillover effects into rural credit, and albeit imperfect from a market-oriented perspective, there is cause for public intervention(Turvey, 2017)

The key results are that farmers who use credit have moderately inelastic to elastic demands. This implies that farmers are generally sensitive to interest rates, implying that policies that curb interest rates or otherwise lower the cost of credit may spur on credit demand. If subsidies are required, they must be smart in the sense of minimizing distortions in the marketplace and, most likely, targeted towards lenders as incentives to increase loans in poverty or underserved communities, women borrowers or indigenous peoples. When markets, for whatever reason, fail agriculture, it was also suggested that governments consider state run government-sponsored enterprises to meet farmers’ credit demands. Lenders to farmers and rural communities, including MFIs, must reconsider their approach to disciplined savings and lending activities(Turvey, 2017)

Guo (2009) concluded that return on investment in the village or township banks as new rural financial institutions is very considerable in the conditions of starved financial needs and insufficient financial supply in the vast rural areas. The village or township banks are springing up all over the nation in the norms of national policy and market commercial interests drive. The author believes that the village or township banks in China will play an more and more important role in the rural economy with the continuous improvement of the rural financial system and the steady development of agricultural economy(Guo, 2009).

Milder (2008) found that lending against movements of product and payment in the value chain requires a degree of familiarity and comfort with both borrowers and buyers; transparency and open communication on all sides are fundamental. As these players begin applying value chain finance, it is likely that they will identify and respond to market demand for a broader range of financial services, including weather and crop insurance, hedging, and equity investments. In doing so, they will close the gap by extending basic financial services to the missing middle and rural poor(Milder, 2008).

In Ethiopia, a study conducted in Gamo Gofa zone of SNNPR indicates that (Amanuel & Agidew, 2019) informal financial services are contributing for rural money saving, non-farm sector participation and livelihood diversification. They had significant contribution towards non-farm activities, especially petty trading, livestock and grains trades.

Admassie (2004) reviewed performance of agricultural finance in Ethiopia: pre and post reform periods (1990s). It is indicated that lack of autonomy for financial institutions in the pre reform period was an obstacle for the effective management of the institutions and promoting competition in the financial market. This study also pointed out that the role of regional governments as financial intermediary was the weakness of the post reform financial service to the farmers. The review concluded that there is important need for a proactive role of the government in creating of a favorable macroeconomic environment