

# Rural Development Policy: What does Ethiopia Need to Ascertain from China Rural Development Policy to Eradicate Rural Poverty?

Abate Meseret Chanie\*, Kuang Yuan Pei, Zhang Lei, Cai Bao Zhong

School of Economics, Hunan Agricultural University, Changsha, China

\*Corresponding author: meseretcbeti16@stu.hunau.edu.cn

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**Abstract** The struggle against poverty is directly linked to saving rural people. Ethiopia and China have been implementing rural development policies and strategies to lead millions of rural poor out of poverty. The study investigates Ethiopia's and China's rural development policies since the major rural reform periods. The author utilizes data from World Bank (WB) and Food Association Organization (FAO) to scrutinize the consequence of rural development policies towards rural poverty eradication in China and Ethiopia. The paper also describes the literature and based on the data, a series of normative analyses examine the interaction among rural development policy, rural people, and poverty in both nations. The finding of our study strongly urges that the remarkable achievements of China in the huge reduction of rural poverty is basically due to the post-reform commitment of the Communist Party of China towards target-specific, research-based, achievement-oriented and pro-poor rural development policy and implementation. Ethiopia needs to develop and implement bottom-up demand based, top-down incentive oriented, target-specific, research based and pro-poor rural reform strategies to lead millions of rural people from multi-causal poverty. Formulating and implementing target specific, research-based, achievement-oriented and pro-poor rural development policies and strategies could play a substantial role to eradicate rural poverty in developing countries.

**Keywords:** rural development policy, poverty, Ethiopia, China

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## 1. Introduction

In the era of globalization, ruinous climate change and alarming population growth, formulating and implementing comprehensive rural development policy which consider the balance between food security, demography and environmental sustainability is undeniable [1,2,3]. The United Nations Food and Agriculture Organization estimates that the arena will ought to produce some 60 percent extra food, on typical, to feed an undernourished world via 2050, when the worldwide populace is expected to high 9 billion [4], indicated that with the scarce land resource, an increasing population number of the planet have not kept steadiness with food production [5]. Moreover, agriculture and institutional environment for agriculture vulnerable to intricate challenges than ever before [6]. Therefore, it must be complemented by policies to enhance access by fighting poverty, especially in rural areas, where extreme poverty is disproportionately concentrated [7,8]. Despite its importance, there are complicated issues on how to formulate and implement proper rural development policies (RDPs) to better impact

on countries sustainable economic development and to lead millions of rural people out of poverty [9].

Traditionally, rural development is highly hearted on land intensive agriculture production, poor participatory approach [10] and imprudent strategies [11]. The robust and volatile agriculture sector has been taken as a decisive cornerstone of rural development which provokes a healthy tie to other economic sectors, nonetheless, rural development is more than the scope of agriculture productivity [12]. Accordingly, RDP is a comprehensive aspect of all state action that, directly or indirectly, influences the nature of economic and social development in rural areas [13]. Countries in the world usually implement agriculture based RDPs with the goal of achieving a specific objective in the domestic agricultural product markets including, a guaranteed supply level, price stability, product quality, product selection, land use or employment. However, RDPs is a comprehensive strategy which includes issues related to technology, land, education, research, extension and institutional structure, which are triggering factors for development in rural area [14]. Making the objectives that underlies a policy set explicit and quantifiable is a first, inevitable and critical step towards policy design. It is a great deal to give the

general public an impartial, over-all picture of the vast government operations in the field of agriculture and rural development and their cause and effects [15].

Agriculture in Ethiopia is the foundation of the country's economy. Agriculture (farming or livestock) is practiced by 98% of rural households and 42 % of small town household [16]. This specific sector regulates the progress of all other sectors and thus the entire national economy. The sector is highly dominated by poor small-scale farmers who operate subsistence rain-fed farming system through utilizing traditional indigenous knowledge [17], adopting poor technological [18] and research advancement [19] and weak government support. There has been no significant development of agriculture in Ethiopia following the 1975 land reform, which resulted in insecurity of individual land tenure, low productivities, poorly structured market for agriculture input and output and quantitative and qualitative deficiencies of research and extension to support the agriculture sector [20]. Though changes occurred in Ethiopia's agriculture sector in the last decade, still there are real concrete problems such as fragile soil and environmental degradation [21], fragmentation of land plot [22], poor infrastructure development [23] weak markets [24] and poor human development [25]. Therefore, there is a need for panoramic development of rural area.

China's agriculture is predominantly feeding the largest part of the world's population. This is due to the fact China has carried out fundamental economic policy reform including rural reform policies since 1978, which resulted in agricultural production that rose sharply, industries absorbing a large number of farm labor [26], the incidence of poverty reducing significantly. After the year 2000, dramatic change in China's rural land policy has been boosting up farmer's income rights and incentivizing them to increase their qualified investment on their responsible land. Rural development experts are putting more effort into understanding how China markedly reduce rural poverty within three decades.

With 13.5% of the arable land [27], China is feeding 18.54% of the world's population [28]. However, with 15.2 % of arable land [27], Ethiopia couldn't feed 1.41 % of the total world's population [29]. Why this is happening in a natural resource wealthy nation with a diversified agro-ecological climatic zone and the water tower of East Africa is the central question for an immense number of researchers. [30] revealed two lessons for Africa from China to eradicate poverty from the content. Firstly, market-based incentives and public service should support smallholder productivity growth and secondly, leaders at all level of the government need to have strong and efficient public administration capability. However, our study emerged with the fact that there are a lot more things to learn from China RDPs to eradicate rural striking poverty in Ethiopia. Chinese commitment in Ethiopian agriculture transformation is smaller, but it tends to be long-lasting and augmented in the future [31]. By comparing Ethiopian rural development policy (RDP) trends with China RDPs since the major rural reform periods, our study addresses and prioritizes problem associated with Ethiopia's RDPs and strategic objectives for the better future rural prosperity. Moreover, the study analyzes the constraints regarding Ethiopia's RDP implementation to provide critical remedial action

for policy makers. Even though China's agriculture and rural development trend faces various challenges including imbalance of the supply-demand structure, unreasonable allocation of factors, huge resource and environmental pressure [32] and sluggish continuous income growth of farmers, by learning from best practices of China's rural development strategies and avoiding known pitfalls policy reforms, Ethiopia can improve upon the example of early reformers and use the experience of China in garnering political support in the early stages of the policy reform cycle. Although Ethiopia and China differ greatly in economic, social, and political circumstance, both emerged as fast-growing countries in the past decade and have agriculture as an important economic sector.

## 1.1. Overview of Ethiopia and China Agriculture Profile

Agriculture is among the predominant economic sectors in almost all developing countries [33]. The vast majority of rural men and women employment opportunity in Ethiopia and China is from the agriculture sector. The truth is that each nation agriculture sector experienced colossal challenges and opportunities throughout the final three decades [34,35].

**Table 1. Indicates the short summary of profiles for Ethiopia and China <sup>1</sup>**

Indicators	Ethiopia	China
Total population number	102,403,196	1,379,000,000
Rural Population (% of total population in 2016)	80.04	43.22
Country Area (1000ha)	110,430	960000.63
Land Area (1000 ha)	100,000	942470.13
Agriculture Area (1000 ha)	36,259	515357.7
Water (% of total area)	0.7	2.8
Government system	Federal parliamentary	Unitary socialist

Note: Ha= Hectares.

Agriculture in Ethiopia is the nucleus of the country's economy, accounting 42% of gross domestic product (GDP), 83.9% of exports, 80% of the whole employment and 90% of foreign currency [36]. An estimated 80.08 % of the population is engaged in the agricultural production, commonly in subsistence rain-fed farming and cattle production [37]. The agriculture sector is also the backbone which provides input for other economic activities including marketing (domestic and export) and industrial processing sectors. [38] reported that out of the total land area (111.5 million ha) of the country, about 74.3 million hectares (66.63 % of total land area) is suitable for annual and perennial crop production. Of the estimated arable land, around 18 million hectares (only 24.23% of the potential) is currently cultivated under rain fed crops. The irrigation potential of the country is estimated to be around 4.3 million hectares. All data has indicated how significant the agriculture sector is for the majority of Ethiopian people.

Agriculture in China is instantly associated with the growing desires of local markets and thus fosters the growth of country huge economic system [39]. China's

<sup>1</sup>The author collected data from World Bank, FAO and CIA fact book.

grain output is first in the world, reaching 621.44 billion kg in 2015, which was 304.77 billion kg in 1978, increasing by 103.9%. China's farmers net per capita income reached 11,421.71 RMB (USD 1833.81) and 134 RMB (USD 77.91) in 2015 and 1978, respectively, which is more than 84 times within 38 years [40]. Although the agriculture shares in Gross Domestic Product (GDP) of China is dropping, agriculture considering the groundwork of stabilized country huge economic development has under no circumstances been converted.

## 1.2. Land Reform in Ethiopia and China

Land tenure policy is one of the pillars for rural development which favor farmers to clarify their relationship with the land [41,42]. In the prospects of land reform, it is unattainable to address peasant-politics-government triangulation relationship independently.

**Table 2. Shows the summary of major events of land reform in Ethiopia and China. The author constructs the table by referencing both nation land tenure study<sup>2</sup>**

Ethiopia	Year		China
	Pre-1975	Pre-1949	
Feudal pattern land ownership (landlordism).	Pre-1975	Pre-1949	Feudal pattern land ownership (landlordism)
All rural land to be the property of the state (utilized the slogan "The land to tiller").	1975	1947-1952	Peasants with full ownership of land (Successful creation of small scale farming system)
Establishment of peasant association (PA).	Nearly 1977	1956-1978	Collective farming (people commune system)
Publicizing of Agricultural Producer Cooperatives (APC). The establishment of large-scale state farms.	1778-1980	1978	The establishment of Household Responsibility System.
The Transitional government of Ethiopia declare the continuation of the land policy of the Derg regime	1990	1984-2001	Land leasehold extended for 15 years
The new constitution of 1995 permitted and proven the state possession of land	1995	1995	Land leasehold extended for 30 years
Regional governments of Ethiopia have formulated their land policies.	1997	2002	Rural land contracting law of peasants
Keeping rights to peasants comprise leasing rights and inheritance rights.	2005	2007	China adopted the property law (farm land remains the property of village collectives)
		2008	CPC further call for farmland transfer, lease and exchange based on market oriented mechanism
		2010	Accelerating contracted land use rights transfer for scaled production.

APC= Agricultural Producer Cooperatives CPC= Communist Party of China, PA= Peasant Association.

<sup>2</sup> Land reform data of Ethiopia and China (Table 2) obtained from the following literature: *Ethiopia* [43,44,45,46] and *China* [47-54].

## 1.3. The Two Major Phases of Rural Land Reform in China

The pre-1949 of China's land tenure could be characterized as feudal pattern land ownership (landlordism) [55]. The rights of peasant to use land for their production purpose were denied and only landlords have been practiced. The communist party of China in 1949 rose to power and the *first* and fundamental reform was conducted by the party in 1950 with the aim of abolishing landlord class and securing the majority of middle and poor peasant land ownership (Article 1 of the agrarian reform law promulgated in 1950). These agrarian reforms were implemented in various parts of China from 1950 to 1953. In all, 700 million mu of land (1 mu is .0667 hectares) and various means of production were redistributed among 300 million peasants who had been landless before [56]. By 1952, the Chinese Communist Party had succeeded in creating a system of small-scale family farming. However, in 1953, they started to organize the farmers in the form of mutual help team. These were gradually merged into lower agrarian cooperatives. During the Great leap forward, these lower forms of cooperatives would be merged into huge People's Communes. Gradually, collective farming was created from 1955 to 1956 [57]. By way of the uniting and organization of labor and earnings, communes were designed to fill a mass of facets: to provide rural communities the possibility to accomplish big water conservation initiatives; to set up small factories and produce items that will increase natural gains; to support hospitals and faculties; and to care for the elderly and disabled within the neighborhood [58]. The structure of the commune was such that households were organized into teams, then teams formed brigades, and brigades formed the commune [59].

In the route of 1958-1959, the communes tried to equalize profits among cooperatives by way of becoming a member of numerous cooperatives together; in so doing, a cooperative staff with poor land benefited from the wealth of a cooperative regional with very fertile land [60]. Launched in the early 1980s, the *second* and current land tenure system of China "household responsibility system (HRS)", was an agriculture production system, which allowed households to contract land, machinery and other facilities from collective organizations [61]. According to the HRS, farmland remains to be owned by public and the production and management are endowed to individual household through long-term contracts [62]. The system was so warmly accepted by farmers and a lot of production teams had adopted the system by the end of 1983. The HRS extensively encouraged farmers' creation initiative, sharply expanded agricultural output, and raised rural productivity [63]. Significant quantity of rural labor force used to be released from land cultivation and entered village-run factories and township businesses [64]. In 2002, the Standing Committee of the Ninth national people's Congress approved the Rural Land Contracting legislation, which grew to be effective in 2003 [65]. The law presents a legal warranty for farmers' long-term and secured land-use rights. Almost always, there was the continuing evolution of the policies governing landholding in the people's Republic of China, granting

farmers bigger mandate over the land they farm as a way to inspire better investment in that land.

#### 1.4. The Two Major Phases of Rural Land Reform in Ethiopia

Intricate landlordism had been officially ruminated the pre-1975 land tenure policy of Ethiopia [66]. The land tenure administration sector was dominated by common and ordinary institutions, which avoid the peasant-land relationship and saved the want of absentee landlords [67,68]. The land was also supplied to the Church which was once regarded as an important cooperator to the imperial power. In 1974, the emperor and his landlords owning the vast land pushed peasant and student rebellions to rise. "Land to the Tiller" grew to become reasons for the downfall of the feudal-capitalist state in the nation [69]. Consequently, in 1975 the military socialist takes the power from the emperor and declared Proclamation and furnished the *first* major rural land reform of Ethiopia, general public possession of Rural Lands (Proclamation No. 31/1975) [68]. All rural land was to be the property of the state (Article 3) with no compensation to previous rights holders and prohibited all tenancy members of the household (Article 4.5), which supplied the distribution of usufruct rights to the colossal number of rural households (egalitarianism). Farmers weren't allowed to modify their usufruct rights by means of sale and rent. The reform was once the first uniform tenure process introduced upon Ethiopia as a whole. With the purpose of practicing peasant socialism, Derg called for collectivization of small scale farms and establishment of state farms to distribute entire land in the form of Peasant Association (PA) [70]. By the end of the 1970s, Derg deepened the collectivization program by establishing Agriculture Producer Cooperatives (APC).

In 1991, the transitional government of Ethiopia removed Derg from its power and confirmed the continuation of the land policy of Derg in its declaration on the economic policy of Ethiopia [71]. In 1995, the transition government of Ethiopia organized as Federal Democratic Republic of Ethiopia (EPRDF) and declared a new constitution by proving the state possession of the rural and urban land. Here, the *second* major land reform was implemented at the end of 1995 which allowed the possibility of land lease and hiring of labor, previously denied by Derg regime [72]. In 1997, EPRDF announced proclamation which allowed regional governments to formulate their land policies [73]. However, regional governments needed to respect state ownership of land and the impossibility of land transfer through sale or mortgage. In 2005, the federal government declared the revised land administration and land use proclamation by regurgitating the exclusive rights of land belonging to the state and the people [74]. This proclamation introduced the inheritance land rights of peasants. It is situated on a commonly unfold proposal that each Ethiopian has to have the documents to a plot of land if he/she requires it for a livelihood.

#### 1.5. Things in Common

The pre-1975 of Ethiopia's and the pre-1949 China's land tenure system is landlordism. In both nations

agricultural productivity, rural livelihood improvement and rural area prosperity has been denied during those periods. With the introduction of people commune system in China in 1956, peasants obtained better land use rights and agricultural productivity which was better than landlord regime. The 1975 Ethiopia and the 1949 China governments have similar military socialist which was obtained from soviet socialist regime. As a result, the people commune system of China and the Peasant Association of Ethiopia had a similar objective for the land tenure system. Since 1980, the HRS of China converted rural areas and farmer's lifestyle by way of elevating farmers from self-sufficient inconsiderable producers (poverty) to commodity producers and executives, even as selling the development of rural market. Though the 1995 land use system of Ethiopia provided little improvement on rural livelihood, it was highly insignificant.

#### 1.6. Rural Development Policy Target Issues in China's Central Government No.1 Documents

No.1 Central document in China is the first document issued annually by the Chinese Communist Party's Central Committee. Historically, this document was released on October 1, 1949 and provided a policy blueprint for the year to come. Now it has become the proper noun of the central Committee to pay attention to rural issues. The Communist Party of China issued these central documents on agriculture, rural areas and farmers for five consecutive years from 1982 to 1986 to make concrete deployment of rural reform and agricultural development. From 2004 to 2017 for 14 consecutive years, agriculture, rural area and farmers emerged as the theme of the central document, stressed the "three rural" issues (Sang Nong issues) in China's socialist modernization period. The document has been largely crucial to immediately announce and troubleshoot rural problems during the past three decades.

The content of the No. 1 document broadly divided into three main parts; First, elaborating rural people problems based on the research findings; Second, announcing possible rural development measurements to solve those problems; Third, clarify practical strategies at all level of the government. For example, in the late 2003, Chinese government found that farmers experienced huge reduction in their income and the No. 1 central document issued on Feb. 8, 2004, took "boosting farmers' incomes" as its theme. The document said, "Among the many problems facing agricultural and rural development, the difficulty of increasing farmers' incomes is the most prominent." The document prescribed a number of measures, stressing raising farmer's incomes was a significant issue both economically and politically and raising agricultural incomes was key to maintaining China's economic growth. The measures also included adjusting agricultural structure, increasing jobs for farmers, enhancing rural investment, deepening rural reform, and quickening agriculture-related science and technology. Since 2004, China's grain farmers have received direct payments, fine breed payments and machinery payments from the government. Over 600 million farmers have benefited from these payments. Table 3 summarizes the

rural policy issues raised in the No. 1 documents since the 1978 economic reform period.

**Table 3. The Nineteen No. 1 documents and the target rural policy issues of Communist Party of China<sup>3</sup>**

Year	Target issues of No. 1 documents of Communist Party of China
1982	Strengthen rural research and investigations to solve the new agricultural problem in a timely manner
1983	Constructing socialist modernization and doubling the annual gross output value of the national agriculture
1984	Strengthen the construction of rural party organization to build a new socialist countryside.
1985	Making agricultural production meet the demand of the market
1986	Implementing policies, deepening reform and sustaining agricultural production conditions
2004	Boosting farmers' incomes by reducing taxes and fees.
2005	Strengthening rural work and improving the overall production capacity of agriculture
2006	Constructing a new socialist countryside
2007	Developing modern agriculture to promote the construction of a new socialist countryside
2008	Fortifying the foundation of agriculture
2009	Achieving steady agricultural development and sustained income increases for farmers
2010	Strengthening the development of rural areas and consolidating the foundation of agricultural development
2011	A decision on speeding up the development of water conservancy reform
2012	Accelerating agricultural science and technology innovation to enhance the supply of agricultural products
2013	Speeding up the development of modern agriculture and further enhancing the vitality of rural development
2014	Deepening rural reform and speeding up the promotion of agricultural modernization
2015	Speeding up the construction of agricultural modernization by intensifying reform and innovation
2016	Implementing the new concept of development and agricultural modernization to realize the well-off society
2017	Deepening agricultural supply-side structural reform
2018	Rural revitalization

In general, such a series of the central documents under the guidance of 30 years of rural reform climax is boosting up the China's agriculture and rural development. In the different time background, 19 central documents having different emphases, accurately grasp the protection of farmers' interests, respect the democratic rights of farmers, liberate and develop social productive forces, reform the main line, accelerate the historical process of the coordinated development of urban and rural, played the common prosperity of the rural economy, promoted the main melody of farmers' income and promoted rural society through the development of great momentum of China's urban and rural society to harmonious development.

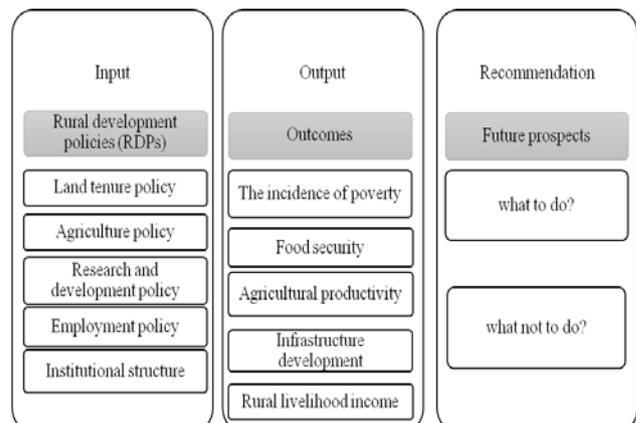
<sup>3</sup> The author summarized the issues of No. 1 document of rural issues of Communist party of China from Ministry of Agriculture and rural affairs of the People's Republic of China (Table 3); <http://english.agri.gov.cn/hottopics/cpc/>.

### 1.7. Agriculture Led industrialization Policy (ADLI) in Ethiopia

Ethiopia has committed overarching actions of economic reforms, which have brought continuous economic growth. Early development professionals have assorted stand towards taking agriculture as a driver of economic development. The government of Ethiopia also decided upon agriculture first policy, ADLI, to alleviate huge rural poverty. ADLI is defined as the development strategy that aims to achieve initial industrialization through sturdy agricultural growth and coupling the agricultural and the industrial sector [75]. This strategy was firstly imposed with aim of maximizing agricultural productivity, integrating agricultural sector with other sector and establishing effective agriculture marketing system. Ultimately, by implementing mutualistic approach, the government intended to change the ADLI policy into Industry Led (IDAI) policy. The government also formulated a plan for accelerated and sustained development to end poverty (PASDEP). So far, ADLI has not brought about the anticipated food security and sustainable economic growth. Evidently, still 33 million households are under the poverty line, the persistent rain-fed agriculture is highly dominated by traditional farming system, and the severity of food insecurity keeps growing. Therefore, there are push factors that the government needs to alert for such chronic problems.

### 2. Methodology

Time series data on rural poverty, prevalence of undernourishment, arable land size per person, rural population reduction trend, employment in agriculture of China and Ethiopia were obtained from WorldBank database. Time series data on cereal total production, agricultural irrigated land, food deficit of both nations were obtained from food and agriculture organization of United Nation Department (FAO). Based on the data obtained, normative analysis is used to elaborate the outcome of RDPs of both China and Ethiopia since the major reform period. Through learning from China, we made recommendations about what actions should be taken by the government of Ethiopia in the reform of RDPs to leave millions of rural people out of rural poverty.



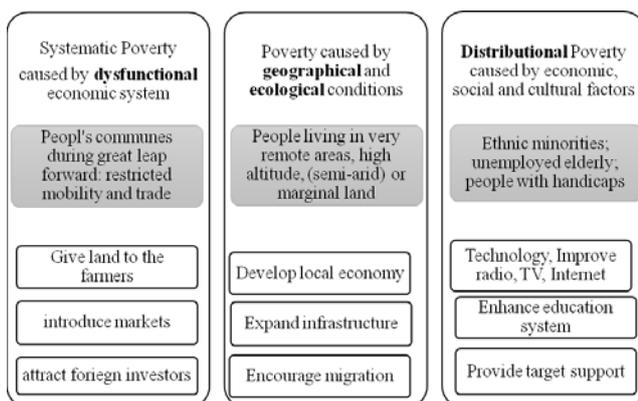
**Figure 1.** Conceptual framework of normative analysis. The author construct conceptual framework is based on the objective of the paper

### 3. Result and Discussion

#### 3.1. The Consequence of China and Ethiopia Rural Development Policies (RDPs)

##### 3.1.1. The Incidence of Rural Poverty in Ethiopia and China

Nevertheless, experts and academics have demonstrated many definitions of poverty, it is the lack of, or the inability to achieve, a socially acceptable standard of living [76]. According to the most recent estimate of world bank, in 2013, 10.7 percent of the world's population lived on less than US\$1.90 a day [77]. Surprisingly, a vast majority of the global poor live in rural areas and depend largely on agriculture to make a living. Why is the producer being always poorer than the consumer is the greatest question for almost all of the researchers and experts in the agriculture industry? The cause and effect of poverty is complicated and disparity type of poverty is common in different region, group of the community and even within the community [78,79,80,81,82].



**Figure 2.** Major Types of Poverty and Corresponding Poverty Alleviation Methods in developing countries [82]

Poverty in China is always the most serious issue and the battle against it is far from over. The top administration to individual entity at grass-root level engaging to divorce from it [84]. Figure 2- indicated that essentially there are three types of rural poverty in China- poverty caused by dysfunctional economic system, geographical and ecological condition, and distributional (economic, social and cultural factors) [83]. Among the three, addressing poverty caused by dysfunctional economic system could have a significant role to tackle the other two. Poverty also can be classified as chronic and transient based on their persistence in rural China. The latter may happen as a result of the former type [85].

In 1990s the incidence of poverty in China was exacerbating. This is due to the increase in the relative food price and the need to purchase items of education, housing and medical care that were previously provided free or at highly subsidized prices by the state [86]. Researchers and scholars are exploring diversified reason for the large margin reduction of poverty in China. For Example, [87] reported that the continued high economic growth, huge rural labor force transfers to non-agricultural industries [88], speeding up urbanization, implementing

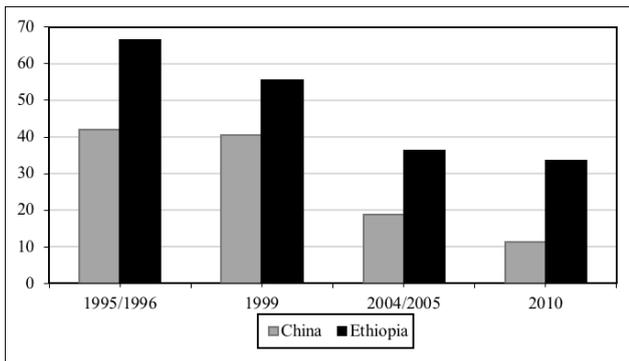
export-oriented open-up policies, improvement of human capital and anti-poverty actions adopted by the government are reason for immense number of rural poverty reduction. In fact, macroeconomic stability is the fundamental requirement to resolve social problem embracing rural poverty [89]. The hot and the most important question, recently in China poverty reduction regime is its uneven progress [90,91,92]. The variation in the intensity of poverty between rural and urban area drives researchers to explore multi-dimensional view on the spread of poverty in China. Urban areas are basically not as poor as rural area, instead, rural to urban transition of poverty create new economic structure and new marginal group in the urban institution [93].

Hadded, [94], also reported undernourishment has been emerging in urban areas as the result number of poor in urban areas has been increasing as consequence of rural migrants in the city. This might be basically the impact of rapid urbanization due to the foundation of market economy in urban areas [81], which enlarges the idea that urban-biased policies enacted by the Chinese government [95], contributes a lot to Chinese urban population growth [96].

Based on causality there are also three types of poverty in Ethiopia as Heilig *et al.*, [83] reported in China (see Figure 2). This includes poverty caused by dysfunction of the economic system, geographical/ environmental condition, and socio-cultural. They are highly interrelated and interdependent and the situation became riskier in the full rain-fed agriculture system of Ethiopia. Poverty caused by environmental problem have been hugely distracting the rural community economic development. This poverty type might cause short-term (seasonal) [97] or long-term vulnerability [98]. In order to eradicate this poverty type, the strategies of the government need to targeting how to fall into and escaping from poverty [99,100]. However, due to poor insurance system, it perpetuates itself in the agrarian community [98,101,102]. Surprisingly, the very poor rural community highly marginalized [103] and buffer even from social network [104]. The persistency of rural poverty highly related to the weak and poor governing system in Ethiopia. For example, Bogale, *et al.*, [105] reported that rural poverty was highly linked to entitlement failure, suggesting that improving targeting devices could be a crucial tool to reduce chronic poverty.

Income and consumption factors has been largely used to measure the presence, incidence and severity of poverty [106]. However, a large number of rural poor come out due to the inappropriate use of biased global poverty line standard [107]. The global poverty line also may underestimate the number of poor in rural area. In fact, the reality in Ethiopia regarding the number of poor was always underestimated for political purpose. Nevertheless, underestimation and overestimation happened in the study of the incidence, severity and persistency of rural poverty, understanding rural poverty in Ethiopia needed the convergent view from qualitative and quantitative approach [108,109,110]. On the other hand, the result of poverty highly damaged rural women more than men in Ethiopia, since the household responsibility basically owned her [111]. This made the situation worse and huge struggle and sophisticated attention from all stockholder and all

these makes the multi-dimensional devastating effect of rural poverty in Ethiopia [112].



**Figure 3.** Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population) in Ethiopia and China<sup>4</sup>

Poverty in China fell from 42 % in 1996 to 11.2 % in 2010. In Ethiopia, poverty head cut ratio was decreased from 66.4% in 1995 to 33.5 % in 2010. As compared to China, Ethiopia still has a lot of people who are living under poverty. The speed of poverty reduction in China is much higher than Ethiopia. Poverty reduction experts in China also announced in 2018 the number of people in poverty living below the national poverty line is around 30 million, about 2% of the population, with hopes of totally eradicating poverty by 2020.

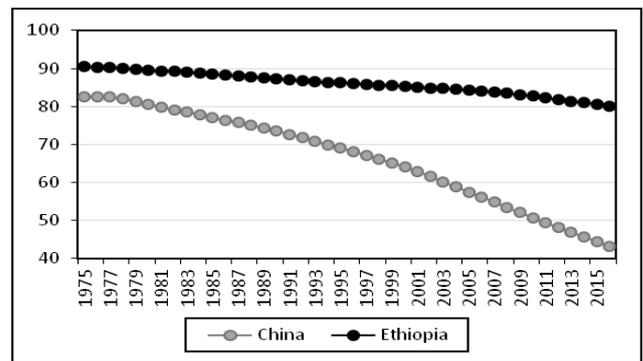
Even though, [113] reported that it would have been impossible to achieve rapid economic growth and poverty reduction in China had there not been several prior decades of government investment, our study strongly urges that the remarkable achievements of China in huge reduction of rural poverty is basically due to the post-reform commitment of the Communist Party of China towards target specific, research based, achievement-oriented and pro-poor agricultural policy development and implementation. In China, there is a need for better tools for targeting the poor or malnourished [114].

One of the greatest evidence towards this inference is that the No.1 document, the most crucial document which addresses the “San Nong” issue (agriculture, rural area and rural people), and makes China the first producer of grain in the world, achieving world-class education and health-care service and lifting up millions of farmers out of poverty since 1978. In spite of the fact that Ethiopia has pace progress in reducing rural poverty circumstance, there are still 33 million people who are subsistence and rain-fed based peasants in the country. Therefore, it is time for a turning point in Ethiopian government to develop and implement bottom-up demand based, top-down supply oriented and target-specific RDPs reform in the country.

### 3.1.2. Rural Employment and Migration in Ethiopia and China

The post-reform rural development in China witnessed that the people common system has been the barrier for agriculture development and rural people prosperity before the reform period. The inauguration of household responsibility system in the early 1980s addressed those

barriers and the new regime of rural development strategies emerged as well. However, since the reform, the dual rural-urban structure creates perplexing scheme for economists and policy makers. A more noteworthy phenomenon of rural reform on the national economy come the unintended occasion; surplus laborers were released from agriculture and reallocated to non-agricultural activities in rural and urban areas, which contribute the great momentum of rural labor displacement to the urban areas. Then in the opening up policy the excess rural labor got solution from the market oriented-reform and the heavy industry oriented development strategy together created labor intensive production, which trigger the communist party of China to amend the regulation of rural people residence permission in urban and to allow the unrestricted flow of rural labor to all region. Chan & Zhang, 1999 [115], reported that HRS is far beyond rural-urban migration issue, but it is also regulating population distribution in the country. Therefore, rural-urban migration is feeding each other, the former as production factor and the later as employment opportunities for migrants.



**Figure 4.** China and Ethiopia rural population reduction trend (% of total population)<sup>5</sup>

Moreover, the informal sector in the urban region plays great role in attracting the rural migrants as well [86]. However, factors emerged which restricted or prevent rural-urban migration. For example, Mullan [116], record land tenure insecurity in urban diminish rural household to decide to leave their rural resident. Thus factors resulted in natural resource degradation (forest decline and soil degradation) in the region to get extra arable land.

As indicated in (Figure 3), before 1978 the period was generally characterized by an insignificant decline of number of rural people in china. But, since 1978 (after the reform period), the unusual decline in number of rural population was observed. The number decreased from 82.1% in 1978 to 43.22 % in 2016 i.e. reduced by 50%. This marked reduction showed that the urban employment opportunity swallowed huge rural labor force in China economic growth regime, given that the industrial growth oriented policy played a great role.

Though the current national policy is agriculture-led Industrialization (ADLI), it has been a dilemma that Ethiopian government came up with antagonizing recommendation on the importance of rural agriculture or urban industry to

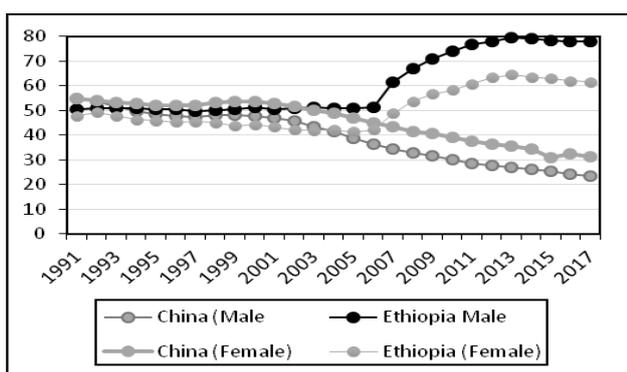
<sup>4</sup> The author retrieved the data from WorldBank database <https://data.worldbank.org/indicator/SI.POV.DDAY?locations=CN-ET>

<sup>5</sup> The author retrieved the data from WorldBank database <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=CN-ET>

alleviate poverty. To interfere the confusion, [117] reported urbanization can be a long-term solution, but to cure seasonal poverty agriculture investment take the advantage for short-term. It is clear that agriculture plays a pillar role to reduce rural economic problems.

In Ethiopia rural migration is not only to urban region but also international migration has become more serious. Particularly, huge number of rural young women and men migrated into Arabic countries to find employment opportunity. But, they take great risk during their travelling and stay as a household servant. This migration type basically is illegal and they are responsible for any accidents that happened in their life. They don't have any life insurance and they only get monthly salary from the employer. Those who are lucky in their career changes their rural family by constructing better shelter, food and other basic needs.

The industrial growth and the agriculture growth strategies highly support each other in China. It was observed that the agriculture sector was used as a mechanism to save Chinese economy during economic crises. The industrial growth also created huge employment opportunity and machinery input for rural people, however, in Ethiopia the two sector didn't have such mutual benefit in growth strategies. This might be due to the fact that infant industrial growth stage in Ethiopia did not fully support rural migrants enough, up to the point that they will become more poor in urban region. In order to tackle this problem arising in rural urban migration scheme, the government of China always identified and prioritized target specific research based measurements to address all agrarian troubles. Issues updated year by year for rural prosperities can be taken as the best evidence for this regime. The well-organized institutional structure highly supports and facilitate the successful implementation possible measurements. To this end Ethiopia has a lot of things to do starting from grass root level to central planning system.



**Figure 5.** Employment in agriculture (% of male and female employment) (modeled ILO estimate) in Ethiopia and China <sup>6</sup>

Until 2004, there were no significant difference among the rural employer proportion in China and Ethiopia. However, since 2005 a marked difference started to

<sup>6</sup> The author retrieved the data from world bank database <https://data.worldbank.org/indicator/SL.AGR.EMPL.MA.ZS?locations=CN-ET>; <https://data.worldbank.org/indicator/SL.AGR.EMPL.FE.ZS?locations=CN-ET>

International Labour Organization, ILOSTAT database. Data retrieved by WorldBank in November, 2017.

emerge between the employment in agriculture between the two countries. This is due to the slow growth of industrial sector in Ethiopia and then the preference of rural people to stay in agriculture. Amazingly, Figure 5 also showed that the percentage of female employer in agriculture sector is higher than male in China and Ethiopia. This showed that China has did great achievement on the prevalence of rural gender equality in the region. Since 2006 the employment rate in the agriculture industry experienced an alarmingly increase in Ethiopia. This might be due to the price increments of food and other agricultural products and the slow growth of wage in the industry and service sector. The situation resulted huge land degradation due to poor-extensive agriculture system. Based on such perspective Ethiopia have a lot of tasks to reduce huge farmland pressure.

### 3.1.3. Rural Household Income in Ethiopia and China

Non-farm employment in rural area play a substantial role on increasing the income of the rural community [88,118]. But, the improper manipulation of non-farm enterprise may have insignificant effect on rural income growth [119]. Increasing agricultural productivity enhances rural household's income growth directly or indirectly. Since the 1978 reform period, rural household per capita income increases at a great rate in China. However, the rural-urban income gap became enlarged with time and it takes the attention of economists and scholars. The industry growth oriented policy obviously shows the government inclination to the urban biased economic growth [120]. Due to this occasion the China communist party set diversified and research based strategies in the nation to enhance rural household income growth. The measurement included permission of rural to urban migration, establishment of non-agricultural (off-farm) employment [118,121], cutting-off agricultural tax, providing varies subsidies (seed, machinery, money), etc. However, there are studies which support the assumption that income inequality could be reduced with promotion of agriculture development in rural area than rural industry which exacerbate the rural-urban income gap [122]. Immense research revealed that the rural-urban income gap in China has become complicated and target specific measurement need to be taken. Western to Eastern, province to province, county to county and even income gap within the rural areas make the situation more intricate [123]. The gap mostly observed in social service development including education [124], health care [125] communication and insurance [126]. Fig. shows that the rural net per capita income increased since the 1978 reform.

It is undeniable to find a better way for 82% of rural household income growth to speed up the national development in Ethiopia. A large part of the economy is characterized by semi subsistence agriculture with exceedingly low incomes and hand-to-mouth livelihoods. By designing ADLI, the government has been practicing diversified rural development strategies to increase rural household income during the last two decades. The strategies include promoting small scale farming [127], encouraging foreign aid safety net programs [128] and practicing ineffective non-farm employment [118]. However, all the previous policies and strategies did not

address the major structural constraints of the rural economy which is detrimental to economic development. Agriculture, although the dominant sector of the economy, is constrained by age-old production practices and structural problems. It has failed to provide moderate and sustained incomes for many people who are engaged in the sector. Nor, has it provided a basis for the accelerated development of other sectors.

### 3.1.4. Food Security in Ethiopia and China

Achieving food security is one of the most and preliminary requirement for every nation from the early stage of development in the world. Food security always links to the success and failure of all other aspects of life such as education and health. China as the most populous nation in the world has been struggling to achieve food security with the intended objective of food self-sufficiency. The main goal of the late 1978 rural reform period was increasing agricultural productivity by inducing household responsibility system of land tenure policy, applying modern agriculture technology with the help of the industry sector, expanding infrastructure development, practicing intensive small scale farming system and most importantly tackling of market structural barriers. For Chinese government, food security is the central point to eradicate social unrest in the nation. A populous nation with the most productive labor force without adequate access of food is unimaginable. It is undeniable to design and implement any RDPs, if it has a possibility to eradicate food insecurity problem in China. The fact that, balancing alarming population growth, scarce land and water is the heart of three rural issues (Sangnong Issues). With this effort, China become the biggest producer of grain in the world. Currently, the main problem in China food security regime is safety and quality not quantity. This step by step transition from food self-sufficiency to world first producer is the outstanding implication of Communist party of China having best practice of research based and participated-oriented RDPs in the nation.

Ethiopia has remarkable agricultural production potential due to the availability of fertile soil, water and anticipated diverse agro-climatic zone. Having huge amount of productive labour force with sufficient indigenous knowledge is also a great opportunity for Ethiopia's agriculture productivity growth. However, the 82 % agrarian people owner nation is still under dependent on foreign food aid program. This is mainly due to the lack of research based, target oriented and selective formulating and implementation of RDPs in the nation. Rural people, the most important community part of the nation has been denied from diversified service and industrial support for a long period of time. This could be proven by poor infrastructural development, low market access, lack of qualified education and healthcare service in the rural area. Cyclic persistent of climate change induced drought has been striking some parts of the nation. The government of Ethiopia took action such as enacting RDPs, which could not cut off undernourishment in the nation. The government also supported by foreign organization including United Nation. However, foreign aid based effort of stopping undernourishment cannot be a long-lasting solution of achieving food security.

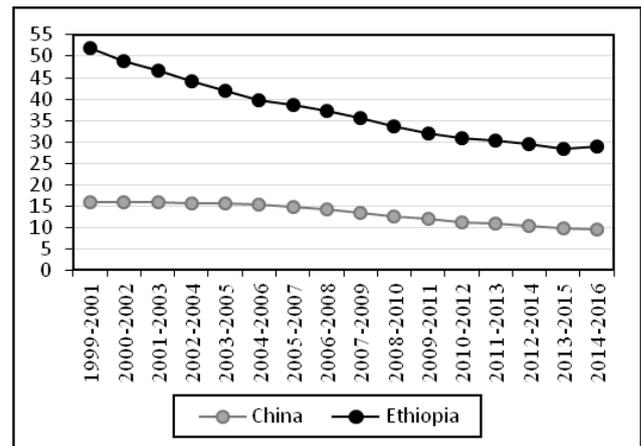


Figure 6. Ethiopia and China Prevalence of undernourishment (%) (3-year average)<sup>7</sup>

Figure 6-indicates that there is a big gap between Ethiopia and China in terms of prevalence of undernourishment. For example, in between 2014 and 2016, 28.8% of Ethiopian people are undernourished whereas only 9.6% in China. As China did, the Ethiopian government needs to prioritize RDPs which enable the people to stand for self-supporting effort of tackling food insecurity problem. China showed that achieving food security for a nation is a step by step progress, from quantity to quality and safety. Moreover, the government of Ethiopia needs to start implementation of strategic action plan from the rural grass root level (farmers). All the RDPs have been floated on the top level of the government without addressing the rural people productivity issues. China also took supplied side incentive measure to better motivate and encourage farmers to boost up food availability for 1.3 billion people. The supplied incentive includes canceling of tax and fees of farmers, direct gift of machinery and other inputs etc.

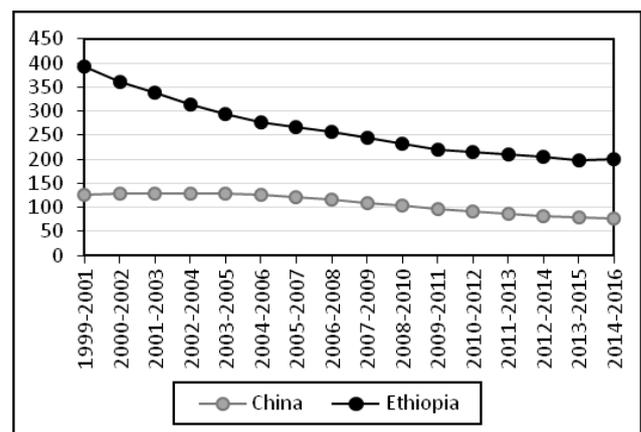


Figure 7. China and Ethiopia depth of food deficit (kcal/capital/day)<sup>8</sup>

Depth of food deficit in China is also much lower than Ethiopia as indicated in Figure 7. In China, the population growth induces the people to find a way for accessing food variability. In Ethiopia, most people stick to a specific kind of food with little variability. This implies

<sup>7</sup> The author retrieved the data from FAO and WorldBank database <https://data.worldbank.org/indicator/SN.ITK.DEFC.ZS?locations=CN-ET>. <http://www.fao.org/faostat/en/?#data/FS>

<sup>8</sup> The author retrieved the data from WorldBank and FAO database <https://data.worldbank.org/indicator/SN.ITK.DFCT?locations=CN-ET> <http://www.fao.org/faostat/en/?#data/FS>

that there is a need for a proper extension system in Ethiopia to enlarge the promotion of accessing food variability in the nation. In 2014 to 2016, Ethiopia has food deficit of 201(kcal/capital/day), whereas 76 (kcal/capital/day) in China. Therefore, enhancement productivity oriented for self-efficiency of food security development strategies need to be implemented in Ethiopia.

**3.1.5. Arable Land Size and Agriculture Productivity in Ethiopia and China**

The closer land-peasant relationship (Peasant owning full-rights towards farmland) the larger the fragmentation of land size per person due to the growth of population with time. Land fragmentation is one of the most important factor to influence agriculture productivity. Literatures reported that land fragmentation may happen due to partial inheritance system, significant imperfections of land market, and the breakdown of common property system under the pressure of population growth. These are true both in Ethiopia and China during the past land reform period. Since the 1978 reform, the government of China declared the household responsibility system which practiced egalitarian principle. All rural population deserves equal rights and opportunities from the highly fragmented land which led Chinese farmers to hand over small-scale farming system. Though small land holding tends to play a positive role towards soil and water conservation and increase crop variability of production, it denied farmers to apply huge agriculture technology in the farmland. Currently, in China, land transfer is the hot issue which might have a positive role to alleviate land fragmentation problem. In addition, the industrial biased policy also played a substantial role in reducing farmland pressure by swallowing huge rural migrant workers in the city. As we observed in (Figure 8) the arable land size per person was decreased from 0.097 in 1981 to 0.077 hectare in 2014. However, arable land size has been increased from 0.097 to 0.114 in 1981 and 1985. This might be due to the huge rural to urban migration following the 1978 reform and opening up policy. Researchers and scholars is putting huge effort to find out land fragmentation problem which directly affect the domestic productivity and the food security in China.

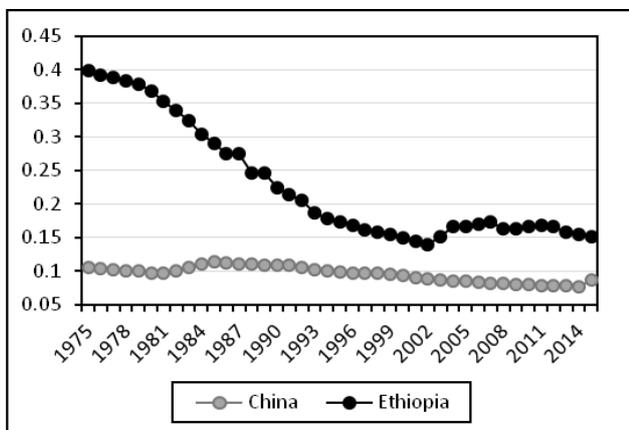


Figure 8. Arable land (hectares per person)<sup>9</sup>

<sup>9</sup> The author retrieved the data from WorldBank and FAO database <https://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC?locations=CN-ET> <http://www.fao.org/faostat/en/?#data/FS>

Arable land issue has always been the preliminary tool to increase agricultural productivity in Ethiopia. Up on the fall of imperial regime in 1975, Derg (military socialist) declare land reform as cooperative and state farm. During this period land fragmentation has not been serious problem.

Since, 1979 a marked reduction of arable land size was recorded in Ethiopia, the Derg started to apply the “land to tiller” slogan in practice. The arable land size per person reduced by 63.06 % from 1979 to 2002. Population pressure, inheritance right, and the practice of egalitarian principle take the responsibility for this marked reduction. In between 2002 and 2007, the arable land size per person began to increase from 0.14 ha/person to 0.137ha/ person. This might be due to the declaration of government to allow lease right in the rural Ethiopia.

Ethiopia has been late to declare the rights of peasants towards their farm land than China. The average arable land size per person has been always greater in Ethiopia than China. However, China practiced intensive farming system and answering the question of scholars “who will feed the Chinese?” The vast mutualistic relationship between agriculture and industry sector has played a substantial role to boost up the small scale farming system productivity of China. To this point defining and finding the basic responsibility of agriculture and industry sector could be the backbone of alleviating low subsistence productivity of huge peasants in Ethiopia. Moreover, studies reported Ethiopia has a problem of improper utilization of arable land. Therefore, the government needs to grasp the hotspot of arable land productivity to lead millions of rural poor out of poverty.

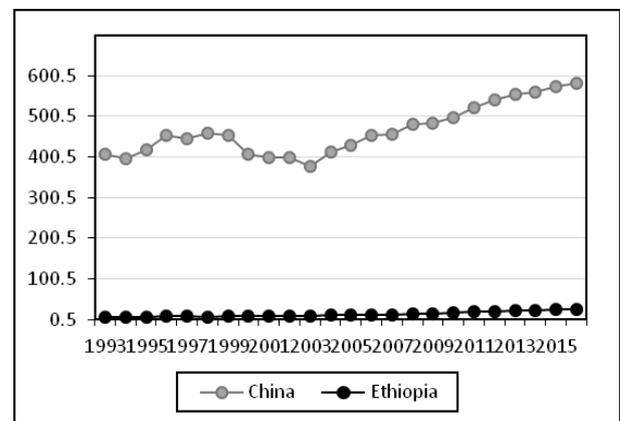


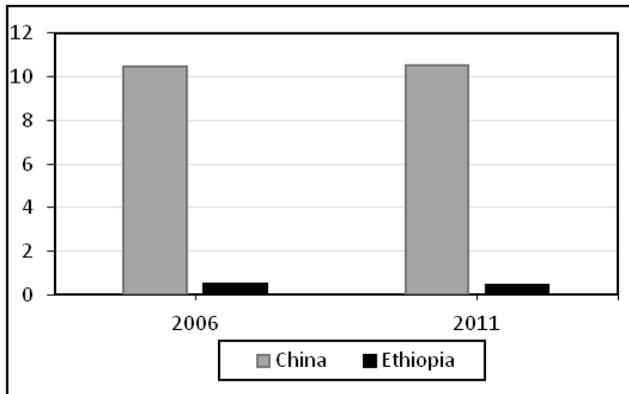
Figure 9. China and Ethiopia cereal total production (Million tons).<sup>10</sup>

**3.1.6. Agricultural Infrastructure Development (Irrigation) in Ethiopia and China**

The success and failure of increasing agricultural productivity determined by the proper expansion of rural infrastructure including road, telecommunication, electricity, irrigation facility, etc. By supporting this view, [113,129], in their study of infrastructure development in china infer that infrastructure development explaining agricultural productivity difference among regions. As a water shortage

<sup>10</sup> The author retrieved the data from WorldBank and FAO database <https://data.worldbank.org/indicator/AG.PRD.CREL.MT?locations=CN-ET> <http://www.fao.org/faostat/en/?#data/FS>.

country, especially with industrialization, urbanization and agriculture modernization, the contradiction between water supply and demand will become increasingly prominent, the development of agricultural water-saving irrigation improve the effective utilization of agricultural irrigation water, and the government take it as an inevitable direction for the development of agricultural modernization.



**Figure 10.** China and Ethiopia Agricultural irrigated land (% of total agricultural land) one paper <sup>11</sup>

Since the 1980s, the irrigation and drainage industry has received more attention in China and has achieved great results. This has greatly improved the agricultural production, living conditions of farmers and the rural ecological environment, enhanced the ability of agriculture to resist natural disasters, and lifted hundreds of millions of farmers out of poverty. The income steadily increased, and the main agricultural products such as grain were basically self-sufficient, which made a tremendous contribution to the sustained, rapid and coordinated economic and social development.

Under the circumstances of large population, little cultivated land, and shortage of water resources, it is necessary to ensure that the food of more than 1.3 billion people is basically self-supporting, and it also provides support for adjusting the agricultural structure, increasing farmers' income, promoting agricultural and rural modernization, and protecting and improving the ecological environment. This is a huge challenge for the irrigation and drainage business, and it is also a rare opportunity for development.

The 1978 rural reform primarily aimed to increase grain productivity to balance the national grain demand and to reduce pressure from dependency grain importing. To achieve this aim, rain-fed agriculture solely couldn't be a solution. Instead, China developed strategies on the utilization of surface water and ground water resource. The huge population growth, the changing climate, competition on global agricultural product market and pro-poor strategies trigger China to speed up irrigation technology in the rural area. The high water demand rice production also pushes farmer's decision to expand proper utilization of surface and ground water [130]. However, there are always diversified problem with the changing environment regarding irrigation infrastructure development

[131]. China take it as a no choice option and keep struggling with the ultimate objective of modernizing agriculture by following research based policy adoption process. The research institutions, talent cultivation, technology development, technology promotion system and the technical exchange of irrigation lead China's agriculture irrigation experienced a process from artificial irrigation to mechanical automatic irrigation, from the traditional irrigation technology to the use of water resources on the roots of crop water-saving technology.

### 3.1.7. Rural Development Research and Extension in Ethiopia and China

The transfer and exchange of knowledge, skill, technology, attitude through research and extension service has been one of the indispensable political and organizational tool to enhance social and economic development of rural people in Ethiopia and China. Particularly, by following the principle of problem-solving educational approach, rural extension service provides practical information aimed at alleviating poverty and advancing community involvement in the process of development. The 1980s rural reform of China not only is essential to agricultural production and rural development, but also has great impact on agricultural extension. The influence of agricultural extension to educate farmers to efficiently and effectively produce in the parcel of land, to use their right offered from household responsibility system, and to apply policies enacted by communist party of China was significant. For example, the cereal yield increased from 2,791.8 kg/ha to 6,029.2kg/ha in 1978 and 2016, respectively. This is basically due to the transfer of production technology directly to farmers through research and extension service. The institutional barriers related to the application of rural development extension center was more or less null. China also transformed from supply center to demand center extension service to target and tackle market barriers.

In Ethiopia, agriculture and rural development extension have been practiced with the aim of improving small holder agricultural productivity and expanding market access in rural area. The majority of rural development extension service have been funded by foreign non-governmental organization and implemented with the facilitator of ministry of agriculture of Ethiopia. Most of the technology transfer has been unsuccessful due to lack of pre-research action, lack of skilled man power and diverse institutional barriers. As compared to China, the productivity of cereal per hectare of land is very low. For example, in 2016, the cereal production was 2,484 kg/ha whereas in China 6029.2 kg/ha, approximately three times more than Ethiopia. Therefore, the government of Ethiopia need to practice research based extension service to improve the productivity of land by practicing input intensive production approach to alleviate national food insecurity problem.

## 4. Conclusion and Recommendation

Research-based Rural Development Policy making process has long lasting solution to alleviate complicated and chronic rural poverty and promote long-lasting rural

<sup>11</sup>The author retrieved the data from FAO and WorldBank database <https://data.worldbank.org/indicator/AG.LND.IRIG.AG.ZS?locations=CN-ET>  
<http://www.fao.org/faostat/en/?#data/FS>

prosperity. However, most of rural development related policies in Ethiopia were directly imitated and implemented from other countries without any consideration of environmental, political, economical and socio-cultural factors. Ethiopia is a country where 83 nation & nationalities have their own socio-cultural constituents. This implies that even it is too hard to apply the same RDPs in the whole nation, given that the diversified agro-ecological zone makes the situation more complicated. Therefore, the government must adopt research based RDPs by taking advantage of indigenous property into consideration.

Bottom-up demand oriented and top-down supply strategical reform particularly in the agriculture and rural development sector need to be conducted in Ethiopia as China did in the early 1980s. This can alleviate all the institutional barriers which hinder agricultural growth and rural development in the country. Poor market structure and sympathetic market environment take all the responsibility for being what economy of rural people seems like today. Even the national economy didn't benefit from the potential of agriculture due to such poor market structure. This is exactly why the whole economy of China could benefit from agricultural and rural development. Moreover, the farmers don't have direct relationship with the top level government institution. In order to get a response for their multi-causal seasonal response, it takes long time. With this reform the agriculture institution needs to transfer from political game to development movement.

In order to eradicate food insecurity problem in Ethiopia, a food-production-oriented agricultural development strategy and relevant measures need to be adopted at national to grass-root level. China has set up a package of policy systems and relevant measures to ensure a food-production-oriented agricultural development in terms of land tenure, price policy, investment in science and technology, subsidies to agriculture, agricultural infrastructure, and rural financial structure improvement. Alleviating export oriented agricultural productivity policy has a vital role specially to achieve undernourishment in the nation.

The absence of endogenous agricultural development strategies has led to a heavy reliance on external supports and a weak capacity of developing and implementing their own agricultural policies. The agricultural growth in Ethiopia has sadly been in stagnation. The government needs to design fishing rural development strategies than taking the fish from outsiders. All the rural development strategies need to be focused on the manipulation and cultivation of internal skilled labor and self-mobilized science and technologies to achieve long last rural prosperities.

## References

- [1] Sigrid Nagoda & Andrea J. Nightingale. (2017). Participation and Power in Climate Change Adaptation Policies: Vulnerability in Food Security Programs in Nepal. *World Development*, 100, 85-93.
- [2] Hawkesworth, S., Dangour, A., Johnston, D., Lock, K., Poole, Rushton., Waage, J. (2010). Feeding the world healthily: The challenges of measuring the effects of agriculture on health. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 365(1554), 3083-3097.
- [3] Otsuka, K. (2013). Food insecurity, income inequality, and the changing comparative advantage in world agriculture. *Agriculture Economics*, 44, 7-18.
- [4] Food and Agriculture Organization of the United Nations (FAO). (2009). The state of food and agriculture: Livestock in the balance. <http://www.fao.org/docrep/012/i0680e/i0680e.pdf>.
- [5] World Watch. (2004). Population and its discontents. *World Watch Magazine*, September/October 2004, 17, No. 5. <http://www.worldwatch.org/system/files/EP175D.pdf>.
- [6] Food and Agriculture Organization of the United Nations (FAO). (2014). The state of food and agriculture: Innovation in family farming. <http://www.fao.org/3/a-i4040e.pdf>.
- [7] Thomas Glauben, Thomas Herzfeld, Scott Rozelle and Xiaoping Wang. (2012). Persistent Poverty in Rural China: Where, Why, and How to Escape? *World Development*, 40, 784-795.
- [8] Ward, Patrick S. (2016). Transient poverty, poverty dynamics, and vulnerability to poverty: An empirical analysis using a balanced panel from rural China. *World development*, 78, 541-553.
- [9] Irina Ramnicean & Robert Ackrill. (2007). EU rural development policy in the new member states: Promoting multifunctionality? *Journal of Rural Studies*, 23, 416-429.
- [10] John M. Cohen; Norman T. Uphoff. (1980). Participation's place in rural development: Seeking clarity through specificity. *World Development*, 8, 213-235.
- [11] Caroline Ashly, Simon Maxwell. (2002). Rethinking rural development. *Development Policy Review*, 19, 395-425.
- [12] Anriquez, G., & Stamoulis, K. (2007). Rural development and poverty reduction: is agriculture still the key? ESA Working Paper No. 07-02. <http://www.fao.org/es/esa>.
- [13] Van der Ploeg, J. D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., ... & Ventura, F. (2000). Rural development: from practices and policies towards theory. *Sociologia ruralis*, 40(4), 391-408.
- [14] Kay, C. (2009). Development strategies and rural development: exploring synergies, eradicating poverty. *The Journal of Peasant Studies*, 36(1), 103-137.
- [15] Raymond E. Owens. (1987). An overview of agriculture policy: Past, present and future. *American Economic Review*.
- [16] Central Statistical Agency (CSAE) & the World Bank. (2013). Ethiopia Rural Socioeconomic Survey report.
- [17] Dixon, A. B. (2005). Wetland sustainability and the evolution of indigenous knowledge in Ethiopia. *The Geographical Journal*, 171(4), 306-323.
- [18] Asfaw, S., Shiferaw, B., Simtowe, F., & Haile, M. G. (2011). Agricultural technology adoption, seed access constraints and commercialization in Ethiopia. *Journal of Development and Agricultural Economics*, 9, 436-477.
- [19] Ejigu, K., Gebey, T., & Preston, T. R. (2009). Constraints and prospects for apiculture research and development in Amhara region, Ethiopia. *Livestock Research for Rural Development*, 21(10), 172.
- [20] Belete, A., Dillon, J. L., & Anderson, F. M. (1991). Development of agriculture in Ethiopia since the 1975 land reform. *Agricultural Economics*, 6(2), 159-175.
- [21] Tizale, C. Y. (2007). The dynamics of soil degradation and incentives for optimal management in the Central Highlands of Ethiopia (Doctoral dissertation, University of Pretoria).
- [22] Amsalu, A., Stroosnijder, L., & de Graaff, J. (2007). Long-term dynamics in land resource use and the driving forces in the Beressa watershed, highlands of Ethiopia. *Journal of Environmental management*, 83(4), 448-459.
- [23] Platteau, J. P. (1996). Physical infrastructure as a constraint on agricultural growth: The case of sub-Saharan Africa. *Oxford Development Studies*, 24(3), 189-219.
- [24] Poulton, C., Kydd, J., & Dorward, A. (2006). Overcoming market constraints on pro-poor agricultural growth in Sub-Saharan Africa. *Development policy review*, 24(3), 243-277.
- [25] Aturupane, H., Glewwe, P., & Isenman, P. (1994). Poverty, human development, and growth: an emerging consensus? *The American Economic Review*, 84(2), 244-249.
- [26] Andreas, J., & Zhan, S. (2016). Hukou and land: market reform and rural displacement in China. *The Journal of Peasant Studies*, 43(4), 798-827.

- [27] Central Intelligence Agency (CIA). (2018). Land use of Ethiopia and China. The World Factbook. <https://www.cia.gov/library/publications/the-world-factbook/fields/2097.html>.
- [28] Worldometers. (2017b). China population. Elaboration of data by United Nations, Department of Economics and Social Affairs, Population Division. <http://www.worldometers.info/world-population/china-population/>.
- [29] Worldometers. (2017a). Ethiopia population. Elaboration of data by United Nations, Department of Economics and Social Affairs, Population Division. <http://www.worldometers.info/world-population/ethiopia-population/>.
- [30] Ravallion, M. (2009). Are there lessons for Africa from China's success against poverty?. *World Development*, 37(2), 303-313.
- [31] Brautigam, D., & Tang, X. (2012). An overview of Chinese agricultural and rural engagement in Ethiopia. IFPRI Discussion Paper 01185, Development Strategy and Governance Division, Washington DC: International Food Policy Research Institute.
- [32] Liu, Q. (2012). The environment quality and economics growth in China-A literature review and discussion.
- [33] Johnston, B. F., & Mellor, J. W. (1961). The role of agriculture in economic development. *The American Economic Review*, 51(4), 566-593.
- [34] Belay, K., & Abebaw, D. (2004). Challenges Facing Agricultural Extension Agents: A Case Study from South-western Ethiopia. *African Development Review*, 16(1), 139-168.
- [35] Guobin, L. (1999). Soil conservation and sustainable agriculture on the Loess Plateau: challenges and prospects. *Ambio*, 663-668.
- [36] World Bank, 2015. Country Data, "Agriculture, Value Added (% of GDP)". <http://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=ET> and "Rural Population".
- [37] WorldBank, 2016. Country based rural population percentage. <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=ET>.
- [38] Ministry of Agriculture and Rural Development (MARD). (2009). Agriculture investment potential of Ethiopia. [https://features.hrw.org/features/omo\\_2014/docs/ethiopian\\_investment\\_brochure.pdf](https://features.hrw.org/features/omo_2014/docs/ethiopian_investment_brochure.pdf).
- [39] Cheng. (2005). China's agriculture policies and rural development. Institute of Market Economy, Development Research Center of the State Council of China. <http://www.oecd.org/tad/agricultural-policies/37700749>.
- [40] China statistical year book (CSYB). (2015). The growth of per capita income of rural household in China. <http://www.chinabookshop.net/china-statistical-yearbook-2015-p-22197.html>.
- [41] Studies, L. T. (2002). Land tenure and rural development. *Land administration*, (3).
- [42] Feder, G., & Feeny, D. (1991). Land tenure and property rights: Theory and implications for development policy. *The World Bank Economic Review*, 5(1), 135-153.
- [43] Mulatu Wubneh. (2018). Policies and praxis of land acquisition, use, and development in Ethiopia. *Land use policy*, 73, 170-183.
- [44] Husen Ahmed Tura. (2018). Land rights and land grabbing in Oromia, Ethiopia. *Land use policy*, 70, 247-255.
- [45] Mintewab Bezabih, Gunnar Kohlin, Andrea Mannberg. (2011). Trust, tenure insecurity, and land certification in rural Ethiopia. *The journal of socio-economics*, 40, 833-843.
- [46] Sosina Bezu & Stein Holden. (2014). Demand for second-stage land certification in Ethiopia: Evidence from household panel data. *Land use policy*, 41, 193-205.
- [47] Li Huang. (2018). From benign unconstitutionality to delegated legislation: Analysis on the ways for legal reform of China rural collective construction land circulation. *Habitat international*, 74, 36-47.
- [48] Lei Feng, Helen Bao, & Yan Jiang. (2014). Land reallocation reform in rural China: A behavioral economics perspective. *Land use policy*, 41, 246-259.
- [49] Ang Li, Jianguo Wu, Xueyao Zhang, Jianguo Xue, Zhifeng Liu, Xingguo Han & Jianhui Huang. (2018). China's new rural "separating three property rights" land reform results in grassland degradation: Evidence from Inner Mongolia. *Land use policy*. 71, 170-182.
- [50] Xuefeng Yuan, Wenpeng Du, Xindong Wei, Yue Ying, Yajing Shao, Rui Hou. (2018). Quantitative analysis of research on China's land transfer system. *Land use policy*. <https://www.sciencedirect.com/science/article/pii/S026483771730368X>.
- [51] James Kai-sing Kung, Xiaogang Wu, Yuxiao Wu. (2012). Inequality of land tenure and revolutionary outcome: An economic analysis of China's land reform of 1946-1952. *Explorations of economic history*. 49, 482-497.
- [52] Meina Cai. (2016). Land for welfare in China. *Land use policy*, 55, 1-12.
- [53] Liangliang Gao, Dingqiang Sun, Jikun Huang. (2017). Impact of land tenure policy on agricultural investments in China: Evidence from a panel data study. *China economic review*, 45, 244-252.
- [54] Lin, J. Y. (1992). Rural reforms and agricultural growth in China. *The American economic review*, 34-51.
- [55] Prosterman, R. (2001). Land tenure, food security and rural development in China. *Development*, 44(4), 79-84.
- [56] Fureng, D. (1992). The Rural Economic System and Agricultural Modernization, 1949-78. In *Industrialization and China's Rural Modernization* (pp. 13-22). Palgrave Macmillan, London.
- [57] Walker, K. R. (1966). A Tenth Anniversary Appraisal: Collectivization in Retrospect: The "Socialist High Tide" of Autumn 1955-Spring 1956. *The China Quarterly*, 26, 1-43.
- [58] Crook, F. W. (1978). The commune system in the Peoples Republic of China 1963-74.
- [59] Ho, P. (1996). Ownership and control in Chinese rangeland management since Mao: the case of free-riding in Ningxia (pp. 99-132). *Odi, Pastoral Development Network*.
- [60] Sklair, L. (1979). Relations of production, productive forces and the mass line in the formation of the rural people's communes in China. *The Journal of Peasant Studies*, 6(3), 311-341.
- [61] Du, R. (2009). 4 The course of China's rural reform. *Governing Rapid Growth in China: Equity and Institutions*, 78, 35.
- [62] Glendinning, A. (2014). The Problem of the Relationship between Land for Construction and Farmland in China's Socio-Economic Development. *Rangsit Journal of Social Sciences and Humanities*, 1.
- [63] Tilt, B. (2008). Smallholders and the 'household responsibility system': adapting to institutional change in Chinese agriculture. *Human Ecology*, 36(2), 189-199.
- [64] Zhao, Y. (2003). The role of migrant networks in labor migration: The case of China. *Contemporary Economic Policy*, 21(4), 500-511.
- [65] Xiao Jun, C. H. E. N. (2010). On the System and Operational Mechanism of Rural Land Ownership in Post-Agriculture Tax Period: Based on the Investigation of Rural Land Legislation in 10 Provinces. *Science of Law (Journal of Northwest University of Political Science and Law)*, 1, 010.
- [66] Joireman, S. F. (2000). Property Rights and Political Development in Ethiopia and Eritrea 1941-74. Ohio University Press.
- [67] Aberra Jemberre. 2000. An Introduction to the Legal History of Ethiopia: 1434-1974. Münster, Hamburg, London: LIT-Verlag.
- [68] Pausewang, S. 1983. Peasants, Land and Society. A Social History of Rural Reform in Ethiopia. München, Köln, London: Weltforum Verlag.
- [69] Cohen, J. M., & Koehn, P. M. (1977). Rural and urban land reform in Ethiopia. *The Journal of Legal Pluralism and Unofficial Law*, 9(14), 3-62.
- [70] Kebede, T. A. (1998). *Tenants of the State': The Limitations of Revolutionary Agrarian Transformation in Ethiopia, 1974-1991* (Vol. 24). Department of Sociology, Lund University.
- [71] Crewett, W., & Korf, B. (2008). Ethiopia: Reforming land tenure. *Review of African Political Economy*, 35(116), 203-220.
- [72] Holden, S. T., Deininger, K., & Ghebru, H. (2011). Tenure insecurity, gender, low-cost land certification and land rental market participation in Ethiopia. *The Journal of Development Studies*, 47(1), 31-47.
- [73] Deininger, K., & Jin, S. (2006). Tenure security and land-related investment: Evidence from Ethiopia. *European Economic Review*, 50(5), 1245-1277.
- [74] Deininger, K., Ali, D. A., Holden, S., & Zevenbergen, J. (2008). Rural land certification in Ethiopia: Process, initial impact, and implications for other African countries. *World Development*, 36(10), 1786-1812.

- [75] Belayneh, B. Z. (2015). Analyses of Agricultural Development led Industrialization (ADLI) Policy's Effectiveness in Ethiopia. *Journal for studies in Management and Planning*, 1(11).
- [76] Giovanni, L. B., & Paulo, L. (2005). Impacts of Policies on Poverty: The Definition of Poverty.
- [77] Mundial, B. (2016). Poverty and shared prosperity 2016: taking on inequality. *Washington DC: Banco Mundial doi*, 10, 978-1.
- [78] Lazarus, W. C. (1958). A Poverty Point complex in Florida. *The Florida Anthropologist*, 11(2), 23-32.
- [79] Ford, J. A. (1954). Additional notes on the Poverty Point site in northern Louisiana. *American Antiquity*, 19(3), 282-285.
- [80] Gustafson, B., & Shi, L. (2004). Expenditures on education and health care and poverty in rural China. *China Economic Review*, 15(3), 292-301.
- [81] Liu, Y., & Wu, F. (2006). The state, institutional transition and the creation of new urban poverty in China. *Social Policy & Administration*, 40(2), 121-137.
- [82] Gustafsson, B., & Sai, D. (2009). Temporary and persistent poverty among ethnic minorities and the majority in rural China. *Review of Income and Wealth*, 55(s1), 588-606.
- [83] Heilig, G. K., Zhang, M., Long, H. L., Li, X. B., & Wu, X. Q. (2006). Poverty alleviation in China: A lesson for the developing world? *Geographische Rundschau*, 4-13.
- [84] Shujie, Y., Zhang, Z., & Hammer, L. (2004). Growing inequality and poverty in China. *China Economic Review*, 15(2), 145-163.
- [85] Jalan, J., & Ravallion, M. (2000). Is transient poverty different? Evidence for rural China. *The Journal of Development Studies*, 36(6), 82-99.
- [86] Meng, X. (2001). The informal sector and rural-urban migration-A Chinese case study. *Asian Economic Journal*, 15(1), 71-89.
- [87] Angang, H., Linlin, H., & Zhixiao, C. (2005). China's economic growth and poverty reduction (1978-2002). In *India's and China's Recent Experience with Reform and Growth* (pp. 59-90). Palgrave Macmillan, London.
- [88] De Janvry, A., Sadoulet, E., & Zhu, N. (2005). The role of non-farm incomes in reducing rural poverty and inequality in China.
- [89] Ravallion, M. (2011). A comparative perspective on poverty reduction in Brazil, China, and India. *The World Bank Research Observer*, 26(1), 71-104.
- [90] Ravallion, M., & Chen, S. (2007). China's (uneven) progress against poverty. *Journal of development economics*, 82(1), 1-42.
- [91] Glauben, T., Herzfeld, T., Rozelle, S., & Wang, X. (2012). Persistent poverty in rural China: Where, why, and how to escape? *World Development*, 40(4), 784-795.
- [92] Zhao, Z. (2006). Income inequality, unequal health care access, and mortality in China. *Population and Development Review*, 32(3), 461-483.
- [93] Wu, F. (2004). Urban poverty and marginalization under market transition: the case of Chinese cities. *International Journal of Urban and Regional Research*, 28(2), 401-423.
- [94] Haddad, L., Ruel, M. T., & Garrett, J. L. (1999). Are urban poverty and undernutrition growing? Some newly assembled evidence. *World development*, 27(11), 1891-1904.
- [95] Yang, D. T. (1999). Urban-biased policies and rising income inequality in China. *American Economic Review*, 89(2), 306-310.
- [96] Zhang, K. H., & Shunfeng, S. (2003). Rural-urban migration and urbanization in China: Evidence from time-series and cross-section analyses. *China Economic Review*, 14(4), 386-400.
- [97] Dercon, S., & Krishnan, P. (2000). Vulnerability, seasonality and poverty in Ethiopia. *The Journal of Development Studies*, 36(6), 25-53.
- [98] Bigsten, A., & Shimeles, A. (2008). Poverty transition and persistence in Ethiopia: 1994-2004. *World development*, 36(9), 1559-1584.
- [99] Krishna, A. (2007). For reducing poverty faster: Target reasons before people. *World development*, 35(11), 1947-1960.
- [100] Arne Bigsten & Abebe Shimeles. (2008). Poverty Transition and Persistence in Ethiopia: 1994-2004. *World Development*, ISSN: 0305-750X, Vol: 36, Issue: 9, Page: 1559-1584.
- [101] Dercon, S., & Christiaensen, L. (2011). Consumption risk, technology adoption and poverty traps: Evidence from Ethiopia. *Journal of development economics*, 96(2), 159-173.
- [102] Dercon, S. (2004). Growth and shocks: evidence from rural Ethiopia. *Journal of Development Economics*, 74(2), 309-329.
- [103] Husmann, C. (2016). Marginality as a Root Cause of Poverty: Identifying Marginality Hotspots in Ethiopia. *World Development*, 78, 420-435.
- [104] Santos, P., & Barrett, C. (2006). Informal insurance in the presence of poverty traps: Evidence from southern Ethiopia.
- [105] Bogale, A., Hagedorn, K., & Korf, B. (2005). Determinants of poverty in rural Ethiopia. *Quarterly Journal of International Agriculture*, 44(2), 101-120.
- [106] Bevan, P., & Joireman, S. F. (1997). The perils of measuring poverty: identifying the 'poor' in rural Ethiopia. *Oxford Development Studies*, 25(3), 315-343.
- [107] Deaton, A. (2010). Price indexes, inequality, and the measurement of world poverty. *American Economic Review*, 100(1), 5-34.
- [108] Tache, B., & Sjaastad, E. (2010). Pastoralists' conceptions of poverty: An analysis of traditional and conventional indicators from Borana, Ethiopia. *World Development*, 38(8), 1168-1178.
- [109] Skoufias, E., & Quisumbing, A. R. (2005). Consumption insurance and vulnerability to poverty: A synthesis of the evidence from Bangladesh, Ethiopia, Mali, Mexico and Russia. *The European journal of development research*, 17(1), 24-58.
- [110] Kedir, A. M. (2005). Understanding urban chronic poverty: crossing the qualitative and quantitative divide. *Environment and Urbanization*, 17(2), 43-54.
- [111] Deyessa, N., Berhane, Y., Alem, A., Hogberg, U., & Kullgren, G. (2008). Depression among women in rural Ethiopia as related to socioeconomic factors: a community-based study on women in reproductive age groups. *Scandinavian journal of public health*, 36(6), 589-597.
- [112] Bevan, P. (2005). Studying Multi-Dimensional Poverty in Ethiopia: towards a Q-Integrated Approach'. *Q-squared Working Paper series*, 15.
- [113] Shenggen Fan, Linxiu Zhang, and Xiaobo Zhang. (2004). Reforms, Investment, and Poverty in Rural China. *Economic Development and Cultural Change* 52, no. 2 (January 2004): 395-421.
- [114] Alan de Brauw, MH Suryanarayana. (2015). "Linkages between poverty, food security and undernutrition: evidence from China and India", *China Agricultural Economic Review*, 7, 655-667.
- [115] Chan, K. W., & Zhang, L. (1999). The hukou system and rural-urban migration in China: Processes and changes. *The China Quarterly*, 160, 818-855.
- [116] Mullan, K., Grosjean, P., & Kontoleon, A. (2011). Land tenure arrangements and rural-urban migration in China. *World Development*, 39(1), 123-133.
- [117] Dorosh, P., & Thurlow, J. (2014). Can cities or towns drive African development? Economy wide analysis for Ethiopia and Uganda. *World Development*, 63, 113-123.
- [118] Haggblade, S., Hazell, P., & Reardon, T. (2010). The rural non-farm economy: Prospects for growth and poverty reduction. *World development*, 38(10), 1429-1441.
- [119] Reardon, T., Taylor, J.E., Stamoulis, K., Lanjouw, P. and Balisacan, A., 2000. Effects of non-farm employment on rural income inequality in developing countries: an investment perspective. *Journal of agricultural economics*, 51(2), pp.266-288.
- [120] Tao Yang, D., & Zhou, H. (1999). Rural-urban disparity and sectoral labour allocation in China. *The Journal of Development Studies*, 35(3), 105-133.
- [121] Yang, D. T. (2004). Education and allocative efficiency: household income growth during rural reforms in China. *Journal of Development Economics*, 74(1), 137-162.
- [122] Rozelle, S. (1994). Rural industrialization and increasing inequality: Emerging patterns in China's reforming economy. *Journal of comparative economics*, 19(3), 362-391.
- [123] Gustafsson, B., & Shi, L. (2002). Income inequality within and across counties in rural China 1988 and 1995. *Journal of Development Economics*, 69(1), 179-204.
- [124] Sicular, T., Ximing, Y., Gustafsson, B., & Shi, L. (2007). The urban-rural income gap and inequality in China. *Review of Income and Wealth*, 53(1), 93-126.
- [125] Yip, W., Subramanian, S. V., Mitchell, A. D., Lee, D. T., Wang, J., & Kawachi, I. (2007). Does social capital enhance health and well-being? Evidence from rural China. *Social science & medicine*, 64(1), 35-49.
- [126] Jalan, J., & Ravallion, M. (1999). Are the poor less well insured? Evidence on vulnerability to income risk in rural China. *Journal of development economics*, 58(1), 61-81.
- [127] Kinfe, A., Chilot, Y. and Rajan, S., 2012. Effect of small-scale irrigation on the income of rural farm households: the case of Laelay Maichew district, central Tigray. *Ethiopia. J. Agric. Sci*, 7(1).

- [128] Andersson, C., Mekonnen, A. and Stage, J., 2011. Impacts of the Productive Safety Net Program in Ethiopia on livestock and tree holdings of rural households. *Journal of Development Economics*, 94(1), pp.119-126.
- [129] Démurger, S. (2001). Infrastructure development and economic growth: an explanation for regional disparities in China? *Journal of Comparative economics*, 29(1), 95-117.
- [130] Li, Y., & Barker, R. (2004). Increasing water productivity for paddy irrigation in China. *Paddy and Water Environment*, 2(4), 187-193.
- [131] Yang, H., Zhang, X., & Zehnder, A. J. (2003). Water scarcity, pricing mechanism and institutional reform in northern China irrigated agriculture. *Agricultural Water Management*, 61(2), 143-161.