International Scholars Journals

African Journal of Agricultural Marketing ISSN: 2375-1061 Vol. 11 (2), pp. 001-005, February, 2023. Available online at www.internationalscholarsjournals.org © International Scholars Journals

Full Length Research Paper

Contextual analysis of *Teff* marketing: empirical evidence from Halaba, Lomie, Shenkora na Minjar and Tahtay Maichew

Larry Williams and Kelvin Smith

Accepted 11 February, 2023

Abstract

Grain marketing in Ethiopia is important for the agricultural sector as it is the largest of all the agricultural markets, and it involves a large number of participants. Since the adoption of the new economic policy in 1991 in Ethiopia, agricultural markets have been reformed and prices of commodities are determined through market mechanisms. Though *Teff* marketing was practiced for decades in the study areas, and there are studies on the quantitative aspects of the *Teff* value chain, it is not well supported by qualitative research. Thus, the aim of the study is to qualitatively and systematically examine the situation of *Teff* marketing in Ethiopia from smallholder farmers' and stakeholders' perspective.

The researchers used a multistage sampling to select top *Teff* producing regions, districts, and *Kebeles.*In this regard, four *Teff* producing districts were purposively selected from four different regions. Moreover, a total of eight *Kebeles* were purposively selected from the four districts. In gathering empirical data, about 84 focus group participants were purposively selected from eight *Kebeles.* Moreover, about 25 key informants were purposively selected from district, regional, federal level officials, and wholesalers. A systematic review of scientific journals and documents were used to assess previous studies. Content analysis was used to code and categorize the qualitative data and to generate the key themes.

The survey result indicates that *Teff* is a cash crop value. The government is following free market economy and farmers are free to sell their crops. However, the *Teff* marketing in Ethiopia largely relies on traditional practices and the farmers are not getting benefits as much as they deserve to be. Thus, it is recommended that the government should create an enabling environment for the participation of farmers in *Teff* marketing and develop strategies for modernizing the market.

Keywords: Ethiopia, cooperatives, government, price, smallholder farmers, Teff marketing, transport facilities

1. Introduction

In many poor developing countries, agriculture constitutes the backbone of the economy (FAO 2012). According to Andrew, Jonathan, Jamie and Ian (2003), agriculture is an important part of the livelihoods of many poor people, and it is frequently argued that agricultural growth is a fundamental pre-requisite for widespread poverty reduction. In this regard, a large proportion of the small and marginal farmers gain

their livelihoods through production on small pieces of land whereby majority of families, in both the farm and non-farm sectors, derive their livelihoods from agriculture (Acharya 2006). Strengthening smallholder agriculture is argued to remain important strategy for economic development and poverty reduction in developing countries but its development is challenged by the need for institutional innovations to overcome market failures (World Bank (2007) and Hazell, Poulton, Wiggins &Dorward (2010)).

In Sub-Saharan Africa, subsistence agricultural producers face several barriers to gain access to markets and productive assets (Alene, Manyong, Omanya, Mignouna, Bokanga, & Odhiambo, 2007). The lack of access and absence of required storage facilities leads to local price reduction at harvest time because all the poor farmers are obliged to sell their produce at the same time to generate income (Burney, &Naylor 2011). In the process of selling the agricultural products, farmers face many challengessuch as weak market linkages (farmers are unable to take advantage of the deficit markets because the markets are poorly coordinated), asymmetry of information (transacting parties do not have equal information), high transaction costs (costs associated with information, negotiation and monitoring and costs of transferring the products or inputs being traded such as transportation costs and the time spent delivering the product to the market) (Bihon 2015).

The vast majority of households in Ethiopia live in rural areas and agriculture is still the main economic activity and they earn their livelihoods primarily from agriculture. In this regard, agriculture in Ethiopia is dominated by smallholder farming households that cultivated 94percent of the national cropped area in 2013/14 (FantuNisrane*et al* 2015). The agricultural sector, which is stunned by subsistence smallholder farmers, is the primary source of livelihood for the majority of the population and the basis of the national economy (Azeb*et al* 2017). They rarely produce for the market and are highly dependent on climate for their subsistence (Efa*et al* 2017).

In order to improve the performance of the agricultural sector in Ethiopia, different strategies have been adopted since 1970s. According to Desalegn *et al* (1998) most strategies have focused on increasing agricultural productivity at the farm level through the dissemination of improved production technologies, while the marketing aspect of agriculture was relatively neglected. It is only recently that the country adopted a market reform policy with the objective of improving agricultural market performance and reducing food insecurity through enhancing market efficiency (Desalegn *et al* 1998).

The Ethiopian Economics Association (EEA) (2005) indicated that since the adoption of the new economic policy in 1991 in Ethiopia, agricultural markets have been reformed and prices of commodities are determined through market mechanisms. The PASDEP (Plan for Accelerated and Sustained Development to End Poverty)plan (MoFED 2006) focuses on the development of agriculture both as a source of production for direct consumption and as raw materials for industrial processing. The plan is to accelerate the transformation from subsistence to a more business/market-oriented agriculture. As a result of such favorable conditions, a large number of small holder producers are growing a variety of cereal products for the local market.

Marketing is not simply an extension of the production process, but as mentioned by Glahe referring the work of Adam Smith in his text The Wealth of Nations (1776), said that: “consumption is the sole end purpose of all production, and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer” (Glahe 1978). Marketing refers to the series of services involved in moving a product (or commodity) from the point of production to the point of consumption (Enibe, Chidebelu et al. 2008; Abdullah and Hossain 2013). Agricultural marketing is defined as the performance of all business activities involved in the flow of food products and services from the point of initial agricultural production until they are in the hands of consumers (Meulenberg 1997; Siskos, Matsatsinis et al. 2001). In this regard, the participation of producers is crucial for the success of agricultural marketing.Market participation refers to the extent to which a household participates in the market as a seller (Jagwe*et al* 2010). Participation means any situation which involves the exchange of goods for money, regardless of location.

The findings of Seneshaw (2013) indicates that grain marketing in Ethiopia is important for the agricultural sector for two reasons: (1) It is the largest of all the agricultural markets, based onvolume of output and the geographical area covered; and (2) it involves a large number of participants in production, trade, transportation, storage, and retail. In this regard, agricultural growth can promote growth in food production that can raise real incomes for the poor by reducing food prices (Diao, Hazell et al. 2010). Considering the marketing of agricultural commodities in Ethiopia, one of the major cereal crops is *Teff*whereby it involves more than 6.7 *Teff* producers and more than 50 million consumers.

Teff (Eragrostistef) is the most important cereal in terms of both production and consumption in Ethiopia (FAO 2015). It is a major staple food crop in Ethiopia, as measured by a number of indicators such as acreage, harvesting and consumption. Research results of Demeke and Marcantonio (2013) indicated that *Teff* accounts for the largest share of the cultivated area (28.5% in 2011). It is grown by 6.7 million smallholder households in Ethiopia and is cultivated on more than 3 million hectares of land, which represents one-third of total cereal acreage and about one fifth of the gross cereal grain production with production of 52.8 million quintals of *Teff* crops (CSA 2017/18).This higher and relatively more stable price is one of the main reasons for growing *Teff*, primarily as the source of cash crops (Habtegebrial and Singh 2006). However, due to inefficiency in marketing and associated value chain problems, the country is not benefiting from *Teff* marketing and its opportunities.

The marketing system in which the actors participate and operate influences the incentives of the participants with different implications on the performance of the sector. The marketing system is important for producers, traders, and consumers make and it necessary to study the marketing system of the crop both for economic and political reasons (Getnet 2007; Minten, Tamru et al. 2013; Abraham 2015). Considering its market value which is often two or three times higher than maize (the grain with the largest volume of production), *Teff* covers the largest share of the total value of cereal production.

Teff marketing systems are complex combinations of activities, functions and relations (production, handling, storage, transport, processing, packaging, wholesaling, retailing, etc.) that enable the country to meet its food requirements. These activities are performed by different economic agents such as food producers (farmers), assemblers, importers, transporters, wholesalers, retailers, processors, shopkeepers, street vendors, providers of services (such as credit, storage, information and extension), packaging suppliers and public institutions. They all need infrastructure, facilities, services and laws as well as formal regulations to govern their decisions (Olivio& Cecilia 2005).

According to Birara (2017), the marketing problem of *Teff* were identified as poor market linkages, collusion of buyers on price setting, high transport cost, unavailability and poor quality of packaging materials, adulteration, and inconvenient taxation system. Also, food value chains are characterized by many layers of traders between producers and consumers, leading to inefficiency (Masters 2008; World Bank 2009). As per the technical report of FAO (2015), the *Teff* value chain is long and involves too many small operators. The supply market is also fragmented as a result of the small volume handled by traders and the limited number of large scale buyers. It involves input suppliers, producers, traders (local assemblers and wholesalers), retailers, processors and consumers. The marketing chains are long and involve too many operators who rarely provide marketing services beyond transport and storage. However, the price of *Teff* has remained relatively high because of the high demand resulting from rising incomes, high rates of urbanization and rapidly increasing export demand for fresh *Injera* and smuggling to neighboring countries (FAO 2015). On the other side, the growing demand for local foods is presenting new opportunities for smallholder agricultural producers(Matthew and Todd 2009). On the other side, the modernization of the global retail food system has raised fears that smallholder farmers may be increasingly marginalized (Jayne & Elliot 2010). Thus, understanding the relative benefits of enabling environment for*Teff* marketing is important to maximize farm performance (Matthewand Todd2009).

In most developing countries, there exist various drivers that are changing food demand. These drivers include most importantly rapid urbanization, income growth, changing lifestyle and female participation in the workplace, as well as increasing access to better food technologies (such as refrigerators, microwave ovens, and gas stoves (Bart *et al* 2013). On the other side, these modifications in the supply chain ultimately influence the rural producer's production environment; their livelihood might change due to the different crops that they grow as well as the impact of changes in input and output prices (Bart, Seneshaw, Ermias& Tadesse 2015). In this regard, Daniel Roduner (2007) stated that globalization does not only patch up market gaps and brings producers and consumers closer together; it also brings regional and international competition into local markets. He also mentioned that any agricultural production not consumed by the farmers' families is a product in the market (local to international) and competes today with products coming from nearby or far away. Therefore, all farmers offering their products for sale are instantly part of a value chain (Katia C., Longin N.,& Alberto Z., 2012).

Farmers produce *Teff* for market and some authors indicate that the average marketable surplus of *Teff* ranges between 26 to 75 % of the harvested crop (Fufa, Behute et al. 2011; Gideon 2016). However, farmers in developing countries like Ethiopia are under intense pressure for enhancing their market orientation due to the increasing demand for agricultural commodities on domestic markets and abroad. In this regard, some authors such as Coleman (1999) argued that smallholder farmers are not benefiting

from the share of the consumer price and they are not producing and selling in an organized system like cooperatives and thus part of their benefit may transfer to the middlemen.

In studying the *Teff* marketing in Ethiopia, the technical report of FAO documented that the value chain of the *Teff* crop is very long and it involves a lot of actors such as input suppliers, producers, traders (local assemblers and wholesalers), retailers, processors and finally consumers (FAO 2009). Similarly, Hyjin Lee (2018) argued that *Teff* value chain in Ethiopia largely relies on traditional practices and the *Teff* market is limited by the government's export ban. In this regard, identifying the factors that limit the participation of smallholder farmers in *Teff* marketing requires rigorous empirical studies. Though *Teff* marketing was practiced for decades in the study area and there are studies on the quantitative aspects of the *Teff*value chain, it is not well supported by qualitative research. Thus, the aim of the study is to qualitatively and systematically examine the situation of *Teff* marketing in Ethiopia from smallholder farmers' and stakeholders' perspective.Having first-hand information about the enabling environment of *Teff* marketing at district level is essential to devise appropriate strategies aimed at enhancing its value chain. In this regard, the paper tries to analyze the enabling environment in terms of access to market information, access to road transport and facilities, price determination in the market, role of cooperatives, role of government, and challenges in*Teff* marketing.The specific objectives are described hereunder.

- To examine access to market information, road and transport facilities
- To understand how is price fixed in the market
- To assess the role of government and cooperatives in *Teff* marketing
- To identify the challenges of *Teff* marketing

The paper is divided into various sections. The section that follows presents the methodology and then the findings from the analysis of *Teff* marketing in Ethiopia. The discussion compares the findings of our analysis against previous studies and draws out the policy implications for *Teff*marketing. The conclusion is a recapitulation of the key ideas emerging from this paper.

2. Methods

2.1. Research design

The paper adopted a cross-sectional research design to guide the data collection process. According to Bryman (2008), a cross-sectional research design represents the collection of data at a single point in time. In cross-sectional research design, researchers investigate the state of affairs in a population at a certain point in time (Bethlehem 1999).

2.2. Sampling methods

The target population of the study is household heads involved in *Teff* production and marketing from four districts. A multistage sampling procedure was used to identify the case study areas. The regional states, districts and *Kebeles* were purposively selected for the following reasons. Firstly, Oromiya and Amhara regional states are among the top *Teff* producer and supplier regions with the national contribution of 48.86 % and 38.6 %, respectively in 2017/18 harvest period (CSA 2017/18). SNNPR (Southern Nation and Nationalities and Peoples Region) and Tigrai regional states were selected as there is a potential for *Teff* production with national contribution of 7.01 % and 4.88 %, respectively in 2017/18 harvest period and thus remaining less productive as compared to Oromiya and Amhara regional states which need further attention of researchers (CSA 2017/18; Gideon 2016).

At second stage, districts were purposively selected. Lomie district is purposively selected from the East Showa zone of Oromiya regional state as it is ranked 1st in *Teff* production at the national level. Shenkora na Minjar district is purposively selected from the North Shewa zone of Amhara regional state as it is ranked 4th in *Teff* production from the Amhara region and 7th in *Teff*production at the national level. These two districts are among the top seven *Teff* producing districts at the national level (Warner, Stehulak*et al* 2019). For the same study, Halaba zone from SNNP regional state and Tahtay Maichew district from Tigrai regional state were purposively selected as they are the top *Teff* producer zone and district in their respective regions (CSA 2017/18).

Thirdly, in consultation with the Office of Agriculture and Rural Development at the district level, two *Teff* producing Kebeles were purposively selected from the four districts. A total of eight *Kebeles* were purposively selected for the study at hand. In this regard, Deke Bora and Tulu Re'ee*Kebeles* were purposively selected from Lomie district, Agirat and Bolo Silassie*Kebeles* were purposively selected from Shenkora na Minjar district, AndegnaHansha and Guba *Kebeles* were purposively selected from Halaba zone, and Kewanit and May Brazio*Kebeles* were purposively selected from Tahtay Maichew district. The main criteria for selecting the two *Kebeles* from each district were potentially *Teff* producing area,

geographically convenient to conduct surveys, easy to find representative people from *Teff* producers and easy access to transport facilities.

A purposively sampling technique was also employed to select participants for focus group discussion and key informant interviews. In this regard, purposive sampling helped to find those informants who have knowledge and experience about the *Teff* production and marketing, that are capable of providing reflection and are willing to take part in the research/ investigation. To understand the enabling environment for *Teff* marketing, eight focus group discussions involving 84 participants and 25 in-depth interviews with experts in the area and *Teff* wholesalers were conducted. Overall, a total of 109 sample respondents were involved in the study. The factors that were considered in deciding upon this sample include available time and financial resources, discussions with the academic staff and colleagues involved in *Teff* industry in Ethiopia and the sample sizes involved in similar studies conducted earlier.

2.3. Data-gathering instruments

The study employed different data collection techniques. Three sources of data were utilized: (1) a desk review of relevant documents, (2) focus group discussion with *Teff* producers and development agents, and (3) key informant interviews with key federal, regional, district officers and wholesalers of*Teff*crops. Data collection took place from June 2018 to December 2018.

Data collection was undertaken in two successive stages. First, review of literature and documents on *Teff* production in Ethiopia were undertaken. In this phase, we analysed the literature and data on the trends of *Teff* production at regional levels from scientific journals and Central Statistical Agency, respectively.Second, the study employed focus group discussions (FGDs) and in-depth key informant interviews in order to understand community views regarding the enabling environment of *Teff* marketing.

Qualitative types of data were collected from FGD and KII participants as primary data sources. In each district, two homogenous male and female FGDs were conducted. Each FGD had between seven to eleven participants. Each FGD was moderated by a facilitator who asked the questions and then allowed the participants to discuss. The facilitator worked with a note-taker who took notes during the FGDs and indicated to the facilitator where they needed to probe for further details. In total, about 84 participants (68 *Teff* producers, 7 Kebele administrators, and 10 development agents) were involved in eight FGDs. Out of the 84 participants, 42 were males while the remaining 42 were female. In each district, region and at federal level, key informants were identified and a key informant guide was administered to get insights on *Teff* production. In total, 25 key informants (10 district level experts, 5 regional experts, 4 federal experts, and 6 wholesalers) were interviewed. The details of the three methods of data collection used in this study are described hereunder.

2.3.1. Document review

Document review is one of the data collection tools /methods largely used for reviewing literature on the subject. Document analysis involves a systematic review and examination of documents from secondary sources like journal articles, textbooks, magazines, reports, etc. relevant to a particular study. It involves reading extensive amount of text data to understand and shed more light on a particular field of study. In this paper, document review was used as a tool of data collection with the objective of assessing the literature and the prevailing *Teff* production situation at national level.

The search words we used to get the journal articles and other materials include Ethiopia, *Teff*, marketing, price, transport facilities, smallholder farmers, cooperatives, and government. The inclusion criteria for the research words are their significance to title of the study at hand, their relevance to the areas of *Teff*marketing, possibilities to access to peer reviewed journals from google.scholar, and access to updated data or information. In this regard, marketing of other agricultural commodities such as vegetables, fruits, spices, etc. is not the subject of the study and thus excluded. Moreover, the research words focused on smallholder farmers and thus, medium and large scale *Teff*suppliers are excluded from the study.

Relevant documents such as guidelines on cereal marketing were collected from Ministry of Agriculture and Rural Development, Agricultural Transformation Agency, related regional offices and Office of Agriculture and Rural Development of the study areas. Government related strategic plans and performance report documents such as Plan for Accelerated and Sustained Development to End Poverty (PASDEP), Growth and Transformation Plan (GTP I and II), Poverty reduction strategy paper (PRSP), Policy and Investment Framework (PIF) and other relevant documents such as FAO and UN reports were reviewed. The documents were reviewed to determine the national level and regional level data in relation to the involvement of smallholder farmers in *Teff* marketing. Previous worldwide studies were also assessed and reviewed and thus, the literatures on *Teff*marketing were assessed from scholarly articles.

We used a systematic review of scholarly articles and documents in assessing previous studies. In this regard, a total of 97 documents were retrieved for screening (69 published and 28 grey literature), and 26 documents were excluded because they were not relevant for *Teff*marketing. About 71 documents (5 books, 41 academic journal articles, 10 working papers,3 dissertations, 4 research papers, 6 reports, and 2 unpublished articles) were reviewed.

2.3.2. Focus group discussion

As per the argument of Kitzinger (1994), focus group discussions (FGDs) are important instruments in helping delineate social norms and facilitating discussion on topics generally viewed as taboo such as grievances. FGD allows the researchers to generate a substantial amount of information over a relatively short period of time (Mack 2005). The discussion is conducted in a neutral, non-judgmental and nonthreatening atmosphere which allows participants to reveal the motives they have and processes used when making decisions (Suh 2002). The reason for using FGD is that they allow the detailed observation of a range of opinions about the issue at hand from the participants.

Focus group discussions were conducted at *Kebele* level with purposively selected rural households. The focus group participants were selected purposively based on their knowledge and experience on the topic. Once the *Kebele* administrators had granted permission to conduct the study, the development agents assisted in identifying and informing the farmers about the focus group discussion and the eligibility criteria. The eligibility criteria were that the participants should be resident of the *Kebele*, they should be involved in *Teff* production and marketing in 2010 E.C (2017/18), they should be voluntary to take part in FGD and allow for recording, and be aged 18 years or above. FGD participants were invited to the focus group discussion following meetings with *Kebele* administrators and development agents where the purpose of the study was explained.

FGD participants who arrived at the FTC (Farmers' training center) were taken through the study information in line with ethical principles. Their acceptance to participate in the discussion and recording of FGDs was required, and only those participants who consented and signed the consent form have participated in FGDs. Once the study participants accepted and signed the consent form, discussions with FGD participants commenced. The FGD session included participants from smallholder*Teff* producers, *Kebele* administrators, and development agents. To ensure confidentiality and protection of study participants, each discussant was given a unique identification number throughout the discussion (Ndinda et al 2016).

The FGDs were moderated by experienced researcher and a facilitator who posed open ended questions and probed the participants, and a note-taker ensured that the electronic recorder was functioning. The issues covered in the focus group discussion include: access to road and transport facilities, access to market information, price determination in the market, the role of cooperatives in *Teff*marketing,the role of government in *Teff* marketing, and challenges in *Teff* marketing. The reflections of FGD participants were tape recorded and notes were taken as a back-up for the recordings. The notes also helped in identifying participants by their pseudonyms when transcription took place.

2.3.3. Key informant interview

In-depth interviews were chosen as one data collection method in this paper as it provides the opportunity to explore issues in depth and seek explanations of concepts that are unclear (Curry, Nembhard et al. 2009). In this regard, in-depth interviews were conducted in Sri Lanka by Bandula, Jayaweera *et al* (2016) with selected value chain representatives to determine the role of underutilized crop value chains in rural food and income security. Moreover, interviews with key informants were also used by Hailu, Weersink*et al* (2015) in the value chain to understand how the *Teff* value chain is transforming. The purposively identification and selection of appropriate individuals within agriculture sector were done in consultation with bureau heads and high level officers.

The in-depth interview is conducted with purposively selected key informant interviewees from experts at district, regions and federal level officials such as the Office of Agriculture and Rural Development. Like FGD, the key informants were informed about the purpose of the study and ethical principles. It was planned to undertake an interview with 31 key informants. However, about 25 key informants were involved in the study as the required information is collected, repetitive, and similar nature of the responses. The interviewers explained the purpose of the study, and the right to withdraw at any time without penalty, and confidentiality, while participants provided verbal or written documentation of consent to participate (Ndinda*et al* 2018). In line with ethical standards and to ensure anonymity, the key informants were identified by numbers and places. The key informant interviews were electronically

recorded, but in two cases where individuals declined being recorded, the study team took notes. The interviews were conducted at mutually agreed times and at venues that were free from distractions.

2.4. Data analysis

The raw qualitative data (recordings) from the focus group discussions and in-depth interviews with extension agents, experts,and wholesalers were captured on audio recordings in local languages. The FGD and KII recordings were transcribed verbatim in the local language (*Tigrigna* and *Amharic*) and later translated into English (Ndinda et al 2016). The first step was transcribing the recordings verbatim and translating the raw data into English before commencing the data analysis. The data were carefully examined for the correction of mistakes arising out of transcription and organization. These transcribed data along with field notes were organized and prepared for analysis based on the categories of participants.

Thematic content analysis was applied to qualitative data collected from focus group discussions and in-depth interviews. It involves the extraction of themes or categories from the data and then using these to explain phenomena under investigation (Hsieh and Shannon 2005). Thematic content analysis is a well-established and widely used technique in qualitative research, particularly in case study methodology (Attride-Stirling 2001; Hsieh and Shannon 2005). Content analysis is chosen as one of data analysis in this paper as it is widely used qualitative research technique and it is a flexible method for analyzing text data (Cavanagh 1997). In this paper, guided by the key research questions, thematic analysis was used to code both documents and transcripts, and results were reported thematically (Ndinda et al 2018). The conceptual analysis begins with identifying research questions and about six questions were developed that helped in developing manageable content categories. By reducing the text to categories consisting of a word, set of words or phrases, the researchers focused on, and code for, specific words or patterns that are indicative of the research question.

Recorded interviews were transcribed, edited to remove typographical and grammatical errors and real names of study participants. For this purpose, the transcribed data were thoroughly read many times in order to understand the true contextual meanings, so that concepts were properly derived from the textual data. Then the raw data were transformed into concepts. These derived concepts were categorized into different categories based on the research questions that allow the creation of a number of concepts and themes from the data. In this regard, important themes relating to the enabling environment of *Teff*marketing (access to road, access to transport, fixing price, roles of cooperatives and government, challenges in *Teff* marketing) among FGD participants and key informants were extracted.

The textual data were subjected to thematic analysis whereby entailed the researchers getting immersed in the data to ensure sensitivity. Inductive coding was used to explore the attitudes identified in greater detail. In textual data analysis, we broadly characterized coding, categorization, and theme identification. The codes were categorized according to emerging dominant ideas from the textual data and interpreter reliability helped in comparing the themes identified. What emerged were themes that were similar, while differences in analysis of the data were accounted for by the emphasis placed on some themes and selection of extracts to support the dominant themes (Ndinda et al 2016).

2.5. Ethical considerations

The research ethics protocol and procedures which are appropriate for the cross-cultural context in Ethiopia settings were applied. In this regard, before conducting the field research, an ethical clearance with reference number 2017_DEVSTUD_Student_31 was obtained from the University of South Africa (UNISA), Department of Development Studies, Research Ethics Review Committee. Moreover, notifications of expedited approval with reference number 1107/2017 were obtained from Mekelle University, College of Health Science, Health Research Ethics Review Committee.

Moreover, in order to ensure the validity of the data, only willing respondents were included and they were taken into full confidence by disclosing the purpose and nature of the study. In order to maintain the confidentiality of the survey, each FGD and KII participants was given a unique identification number. The confidentiality and privacy of their responses were assured. In this research, informed consent was applicable and hence, written permission was obtained from the individual participants in the FGD, and key informant interview before they provide the information. In this regard, prior to conducting field activities, the research participants were informed that the participation in the research is voluntarily and the participant has the right to ask questions during the interview. Moreover, information collected for this study was kept strictly confidential and all interviewees are anonymous.

3. Results

3.1. Access to market information

According to Antonaci, Demeke *et al* (2015) up-to-date information, including different market prices of both commodities and inputs, and their intra-seasonal variation, allows farmers to make more profitable decisions on production activities. Thanks to market information, farmers are able to better plan planting and storage decisions, finding appropriate markets for their produce and gain from profitable trade deals.
In this regard, in a focus group discussion, a study participant from Tahtay Maichew district highlighted the following in relation to access to market information.

"Most of the farmers get information from other farmers who have sold *Teff* crops. But if this is not available, the farmers must check for the price by going to the market in person. Otherwise, we have no other method of market orientation with the exception of few farmers who get information from the radio" (Tahtay_Maichew_FGD_1).
Another study participant from Lomie district said the following in relation to the access to market information.
"In addition to a personal search for information from market and peers, mobile and extension workers are the source of market information for farmers" (Lomie_FGD_14).
A study participant from Shenkora na Minjar district also stated the following in relation to the access to market information.
"Our sources of market information are mobile, cooperatives and extension agents" (Shenkora_na_ Minjar_FGD_19).
By supporting the above arguments, a key informant from Halaba zone stated the following concerning the access to market information.
"Farmers get market information from other farmers, traders, development agents, mobile and radio" (Halaba_KII_1).
A key informant from Shenkora na Minjar district also stated the following in relation to the problems of accessing market information.
"Farmers get market information from different sources;however, its reliability is questionable. Due to the nature of supply and demand of agricultural commodities, the price of*Teff* is changing from time to time. Thus, there should be systems for the timely dissemination of reliable and relevant market informationto farmers at grassroots' levelspecially on price, amount of demand, market places and other issues so that they will be able to exploit the exiting marketing opportunities" (Shenkora_na_Minjar_KII_1).
From the above discussion, we can realize that farmers do have multiple options for accessing market information including personal search in the market, peer farmers, traders, mobile, extension workers and cooperatives.Farmers get market information from different sources;however, its reliability is questionable.

3.2. Infrastructure and access to transport facilities

If the distance from residence to the market is closer, the lesser would be the transportation cost and time spent by farmers (Tegegn 2013). Other researchers such as Hailu, Weersink et al (2015) also found that producer prices over distance travelled decline in line with transportation costs.In a discussion with study participants, a respondent from Tahtay Maichew district stated the following in relation to the means of the transport facilities they use to bring their *Teff* crops to the market.
"If the transport route is available, the farmers use freight vehicles. However, most farmers use donkey and mule as a means of transportation. Few farmers carry their product by themselves to market" (Tahtay_Maichew_FGD_10).
A respondent from Lomie district stated the following about the transport facilities they use to bring their *Teff* crops to the market.
"Farmers transport their crops from rural areas to asphalt or road by using donkeys and mules and then use vehicles to transport to town markets. We use human labour if the amount of *Teff* is small such as less than 25 kg, pack animals up to two quintals and tracks for more than two quintals" (Lomie_FGD_3).
A respondent from Shenkora na Minjar district stated the following in relation to the transport facilities they use to bring their *Teff* crops to the market.
"We use a combination of pack animals and vehicles. Farmers use pack animals to transport their *Teff* crops to *Kebele* market and vehicles to *Woreda* market" (Shenkora_na_Minjar_FGD_11).
A respondent from Halaba zone stated the following concerning the mode of transport used to transport their *Teff* crops to the market.

“We often take it through a cart pulled by our donkey. Some of us do have own carts and some don’t and those who do not own it try to rent a cart from the owners of the carts” (Halaba_FGD_17).

From the above discussions, we can learn that the farmers located around the main roads use freight cars. However, those who are away from the road use their pack animals such as donkeys and mules to transport their *Teff* crops to market. They also use human labour if the amount of *Teff* crops is small such as less than 25 kg. In Halaba zone, the farmers often use a cart pulled by donkeys.

3.3. Price determination

Since the adoption of the new economic policy in 1991 in Ethiopia, agricultural markets have been reformed and prices of commodities are determined through market mechanisms (EEA 2005). However, the report of Ethiopian Economics Association revealed that due to the weak bargaining power of producers and harvest fluctuations, the *price free* notion of markets have been found to affect producers(EEA 2005). Food price movements are scrutinized by consumers and governments, as food expenditures continue to represent an important share of household budgets, especially in developing countries (OECD/Food and Nations 2015). Changes in price might have negative effect on the productivity of farmers and eventually, on their food self-sufficiency and food security status and in such cases monthly cereal price variability in the country is not only among the highest in the world but has even worsened since 2000 (Gabre-Madhin and Mezgebou 2006; Getnet 2008).

A question was raised to the study participant and key informant on how price is determined in the market and whether the farmers are satisfied with the price. An FGD participant from Tahtay Maichew district stated the following.

“*Teff* is the most expensive of all the other crops that farmers produce, especially if it is white *Teff*. It is considered as the main source of income for the farmers. When we come to the question whether it is fair or not, the price is determined by the seller and buyer through negotiation and farmers benefit from it. Its high price and its scarcity in market make it hard for customers to afford. I don’t think the price is fair for buyers in general” (Tahtay_Maichew_FGD_17).

The FGD participant from Lomie district described the problem of price determination as follows.

“The problem with farmers is that they sell in bulk immediately after harvest when the price has gone down. They do not store it until the price is back to its normal value and they run out of supply when the price becomes expensive. Therefore, the farmer are not benefiting as they are just selling their produce immediately after harvest to fulfill their livelihood requirements” (Lomie_FGD_23).

A study participant from Shenkora na Minjar district stated the following about the price determination in the market and associated problems in price determination.

“It is the traders who set the price. If the traders don’t buy with the price they set, there is nothing the farmers can do. Farmers face problem that they may return home without selling their product” (Shenkora_na_Minjar_FGD_1).

Another study participant from Shenkora na Minjar district stated the following by supporting the free market notion as important for the farmers.

“I strongly believe that the free market is important for farmers. If the price goes down, the farmer has the right not to sell his/her product. Most of the time the price is fair, but sometimes it fluctuates” (Shenkora_na_Minjar_FGD_12).

Another FGD participant from Halaba zone said the following.

“It depends on the time of selling. If you sale immediately after harvest, the price could be low and if you wait till April and May, the price could be high. The price for *Teff* crops is also fluctuating” (Halaba_FGD_6).

A key informant from Lomie district stated the following concerning the unfair price in the market.

“I think farmers don’t get fair price in the market. The problem is that traders talk to one another and fix the price as they wish” (Lomie_KII_1).

A key informant from wholesalers in Addis Ababa statedthe following about the price determination of *Teff* crops’ in the market.

“The price depends on the type of the *Teff* quality. I almost have all types of *Teff*. I have white *Teff*, but often I am demand oriented. Whatever my customer wants, I buy and provide. I am the one who sets the price based on how much I bought it. As a trader, I conducted market survey. If there is more supply, the price goes down and when there is less supply it goes up. We call each other to talk over the price and share information with the other traders as well” (Wholesaler_KII_6).

A key informant from the Ministry of Trade and Industry highlighted the following in relation to the price determination in market places.

“It is the farmer who set the price. If farmers don’t agree on the price, they let it stay. The price is determined on daily basis and it is not permanent or fixed. It fluctuates on daily bases. Sometimes, it increases and decreases based on the production and supply of *Teff* crops. Even there is a difference between the price that is set in the morning and in the afternoon. In general, the price of *Teff* has an increasing trend from year to year and even within a year. Sometimes when *Teff* is production is low due to bad weather situation, the supply might decrease and the price might increase due to shortage of supply. Usually, smallholder producers do sale their *Teff* crops immediately after harvest (December or January) and thus get lower price as there is excess supply in the market. The government has no interference in the *Teff* market because of its free market policy” (Federal_official_KII_2).

From the above discussions, we can understand that *Teff* is cash crop for the farmers and its market value is higher as compared to other cereal crops. The price depends on the time of selling and the quality of the *Teff.* Usually, smallholder producers do sale their *Teff* crops immediately after harvest (December or January) and thus get lower price as there is excess supply in the market. The government has no interference in the *Teff* market as it is following free market economy and farmers are also free to sell their crops. The price of *Teff* has an increasing trend from year to year and even within a year. In principle the price is determined through negotiations in the market and the farmers do have the right not to sale their crops. Sometimes, the traders talk each other and fix the price of *Teff* crops. If the traders don’t buy with the price they set, there is nothing the farmers can do. Farmers face problem that they may return home without selling their *Teff* crops.This result is like the previous research output of Getnet (2007) which states despite their perception of low producer prices in December, January and February, the majority of farmers sell their marketable *Teff* during these months, mainly for cash income generation to settle annual land use tax bills and outstanding loans on commercial fertilizer. It is also similar to the research result of Kebebew Assefa *et al* (2013) that state about 85% of *Teff* is sold during the months of December and January mainly due to liquidity requirements to cover various expenses such as credit, social obligations, school fees, clothing, and the likes.

3.4. Membership in cooperative marketing

Farmers’ organizations link farmers to inputs, outputs and credit markets (Bernard and Taffesse 2012). Other researchers such as Tadesse and Guttormsen (2011) also recommended the importance of cooperatives in breaking the self-centered mentality and create awareness towards established *Teff* supply chains characterized by win-win cooperation among chain actors.

In this regard, discussions were undertaken with the focus group participants (FGDs) and key informants in relation to the contribution and limitations of cooperatives in creating sustainable market for the farmers. Accordingly, the study participants from Tahtay Maichew district described their opinion hereunder.

“There are three cooperatives in our *Kebele*; one is saving and credit cooperatives, the second is *Teff* producer cooperative (for improved seed provision) and the third is multipurpose cooperatives. The producer cooperative is the only supplier of improved seed in our district and the farmers take a good advantage of it. Earlier, farmers took their products to the market and dump it for cheap and unfair price. However, last year the producer cooperative has bought our entire product for better price” (Tahtay_Maichew_FGD_7).

The other study participant from the same district also stated the following.

“Most of the farmers weren’t involved in cooperatives in the past. The reason was that there were some problems within the cooperative societies in relation to the transparency of financial issues and management of the resources of cooperatives and farmers have had less trust in the cooperatives. But now we have managed and solved the problem through discussion and the cooperative has promised to buy our *Teff* crops by providing a price in the market plus 2 % and we have reached agreement, which has made all the famers happy” (Tahtay_Maichew_FGD_21).

A study participant from Lomie district stated the following in relation to the role of marketing cooperatives in their areas.

“Sometimes cooperatives provide market information to their members otherwise they do not have roles in marketing. However, some farmers are selling their crops to cooperative but most farmers do sale their crops to traders” (Lomie_FGD_18).

A key informant from Lomie district stated the following in describing the limited role of marketing cooperatives.

“Cooperatives don’t have visible role in *Teff* marketing. However, they support the farmers by supplying sugar and edible oil, fertilizer and other inputs such as chemicals. However, they have never been

involved in *Teff* marketing and the tie between cooperatives and farmers is not as such strong. The cooperative that we have in our area has not yet begun purchasing of *Teff* crops from farmers" (Lomie_KII_1).

A study participant from Shenkora na Minjar district also said the following in relation to the role of cooperatives marketing in their areas.

"Sometimes cooperatives purchase *Teff* from farmers during the harvest period and sale it later at a better price. Then the dividend is divided to members based on their contribution" (Shenkora_na_ Minjar_FGD_2).

A key informant from Shenkora na Minjar district stated the following in describing the limited role of marketing cooperatives.

"The involvement of cooperatives in *Teff* marketing in our area is almost nonexistent. They don't have a role in improving the market as they buy the product at a lower price than the traders. This makes the farmers move away from cooperatives and sell their crops to traders or consumers" (Shenkora_na_Minjar_KII_1).

Similarly, a study participant from Halaba zone said the following.

*"*The multipurpose cooperatives sometimes purchase *Teff* from members and supply to local consumers in towns" (Halaba_FGD_15).

From the above discussions, we can learn that cooperatives do not have a visible role in *Teff* marketing apart from providing market information to their members. They are focusing on the distribution of input and supply of industrial goods to the farming community. Some farmers are selling their *Teff* crops to cooperatives during harvest time at cheap price and in return get dividend after the crop is sold at a better price later. The research result also revealed that as cooperatives don't provide a better price and most of the farmers prefer to sale their crops to traders or consumers. However, in Tahtay Maichew district efforts are made by the local government to introduce marketing cooperatives and linking with major buyers. As a result, an agreement is reached between farmers and cooperatives to provide a price in the market plus 2%. There were also concerns in the transparency of financial issues and management of resources of cooperatives which is now solved through discussions.

3.5. Government policyin *Teff* marketing

In Ethiopia, steps taken to liberalize markets in the 1990s and promote fertilizer and seed packages have yet to generate payoffs in terms of higher cereal yields, lower food prices, or reduced dependency on food aid (Spielman, Byerlee et al. 2010). As per the argument of Bonger, Gabre-Madhin (2002), interventions and policies to improve grain markets can be grouped into four main areas: interventions related to infrastructure, institutions, regulatory policies, and capacity-strengthening. In this regard, discussions were undertaken with the focus group participants (FGDs) and key informants about the government policy and its contribution and limitations in creating a sustainable market for the farmers.

In a focus group discussion, a study participant from Tahtay Maichew district highlighted the following in relation to the role of the government.

"The existing free-market policy does support the transaction of *Teff* crops in the market as it provides freedom for farmers in setting the price of his/her own products. Since the policy gives liberty for the farmer to get profit from his/her product, we believe the policy is at the farmer's best interest. Farmers do need a lot of support from the government such as equal and peaceful market opportunities for all farmers. Above all, farmers need road infrastructure. This is because not only human beings need access to the road but also mules and donkeys need a better road to transport products to the market. Therefore, infrastructure and loan provisions are needed from the government" (Tahtay_Maichew_FGD_21).

Another study participant from Lomie district highlighted the following about the role of the government in *Teff* marketing.

"The government has no interference in the *Teff* market as its policy is a free-market economy. The role of the government is regulating illegal trade" (Lomie_FGD_17).

A key informant from Lomie district also said the following in relation to the role of the government in *Teff* marketing.

"The government doesn't intervene in the market to determine the price of *Teff* crops like the *Derg*regime because of its free-market policy. However, the government must monitor the collusion of traders in fixing the price of *Teff* crops" (Lomie_KII_2).

A key informant from Halaba zone also highlighted the following concerning the role of the government in *Teff* marketing.

“I think the government is supporting in promoting *Teff* production like provision of technical support and access to inputs to farmers but its involvement in marketing is very limited except organizing cooperatives or unions” (Halaba_KII_1).

An expert from the Ministry of Trade and Industry stated the following about the free-market economy the government is following.

“Free-market has a very broad definition and the policy that a country implements also matters in this regard. So the meaning of free-market can be interpreted in the context of how much wealth one is allowed to accumulate and since there is no limit set by the government, the market can be said to free. Any farmer can produce as much as s/he can and can sell it without a limitation and intervention from the government or another third party. Also, the farmers are provided with market linkage services from the federal and regional offices and thus we can say that the market is free and the price is being set through negotiations” (Federal_official_KII_2).

Similarly, an expert from the Ministry of Agriculture and Rural Development said the following concerning the policy and strategy of the government in creating a sustainable market for *Teff* producers.

“The fact that the market is free benefits everyone because it provides the opportunity of buying and selling and other terms and condition of the contract including the price and quality of the crops to be decided by the buyers and sellers in the market. It provides better competition opportunity. The benefit of free-market is that it does not limit the right of farmers, traders or consumers in buying and selling decisions. The government has a supportive role including developing national marketing policies and strategies, establishing a legal framework, developing market infrastructures such as road, market places, providing training, organizing marketing cooperatives and regulatory issues. Otherwise, the government doesn’t interfere in the market to fix the price of commodities unless it subsidized through its budget such as petroleum products, sugar, edible oil and flour mill” (Federal_official_KII_1).

Contrary to the above views, a trader from Addis Ababa stated the following concerning the problems of illegal traders.

“The free-market has killed our business as there are illegal sellers and brokers without a proper license and storage. They get a lot of benefits as they have no rent to pay for warehouse and most customers buy *Teff* from such illegal traders as they sell it at a lower price as compared to traders with license and with storage facilities. There are only 280 traders with storage. However, the number of traders is assumed to be around 2000. The ones with the store have gone bankrupt and sold out their business. However, the farmers are benefited because they sell their product either ways” (Wholesaler_KII_3).

Another key informant (wholesaler) from Addis Ababa also stated the following about the problems faced during business transactions in *Teff* marketing.

“We get *Teff* from the farmers following the governmental procedure, which is working through a license. There were a lot of problems in the years 2007 E.C to 2009 E.C and the main problem was that the Oromiya region’s license was not valid in Addis Ababa. When we go and ask the concerned governmental bodies, their response was that we are only permitted to sell in Oromiya and that was a big problem for us. However, this problem has been solved even though we see illegal traders and brokers who participate in *Teff* marketing using trucks. They sell the product and go back to the regions. If they could have delivered it straight to the legal traders, without reaching illegal brokers, the price could have been fair” (Wholesaler_KII_4).

From the above discussions, we can understand that the government is following a free-market economy. This result is like the findings of Bihon (2015) which states the present government, which took power in 1991 enforced new economic reform (free-market) in 1991. The existing free-market policy provides freedom for farmers in setting the price of his/her products and it is believed the policy is at the farmers’ best interest. The farmers, traders and consumers are free to buy and sell *Teff* crops at anytime and anywhere and the price is being set though negotiations. Any farmer can produce as much as s/he can and can sell it without a limit and intervention from the government or other third parties. The government has a supportive role including development of national marketing policies and strategies, establishing a legal framework, development of market infrastructures such as road, market places, providing training, organizing marketing cooperatives and regulatory issues. However, the issue of licensing and illegal trade and brokers are the major problems in *Teff* marketing that need the attention of the government. The government should monitor the illegal trade and collusion of traders in fixing the price of *Teff* crops through strengthening its regulatory mechanisms.

3.6. Problems of *Teff* supply

To identify the major problem of *Teff* marketing, discussions were undertaken with FGD participants and key informants in all districts. As a result, a study participant from Tahtay Maichew said the following.

"The market chain is too long and the farmers are not benefited as much as they deserve to be. The biggest market problem that we have is that we pay a high amount of tax when we want to sale *Teff* crops. The tax is two hundred birr per quintal when a farmer wants to sale his/her *Teff* crops and this is a big problem for farmers" (Tahtay_Maichew_FGD_13).

A study participant from Lomie district said the following in relation to market problems.

"There are problems with the scale and in some case adulteration (mixing with others) of *Teff* crops" (Lomie_FGD_19).

A study participant from Shenkora na Minjar district said the following about the market problems.

"The price is fixed by the traders and thus farmers face problem that they may return home without selling their product" (Shenkora_na_Minjar_FGD_43).

A study participant from Halaba zone said the following about the market problems.

"Lack of proper scale and price fluctuations are the main problems in *Teff* marketing" (Halaba_FGD_14).

A key informant from Lomie district said the following in relation to the problems of *Teff* marketing.

"Actually, the traders are fixing the price for *Teff* crops in the market. Though the farmers do have the right to reject the price set by traders, the farmer is usually the price-taker. Some traders store *Teff* for long time to manipulate the price and the market so that they sell it when it gets expensive. This makes the market unstable" (KII Lomie_2).

A key informant from Addis Ababa highlighted the following about the problems of *Teff* marketing.

"The farmers do not directly contact the consumers or traders as there are illegal traders and brokers in between. There are government offices responsible for addressing this issue. However, they are not working as expected. The other problem is inflation of price of *Teff* crops when the demand gets high. If the production improves, I think that the problem will be solved" (Wholesaler_KII_1).

Another key informant from Addis Ababa also stated the following in relation to the major problems of *Teff* marketing.

*"*There are sometimes market instabilities and it is hard to make the market stable all the time. It is often hard to decide on the market or the farmers. The farmers have information on the price of *Teff* and the price is left for competition" (Wholesaler_KII_3).

A key informant from Addis Ababa also highlighted the following about the problems of *Teff* marketing.

"The government and district level authorities have tried to get rid of illegal traders and brokers who buy and sell directly from freights. But the job has not been consistent and effective" (Wholesaler_KII_6).

A key informant from Tigrai region also stated the following in relation to the problems of *Teff* marketing.

"The major marketing problems are long value chain from farmers to consumers, the absence of strong marketing cooperatives, and lack of transport facilities from remote areas to urban areas" (Tigrai_official_KII_1).

A key informant from the Ministry of Trade and Industry also stated the following concerning the problems of marketing.

"Exporting *Teff* could potentially increase concerns of inflation and rising commodity prices in local markets. On the other side, thelocal *Teff* marketing largely relies on traditional practices.The market chain for *Teff* crops is too long. This makes the illegal traders and brokers as part of the chain and without adding value they are getting financial benefits. In this regard, the farmers are not getting benefits as much as they deserve to be" (Federal_official_KII_2).

From the above discussions with FGD participants and key informants, we can see that *Teff* marketing largely relies on traditional practices. The major*Teff* marketing problems identifiedin the discussion are highlighted as follows. The existence of illegal traders and brokers in the *Teff* value chain, poor monitoring of the illegal traders from government authorities, price is fixed by traders and usually the farmers are price takers, absence of strong marketing cooperatives, fluctuations and inflation of price of *Teff* crops price, lack of proper scale, traders store *Teff* for long time to manipulate the price (hoarding), lack of transport facilities to remote areas, high of tax rates and adulteration (mixing with others).

4. Conclusion

Teff (Eragrostis *Teff*) is one of the major cereal crops in Ethiopia in terms of production and consumption. The country is the largest *Teff* producing country and has adopted *Teff* as a staple crop. Though *Teff* marketing was practiced for decades in the study areas and there are studies on the quantitative aspects

of the *Teff* value chain, studies on the qualitative aspect is limited. Thus, the aim of the study is to qualitatively and systematically examine the situation of *Teff* marketing among smallholder farmers.

The sampling design used in this study was multistage sampling method.Purposive sampling method was used to select top *Teff* producing regions, districts*, Kebeles*, key informants and FGD participants. The data collection tools used in this study includes a literature review, focus group discussions and key informant interviews. A total 84 FGD participants and 25 key informants were involved in the study. The data were analyzed qualitatively through content analysis.

From the findings of the research we can learn that *Teff* is cash crop for the farmers and its market value is higher as compared to other cereal crops. We can also understand that the government is following a free-market economy. The existing free-market policy provides freedom for farmers in setting the price of his/her products and it is believed the policy is at the farmers' best interest. The farmers, traders and consumers are free to buy and sell *Teff* crops at anytime and anywhere and the price is being set though negotiations. Any farmer can produce *Teff*as much as s/he can and can sell it without a limit and intervention from the government or other third parties. On the other side, the government's*Teff* export ban policy limited the participation of smallholder farmers in the global market. This indicates the intervention of the government in *Teff* marketing which is in contradiction with its free market policy. The reason for government's*Teff* export ban policy could be exporting *Teff* could potentially increase concerns of inflation and rising commodity prices in local markets. On the other side, the local *Teff* marketing largely relies on traditional practices.The price determinationdepends on the time of selling and the quality of the *Teff.* However, smallholder producers do sale their *Teff* crops immediately after harvest (December or January) and thus get lower price as there is excess supply in the market.

The study also revealed that farmers do have multiple options for accessing market information such as personal search in the market, peer farmers, traders, mobile, extension workers and cooperatives; however, the reliability of the information is questionable.Farmers who have access to main roads use freight cars while farmers who are away from the road use their pack animals such as donkeys, mules, and cart pulled by donkeys or human labour to transport their *Teff* crops to market. We can also learn that cooperatives do not have a visible role in *Teff* marketing apart from providing market information to their members. However, some farmers are selling their *Teff* crops to cooperatives during harvest time at cheap price and in return get dividend after the crop is sold at a better price later.

The government has a supportive role including development of national marketing policies and strategies, establishing a legal framework, development of market infrastructures such as road, market places, providing training, organizing marketing cooperatives and regulatory issues. However, as per the discussion with study participants, the issue of licensing and illegal trade and brokers are the major problems in *Teff* marketing. In this regard, sometimes, the traders talk each other and fix the price of *Teff* crops. If the traders don't buy with the price they set, there is nothing the farmers can do. Farmers face problem that they may return home without selling their *Teff* crops.

The existence of illegal traders and brokers in the *Teff* value chain, poor monitoring of the illegal traders from government authorities, collusion of price by traders and usually the farmers are price takers, absence of strong marketing cooperatives, fluctuations and inflation of price of *Teff* crops price, lack of proper scale, traders store *Teff* for long time to manipulate the price (hoarding), lack of transport facilities to remote areas, high of tax rates and adulteration (mixing with others) are some of the problems raised by study participants.Having reviewed the major findings of the empirical studies, the following policy implications are recommended.

- The government should develop systems of monitoring the illegal trade,hoarding,and collusion of traders in fixing the price of *Teff* crops through strengthening its regulatory mechanisms.
- Creating strong marketing cooperatives can improve the bargaining power of farmers and thereby shortening the long market chain that can benefit both producers and end-users.
- Crafting of marketing information system at district and *Kebele* level so that farmers will have easily access to reliable and up-to-date market information.
- The *Teff* marketing largely relies on traditional practices and the farmers are not getting benefits as much as they deserve to be. Thus, the government should develop strategies for creating enabling market environment and modernizingthe market as it is having a major role in the development of national marketing policies, strategies, regulations and infrastructure.
- Though it might have its advantages and disadvantages, the participation of smallholder farmers in global *Teff* market is limited by the government's export ban policy. However, this requires regular review of the export ban policy through critical studies. In this regard, the government should assess the

trends of global *Teff*market regularly and see strategies forintroducing opportunities to enhance and maximize the benefits of smallholder farmersfrom the participationin global *Teff* market.

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