

# Assessment of Market Linkages for Smallholder Farmers of Coffee Producers in Gihmbi Zone, Ethiopia

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**Abstract-** As countries develop, their labor force shifts from agriculture to industry and services rendering, and in this process the well-being of the people improves. However, for agriculture to become a credential tool for economic growth an improvement in smallholder productivity is necessary through improving resources, farmers can access with new markets and engage in value-adding activities. For that reason, this article aims to investigate how smallholders can be supported in their efforts to create new market linkage opportunities and develop their resources. The Ethiopian coffee producers particularly Gihmbi have been served as a case study for this investigation because it can be characterized by its large number of smallholder farmers. In this case chain integrators can play a vital role for smallholder farmers in order to access them to the market. Because these chain integrators represent different types of value chain actors, they each take a different approach to their development intervention. This article concludes that each approach to develop market linkages for smallholders has its own challenges and weaknesses. Having this in mind there are three different types of chain integrators were identified, i.e. buyer-driven, intermediary-driven and producer-driven. As well as, the instruments of chain integrators aim to contribute to three fundamental purposes that improve the development of market linkages for smallholder's farmers those are: reducing transaction costs, creating production networks and developing the resources of the firm. A Sample size of 60 is taken, the collected data has been analyzed using both qualitative and quantitative methods and the data analysis has been supported by SPSS 16.0 software. As result shows integrators consequently configure the instruments that contribute to these purposes determines the success of the intervention and the sustainability of the market linkage for the smallholders.

**Index Terms-** chain instruments, buyer-driven, intermediary-driven and producer-driven.

## I. INTRODUCTION

As countries develop, their labor force shifts from agriculture to industry and services, and in the process, the well-being of the people and society has been improves. This article gets rid of some light on the economic logic that drives the process and on the important role that agricultural productivity plays in it. It argues that agricultural productivity growth is the key to poverty alleviation.

In development thinking there are many shifts over the past decades ranging from an emphasis on technical solutions to basic needs and from integrated development programs to structural

adjustment (Schulpen & Gibbon, 2002). In order to reduce poverty, agriculture should therefore be one of the focal sectors of development interventions. Not only agricultural sector contribute to poverty reduction, at the same time it would help reduce food insecurity in many developing countries. Using agriculture as the fundamental basis for economic development in the agriculture-based countries like Ethiopia requires a productivity revolution in smallholder farming (World Bank, 2007). Smallholder farmers in developing countries like Ethiopia need to raise production efficiency and quality standards to become as distinctive competitive tools in agricultural markets. However, due to urbanization, rising incomes and globalization there are new opportunities to diversify particularly into cash markets. A major challenge is that a large part of the agricultural activities in developing countries currently occur in the informal economy (Henson & Cranfield, 2009). To increase efficiency in agriculture and to develop agribusinesses that are able to look at new markets by diversification, formalization in agriculture is necessary. By linking up to domestic and international markets, farmers have the opportunity to develop and modernize production processes that will increase their competitiveness in these markets. In order to become active players in the global agricultural industry, farmers from developing countries like Ethiopia has been need to hold close a stronger business perspective and reconsider their current set of farming activities.

### 1.1. Statement of the Problem

Because of their limited capacity and capabilities, smallholders often have problems to explore new market opportunities. Therefore, they need support that aims to organize and coordinate smallholder production and establishes new market linkages. There are abundant institutions and companies that are actively engaging in such activities. Particularly donors and non-government organizations have traditionally set up development projects that aimed to improve the position of smallholders (Shepherd, 2007). However, these non-government organizations have now become alarming for the development interventions that need to be motivated by market demand, because development interventions are more sustainable if they are commercially viable. That is why production activities need to be assessed in relation to the entire value chain. This supports the notion that there is a need for better market linkages between small producers and the market in developing countries (Shepherd, 2007).

This study contributes to the discussion regarding the development of market linkages for smallholders. particularly, these market linkages need to focus on establishing a long-term relationship between small farmers on one hand and downstream agribusiness (processors, exporters and retailers) on the other hand (Vorley, Lundy & Macgregor, 2008). Furthermore the

condition of extension services such as finance, training, inputs, etc. enhance the development of smallholders' capabilities which can stimulate the development of sustainable market linkages. However, there are high costs and risks associated with linking smallholder farmers to formal markets. Troubles with regard to production costs and volumes, poor access to information, etc. raise the transaction costs of working with a large number of small farmers. In addition, the low production capability of smallholders is the challenges to achieve economies of scale. Close coordination of production is therefore a necessity to lower the transaction costs, raise efficiency and make the linkage sustainable. Despite of this private companies usually prefer to work with organized farmers over individual farmers (Vorley et al., 2008). That the production of smallholders needs to be coordinated is recognized in many commodity chains. There are numerous drivers that can provide the harmonization and integration of smallholder production such drivers are non-government organizations, lead firms or farmer cooperatives. As there exists no universal term for the drivers in linkage literature, they has been referred to as „chain integrators“ for the rest of this study. This term has been chosen because the chain integrators attempt to facilitate the integration of smallholders into formalized production chains. On the other hand, terms such as chain facilitator driver for market linkages or market linkage developer, could also have been chosen. All the different chain integrators have their own initiatives and therefore different approaches to develop market linkages. As it is uncertain whether one of these approaches is typically better than another, it is attractive to investigate the features of the interventions by different chain integrators. This would lead to valuable insights of the functioning of several chain integrators and can possibly lead to more effective and balanced interventions by chain integrators in the future.

The coffee production will provide as a case to investigate the role of the chain integrator in creating market linkages for smallholders. Particularly, the focus is on the formalized market, referring to the trade between producers and (small scale) coffee producers. Due to a lack of large-scale coffee producers in Ethiopia, coffee producers are forced to turn to smallholder farmers for the procurement of coffee. However, there is a large informal coffee market in which most of the coffee is traded. This informal market offers stiff competition to the coffee producers in both the procurement and sales of coffee. In general, the linkages between smallholders and the formal market are weak.

The interventions of chain integrators in the Ethiopian coffee industry are focused on establishing and developing new market opportunities for smallholder farmers and at the same time securing a stable coffee supply to the professional coffee producers. Several different types of chain integrators offer a good case for comparison of approaches to create market linkages. The case has been illustrated how chain integrators approach the creation of market linkages in a developmental context.

### 1.2. Specific objectives of the study

1. To investigate the role of chain integrator in creating market linkages for smallholders of Coffee producer Gihmbi Zone Ethiopian.

2. To assess the aim of chain integrators in developing market linkages for smallholder farmers of Coffee producer particularly Gihmbi Zone Ethiopian.

### 1.3. Analytical framework

In order to develop a comprehensive analytical framework, it is necessary to define the chain integrators and their instruments that are used to analyze the Ethiopian coffee industry. Consequently, this framework has been providing the basis for analysis of the data that was collected during the field research. As such, the chain integrators have been framed in terms of producer-driven models, buyer-driven models and intermediary driven models.

**Producer-driven models** – These chain integrators include initiatives such as cooperatives and farmer-owned businesses. The models have had a mixed record of providing members with economic benefits in terms of access to dynamic markets (Vorley et al., 2008, p.197). These producer organizations engage in a wide variety of supporting activities, but rarely focus on providing an effective marketing channel. Even in this case where the organizations operated as marketing channel they were avoided by agribusiness because of problems in cooperation (Vorley et al, 2008). Yet, these kinds of farmer organizations are an important tool to increase competitiveness. In comparison to welfare organizations they are more focused on building competitiveness capacities and are better able to build on informal linkages in the market.

**Buyer-driven models** –This stand for a more forward relationship between the buyer and the producer that is frequently managed and maintained by a retailer or processor in an industry. There are various cases in which buyers had to include smallholders in their business model, because these were the only sources of raw materials available. In these instances the inclusion of small-scale producers has led to a sustainable relationship, such as in certain coffee industries (Vorley et al., 2008). Traditionally, buyers or processors integrate backwards and try to coordinate the production. This is also stimulated by a lack of initiative from the side of the farmers. The buyer usually attempts to cut out the middleman to create a direct relation with the producers and promotes this as a win-win situation for the producer, the customer and the buyer himself. Prices are supposed to be fair for the producer and the buyer has a better control over production.

**Intermediary-driven models** –these models create an alternative to producer and buyer-driven models through integrating forward for producers or backwards for retailers or processors is time demanding and expensive (Vorley et al., 2008). In essence these are attempts to cut out the middlemen to save costs, but in reality they often deemed result in high transaction costs and mixed outcomes. For that reason, working with middlemen might not be such a bad alternative as it is often perceived. This shows the opportunity to current as well as new intermediaries to engage in a certain value chain (Vorley et al., 2008). Mainly the transaction costs of working with many smallholder farmers are overwhelming. Additionally, the coordination efforts required to organize these farmers are discouraging retailers to directly source from smallholders (Vorley et al., 2008). In some cases industries have been intermediaries that have developed into an important facilitator in

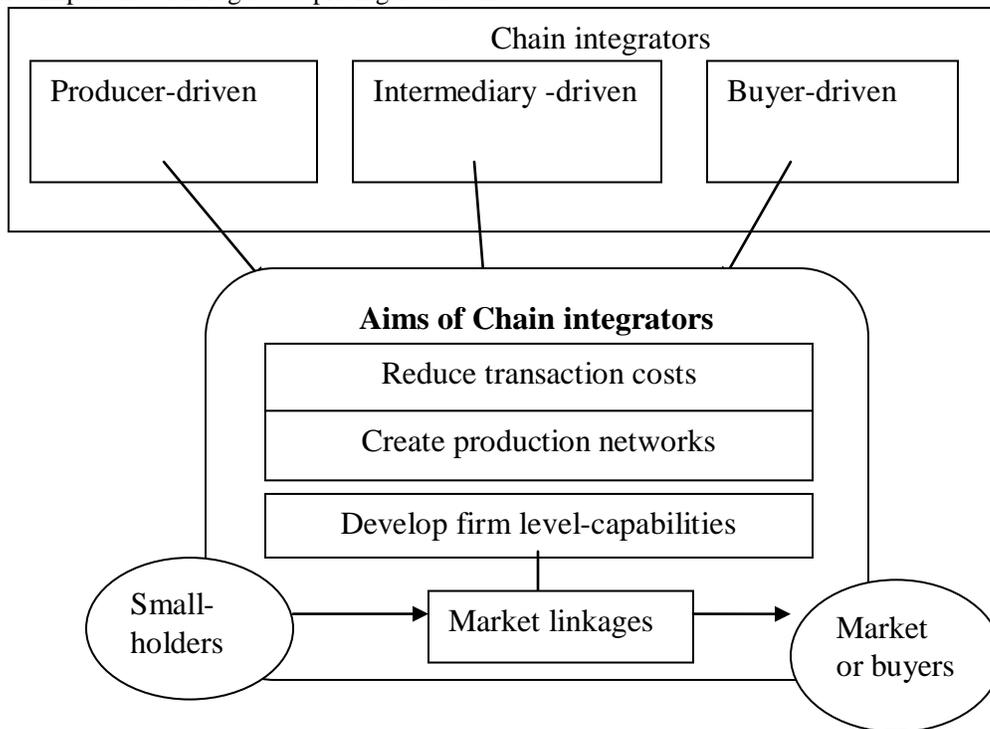
the chain. They have introduced new standards and technologies in the sector that have supported smallholder farmers in improving their production quality and quantity. These intermediaries often have a strong focus on service provision but with a commercial attitude. Their focus on increasing the competitiveness of the chain and their market orientation can make them effective and efficient facilitators.

**1.3.1. Importance of chain integrators**

As far as previously mentioned, the instruments that chain integrators use to develop market linkages for smallholders serve three major purposes those are: - reducing transaction costs, creating production networks and developing firm level capabilities. Based on the results of the review of literature, these instruments have been briefly discussed below. Nevertheless, it is important to remember that the instruments are very context specific. Therefore, these instruments simply served as an inspiration for the field research. The analytical framework would accordingly be framed in terms of the purposes of the interventions, in order to give it a stronger conceptual value. To reduce transaction costs- in this case chain integrators have tried to ensure price stability for certain commodities. Particularly for smallholder farmers price stability is essential. For subsistence farmers with low incomes, fluctuating prices can have demoralizing effects and may lead them to abandon a business agreement. Important with regard to pricing is also the

negotiation process in which the prices are determined. Chain integrators have been active in price negotiations to support the weaker party in order to get fair price agreement. Another instrument that is used to reduce transaction costs is the introduction of production and quality standards. These standards are useful for buyers as they guarantee quality inputs. For producers they increase sales opportunities and sometimes a premium price can be earned. A final important field of intervention for chain integrators in the light of transaction costs has to do with the logistics of the products. This is a broad topic, concerning not only transportation, but in the light of smallholder production, also the collection of agricultural products and the use of informal channels such as middlemen.

According to network theory, chain integrators have mainly focused on developing and improving production networks such as farmer cooperatives and business associations. Cooperation of value chain actors at the same level has many advantages, among which increased bargaining power, learning opportunities and collective investment opportunities. However, production networks also encounter many obstacles, such as a lack of resources, weak capabilities and fraud by its members. Therefore, chain integrators with relevant expertise have been able to play an important role in strengthening the capabilities of such networks.



**Figure 2.1: Analytical framework**

**1.4. Methodology of the study**

The data that was used in this research is both primary and secondary data sources, with an emphasis on primary data. The data were collected by means of in-depth interviews, field visits and observations. The in-depth interviews were conducted with important stakeholder in the Ethiopian coffee producers. The interviewees were selected based on their membership of Ethiopian coffee Processers Association and their activities in the coffee industry. A wide range of topics were discussed during

the interviews to construct a complete picture of the coffee value chain. Initially, several interviews were held to develop a better understanding of the industry. Already in the early stages of the primary data collection, the different types of chain integrators that drive the development of market linkages for smallholder farmers were identified. The field visits and observations were a combined effort and sometimes took place after the interviews with the stakeholders. Also stallholder’s farms were visited sometimes, to get an impression of how the farmers were kept

and their attitude towards working with chain integrators. During the field visits we spoke with employees of the coffee producers. Thus, the field visits offered a clearer picture of the concrete activities in the chain. As far as secondary data a couple of reports were used that provided an overview of the Ethiopian coffee producers and also presented relevant quantitative data about the industry that was useful later on. In addition, other research reports about the industry were used to determine its structure and a few annual reports of the coffee firms provided more quantitative data and a sample of 60 smallholder farmers are taken and the collected data has been analyzed with the help of SPSS version 16 software.

## 1.5. Analysis and Discussions

This chapter has been discussing the findings of the preceding analysis by comparing the different types of chain integrators on each instrument. This approach provides a good indication of how each chain integrator treats its instruments that aim to develop market linkages for smallholders.

### 1.5.1. Role of chain integrators

Smallholders in Ethiopia often face several different problems that hinder their ability to develop new market opportunities independently. An obvious lack of education limits their ability to recognize or develop business opportunities. Financially, producers are in a weak position as well. Low incomes lead to low savings, and their lack of collateral or education reduces their creditworthiness. It is very difficult to enter new markets without capital to invest. Yet another problem is the small scale of production. As the result has been shown farmers usually own traditional coffee that is very well able to survive the local weather conditions in Ethiopia but they produce little coffee. In addition, most farmers live in remote, rural areas that are hard to reach, their position on the market is particularly weak.

In this case chain integrators attempt to address these weaknesses of the farmers and help them to create new opportunities. Their attention goes to education and training, organization and improving production facilities. Generally, as the result shown their efforts aim to serve three purposes:-

1. Reducing transaction costs, creating production networks, and developing the resources of the firm. On a microeconomic level this means that they have to pay attention to many details. Among central importance in the Ethiopian coffee industry is the coffee collection center. This is the place where the buyers and sellers meet to engage in market transactions, and is therefore the logical place to start building a sustainable relationship aiming to trade cash coffee. As the result has been shown that there are many things that need to be taken into consideration when developing a sustainable system for coffee collection. The set up of factors such as transportation, additional services, and etc all influence the decisions of smallholders and thus leads to have the ability to contribute to a durable cooperation arrangement. It is sometimes a challenge for the chain integrators to align their interests with those of the farmers. This article showed that farmers generally take a short term perspective, meaning that they are focused on direct gains and invest little in the development of their

production capacity and market access. In general, chain integrators take a long-term perspective, meaning that they prefer build durable market relations with smallholders and would prefer that farmers develop their production capacity and quality and commit to the coffee business.

2. Creating Production networks are a useful tool to strengthen the position of farmer's via the market. The aim of these groups is to create a shared responsibility among farmers and to have them stimulate each other to perform and deliver. These groups are seen as a starting point for a system in which the farmers take a higher level of responsibility or even manage their own coffee production activities. Particularly producer-driven initiatives have a strong track record in this area, as they often focus on the empowerment of smallholders.
3. Furthermore, as the result has been shown chain integrators put their attention on the development of the productive resources of the farmers. With poor quality resources it is very challenging to develop new market linkages. Farmers therefore need to upgrade their resources, in terms of better quality of seeds and the opportunity to attract capital to invest. For the traditional smallholders this requires a change of mindset, from considering their product activities as a side-activity, to approaching it with a more professional attitude.

### 1.5.2. Aims of Chain integrators with compared to roles of chain integrators

As the result of the study has been shown when comparing the three types of chain integrators, it is clear that each type has its own strengths and weaknesses. This section compares the different approaches of the chain integrators to develop market linkages for smallholders.

- Transaction costs have been discussed in terms of four factors that were also touched upon in the analysis particular. These includes: commitment or trust; ownership of equipment; remuneration of coffee collection center staff and use of middlemen. Trust is an important factor when trying to build a long lasting business relationship with smallholder farmers. On the informal coffee market in Ethiopia, there exist many uncertainties. Farmers are never certain whether they can sell all the coffee that they produce on the informal market. If they are too late or if there is too much competition, they are not sure to sell all their products. Many farmers have experienced that these are very unreliable, especially regarding their payments. Thus, in order to compete with the informal market, chain integrators can focus on earning the trust from the farmers. This result shown that the trust of the farmers is higher in the intermediary-driven and producer-driven models, than in the buyer-driven models.
- In the buyer-driven model the coffee processors (buyers) mainly try to create commitment through stable prices, timely payments. Even though many farmers appreciate those aspects, they are not a binding factor for the farmers. Sometimes, the coffee processors cannot live up to their promises, damaging the faith of the farmers in the model.
- In the intermediary-driven and producer-driven models, farmers have a much stronger belief in the functioning of the model. This is probably because they feel much more

involved due to the membership of a farmer group. Membership enables them to contribute to the decision-making process. Farmer groups thus have a much better ability to communicate with the farmers in case of unforeseen events. Farmers that are member of the groups also have a special interest in the performance of the coffee collection, because they pay membership fees or receive special benefits.

- Working with middlemen is a weak issue in the Ethiopian coffee industry particularly Gihmbi zone. The ones that are delivering to the informal market are generally considered unreliable and arbitrary. They pay a different price to each farmer. Despite of these claims, many farmers and coffee processors have worked with these on a regular basis. The negative attitude towards middlemen is also expressed in the models for chain integration. The buyer-driven model is the only model that actively uses middlemen to supply their coffee collection centers.
- Generally, the transaction costs are addressed differently by each of the models, although the intermediary-driven and producer-driven models take a similar approach. Their aim is to increase the trust and sense of responsibility of the farmers so that their actions reflect their commitment to the models. This reduces the need to create micro-economic incentives, such as motivating coffee collection center manager by performance payments, but at the same time it puts strong faith on the integrity of the farmers. On the other there is the buyer-driven model that places a stronger emphasis on economic incentives to develop trust and commitment.

## 1.6. Conclusions

- Smallholder farmers often have a lack of resources and capabilities that prevent them from entering and competing in formal markets. Consequently, they usually operate in the informal track, making little effort to upgrade their production facilities. In this case chain integrators can play an essential role in linking smallholders to the market.
- There is the buyer-driven model, in which the coffee processors act as an initiator for the development of continuous market transactions for coffee that they use as an input in their factories.
- There is the producer-driven model, through which the producers try to cooperate and achieve economies of scale that allow them to engage in processing activities and serve new markets. The focus of this type of chain integrator is on

the cooperation with fellow producers by building networks, share knowledge and build new capabilities.

- There is the intermediary-driven model, in which an external agent assists in the development of market linkages for smallholders with the aim to increase their incomes and improve their livelihoods. This type of chain integrator aims to develop the capabilities of the farmers through the development of networks, basic processing facilities and education.

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