Mobile telephony and cereal trade in Mali: More than a narrative of achievement

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Introduction

Trade rests on two pillars, two pillars only, there are not three. The first pillar is trust, the second is information. That's all. Money does not count, these are the two pillars. A trader who has the information is the first on all trading activities. (A. Traoré, interview with author, October 23, 2012 in Bamako)

This quote, taken from an interview conducted in the course of an empirical study (Fofana 2015), contextualizes trade in Africa. This requires taking into account the subjective and objective aspects of cereal trade in Africa in general and in Mali in particular. West Africa has been experiencing a rapid change in the communications media for several decades, which has brought about changes in many areas. These changes affect urban sites and the countryside too. They have occurred thanks to the development of Information and Communication Technologies (ICT). Among these ICTs, the mobile phone has been particularly important in disseminating information in developing countries. It has marked African countries during the last two decades. The commercial interaction is concerned. How does mobile telephony contribute to the achievement of grain transactions for small farmers in Mali?

Cereal markets have undergone changes since the 1960s. These changes concern their structure as well as their functioning. They occur at the supply and demand levels (cereal imports pass through the market), communication methods and policies. Producers who sell their surplus in the market are few, about 20% (Soulé 2011, 31). Since the 1980s with the structural adjustment program, the grain market has entered the era of economic liberalism and must now prove its competitiveness. Technology contributes to market performance and welfare of small farmers (Jensen 2007). Small producers are among the poorest people in rural areas because they are sometimes forced to sell their products on the market just to satisfy the problem of food, debt repayment, health, etc. In the past, they did not have the real value of their goods on the market for lack of information. Success in this market does not only depend on production capacity but also on network capacity and access to information on the market (e.g. on the status, availability,

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quantity, best market, time to sell products, etc.). Their source of income is primarily the sale of their productions. Success means benefiting more in grain sales for economic and social advancement. So taking care of their family and getting into the wealthier producers' position is more challenging for them in this situation.

The cereal market in Mali

Cereals occupy a central place in the Malian economy. More than 50% of the diet consists of cereals, which are grown in general by small producers who are not well placed in the market. Producers are sometimes uncertain about anticipating grain prices. It is an enclave economy, and due to the geographical situation of the country, characterized by difficult access, the cost of communication prior to the development of mobile telephony was high. For example in Mali in 2012, the norm of consumption was estimated at 214 kilograms (kg) per inhabitant per year (81,61 kg for rice, 9,86 kg for wheat and 122,53 kg for dry cereals such as millet, sorghum, corn respectively), according to a report published by the newspaper *L'Essor* (*L'Essor* 2013). This changed slightly in 2017, the annual per capita consumption (the country has 18.1 million inhabitants) is estimated at 266 kg, i.e. 14 kg of wheat, 83 kg of rice and 168 kg of other cereals. This shows that the standard of consumption continues to increase year by year as well as the demand. Today, cereal markets are based on demand and supply.

Farmers sometimes do not know how the sector is organized, but today anybody involved in the cereal trade understands the issues related to information. This is the reason why they organize themselves and get information at each level of the chain. In addition to other programs contributing to their organization such as the Rice Initiative in 2008, corn and wheat in 2009, farmers have gotten organized to face the cereal market. After this organization of producers, there a surge in grain prices occurred. The producers thus have the power to negotiate directly with merchants via the mobile phone.

The following section discusses the mobile phone's contribution to the sale of grain to producers. The second pillar of the grain trade is access to information. Grain market players used to have vertical access. The trader was better informed than the producer. With the use of the mobile phone, access to information has become horizontal, which reinforces the bargaining power of the producer. Horizontal access to information influences price formation. "The mobile phone is helping to raise the price of cereals" according to producer Diallo (interview with author, December 21, 2012 in Diabali). It allows producers to better negotiate the market with the information they obtain through its use. The use of the mobile phone is thus a positive aspect because it allows knowing and understanding the marketing mechanism. Diallo (producer in Diabali) believes that the mobile phone benefits producers rather than traders. Being well informed about the reality of the market, the producers stagger the sale of products in order to benefit from the rise of prices.

Negotiation, access to information and competition for cereal trade's achievement

The information system initiated in the context of ICT progress will enable better marketing of Malian agricultural products by providing donors and rural actors with reliable information on agricultural sectors. The marketing of cereals relies on means of access to information through radio, telephone booths, mobile phone and the internet. According to A. Traoré, "the producers do not even know them, often when they come on the market before the transactions, they go on the radio to ask the price. For them it is the radio that gives the prices. It becomes a bargaining base for them" (A. Traoré, interview with author, October 23, 2012 in Bamako). The mobile telephony in Mali in the late 1990s adopted business models explicitly designed to reach the poorest (and largest) section of the population, with low-priced mobile phones and small-denomination prepaid cards. The mobile telephony is now integrated into the daily activities of business and household lives.

Producers who could not compete with others because of the problem of access to the right information, are now armed with mobile phones. They can negotiate with Malian and foreign traders easily, which was not the case two decades ago. The actors (State, Producers, Consumers, Financial Institutions, Non-Governmental Organizations (NGOs), Transformers, and Traders) in the cereal market are positioning themselves in relation to the purchase and sale of cereals. The market is a competitive space. When seeking to maximize the benefits, the access to information is an important element in all decision-making processes (Svensson and Yanagizawa 2009; Fofana 2016).

The use of mobile telephony (Short Message Service (SMS), platforms like Sεnεkunnafoniso, Sènèkèla of Orange - Mali and social media) has allowed market players to create several commercial networks inside as well as outside the country. Trade on a certain scale and in this competitive environment is an activity in which a mobile phone is a crucial factor. Access to market information allows for good integration, thus promoting competition. Two factors make the grain market competitive, namely the integration of the national and the regional market (Burkina Faso, Mauritania, Senegal, Ivory Coast, and Niger) and access to information. Producers face price instability that increases the risk of investments in the grain sector. Producers remain little involved in the marketing circuits of their products, and value their cereals insufficiently. Each actor intervenes according to their knowledge to improve efficiency. Hence, an information asymmetry between the actors is bound to create an asymmetry of market power. Producers used to be poorly paid for their rice with traders in a dominant position in the market. The use of the mobile phone allows an economic freedom that counters the asymmetry of information and becomes part of a narrative of improvement. Thus, small producers are free in their commercial movement. The decisions are inspired by the state of the growing cultures, the information received on the situation of the cultures in other zones of the country (circle,

regional, national level) through the telephone.

The mobile phone has developed new services and modes of behaviour in Mali that can be explained by activities related to its development. It is seen as a means of raising and dissemination information and thus assumes great significance. It offers quick feedback from investigators. Its use has revolutionized market interaction by facilitating the successful cereal transactions: "Not only the information systems use it but also traders do the same. Its use reduces the time of the transactions. It makes available business opportunities as quickly as possible. It created some trust between the operators. The cellular (mobile phone) is not a very complicated equipment. The user can move around everywhere and at any time he can call either inside or outside to get the information," according to P. Traoré (interview with author, October 17, 2012). Although the focus of the present paper has been on the benefits, it should be mentioned that there are critical views, as well: Molony (2006 and 2008), for instance, in his work on the telephone and the agricultural market offers a critical perspective on information disseminated via the mobile phone in the context of the competitiveness and performance of agricultural markets, especially when perishable agricultural products are concerned. He interviewed a number of entrepreneurs who said they did not trust information received from the mobile phone (Molony 2006, 76).

Conclusion

ICT in the Malian context allows communication and interactions that promote the integration of markets and intra-regional trade. They also sustain the growth in intra-Africa trade. The use of the mobile phone has greatly improved the fluidity of the exchanges. A trader or a producer can give a price that is not real. The mobile phone offers the possibility of a cross check through an alternative source and helps producers to make informed decisions. Farmers need reliable information for their successful self-promotion. The use of the mobile phone allows the actors to better organize themselves and better negotiate with the producers. It has allowed them to increase their profit margin and to be able to sell their products while expanding their trading networks both inside and outside the country. Producers sell their grain to any buyer, not just to traders or consumers, deviating from the rules of trust and routine. In this case, the market is based on the games of the actors. The profits made in the sale of cereals are invested in working oxen, equipment (plows for better production), houses, education, health, motorcycles as a means of transportation, etc. Increasing a producer's income is synonymous with their social and economic promotion. Hence, the impact of the mobile phone on the prices, the incomes and the performance of small farmers is important, too, in terms of changing their social status.

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