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Tracking the Quality Premium of Certified Coffee: Evidence from Ethiopia

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SUMMARY

Certification of Voluntary Sustainability Standards (VSS) is rapidly increasing in global value chains. While consumers, mostly in developed countries, are willing to pay significant premiums for the certification of such standards, it is not well understood how effectively these incentives are transmitted to producing countries. We study VSS—more in particular Fair Trade and Organic certification—in Ethiopia's coffee sector, the country's most important export commodity, using a unique census of transaction data at the export level and large-scale data at the production level. We find that transmission of export quality premiums to coffee producers is limited, with only less than one-third of this premium being passed on, and we find limited evidence of effects due to communal investments. Moreover, as quality premiums are small and average production levels in these settings are low, we estimate that these premiums would only lead to an increased income for coffee farmers of 22 USD per year even with a perfect transmission scenario, and therefore would have little impact on the welfare of the average coffee farmer. Given that the VSS studied are characterized by the highest premiums among VSS schemes, it can be assumed that even lower benefits from other VSS certification schemes trickle down to producers.

1. Introduction

There is a growing emphasis in international markets on Voluntary Sustainability Standards (VSS) practices, seemingly as a response to enhanced global social and environmental pressure (Giovannucci & Ponte, 2005; Henson & Reardon, 2005; Swinnen, 2007). By guaranteeing the product origin, fair prices to producers, adherence to ethical standards in production and processing, environmental sustainability, and safety and quality safeguards—as shown through a certificate of VSS—international buyers and consumers are often willing to pay extra for a product. Conversely, adhering to those new requirements can be expensive with costs coming from several sources. For example, VSS certified organizations are required to put in place environmental, labor, and safety standards and also put documentation systems in place to monitor the production process. The certifying organization's charges can also be substantial (de Janvry, McIntosh, & Sadoulet, 2014). This often raises questions about who actually benefits from the imposition of these standards and if these VSS achieve their objectives (Haight, 2011).[1]

The coffee sector has led the field in applying different VSS (Potts *et al.*, 2014). In this global sector—one of the most important traded agricultural commodities in the world—it is estimated that 18% of coffee production was sold as VSS certified in 2015, up from 4% in 2005 (Giovannucci, von Hagen, & Wozniak, 2014). This share is expected to reach significantly higher levels in the near future (Giovannucci *et al.*, 2014; Pierrot, Giovannucci, & Kasterine, 2011; Potts *et al.*, 2014). [2] Despite the increasing global demand for VSS

[1] In the literature, there are opposing views on the impact of standards on smallholders in developing countries. On the one hand, certification has been found to be beneficial and smallholders are able to thrive under the imposition of more stringent standards (e.g., Kersting & Wollni, 2012; Minten, Randrianarison, & Swinnen, 2009; Wang, Dong, Rozelle, Huang, & Reardon, 2009). On the other hand, there are findings that the impact of standards is minimal or negative (Jena et al., 2012; Dragusanu & Nunn, 2014). Reardon, Barrett, Berdegué, and Swinnen (2009) even find that standards can lead to the exclusion of smallholders in these agricultural value chains, especially when firms have procurement options.

[2] For example, the Sustainable Trade Initiative has an agreement with major roasters toward increasing global sustainable coffee sales to 25% in 2016. See http://www.idhsustainabletrade.com/koffie-news

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and the large share of coffee producers that supply their products under these schemes, there are relatively few studies that examine the impacts of these arrangements on coffee producers or on the distribution of the quality premium along the coffee supply chain. Most available studies have focused on identifying the impacts on the producer level. The findings are mostly mixed, with some exposing positive impacts (e.g., Barham & Weber, 2012; Dragusanu, Giovannucci, & Nunn, 2014; Ruben & Fort, 2012; Rueda & Lambin, 2012; Rueda & Lambin, 2013; Weber, 2011; Wollni & Zeller, 2007; Chiputwa, Spielman, & Qaim, 2015; Bacon, 2005), while others find little effect (e.g., Cramer, Johnston, Oya, & Sender, 2014; de Janvry *et al.*, 2014; Dragusanu & Nunn, 2014; Haight, 2011; Jena, Chichaibelu, Stellmacher, & Grote, 2012; Stellmacher & Grote, 2011; Beuchelt & Zeller, 2011; Elder, Zerriffi, & Le Billon, 2012; Valkila, Haaparanta, & Niemi, 2010; Valkila & Nygren, 2009). In Africa especially, there are few studies on this, possibly because of the lower uptake of VSS than in the rest of the world (CTA (Technical Centre for Agricultural), 2013).

We look at this issue in the case of the coffee sector of Ethiopia, its most important export product which accounts for about a quarter of its foreign exchange earnings.[3] Our contribution to the literature is twofold. First, this is the first study that examines how the quality premium of VSS certification—in particular Fair Trade and Organic certification—is distributed between export and production levels in producing countries. We study the use of the quality premium at two levels. We first look at the transmission of the quality premium from export levels to producers. Then, as some of the funds obtained from the quality premium of VSS certification provide benefits to coffee farmers in other ways than by higher prices because they are e.g., invested in communal assets and in agricultural extension, we test to what extent VSS certification is associated with other intended changes. Second, to examine these questions, we use exceptionally rich datasets, i.e., a census of coffee transactions over a nine-year period, a time-series of coffee producer prices over an eight-year period, and a comprehensive representative survey of 1,600 coffee producers. Moreover, we combine qualitative and quantitative information from these surveys as well as insights from key informant interviews. This comprehensive approach provides confidence in our findings for Ethiopia, the biggest coffee producing country in Africa, and beyond.

We find that there are statistically significant quality premiums attached to VSS certified coffee at the export level. However, there are only small price premiums at the producer level—producers received less than one-third of the quality premium for VSS certification realized by coffee exporters.[4] The gap in effective transmission is seemingly explained by important overhead and certification costs and by investments in communal services that might not directly improve the prices received by individual producers. However, we also do not find large-scale improvements in the stated objectives linked with these communal investments. Compliance costs at the cooperative and household level are often found to be high. Moreover, we find that, even if the transmission of premiums were more efficient, it would likely result in limited impact on the welfare of poor farmers. If an average Ethiopian coffee farmer, who annually sells the equivalent of 400 kg of red cherries, were to market all his or her red cherries as VSS certified, with current VSS premium transmission rates, the farmer's annual income would increase by 6.7 USD compared to the non-certified cooperative farmer (assuming both types of farmers sell all coffee to the cooperative). Even in the case of a perfect transmission, the annual income of the average certified coffee farmer would only increase by 22 USD compared to a non-certified cooperative farmer.[5] These premiums from VSS certification are therefore unlikely to significantly contribute to improving the welfare of coffee producers. The findings of our study therefore raise doubts on some of the fundamental propositions of VSS, and Fair Trade in particular.

The structure of the paper is as follows. First, we provide some background information on VSS in the coffee sector. Section 3 presents a conceptual framework and empirical methodology. In Section 4, we describe the data used for this study. Empirical results on the quality premiums and its transmission between different layers in the value chain are presented in Section 5. In Section 6, we test to what extent VSS certification achieves its intended objectives. We then finish with a discussion of the findings.

2. Voluntary Sustainability Standards (VSS) in coffee

Concerns for producers' income combined with those for social injustice and environmental destruction have led to a global movement for sustainability standards (Giovannucci *et al.*, 2014; Pierrot *et al.*, 2011). The demand for VSS certification for coffee arguably took off globally in the early part of the 2000s when the international price of coffee declined dramatically, creating hardships for many poor smallholder coffee producing households. In 2005, it was estimated that 4% of all coffee was VSS certified. This has grown quickly since then and it is estimated that the share sold as VSS certified has now reached almost 20% of the global trade in coffee (Giovannucci *et al.*, 2014). The main sustainability standards include Fair Trade, Organic, Rainforest Alliance, Utz Certified, and 4C Code of Conduct (Potts *et al.*, 2014).

The Fair Trade movement has its origin in initiatives by charities in the United States and Europe, usually linked to churches, that created "alternative trade" channels for, mostly non-agricultural, products of impoverished people (Bacon, 2010; Jaffee, 2014). A milestone in the Fair Trade movement was the start of the *Max Havelaar* coffee by a church-based NGO in the Netherlands in response to low coffee prices. The *Max Havelaar* foundation licensed the use of the label to existing coffee roasters and retailers who agreed to comply with its criteria of fairness in trade, giving impetus to the start-up of the Fair Trade Labeling Organization (FLO) in 1997 (Jaffee, 2014). The vision of the initiative was to ensure that producers would realize sufficient incomes by assuring minimum prices and by guaranteeing social standards.[6]

Organic certification, a second VSS, ensures that the coffee has been produced under organic standards. It emphasizes systems that promote and enhance agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. For a lot of coffee to obtain an organic certificate, it is required that no

[3] In Ethiopia, there are a number of studies that have examined issues of coffee certification. There are two major drawbacks to previous studies. First, several of these studies were qualitative (e.g., Stellmacher & Grote, 2011) and fail to illustrate quantitative impacts. Second, when surveys were fielded, they were limited spatially or only focused on one type of certification (e.g., Cramer *et al.*, 2014; Jena *et al.*, 2012; Kodama, 2009).

[4] These results are consistent with analysis from other countries which show that typically 10% of premium paid for VSS certified coffee at the retail level in Western countries goes to the producer (e.g., Johannessen & Wilhite, 2010; Kilian, Jones, Pratt, & Villalobos, 2006; Mendoza & Bastiaensen, 2003; Valkila *et al.*, 2010) and that these premiums mainly empower roasters and retailers. On the other hand, Langen and Adenauer (2013) maintain that 50% from the premiums goes to the producers in four Latin American countries. However, most of this analysis suffers from lack of representative data at the different levels of the value chain in producing exporting countries. This is important given the large heterogeneity that is often found in these settings.

[5] The certified cooperative allows for higher quantities to be sold to the cooperative compared to non-certified cooperatives. However, even taking this into consideration does not change this overall picture much. We thank a reviewer for pointing this out.

[6] Fair Trade's interventions for producers can basically be divided in two (see https://www.Fair Trade.net/products/coffee.html). First, a minimum floor price (the Fair Trade Minimum Price) is set for whenever the international price falls below a specific threshold. Second, a premium (the Fair Trade Premium) is put aside in a communal fund to be used toward capacity building and community development projects.