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(Fairtrade) certification: consequences of being a niche market

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ABSTRACT

Product certification such as organic and fairtrade, leads to a price premium for producers in the majority of cases and thus, also encourages them to increase supplied quantities in order to boost revenue, as empirically evidenced by several studies. Theoretically, this might be a plausible business strategy. The market for certified products is, however, a small one, and producers are not able to sell off the entire quantity produced in the certified niche market. Said supply surplus has to be sold off via conventional trading channels, resulting in a head-on competition between certified and uncertified producers. The analysis at hand sheds light on the revenue gains of certified producers via price discrimination on conventional Southern markets, and the consequences for uncertified producers.

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Fairtrade; fairness; sustainability; price discrimination

1. Introduction

Global sales of products certified by the Fairtrade Labelling Organisation (FLO) increased from EUR 0.8 billion in 2004 (Statista 2016) to EUR 5.5 billion in 2013 (Fairtrade Deutschland 2015) and, finally, EUR 7.88 billion in 2016[1] (Fairtrade International 2017). Europe is the main sales market for fairtrade-certified products, and demand accounts for 79% of fairtrade supplies certified by FLO (Lernoud and Willer 2017). In 2016, Austria registered the highest demand increase (fairtrade sales increased by 46%). Apart from Austria, France, the Netherlands, Norway, and Switzerland recorded growing fairtrade sales, with growth rates rising up to 20% in 2016 (Fairtrade International 2017). The growth trajectories of other sustainability labels, like UTZ Certified and Cotton Made in Africa, are at a comparable level (Lernoud and Willer 2017). Said trajectory of fairtrade certification is due to the consumer's willingness to pay a (marginal) price premium for fairtrade-certified products (e.g. Arndorfer and Liebe 2015; Garcia 2015; Poelmans and Rousseau 2016; Bissinger and Leufkens 2017). In any case, with a market share below 5% for organic farming and below 2% for fairtrade certification (Lernoud and Willer 2017), the market for (food) product certification is very small.

The producer side of fairtrade certification is not easy to evaluate. Nevertheless, some studies do address it, theoretically (e.g. Mann 2008; Benzeçon 2011; Bauman, Oschinski, and Staehler 2012; Podhorsky 2015) as well as empirically (e.g. Becchetti and Constantino 2008; Ruben and Fort 2012; Mauthofer et al. 2018). Those studies conceptualise, at least implicitly, fairtrade certification as a demand-driven concept, the success of which is highly determined by the consumer's demand for price inelasticity.

While there is a wide range of academic literature on the economic effect of fairtrade certification on producers, its effect on (conventional) regional markets in the Global South has not yet been

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sufficiently analysed. To the best of the author's knowledge, no analysis addresses price discrimination in this context, up to now.

On that account, this article discusses third-degree price discrimination of fairtrade-certified producers in conventional regional markets of the Global South. According to economic theory, third-degree price discrimination is defined as the same product being priced differently in two markets (e.g. Pindyck and Rubinfeld 2009). In the following analysis, the two markets are defined as (1) the non-certified commodity market in the Global South[2] (conventional regional market) and (2) the market for certified commodities (e.g. fairtrade market).

Prior to the analysis of price discrimination, the main components of fairtrade certification need to be clarified. Certainly, price discrimination introduced by fairtrade-certified producers is rooted in the assumption of advantages in production. These are strongly linked to the instruments of fairtrade certification. Consequently, this article is structured as follows: It begins with a definition of fairtrade certification and then turns to describing the its main instruments. Afterwards, the market structure of regional markets in the Global South is analysed, before the article concludes with a discussion of the theoretical findings.

2. The approach of Fairtrade certification

2.1 Literature review

Fairtrade certification is mainly concerned with product certification in the Global South and the distribution of certified products in the Global North. Labels signal specific product attributes, aiming to reduce information asymmetry between an agent (producer) and a principal (consumer) (e.g. Voigt 2009). The producer side is characterised by fair price payments, including a social premium, short-term credits, and long-lasting relationships with trading partners (Fairtrade International 2018a).

Meanwhile, the Charter of Fair Trade Principles, published by the World Fair Trade Organisation (WFTO) and the Fairtrade Labelling Organisations International e.V. (FLO) (WFTO and FLO 2009), defines fairtrade as the following: "*Fair Trade is a trading partnership, based on dialogue, transparency, and respect that seek equity in international trade*." Besides the aspects of cooperation, transparency, and equality, fairtrade aims to foster sustainable development by implementing production standards (WFTO and FLO 2009, 4). Standards are associated with ecological,[3] economic,[4] and social[5] requirements, with compliance being obligatory for certification (Fairtrade Deutschland 2018). Product certification takes place in accordance with those categories, followed by additional certification criteria concerning the business structure,[6] for instance (Fairtrade International 2018a).

As briefly outlined in the introduction, the market for certified products is demand-driven and best characterised by its ethically-motivated consumers. According to literature, they are less price elastic in their demand (e.g. outlined by Benzeçon 2011; Arndorfer and Liebe 2015; Garcia 2015; Poelmans and Rousseau 2016). Besides such consumer-oriented research, academic literature analyses the producer side as well. Consequently, a fair amount of impact studies of fairtrade product certification are available, such as Ruben and Fort (2012), Becchetti and Constantino (2008), and Mauthofer et al. (2018). Empirical case-specific research frequently outlines a positive impact of fairtrade certification and special instruments in particular on certified producers. Instrument-specific research is discussed in more detail in the following chapter.

Apart from empirical evaluations, academic literature also includes theoretical considerations about fairtrade certification. The aforementioned research r deal with price setting and market structure (e.g. Bauman, Oschinski, and Staehler 2012; Podhorsky 2015) or the economics of fairtrade certification in general (e.g. Mann 2008; Nicholls 2010; Dragusanu, Giovannucci, and Nunn 2014). Although there is an increasing amount of academic literature concerning fairtrade certification, the problems linked to fairtrade being a niche market have not yet been sufficiently discussed.

According to relevant literature, certified producers are not able to sell off their total quantities produced in the niche market. Indeed, only 40–70% is distributed via the fairtrade distribution channel (Fairtrade International 2010). Other niche markets with a focus on product certification, like organic farming, GMO-free, etc may see similar trends. Supply surplus may be an issue in any niche market, and the theoretical framework outlined in Chapter 3 is applicable.

2.2 Instruments of Fairtrade and their empirical evaluation according to literature

Prior to the analysis of third-degree price discrimination in (conventional) regional markets of the Global South, instruments of fairtrade certification need to be presented and evaluated, as a deeper understanding thereof is mandatory to form the model's assumptions. The main instruments, which shall subsequently be briefly described, are fair minimum prices, a social price premium, and small short-term credits for producers. This list is extended by the subordinate instruments of forming a cooperative and the monitoring of certified producers. Although they are often not mentioned in literature as main instruments, both affect the certification system fundamentally.

2.2.1 Fair minimum price

The fair minimum price is the most important component of fairtrade certification, at least from the perspective of most certifiers. It can be most easily explained by taking the example of Arabica coffee. Since 2011, producers certified by Fairtrade International receive 2.97 US$/kg, whenever the conventional commodity price ranges below this amount (Fairtrade International 2017). If the market price lies above the minimum fair price, producers are free to choose the highest price (Cătoiu et al. 2010; Fairtrade Deutschland 2018). Between 2011 and 2016, the minimum fairtrade price has been binding if, and only if, the regional producer price is used as a reference. This is recommended by this article as one should compare prices of the same level (conventional and fairtrade producer prices). Bissinger (2019) has done something similar. However, fairtrade literature (e.g. Raynolds 2000; Mann 2008; Dragusanu, Giovannucci, and Nunn 2014; Dragusanu and Nunn 2018; TransFair 2018a) often points to the world market price as the reference price.

The fair price is calculated based on the costs of sustainable production and thus, contains information about the capital and labour endowment of the business. Furthermore, it takes the actual investment rate, information about input factors, and the business' profit into account (FLOcert 2017).

As illustrated in Figure 1, the fair price consists of the fair producer price and a social premium, which will be discussed subsequently.

In the case of Arabica coffee, the fair price lies above the conventional (regional) producer price. Most of the time, fairtrade organisations aim at floor prices higher than conventional product prices, in order to promote economic development (Fairtrade Deutschland 2018). The difference between a fair and a conventional price is illustrated by the right pillar in Figure 1 and named Fairtrade Price Markup. Hence, the Fairtrade Price Markup identifies the additional amount of money a certified producer receives by selling their products in a fairtrade market. On top of this, the social premium, comparable with ordinary development aid, has to be mentioned.

Concisely, fairtrade certifiers intend to promote producers in the Global South by paying (higher) performance-focused prices (FLOcert 2017; Fairtrade Deutschland 2018).

According to empirical analysis about the impact of fairtrade certification on Costa Rican coffee farmers by Dragusanu and Nunn (2018), fairtrade prices might be a promising tool in development economics. In their conclusion, a positive impact of fairtrade prices on the farmers' revenues[7] was predicted. Moreover, the incomes of small-scale (educated) farmers were affected positively. It has not, however, been proven that hired employees[8] earned higher wages (Dragusanu and Nunn 2018). This might be due to a weakness in the price pass-through along payment chains. Employers might have an incentive to hold back price premiums to arrange business investments or, in the worst case, to enrich themselves. Thus, hired employees do not receive higher wages. Karki, Jena, and Grote (2016) also outline the positive income effect of certification through higher price

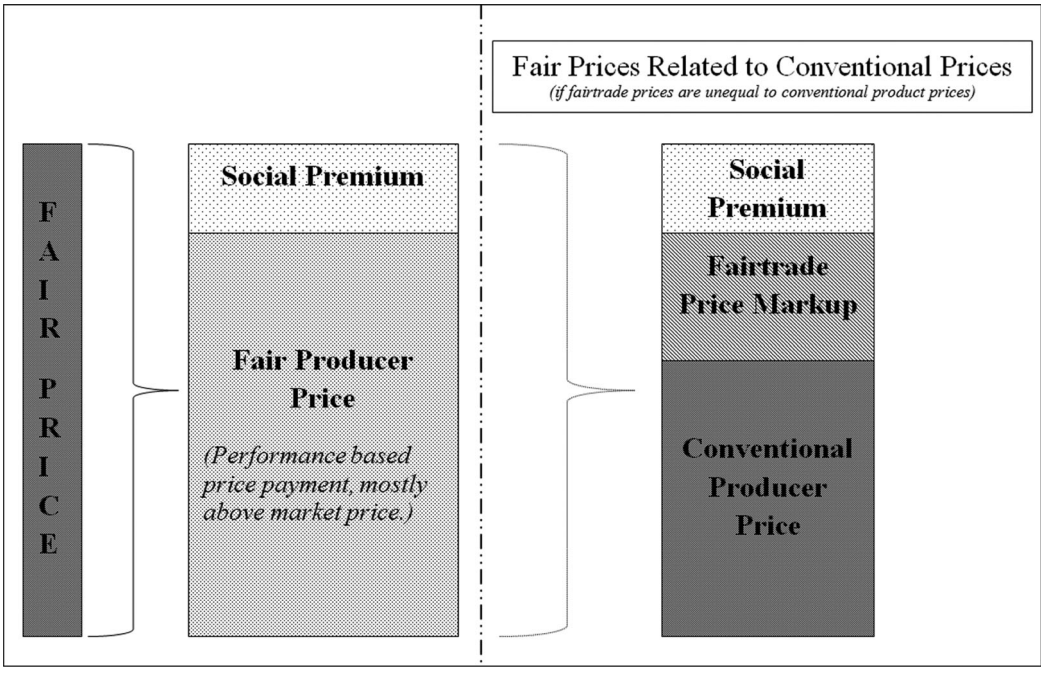

Figure 1. Structure of a fairtrade producer prices. Source: Author's illustration based on common fairtrade knowledge.

payments to coffee farmers in India. Becchetti and Constantino (2008) observed a higher price satisfaction and increases in food consumption of Kenyan farmers, caused by higher price payments. Ruben and Fort (2012) and Mauthofer et al. (2018) outline similar (empirical) results with regard to the impact of fairtrade certification on producers in the Global South. According to Bacon (2015) and Jena and Grote (2017), Nicaraguan and Indian coffee farmers report higher coffee prices for certified coffee as well. Chiputwa, Spielman, and Qaim (2015) report similar estimation results for coffee farmers in Uganda. Consequently, coffee income, as well as household income, rose in the case of Indian coffee farmers (Jena and Grote 2017). Jena and Grote (2017) were able to observe an increase in coffee income per hectare by 49.62 US$ for certified producers.

However, fair price payments could foster businesses, increase the wellbeing of people, and cause economic growth in the Global South.

2.2.2 Social price premium

The social premium is instrumentalised by certifiers to reinforce the impact of certification on economic growth and on the alleviation of poverty. The social premium is added on top to each minimum product price, as illustrated in Figure 1 by the dotted area, and paid to the producers in the Global South.

The nature of the social premium is comparable to ordinary development aid and needs to be reinvested properly. The social premium differs from the fair price paid. It is an extra payment, independent of the production costs and is mainly defined by the producer's obligation to reinvest said additional payments (e.g. Fairtrade International 2015).

In 2016, the social premium paid to producers certified by FLO added up to EUR 158 million. The additional money received was mostly invested into the improvement of cooperation efforts and product quality. Plantation workers, on the contrary, were primarily interested in the improvement of their accommodations and investments in education (Fairtrade International 2015, 2018c). In the case of coffee farmers in Uganda, fairtrade premiums were invested into infrastructure and training programmes (Chiputwa, Spielman, and Qaim 2015).

According to Raynolds, Murray, and Wilkinson (2007), certification led to improvements in the economic status of producers thereafter and predicted an increase in the level of education, caused by a fair price and a social premium. Dragusanu and Nunn (2018) also depict the latter effect. Once again, differences with regard to school enrolment rates have been visible for hired employees and for those working at their own farm.

2.2.3 Small short-term credits

Moreover, a reorientation towards fairtrade certification increases the producer's ability to maintain small (short-term) credits. These credits serve the purpose of pre-financing, the third instrument of fairtrade certification (Fairtrade International 2015). Entering the credit-market – in line with the provisioning of foreign capital – might be an appropriate tool in promoting economic development.

Usually, the agricultural sector is characterised by high levels of uncertainty, resulting in high interest rates in capital markets. Thus, crop failure caused by drought, for instance, often leads to business shortfalls. Consequently, a producer of agricultural products might immediately be compromised in his/her livelihood (Liebig and Sautter 2000, 125–129; Mankiw and Taylor 2012, 714–715). The opportunity to make future plans is a fundamental component of economic development and is promoted by long-term trade relations as well. Hence, Ronchi (2002) describes a positive impact of fairtrade on coffee producers, traced back to pre-financing and long-term trade relationships. Nelson and Pound (2009) empirically confirmed a positive impact of pre-financing on the structure of businesses and their market participation. Ruben, Fort, and Zúñiga-Arias (2009) predict a significantly positive impact of access to loans on certified Kenyan farmers; a similar result is outlined by Bacon (2015). Indeed, loaned money was mostly invested into long-term projects (e.g. buying new agricultural land). Moreover, fairtrade organisations occupy the role of companion in developing a sustainable business and guiding the producer in business issues (Shreck 2002).

2.2.4 Further (subordinated) instruments

In addition to the three pecuniary instruments, standards often include further economic, ecological, and social components. The former three – minimum price, social premium, and financial support – clearly belong to the category of economic standards. In addition, fairtrade certification might have a positive impact on the environment in the Global South. This is analysed by Bacon, Rice, and Maryanski (2014) and Davis and Doherty (2018), for instance. Although this might be an important component of fairtrade certification, the article at hand focuses mainly on the economic impact.

2.2.5 Forming cooperatives

Apart from the fairtrade instruments mentioned previously, another important component of fairtrade certification is linked to the new market structure in the Global South. Although it is not part of the fairtrade standards, it might be an essential determinant of their success. Especially small-scale producers in the Global South form cooperatives. Thus, they are able to interact on a larger scale, via larger production quantities. According to the common literature on cooperatives, cooperative behaviour has a positive impact on producers' resource management, their marketing strategy, and on their ability to access markets (c.f. literature review from the viewpoint of the institutional economy by Mwangi and Markelova 2009; review concerning the cooperatives' marketing strategy and market access by Markelova et al. 2009). Moreover, a collaboration between producers might lead to more efficient production processes as outlined by Abate, Francesconi, and Getnet (2014).

Summarising the above, cooperating farmers offer a larger supply, are thus more likely to influence market prices, and finally, have a better negotiation position in international trade than independent farmers. Making use of economics of scale might lead to economic growth and poverty alleviation, assuming that (poor) small-scale farmers are part of the cooperatives (c.f. Valentinov 2007). The empowerment of poor Nicaraguan coffee farmers is proven by Bacon (2015) and might be due to cooperative behaviour. Bacon (2015) also identified some pitfalls of the new trend in fairtrade certification: By now, said cooperations of small-scale farmers have begun to compete with certified plantations. Thus, the

advantage of small certified producers is fading away.[9] Once again, producers compete with big players, on either the conventional or the certified market. One way or the other, the advantages of cooperation remain unchanged, and independent farmers would be even worse off within this competition – at least in comparison to uncertified and not cooperating small-scale producers.

Surely, commencing cooperation opens up markets. At the same time, large cooperations might face challenges as they unite a large and diverse group of people with different interests. As a consequence, the original idea has to be put on hold. A marketing strategy which leads to a growth in trade volume may simultaneouslyinfringes upon fairtrade requirements; however, growth might have by then become the main focus (Fridell 2009).

2.2.6 Monitoring

Economic standards are supplemented by several monitoring processes to guarantee transparency. Especially from the perspective of Northern consumers, transparency along the supply chain is

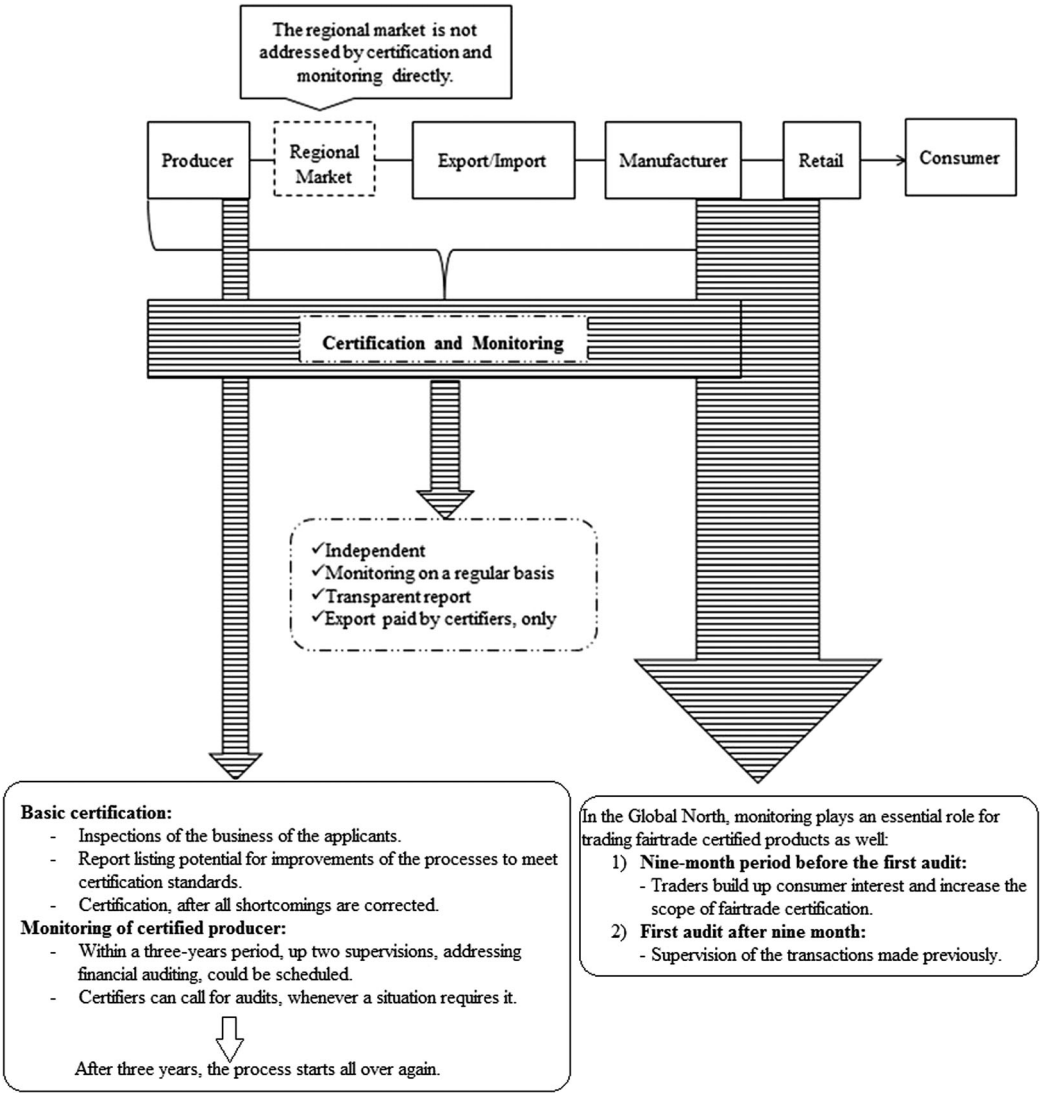

Figure 2. Certification process by FLOcert, the certification body of FLO. Source: Authors' illustration based on Fairtrade International (2018a, 2018b).

an essential tool to create trust and increase sales numbers since information asymmetry is reduced. Thus, monitoring is an essential instrument of fairtrade certification to guarantee proper application of certification standards, implementation of the instruments, and consumer trust in certification.

According to Fairtrade International (2018a, 2018b), monitoring processes play an essential role along the supply chain. Thus, monitoring is implemented on the producer and trader level, as illustrated in Figure 2. However, Fairtrade International (2018a, 2018b) is not clear in determining the actual trader level they are controlling. It might hold true that organisations monitor labels of manufacturers and retailers. Unfortunately, no detailed descriptions for monitoring processes in export or import are provided. It seems obvious, however, that middlemen are cut out in international fairtrade, and that monitoring is done on a regular basis in the Global North and South. In addition, there are social standards; namely, asking for equal rights in producer cooperatives, the introduction of labour law (e.g. the prohibition of child labour, working hours), and the promotion of a democratic institutional structure on the producer level (TransFair 2018b) Some of these are closely linked to the previously discussed economic standards. In any case, tools used to implement the social standards are not apparent and thus not further elaborated here.

3. Price effect of certification in the regional Southern market

3.1 Third-degree price discrimination

Empirical research predicts an average supply surplus of 40–70%[10] within the fairtrade niche market (Fairtrade International 2010). The situation is similar for other sustainability labels. According to the report by Lernoud and Willer (2017; based on self-disclosures of the organisations), sales numbers of Fairtrade International, Cotton Made in Africa, 4 C (now Global Coffee Plattform), and UTZ lag behind the production volumes. Only one sustainability label in history, Round Table on Responsible Soy, has reached market clearance (Lernoud and Willer 2017).

This demand deficit becomes more visible after analysing market data. Certainly, a market share of 4.8%, as registered for organic products in Germany in 2015 (Switzerland: 7.7%, Sweden: 7.3%) (Lernoud and Willer 2017), is very small. Then again, fairtrade certification falls short of even this amount. In fact, fairtrade certification accounts for a market share of 1.7% and 1.5% of the overall market in Switzerland and Sweden, respectively (Lernoud and Willer 2017). Thus, referring to fairtrade certification as a niche market is highly recommended.

As long as certification remains in its niche and certified producers do have an incentive to increase the quantities produced,[11] a supply surplus occurs, which then has to be stored,[12] thrown away, or distributed through conventional trading channels. There is reason to believe that certified producers would choose the last option and distribute their products through conventional trading channels to minimise losses. Fairtrade International (2010) confirms this.

Assuming that certification does not have any impact on a product's sensory attributes such as quality, fairtrade products then directly compete with conventional products. This assumption is plausible as long as fairtrade standards do not include any quality component (TransFair 2018b). Certification standards are predominantly concerned with economic, social, and ecological guidelines (Fairtrade Deutschland 2018) and thus, do not directly affect the quality of a product.

Nevertheless, the distribution of agricultural commodities might be easier for certified producers even on the conventional commodity market. This assumption is rooted in the non-price specific instruments of fairtrade certification, listed in the previous section. Lately, a producer who is supported by an international organisation might have advanced knowledge and/or access to the financial market, for instance. Another crucial component is that fairtrade certification encourages the formation of cooperatives. Consequently, certified producers may have an advantage in comparison to non-fairtrade producers. Those advantages will lead to an unequal distribution on the regional

Southern market, in favour of fairtrade participants. An evaluation of the impact of certification on Southern regional markets is therefore in order.

In the following, not only the behaviour of certified producers but also its effect on uncertified producers is analysed by making use of price discrimination theory.

Producers must indeed meet special standards, as explained, e.g,. by Tomek and Kaiser (2014), in order to price discriminate in two different markets.

First of all, at least two consumer groups in different markets should be identifiable. Those markets are characterised by different price elasticities of demand and different marginal revenues at a certain price.

Secondly, the two markets are not intertwined. Hence, it is not possible to generate arbitrage by buying cheaply on the first market and selling expensively on the second market. Again, the first market is characterised by price-inelastic demand and the second by price-elastic demand. Consequently, prices are higher in the first and lower in the second market (Tomek and Kaiser 2014). Both standards are met in the underlying market setting, when considering a supply surplus of fairtrade producers to be distributed through the conventional market. Firstly, it is possible to identify two different consumer groups (the ethical (fairtrade) consumer and the conventional consumer), with different price elasticities of demand. Secondly, product prices are higher on the fairtrade market than on the conventional market.

As third-degree price discrimination is mostly based on monopolistic competition, the following assumption has to be made: Fairtrade certification of small-scale producers in the Global South is predominantly characterised by forming cooperatives. Cooperative behaviour of producers increases their total amount of quantities supplied to the market and thus, increases their ability to set prices (e.g. DGRV 2018a, 2018b). Hence, the underlying theoretical framework is based on the assumption that fairtrade cooperatives introduce monopolistic competition to conventional regional product markets in the Global South.

Based on this, the theory of price discrimination can be applied to fairtrade certification. The reasoning for price discrimination in the conventional setting is grounded in the following fact: As previously mentioned, certified producers are able to sell merely a small portion of their overall production in the fairtrade niche market. The remaining supply, which lay between 40 and 70% of the whole production in 2010, has to be sold and distributed via conventional distribution channels (Fairtrade International 2015). According to the most recent report by the International Trade Center (ITC) on the state of sustainable markets, the quantity traded under fairtrade adds up to 33% (Lernoud et al. 2018). On the basis of the most recent production volumes provided by Fairtrade International and the sales numbers, authors are able to identify fairtrade shares for several products. Following from this, the amount of certified products sold within the fairtrade market is, on occasion, located even below the mentioned aggregate level of around 30%. Rather, only ~6.5% of the overall tea production was sold under fairtrade in the fiscal year 2014–2015. Although the trading volume of other commodities like bananas (~63%), cocoa (~37%), cane sugar (~20%), coffee (~28%), and seed cotton (~50%), traded in the niche market was a little higher, these numbers should not be sufficient (authors' calculations based on Fairtrade International 2016). Between 2013–2014 and 2014–2015, the share increased for cocoa (~+5%), coffee (~+0.5%), seed cotton (~+8%), and tea (~+0.3%) (Fairtrade International 2015).

Disregarding the aforementioned positive trend, the share of certified products being sold in the niche market remains very low.

When fairtrade minimum prices and conventional prices are equal there is no third-degree price discrimination in conventional markets. According to the fair producer price data, Fairtrade International follows the market outcome of the global market in 29.6% of its price settings (Bissinger 2019). In this specific case, Figure 3 holds, with certified producers selling quantity Q_{Fair} at price P and receiving the corresponding revenue θ. Such argumentation is reasonable as long as demand elasticities are alike on conventional and fairtrade intermediary markets. Uncertified producers operate at lower marginal costs and receive revenue ϑ, by selling their produced quantity ($Q_{\text{Conv.}}$) at a conventional price ($P_{\text{Conv.}}$), as illustrated in Figure 4.

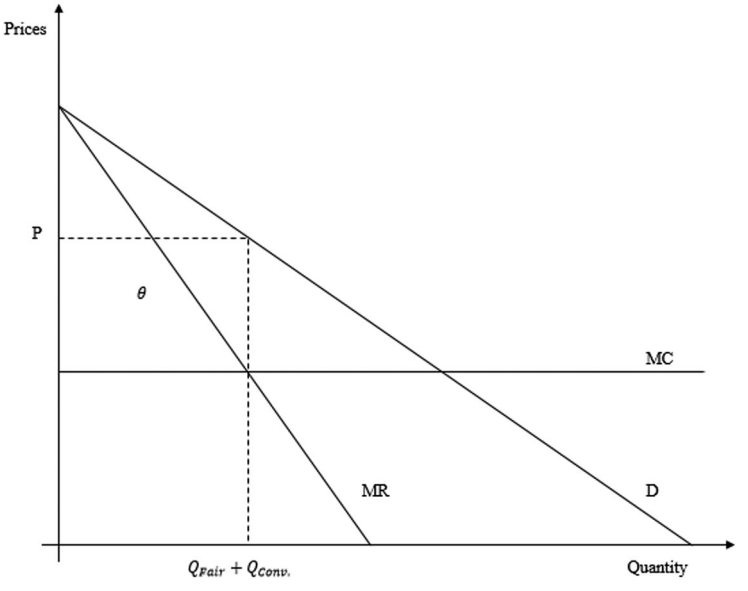

Figure 3. Certification without price discrimination on the producer level.

Notes: D: Demand, MC: Marginal costs; MR: Marginal revenue; ε^D: Elasticity of demand; Conv.: Conventional (non-certified). Source: Authors' illustration based on microeconomic theory.

Whenever fairtrade certifiers impose prices detached from the conventional market price, price discrimination takes place. It is assumed that fairtrade intermediaries are willing to pay an additional price markup to promote the economic development of producers. Consequently, they are less price elastic and $0 > \varepsilon^D_{\text{fair}} < 1$ holds true (see Figure 4). Thereafter, certified producers sell the quantity Q_{Fair}

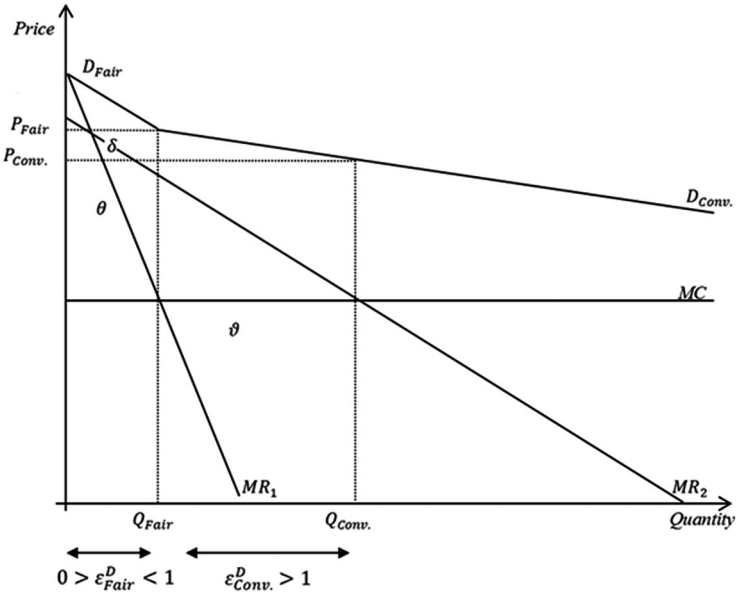

Figure 4. Demand function and price discrimination on the producer level.

Notes: D: Demand, MC: Marginal costs; MR: Marginal revenue; ε^D: Elasticity of demand; Conv.: Conventional (non-certified). Source: Authors' illustration based on microeconomic theory.

at price P_{Fair} in the niche market. At the same time, certified producers receive θ as their revenue. Q_{Fair} accounts for 30–60% of the overall certified supply, while the remaining supply ($Q_{\text{Conv.}} - Q_{\text{Fair}}$) has to be distributed via conventional trade channels at lower prices ($P_{\text{Conv.}}$). Conventional intermediaries are less interested in the wellbeing of the producer. Rather, they use their buying power to increase personal profits. This results in a less price-elastic behaviour of conventional intermediaries, as indicated by $\varepsilon^{D}_{\text{conv.}} > 1$.

On that account, the demand curve illustrated in Figure 4 has to rotate outwards whenever the niche market is left behind.

Schmalensee (1981) linked third-degree price discrimination to social welfare under the assumption of constant marginal costs and predicts an increase in social welfare only if supply increases.[13] The prevalent situation of fairtrade certification fits the assumption of independent demand and constant marginal costs, introduced by Schmalensee (1981). This implies that fairtrade certification, independent of discussions around marketing costs, etc., might have a positive effect on social welfare. However, this is only possible if quantities distributed within the niche market increase.

Meanwhile, the welfare of uncertified producers remains unchanged. At this moment in time, informed intermediary traders are well aware of the decrease in quantities supplied on the conventional market due to certification and thus, may adjust prices in favour of uncertified suppliers in the short run. Here general demand and supply theory applies and, ceteris paribus, prices increase whenever supply decreases. In the long run, new producer cooperatives will enter the market and soon the old equilibrium price will be reached again.

Unfortunately, short-run price adjustment may occur if and only if fairtrade certification is able to grow out of its niche. Only then can certified quantities sold make a significant difference in the regional market. Finally, only large sales numbers will cause additional revenue (δ) to exceed additional production costs (α) (e.g. certification costs and process adjustment costs). If $\delta > \alpha$, fairtrade certification pays off for certified producers and economic development might become visible.

Considering the sales volume of certification and the resulting supply surplus, it is quite obvious that the critical mass of ρ, when $\delta - \alpha > 0$, has not yet been reached. Thus, the producer welfare level remains the same, and uncertified producers are neither better nor worse off.

Nevertheless, certified producers are fundamentally influenced by certification costs. Consequently, the actual revenue gain illustrated by δ in Figure 4 cannot be identified more precisely.

Another critical component of certification that calls for discussion by now is that of quality differentiation. According to fairtrade organisations (e.g. Arge 2018), certified producers are able to increase a product's quality. Under the assumption of highly differentiated products (certified products vs. uncertified products), the competitive setting might be different on regional markets. If certified products are of higher quality, certified cooperatives are able to set higher prices. In turn, low-quality products, per assumption mostly supplied by conventional producers, will be less in demand and/or lower priced. Thus, assuming that certified products are of higher quality in comparison to conventional products, uncertified producers will be worse off, at least as long as third-degree price discrimination is in effect on the conventional market.[14]

Such a scenario decreases the welfare of uncertified producers in the long run if and only if fairtrade certification is not able to grow out of its niche.

As previously mentioned, most sustainability labels do have similar issues to deal with. Usually certified producers are not able to sell off the whole quantity produced in the niche market. Rather, niche markets are saturated well before the total quantity produced can be sold off. Thus, the certified producers have to enter the conventional market in order to maximise profit.

4. Discussion and concluding remarks

After a brief introduction into the definition of fairtrade certification, corresponding instruments were outlined. Based on the second chapter, the concept of price discrimination was derived. As a result, it

was shown that third-degree price discrimination is prevalent on the regional Southern market if fairtrade cooperatives face monopolistic competition.

A profit-maximising certified producer is interested in selling as much quantity as produced, in order to reduce downtime and storage costs. Revenue is maximised when products are sold under fairtrade and in a supplementary fashion on the conventional market. In that case, different prices are applied to different markets and thus, price discrimination is visible. Then, certified producers sell up to 60% (maximum) of the overall production within the niche market, while the remaining 40% (minimum) are distributed via conventional trading channels. Yet, certified producers generate additional revenue, as indicated by δ in Figure 4. As long as certification costs are not included in this analysis, however, a full picture of the impact of fairtrade certification on producers cannot be formed.

A continuous increase in the sales numbers of fairtrade, as registered during the last few years, as well as the continuing interest of Northern consumers in fairtrade certification, might reduce the need for certified producers to price discriminate on regional Southern markets. Then, fairtrade certification will be able to have a positive impact ($\delta > \alpha$) in the Global South.

Said results suggest implications for producers, consumers, and policymakers. Indeed, certified producers should hope for an ongoing growth path of fairtrade sales, which is fundamentally fostered by Northern demand. If fairtrade certification is able to grow out of its niche, fairtrade consumers may foster economic development as (certified) producer's revenue (δ) exceeds the cost of certification (α; e.g. certification fee, adjustment costs). In the case of ethical consumerism, the utility consumers gain from consumption might increase as a consequence. Certified producers will obviously increase revenue and be better off if the niche market grows. Uncertified producers, however, will be better off as well. Finally, quantities sold in the regional Southern market will decrease, which will lead to an increase in prices if ceteris paribus condition holds. Even in the long run, the economy in the Global South will benefit from such a setting. As two different markets, conventional and fairtrade, are established, the regional (less overrun totally excluded from certification) market will attract new market participants, as they are incentivised by high price levels. Although a larger number of market participants would, again force the prices to decrease in a dynamic market, it would also lead to economic growth. In the very long run, dropping prices might lead to market clearance as oversupply disappears. This might be a solution for fairtrade certification as well. As mentioned previously, economic thinking leads to the assumption that higher producer prices, artificially awakened by a price premium, might set an incentive to increase supplies. There are two plausible scenarios for doing away with the supply surplus of fairtrade certified products, which are defined by the following:

(1) Fairtrade certification must outgrow its niche.
(2) Fairtrade certifiers should decrease their price premiums attached to the product, and certification should focus even more on opening markets to producers in the Global South.

Especially the latter ought to be discussed critically: On the one hand, price premiums are an essential instrument for fairtrade certification to improve the living conditions of producers in the Global South. On the other hand, access to markets and further financial support fosters economic development. Uncertified producers often do not have any chance to sell off their products in any market, as of yet. Hence, market access and the possibility to take a stand in international trade might "seal the deal" towards poverty reduction and economic development in the Global South.[15]

As a further step, it would be interesting to do some empirical research on price discrimination in markets of the Global South. The research at hand was unfortunately not able to meet this requirement because of a lack of data access. Nevertheless, empirical research might be able to quantify the revenue certified producers receive when selling products on the conventional, regional market, and thus, it would provide deeper insight into advantages and disadvantages of fairtrade certification for certified and uncertified producers in the Global South.

Notes

1. Lately, the growth process of fairtrade certification has slowed down because of a drought in South Africa in 2016 (Fairtrade International 2017). After the producers recover from its consequences, sales might be able to grow rapidly, again.
2. "*Global South*" stands for the geographic region in which fairtrade-certified producers are (mostly) located. "*Global North*", accordingly, describes the region of the most fairtrade consumers.
3. The standard of ecology deals with bans of certain fertilisers and biogenetics and the promotion of organic farming (Fairtrade International 2018b).
4. Economic standards contain the fair price, a social premium, short-term credits, and relationships for the long run (Fairtrade International 2018b).
5. Social standards determine actual working conditions and foster the first principles of democratic unity (e.g., freedom of assembly) (Fairtrade Deutschland 2018).
6. Fairtrade organisations mostly deal with small producer cooperatives and plantations with a democratic structure (Fairtrade Deutschland 2018).
7. Within the time period of 1999–2014 there have been times when the fairtrade minimum price lay below the world market price. Surely, those times have to be excluded (Dragusanu and Nunn 2018).
8. Thanks to a reviewer's comment, it might be necessary to mention that hired labor is not much of an issue for small-scale farmers. Dragusanu and Nunn (2018) addressed larger scale producers, as well.
9. This fact is briefly explained by the following: Even if (small-scale) farmers form cooperatives, they might not be able to compete with the big plantations of the coffee and tea industry, for instance. Huge plantations will always face larger economies of scale than cooperating small-scale farmers. This will have an impact on price setting, competition, and market access in general. One could assume that there might be cooperatives at an equal scale; however, this is not plausible, at least from my point of view. Finally, according to common knowledge about cooperative behavior, transaction costs are always higher than those of a company, and they increase even further with cooperative size.
10. Those numbers apply to all traded products labelled with the Fairtrade Certification Mark, except for bananas, coffee, and honey. At least the supplied quantity of those three products is fully distributed through fairtrade channels (Fairtrade International 2010). There is reason to believe that the supply surplus of certified producers cannot be distributed within fairtrade due to its low demand levels in demand countries. If consumer demand is able to increase, certified producers might be able to handle higher trade volumes and adjust certification processes.
11. Producers receive higher prices for supplied quantities in the niche market. Consequently, they are incentivized to increase supply in order to maximize revenue and cover additional certification costs.
12. It is an obvious assumption that small-scale producers in low-income countries do not have the capacity to store supply.
13. As a matter of fact, Varian (1985) was able to demonstrate the same mathematical relation when marginal costs change over time.
14. Please consider that fairtrade certification, in general, does not contain any standards affecting a product's quality directly. It might be the case that fairtrade instruments do have positive effects on a products quality; however, this has to be analysed sensorically, which has not yet been done.
15. Author's would like to express gratitude to one of the blind reviewers in the process of publication. He/she provided a food of though for the discussion about reducing the price premium of fairtrade certified products.

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