

# FAIRTRADE: COMMENT ON TEDESCHI AND CARLSON

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**Abstract:** In a recent issue of this journal, Tedeschi and Carlson presented far reaching conclusions on the impact of fair trade. They reject the conclusions of others on the grounds that they are based on incorrect assumptions. It is argued here that their own assumptions are false, seriously misrepresenting fair trade or Fairtrade. Their analysis is therefore incorrect, and their models must be rejected in their entirety. Copyright © 2013 John Wiley & Sons, Ltd.

**Keywords:** Fairtrade; fair trade; social marketing

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## 1 INTRODUCTION

In a recent issue of this journal Tedeschi and Carlson (2013) presented far reaching conclusions on the impacts of fair trade on the welfare of coffee farmers. They reject the conclusions of other researchers on the ground that they are based on incorrect assumptions, 'However, these models fail adequately to represent fair trade because they overlook two very important factors . . .' (2013, p. 457). This response argues that Tedeschi and Carlson's analysis is itself untenable, because its assumptions comprehensively and ubiquitously misrepresent fair trade.

Agricultural Economics and Development Economics are far more difficult than ivory-tower economic modelling from arbitrary assumptions, because we are dealing with real products, real people, real markets and real economies, so our models must be based on realistic assumptions. If we do not get our facts and assumptions right, covering all of reality, our models will produce incorrect conclusions, and may well cause death and destitution. We also face the fact that non-economist decision makers and economists with other specialisms may not be in a position to judge our economics, but they will certainly reject our reports if the facts are wrong, so no action is taken, and we are not paid. Inevitably we have to make some simplifying assumptions for any analysis, but we strive to make them assumptions that do not cause major distortions, partly so the reader does not say, 'That is not at all what happens'.

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We do not use terms like ‘coyote’, which are value laden and indicate lack of objectivity. Any commentator’s credibility would be suspect if they called the international trading firms ‘baa-lambs’ or the cooperatives ‘hyenas’.

In their paper, Tedeschi and Carlson make repeated explicit reference to the detail of one certification scheme, Fairtrade, but state that their conclusions apply to fair trade, though there are many different fair trade systems (Ballet & Carimentrand, 2010). They may be influenced by the fact that Fair Trade USA was a member of Fairtrade until the end of 2011. Accordingly, I use the term Fairtrade and concentrate on this one system.

## **2 THE TWO MARKETING SYSTEMS**

The marketing channels for coffee with and without Fairtrade are almost identical. In the absence of Fairtrade, farmers sell to a range of primary marketing firms including co-operatives, informal traders, larger traders and buying agents. These may sell to larger firms who arrange export. Importers from rich countries buy the product and sell it to roasters and packers who sell it to supermarkets, cafes, etc. With Fairtrade, marketing within the producing country must be done through cooperatives.

When Fairtrade is introduced, some of the cooperatives pay inspection and certification fees to become licensed to market coffee as ‘Fairtrade Certified’. This requires that all that is produced by farmer members of the Fairtrade primary cooperative must meet the Fairtrade criteria. Coffee may be marketed as Fairtrade when, first, it has been produced by members of these Fairtrade primary cooperatives, and, second, the importer pays the higher, Fairtrade, price: if the extra price is not paid, the coffee must be marketed as non-Fairtrade, usually by the same cooperatives. Farmers who are members of cooperatives (Fairtrade or other) are normally ‘expected’ to sell all their coffee through these cooperatives, but it is often more profitable for them to sell some coffee through other traders. The secondary and tertiary Fairtrade cooperatives may market non-Fairtrade coffee from all sources as well as Fairtrade (Fairtrade International, 2011b; Fairtrade Labelling Organizations International e.V., 2011a; Fairtrade Labelling Organizations International e.V., 2011b).

Both Fairtrade and non-Fairtrade farmers may get credit and inputs from the coffee-buying firms, or from a range of other sources, including input suppliers, moneylenders, banks and families.

Some of the importers pay to be licensed to handle Fairtrade Certified coffee as well as non-Fairtrade. The packers pay a licensing fee to Fairtrade, and the certified coffee may be labelled Fairtrade (Fairtrade Labelling Organizations International e.V., 2011a).

## **3 THE WITHOUT-FAIRTRADE MODELS**

Tedeschi and Carlson start by presenting models of the market without Fairtrade. One model assumes perfect competition; the other assumes perfect monopsony, combined with perfect monopoly supply of inputs. These assumptions are so far from any possible reality that they need not be discussed further.

However, it is necessary to discuss one implicit assumption that imposes a very large bias into the analysis. The assumption is that, with Fairtrade, generous consumers pay a higher price for Fairtrade coffee, which goes to Fairtrade farmers, but without Fairtrade, this money

miraculously ceases to exist. This assumes away a large source of economic welfare to the Third World in the non-Fairtrade situation. It would be reasonable to examine other scenarios. One possibility is that in the absence of Fairtrade, the same generous consumers would buy the coffee that offered the best value for money and give the difference to a reputable charity that spent at least 80% of its income in the Third World. Another is that they spend the same money on coffee, buying better quality at a higher price.

In fact, the extra retail price is hundreds of times greater than any extra payment to Fairtrade farmers. The reality is that retailers in the rich countries are free to charge what they like for Fairtrade coffee, and there is a lot of evidence that consumers are willing to pay substantially more for Fairtrade than for other coffee (Niemi, 2009; Trudel & Cotte, 2009; Arnot, Boxall, & Cash, 2006). It is usually impossible to tell how much extra retailers charge, because of the wide range of qualities and brands (particularly own brands) and the universal refusal to sell identical Fairtrade and non-Fairtrade coffee side by side in the rich countries. In a few cases, it has been possible to compare. I found for instance a British café chain charging 10 p per cup extra for Fairtrade, indicating that less than 1% of the extra price reached the Third World exporter, and that 80 times as much would have reached the Third World if the money went to a normal charity instead (Griffiths, 2012). In Finland it was found that 11.5% of the extra price paid at supermarkets reached the exporting country (Valkila, Haaparanta, & Niemi, 2010, p. 266). In the United States, it was 2% (Kilian, Jones, Pratt, & Villalobos, 2006); in the United Kingdom, it varied between 1.5% and 18% for one product line (Mendoza & J. Bastiaensen, 2003, p. 38). Mohan (2010, pp. 52–55) cites Potts (2004), Harford (2005), Sellers (2005), and Weber (2007), as making similar points. He adds ‘Jacquiau (2006) is concerned with the question of how much of the money spent on Fair Trade products actually ends up in the pockets of producers in developing countries; it seems that they generally receive only a small fraction of the extra margin consumers pay: perhaps as little as 10 per cent of the additional price paid for Fair Trade coffee trickles down to the producer. Even analysts who are sympathetic to Fair Trade (such as Nicholls and Opal, 2005) estimate that, at the most, only 25 per cent of the additional price a shopper pays for Fair Trade bananas would go to the producers, largely because wholesalers (including producer organisations), traders (importers) and retailers all increase their mark-ups.’ I have not found any evidence that higher proportions reach the Third World, and indeed, fees payable to Fairtrade mean that anything over 60% is impossible. These figures are compatible with the Fairtrade Labelling Organizations International (2010) figures that on average 1.53% of the retail price reaches the nondeveloped countries, 52 million Euros from sales of 3.2 billion.

The word ‘producer’ can be seriously misleading in this context, suggesting that this is the amount that reaches the farmer. The Fairtrade standards are misleading on this, surprisingly so, since they appear to have been drawn up by lawyers. The Fairtrade standards define the ‘producer price’ for coffee as being the FOB price, at the exporting port, halfway up the marketing chain, and possibly hundreds of miles from the farmer. In some contexts Fairtrade calls the final exporter, a tertiary cooperative, the ‘producer’. In some contexts it is the secondary cooperative, the primary cooperative, or, sometimes, a farmer member of the primary cooperative who is the ‘producer’ (Fairtrade International, 2011b; Fairtrade Labelling Organizations International e.V., 2011a).

These analyses ignore the problem of ‘kickbacks’ and so give an optimistic picture. The normal structure assumed by Fairtrade International is that some farmers (‘Fairtrade farmers’) belong to certified Fairtrade cooperatives, and sell all their coffee to these cooperatives. All the coffee they produce meets Fairtrade standards and potentially may be sold as Fairtrade.

The exporter, usually a secondary or tertiary Fairtrade cooperative, tries to sell this to a Fairtrade certified importer in a rich country who is willing to buy this as 'Fairtrade certified' and is willing to pay the appropriate price, either the minimum price or the going world market price for that quality plus the Fairtrade premium. As the world market for Fairtrade is limited, the cooperatives can sell only a proportion of their supplies as Fairtrade certified at the enhanced price, and must sell the rest as uncertified coffee at the normal world price. The amount that a given cooperative manages to sell as Fairtrade varies between perhaps 4% and 50%. The Fairtrade cooperatives have to meet the extra costs of Fairtrade on all they sell, whether or not they can sell it at the higher, Fairtrade, price.

An importer is in a position to say, therefore,

'I will buy some of your coffee as Fairtrade, but I will only pay half the premium. If you do not agree, I will buy from someone else, and you will have to sell at the world market price. Since you have spent money on achieving Fairtrade standards, you will lose money on this.'

The cooperative management has little option but to agree. There are reports that importers do this, or, in variants, get their kickback by paying the full Fairtrade price but demanding a higher quality than the price refers to, or by paying the full Fairtrade price but demanding a lower price on their non-Fairtrade purchases. (Raynolds, 2009, p. 1089; Valkila J., 2009; Valkila, Haaparanta, & Niemi, 2010, p. 264). Other ways of getting kickbacks include refusing to provide the (cheap) credit specified in the Fairtrade contract, delaying payment, or not honouring contracts if the world prices move against them. (Utting, 2009, p. 139; Valkila J., 2009, pp. 3022–3023; Raynolds, 2009, p. 1089), or ignoring the Fairtrade requirement for long term contracts (Reed, 2009, pp. 12,29). Weber (2006) shows the practical problems Fairtrade cooperatives encountered.

De Janvry, McIntosh and Sadoulet (2010) quantified the kickbacks in a large exporting cooperative which was supplied by 300 cooperatives and other suppliers. They examined the prices paid over a 12 year period for identical qualities of coffee when sold as Fairtrade and when sold as normal coffee. They also took into account the Fairtrade inspection and certification fees. They found,

'These estimated Fair Trade premiums are around 10¢/lb below the value expected from the FLO formula due to the fact that the quality of the coffee sold as Fair Trade is higher than the coffee that sells at the NYC price.'

As the Fairtrade premium was 5c, then 10c, per pound in this period, cooperatives lost money from Fairtrade. De Janvry, McIntosh and Sadoulet concluded that the cooperatives continued with Fairtrade in the belief that if the world price collapsed catastrophically, the minimum price would give sufficient security to justify the loss in other years. This was in spite of the fact that the kickback was higher when there was a minimum price, and Fairtrade sales fell then – because the difference between Fairtrade and non-Fairtrade prices was much higher. De Janvry, McIntosh and Sadoulet appear to believe that the importers were acting within the terms of the contract, though Fairtrade standards are explicit that the premium is over the price *for that quality*, not for a standard, lower, quality (Fairtrade Labelling Organizations International e.V., 2011b; Fairtrade Labelling Organizations International e.V., 2011a). Fairtrade did not act to stop this extortion, although they audited the cooperative over the 12 years.

Even if the trading firms did not demand kickbacks, it is probable that their buyers would. Firms do face the perennial problem of their buyers taking a cut of their purchases, and the

temptation is particularly great when there is an element of subsidy – for instance, farmers generally have to pay a bribe to get subsidized credit, bringing the real interest rate up to the market rate.

It will be shown below that much of the money that does hit the Third World exporter in spite of these leakages, under Fairtrade, does not reach the community, much less the farmer.

Tedeschi and Carlson's implicit assumption that this money magically disappears, means that they overstate the relative benefits to Fairtrade farmers, possibly by a factor of hundreds.

#### **4 THE WITH-FAIRTRADE MODEL**

Tedeschi and Carlson assume that with Fairtrade,

'The farmer now potentially faces two markets for borrowing and for coffee. In the fair trade market, we assume that the farmer contracts to deliver a quantity of coffee (QFT) to a fair trade buyer at the fair trade price (PFT). The fair trade quantity is contracted in advance of the growing season. . . The fair trade price is really a price floor—equal to the FLO minimum price if the world price is lower than the FLO minimum or the market price for coffee otherwise. There is also the per-pound social premium paid on all coffee sold through fair trade channels. Finally, the farmer can again borrow at market interest rates, because pre-financing is offered by the fair trade buyer. . . As all borrowing is done through the fair trade channel. . . The coyote acts as a monopsonist on the portion of the farmer's crop not contracted for purchase by the fair trade buyer' (Tedeschi & Carlson, 2013, pp. 463, 464).

Again, these assumptions bear no relation to reality, or to the situation described in the papers they cite, and again explicit and implicit assumptions introduce major biases in favour of Fairtrade.

##### **4.1 Who Receives the Money?**

Tedeschi and Carlson assume explicitly that the minimum price and Fairtrade premium are paid to farmers (2013, pp. 463, 464). This is false, as is shown in the papers they cite. Fairtrade International states a model where farmers sell to a primary cooperative, which then sells to a secondary cooperative, which then sells to a tertiary cooperative which exports the coffee (Fairtrade Labelling Organizations International e.V., 2011b; Fairtrade Labelling Organizations International e.V., 2011a; Fairtrade International, 2011a; Fairtrade International, 2011c). It calls the farmers and the three levels of marketing firms 'producers', creating a confusion which is convenient for advertising, but which confuses both consumers and researchers. In fact, Fairtrade specifies very clearly that the payments are not made to the farmers but are an FOB price paid to the final exporter at the exporting port (Fairtrade International, 2011b; Fairtrade Labelling Organizations International e.V., 2011a). As the final exporter is halfway up the marketing chain, Tedeschi and Carlson's assumptions are false and produce grossly misleading results.

It cannot be argued that the payment is in fact made to farmers on the grounds that the farmers nominally own the primary cooperatives, which nominally own the secondary cooperatives, which nominally own the tertiary, exporting, cooperative. I buy my groceries from a major cooperative retail chain, and I am a member of the cooperative. This does not

imply in any sense that I pay the wholesale price or farm gate price that the cooperative pays: in fact, I pay a rather higher price than I would at the superstores of the other large retail chains.

The primary, secondary and tertiary marketing cooperatives may spend any extra money they receive from Fairtrade membership on:

1. The costs of certifying themselves as 'Fairtrade' (FLO-CERT GmbH, 2011)
2. The costs of annual inspections by FLO-Cert, a for-profit organization wholly owned by Fairtrade, to ensure that they are meeting Fairtrade standards (FLO-CERT GmbH, 2011)
3. The costs to the organization of meeting these Fairtrade standards, which include the substantial costs of appearing 'democratic'
4. Other costs arising from the fact that Fairtrade demands that they should be cooperatives. It is commonly observed that cooperatives of small farmers, possibly illiterate, are likely to be corrupt and inefficient, and that this is particularly likely to be so when the cooperatives have political objectives. It may be necessary to fund these costs from any additional Fairtrade payment if the cooperative is to pay the farmers as much as the independent traders do; otherwise, the farmers can, and do, stop supplying the cooperative. These problems do arise with Fairtrade cooperatives (Utting, 2009, p. 240; Jones & Bayley, 2000; Mendoza & Bastiaensen, 2003; Berndt, 2007; Mendoza, 2002; Weber, 2006).
5. The extra marketing costs in selling Fairtrade. Weber shows that these may be difficult to cover, '... after six years Oro Verde can cover only 70 percent of its [additional] costs with its current income stream', and the cooperative needs an annual export volume of more than double its current volume to sustain the management team (2006) indicating that they are losing money from Fairtrade membership.
6. Investment.

These costs apply to everything handled by the three levels of Fairtrade cooperative, and to all their operations, not just the proportion of their turnover sold as Fairtrade. The world market is not big enough to take all the Fairtrade coffee produced, so cooperatives are able to sell, on average, perhaps 25% to 33% of their turnover at the higher Fairtrade price, with some selling as little as 4% and a few selling more than 40%. However, the rest of their throughput has to meet Fairtrade standards even if it is sold at the world commodity prices. This means that the costs are incurred on all production, and have to be recovered on only a small proportion, so cooperatives may make a loss on their Fairtrade membership. (Mohan S., 2010; Kilian, Jones, Pratt, & Villalobos, 2006; Berndt, 2007b; Renard, 2005; Bacon, 2005). This is made clear in papers cited by Tedeschi and Carlson.

The Fairtrade system requires that any of the extra Fairtrade price remaining is spent on 'social projects' for community development, such as schools, clinics, women's groups or baseball pitches. It is extremely difficult to quantify any economic benefit from these: researchers tend to measure them in terms of self-esteem, etc. (Griffiths, 2012). The projects are not, in any sense, low-cost: high-payoff. Fairtrade does not envisage that there is any money left over to give to farmers in the form of increased prices, though in some instances cooperatives do juggle the rules to do so, particularly in times of very low world prices, when minimum prices are in operation.

This means that any residual, after costs and leakages have been subtracted from the extra Fairtrade price, is in no sense an extra price to farmers. If the cooperative works according to the cooperative ideal, each member benefits equally: there can be no suggestion that the benefits are related to level or quality of production by the individual. This is also ruled out

if cliques take over management, as is often the case with cooperatives. That is to say these benefits, if they exist, cannot possibly be incorporated in the equations used by Tedeschi and Carlson.

This structure means that, particularly where the cooperatives are able to sell only a small proportion of their throughput as Fairtrade, the farmers get a lower price for their coffee under Fairtrade. Where the cooperatives do very well, some money is available for social projects, but the farmers do not get any higher price. There is in fact no evidence to show that Fairtrade farmers get higher prices for the same quality coffee. There are many anecdotes to show non-Fairtrade farmers getting higher prices and others showing them getting lower prices. Few make any attempt to deal with the well known problems of collecting and analysing agricultural prices described by Bowbrick (1988) for instance. The problems that arise with Fairtrade coffee are particularly difficult (Griffiths, 2012).<sup>1</sup>

## 4.2 Cooperatives sell Fairtrade and Non-Fairtrade

Tedeschi and Carlson assume that farmers sell everything that will eventually be sold as Fairtrade to Fairtrade buyers and everything else to the independent traders they call 'coyotes'— an assumption which has far reaching implications on price, credit, market structure, and farmers' production costs, an assumption which is also false. They say,

'In this section, we continue to assume that markets are not perfectly competitive but that the coyote now faces competition from fair trade in both his or her lending and coffee purchase activities. The farmer now potentially faces two markets for borrowing and for coffee' (Tedeschi & Carlson, 2013, p. 463).

They assume that cooperatives and private traders are somehow performing different functions and that things suddenly change with Fairtrade

'Fair trade provides increased competition for the coyote, causing him or her to change his or her behaviour when fair trade is present. Figure 2 shows how this competition drives up the price that the coyote must pay to the farmer for his or her coffee' (Tedeschi & Carlson, 2013, pp. 465–466).

I have not come across any such suggestion in the literature: on the contrary, the descriptions are of the perfectly normal situation where cooperative members are expected to sell all their production to the cooperative. It is the same firms performing the same functions, with a subsidy to some firms. There is the normal situation that the members are tempted to sell to other traders when they pay a higher price, but if a large number of members do so, the cooperative goes bankrupt. Fairtrade cooperatives normally try to buy all their members' production, then try to sell as much of it as possible as 'Fairtrade Certified' at the higher price. Some small deviations are described, when, for instance, qualities rejected by the cooperatives are sold to other traders. I have not come across any description of a situation

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<sup>1</sup>See also Weber (2011) for the difficulties he encountered in trying to find how much more farmers were paid for coffee that is both Fair Trade and organic. He is unable to allow for labour costs and some other problems identified. See also the difficulties that had to be overcome by de Janvry et al. (2010, p. 16). 'Measuring the correct effective FT premium requires that we know what price each lot of FT coffee *would have received* had it been sold on the traditional market. Because quality (in the absence of a quality dependent price) contains some unobservable component, and given that we have shown that the decision to certify as FT is driven precisely by a quality known to producers but not to the econometrician, any simple measure of the effective premium is likely to suffer from omitted variables bias.'

where the farmers sell only that part of their output, which will eventually be sold as Fairtrade to the Fairtrade cooperative, nor have I seen any hint of a system that would make this possible. And Tedeschi and Carlson do not give any evidence of it happening.

That is to say Tedeschi and Carlson have assumed a situation which has major implications on the cost curves of Fairtrade cooperatives and other traders, and on the price packages that are possible.

### **4.3 Credit**

Tedeschi and Carlson's assumptions that (a) Fairtrade gives the cooperatives credit which enables them to provide input credit to farmers; (b) normal traders provide credit at a lower price but recover their money by paying a lower price for the end product; and (c) farmers base their input use on the nominal interest rate, are critical to their analysis. They also assume that traders have a monopoly/monopsony relationship with members of Fairtrade cooperatives for that part of their production which is not eventually sold as Fairtrade, and that no alternative sources of credit are available

### **4.4 Pre-Finance**

The first assumption, that Fairtrade makes the importers give the cooperatives credit which enables them to provide seasonal input credit to farmers, is false: Fairtrade importers should provide short term marketing credit for a small part of the crop, that part which has been sold as Fairtrade, but only if asked. Fairtrade requires that

'Pre-finance should be provided as soon as possible after signature of contract ... Where pre-financing is requested and unless otherwise stated in the product standards, Fairtrade payers must provide pre-finance up to 60% of the contract value (Fairtrade Labelling Organizations International e.V., 2011a, pp. 13, 14).

'The pre-finance must be made available at least eight weeks prior to shipment' (Fairtrade International, 2011b, p. 6). 'For most products the timeframe is six weeks before shipment' (Fairtrade International, 2011c, p. 13). That is to say the pre-finance is available to the tertiary, exporting, Fairtrade cooperatives to help them cover the substantial costs of assembling, processing, packing, marketing and shipping the coffee, without borrowing elsewhere (particularly from the farmer by means of late payment). If they have a sufficiently good cash flow from other business, it may enable them to pay farmers on delivery – this is important as cooperatives face the serious problem of their members preferring to sell their crop to normal traders who pay cash and who pay higher prices from time to time.

There is evidence of importers refusing to give the pre-financing or charging ridiculously high interest rates for it. (Utting, 2009, p. 139; Valkila J., 2009, pp. 3022–3023; Raynolds, 2009, p. 1089). This is one way of getting kickbacks.

It should not be thought that pre-finance is restricted to Fairtrade. It is good business to protect one's supplies by long term agreements with suppliers, credit schemes, etc. Mohan (2010) provides a substantial section on the various credit systems, price stabilization systems, long-term contract agreements, and to the payments over the 'market price' that non-Fairtrade coffee trading firms do in fact offer. See also Mohan (2007), Mohan and J. Love (2004), and Mohan and Russell (2008), and Mohan (2005).



#### **4.5 Cheaper credit?**

'Finally, the farmer can again borrow at market interest rates, because pre-financing is offered by the fair trade buyer.' (Tedeschi & Carlson, 2013, p. 463) The second assumption, that private traders offer cheaper credit, is based on just two studies, and ignores the widely held belief, supported by many studies, that traders typically do the opposite, paying a high headline price for the product, but charging a very high hidden interest rate to reduce the real price, and that this often leads to indebtedness. That is to say Tedeschi and Carlson's conclusions are derived from an arbitrary assumption which is contrary to the general belief.

There is no evidence to show which belief is correct in this case, and many of the studies in the literature are suspect: it is extremely difficult in practice to calculate the 'real' cost of credit. Farmers are offered a range of price packages. One is that the farmer is paid for the coffee delivered to the processing plant, with payment made in three tranches over the next two years, as the processed product is sold, shipped and, eventually, paid for, allowing for inflation and exchange rate movements, with the farmer not being able to repay credit for a considerable time. Another is that the trader provides credit, inputs, spraying, harvesting labour, packing and transport as well, paying the farmer cash on delivery, with the assurance of a supplementary payment if the world price moves in favour of the exporter. The trader offers a lower headline price, but this translates into a higher net cash income for some farmers. Some farmers are able to get normal government or bank credit, but others can get credit only from traders or moneylenders who know them, and who will impose credit limits and interest rates appropriate to the individual. It is extremely difficult to untangle the different price packages to determine the real interest rate, and the real interest rate will vary enormously between farmers – for example the price package best for a farmer with half a dozen trees is not the best for a farmer with 70 acres of coffee as is sometimes the case with Fairtrade (Weber JG, 2011).

The complexity of the price packages on offer means that it is unlikely that the nominal price of credit has much impact on the use of credit: farmers are all too well aware that a convenient credit deal can lead into chronic indebtedness. The optimum choice for an individual farmer depends on the whole price package on offer; for example, farmers may be better off with expensive credit and payment on delivery than with cheaper credit and payment six months or a year after delivery. There are credit limits for all farmers, and many can only get money from a trader who knows them personally and believes he can recover his money from their crop. This means that an otherwise unattractive price package may be chosen because it gives the farmer more credit than he could get elsewhere.

#### **4.6 Fairtrade credit assumptions**

The assumptions do not square with the observed facts. The Fairtrade importers should provide the exporting cooperative with short-term marketing credit, not seasonal input credit for the farm. This marketing credit is limited to that small part of their turnover that is sold at the full Fairtrade price. In practice many importers do not provide this credit. Many non-Fairtrade importers do provide similar support in an effort to secure their supplies. Tedeschi and Carlson produce no evidence that Fairtrade farmers get a better deal than non-Fairtrade farmers as a result, and I know of none in the literature. Tedeschi and Carlson produce no evidence that importers change their normal practices when they join Fairtrade, and I know of none in the literature.

## **5 COST OF PRODUCTION**

The cost of production of any family farm is always a tricky concept, and that of a subsistence or peasant farm, using family labour and growing food for own consumption (which usually means very different selling and buying prices for food crops) is difficult to conceive of. If we once have a conception of the cost of production, it is then necessary to get some data.

Measuring the labour input – hours worked by each person – is extraordinarily difficult, and we can expect the input to vary enormously from farm to farm. And Fairtrade coffee farms vary from those with half a dozen trees to ones with more than 70 acres of coffee (Weber JG, 2011), with much greater variation for other farmers.

Observing the hours input of the different members of the family and the alternative use of the labour for even a single farm would be prohibitively expensive.

The cost of labour will vary from farm to farm, from crop to crop, depending on the opportunity cost, which in turn depends on which family member we are talking of and the alternative crops on that farm, and the time of the year. Calculating the physical marginal product of each worker in each task, including the alternatives, would be impossible. Calculating the opportunity cost in each task is necessary to cost the labour. The cost of employing labour and village level exchanges of labour would also have to be taken into account as would off-farm employment by members of the farm families. The price of labour is not the same when buying and when selling labour. And these farmers are not obliged by Fairtrade to pay minimum wages.

### **5.1 Calculating Revenue**

The first priority for a family farm is survival, and food crops are important for small farms. Risk is an important cost. The expected selling price and the purchase price for food crops are very different. All prices have an element of risk. Optimizing production requires knowledge of the effective price, which has to be disentangled from a complex price package – two farmers reporting the same headline price may get very different effective farm gate prices. And these prices are needed to calculate opportunity costs. Food crops provide that complex satisfaction of food security, and reduced risk, which is not measurable in money terms. The buying and selling prices of food are not the same, especially if one is comparing the selling price in a high yielding year with the buying price in a short crop year. Some of the crops are annuals, others, like coffee, may be in the ground for decades.

As has been shown above, Fairtrade assumes that any residue from the price premium will be spent on community development projects. The benefit that any one farmer gets from these is not influenced by his or her level or quality of output. They cannot, therefore be included in a single crop production function.

These issues, commonly accepted, are not tackled by Tedeschi and Carlson, and we have instead broad assumptions, based on single studies which may not tackle these problems, extrapolated to all of fair trade.

### **5.2 Credit to the farm**

It is common for subsistence and peasant farmers to be able to borrow money only on those cash crops where a small number of outlets or control of the processing system makes it relatively easy to collect the money, and relatively difficult for the farmer to evade repayments by selling outside the system, crops like coffee, cocoa, tobacco and cotton for instance.

Once the farmers have the credit (whether in cash or in kind), they will use it where they get the highest payoff, so the first fertilizer may go to ensuring that they have enough food for survival, the next may go on high profit vegetables for sale, and so on, so none of the credit need be spent on the coffee which provides security for the loan.

This invalidates the use of credit in a single-crop production function.

### 5.3 Extra cost of producing Fairtrade

Farmers incur extra costs in producing to Fairtrade criteria, for example, not using child labour, observing restrictions on pesticides, herbicides, genetically modified products, etc. (Fairtrade Labelling Organizations International e.V., 2011a; Fairtrade International, 2011b). These also impose extra labour costs. Farmers incur the costs not just on the small proportion of coffee that is eventually sold as Fairtrade, but on all coffee and all other products.

This implies farmers incurring higher costs and receiving lower prices as a result of Fairtrade membership, which is implicitly assumed away by Tedeschi and Carlson.

## 6 OTHER FARMERS AND IMPACT

Tedeschi and Carlson do not deal with the ways Fairtrade may harm non-Fairtrade farmers (as discussed by Griffiths, 2012), but they do claim, without evidence, that the introduction of Fairtrade increases the prices paid to non-Fairtrade farmers.

## 7 CONCLUSION

It has been shown that the assumptions of Tedeschi and Carlson bear no relation to what Fairtrade International describes or to the papers they cite. Nor do they bear any relation to anything I have found in the literature. They are not the simplifying assumptions we have to make in building models of real markets; they are false. Any conclusions produced from modelling them are, therefore, artefacts of the assumptions made, and do not apply to any real situation.

In addition, each assumption produces a range of implicit assumptions throughout the system – the assumption of a monopolist/monopsonist trader, for example, means assuming a complete change in the market structure and all trading relationships. The fact that major false assumptions are made on all aspects of the system, makes it inevitable that some of the assumptions will clash. And any model with clashing, contradictory, assumptions is necessarily logically incorrect.

There have been a lot of criticisms of Fairtrade, that it does not help Fairtrade farmers, but harms non-Fairtrade farmers, for instance. It has been claimed that it increases death and destitution. It is certainly appropriate to test these criticisms with hard fact and hard theory, but we have neither here.

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