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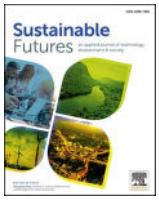

Why direct payments are more effective for combatting poverty than fair prices

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ABSTRACT

Voluntary certification initiatives for tropical commodities intend to reduce rural poverty by guaranteeing higher prices to local smallholder farmers and paying premiums to their local communities. These market-based strategies are important to support farmer organization, but the effects on household income and food security remained fairly modest. Reforms of market mechanism are necessary but usually not sufficient for supporting smallholder farmers. Novel initiatives relying on regular direct payments by companies that provide cash transfers to smallholder families show more tangible impact on improvements in their livelihoods. We compare the theories of change underlying fair trade programs and direct payments initiatives through regular cash transfers and assess the evidence regarding their impact. Direct payments turn out to be more effective because of their focus on female recipients that give priority to expenditures oriented towards household consumption and resilience. Moreover, lower transaction costs for their delivery by companies contribute to the success.

1. Introduction

During the last few decades, much energy has been devoted to programs for reducing poverty amongst smallholder farmers in developing countries by paying better market prices, enabling investments in improved farming practices and by delivering additional premiums for community investments. Notwithstanding the contributions of these programs to the strengthening of smallholder organizations and empowerment, their implications for poverty reduction remained fairly limited.

We regularly hear urgent pleas for improving the position of smallholder farmers in developing countries that still live far below the poverty line. Fair Trade initiatives have therefore been launched to guarantee and increase the farm-gate price for products such as coffee, cocoa, bananas and tea with the intention to raise farm household income [1].[1] Similar efforts are made to reduce prices for some critical inputs (seeds, fertilizers, energy) to protect poor households against sharply rising production costs [2]. Current initiatives for guaranteeing a living income to farmers usually rely on a combination of higher prices and better yields that could lead to improved revenues [3].

The common idea is that higher sales prices – accompanied by lower input costs and higher yields – could support farmers to reach minimum living income standards. Most voluntary certification programs are supported by civic organizations such as Fairtrade and Rainforest Alliance, and focus on better payment regimes *at the end* of the production cycle. On the other hand, there is growing experience with advance delivery of small instalments *during* the production cycle that are supervised by private companies ('direct payments') and public sector agencies ('cash transfers'). In all of these cases it can be accompanied by specific conditions regarding the use of sustainable production practices or the participation in educational or health programs.

There are several reasons why higher prices or direct payment regimes may deliver varied outcomes. First, better market prices do not directly reach smallholder farmers, since many other stakeholders in the midstream of the supply chain (such as traders, processors, exporters) are likely to capture large parts of the price margin [4]. Second, prices of commercial crops usually only represent part of net household income, since farmers increasingly rely on off-farm and non-farm income diversification for securing their rural livelihoods [5,6]. Third, improvements in sales prices are easily outweighed by higher input and transport costs charged by local traders and input providers, since frequently the same person delivers the inputs and buys the product [7]. Fourth, higher prices may also have perverse income effects when they incentivize farmers to increase their production and the rising sales

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[1] We use 'Fair Trade' as a generic category for all alternative trade initiatives that aim to improve the position of smallholders in commodity markets. The term 'Fairtrade' refers to the certification by the Fairtrade Labelling Organisations International (FLO).

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volume put downwards pressure on market prices [8].

It is therefore important to better understand how smallholder livelihoods are intertwined between factor and commodity markets, and which type of incentives can improve their pattern of household income and expenditures. This will be helpful to identify major leverage points for raising smallholder's welfare and reducing rural poverty in a structural manner. In addition to market-based interventions, we will consider the feasibility of direct payments by companies – as a private alternative to the commonly known public cash transfers - for directly targeting income support and improving resilience of selected households.

In this article we will discuss the pros and cons of market-based price support activities supported by civic certification initiatives and compare these with welfare effects derived from regular transfers paid by private businesses and pubic agencies, looking at differences in their conceptual design and practical execution. We consider the available evidence regarding income and welfare effects, the short- and long-term implications for household livelihoods and the distribution of costs and benefits between different value chain stakeholders (i.e. farmers, companies and consumers). This aims to give better insights into the feasibility of these strategies for supporting programs towards sustainable poverty reduction of smallholder farmers in the global South.

The remainder of this article is structured as follows. Section 2 outlines the theory of change underlying market-based strategies to support poverty alleviation through civic-based voluntary certification programs and summarizes the evidence regarding their limited effectiveness. Section 3 presents the theory of change of alternative strategies based on direct payments through regular cash transfers to smallholder farmers, either by private companies or public agencies. Section 4 gives an overview of the available evidence regarding the impact of price support and direct payment programs. Section 5 makes a systematic comparison of the underlying mechanisms of price support and direct payment programs and explains why the latter can be expected to deliver more impact for poverty alleviation. Section 6 concludes with some implications for policy and research.

2. Contributions of market-based strategies to poverty alleviation

Since smallholder farmers are usually facing a disadvantaged bargaining position on input, factor and commodity markets, there are good arguments to advocate for market reforms as a strategy towards poverty reduction. High entry costs, unequal exchange conditions and recurrent price risks are key market constraints that reduce smallholders' trade margins and challenge their market returns. This is mainly caused by the falling price wedge between (decreasing) output prices and lower wages compared to (rising)market costs for buying food, renting land and borrowing money to buy the necessary inputs.

Different instruments and strategies have been developed to improve the market position of smallholder farmers. The launch of Fair Trade – followed later on by a range of other commodity certification initiatives – was meant to break vicious circles of unequal market exchange, by guaranteeing farmers a minimum farm-gate sales price and offering them low-costs technical assistance services to increase their yields and reinforce their production practices (see Fig. 1 for the stylized Theory of Change for Fair Trade). Additional incentives include the payment of a lump-sum premium at the end of the harvest for investments in community services (such as drinking water, education, health care or infrastructure) and pre-finance facilities that enable farmers to acquire critical inputs (fertilizers, herbicides) to improve product quality and/or to reduce the yield gap. The latter investments are also critical for upgrading of value chain linkages through engagement in local processing. Credit supply may be combined with weather insurance services, where price commitments are embedded into longer-term purchase contracts. Recently, attention is shifting to guarantees for generating a living income for farmers (and living wages for workers) through higher net revenues and income diversification.

We further discuss the existing evidence regarding the effectiveness of specific instruments for market-based interventions as outlined in Fig. 1. Price support to reduce price volatility is considered as a key issue for market-based interventions. This includes guaranteed minimum (floor) prices as well as mark-ups for organic and speciality products. A guaranteed selling prices may provide more security to smallholder farmers regarding stable future revenue streams only when a large share of certified produce can be sold under these premium conditions. That is, however, seldomly the case due to serious over-certification. De Janvry et al. [9] show that coffee cooperatives in Central America could only sell 15 % of the certified harvest at Fair Trade prices. DeFries et al. [10] show that worldwide 40 % of all coffee production is certified, but only 12 % is sold under standard compliant conditions. When certified production only represents a small share of farming activities, effects on household income tend to become more limited. Therefore, direct effects of price support on incomes remain fairly meagre and significant contributions to poverty reduction and food security are hardly registered [11]. Vellema et al. [12] explains that this is partly because higher prices encourage farmers towards more specialization at the expense of income from other farm and non-farm activities. Moreover, paying higher prices does not automatically guarantee that the wellbeing of farmers and workers improves, since it needs to be complemented by programs that reinforce their bargaining power in the value chain [13].

The payment of a premium on top of the market price for certified commodities proved to be an important vehicle for reinforcing

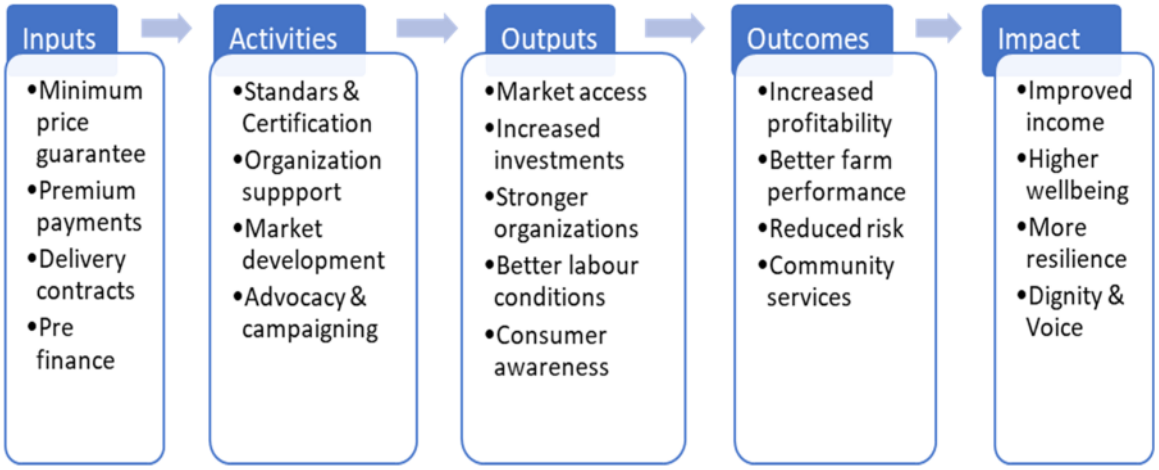

Fig. 1. Theory of Change for Fair Trade market-based reforms.

cooperative membership and community organization. Klier & Possinger [11] find that premium payments are often used for community projects, thus benefitting the wider population and having an impact that extends beyond the members and workers of certified organisations. Sellare [14] shows, however, that many farmers prefer individual distribution of the premium since social premium payments may eventually increase intra-village inequality. In practice, deficiencies in participation and accountability are to a large extent responsible for a less effective use of premium resources [15].

The engagement of farmers and traders into a contractual delivery relationship is an important condition for making the price guarantee effective. Contracts include binding arrangement for input purchase and output deliveries with a long-term perspective to improve mutual guarantees and enhance transparency. Major contract enforcement problems arise from free riding (i.e. side sales by farmers to other buyers that temporarily offer a higher price) and limited trust between value chain partners [16,17]. Otherwise, some non-certified farmers may receive positive spillover effects by selling through their produce through certified neighbours. Surveillance on contract compliance becomes particularly difficult when definitions on timeliness and product quality remain vague and costly arbitrage is required to solve disagreements.

Far less attention is usually given to strategies for improving the value added share accruing to farmers through upgrading. This involves capacity building for more sustainable and/or organic production systems (raising prospects for selling at higher prices), as well as in-depth investment for further local processing and packaging of products to enable selling of higher quality produce at premium outlets. Molenaar & Huetz-Adams [13] confirm that smallholders still receive a small share of the total value added created in the supply chain, thus undermining their ability to make investments for improving the viability, resilience and sustainability of the rural households. Van Wijk et al. [18] assessed the effects of 36 quality standards in retail networks and conclude that these mainly facilitate trading opportunities for high-end producers who can meet the criteria of quality compliance. Standards initiated by NGOs and voluntary partnerships usually offer better upgrading opportunities to suppliers compared to standards initiated by public authorities or by individual firms. Product-specific quality standards with explicit social and environmental goals may have more positive influence on process and product upgrading in developing countries compared to generic standards.

Initiatives for changing governance at farm-household, cooperative and value chain level represent a critical – albeit frequently neglected - component of the market-based reforms through voluntary certification. Cooperative membership is usually supportive for farmer's engagement in premium markets [19]. However, problems of cooperative internal governance due to sparse member's involvement in critical sales and investment decisions [20] may limit possibilities for strengthening their bargaining power in highly segmented value chains. Smith [21] summarizes the evidence related to Fair Trade impact on women and gender relations from over 20 case studies and finds that multiple connections lead to a rather mixed impacts for women's income, wellbeing and status. Final effects differed according to factors such as age, marital status, education and wealth. Fair Trade sometimes leads to more gender equity, but may also increase women's workload. Klier and Possinger [11] report that women are often not eligible as members, e.g. because they cannot own land, and therefore they are excluded from participation in decision processes on the Fairtrade premium.

Finally, increasingly attention is given to improvements in labour conditions and guarantees for providing a decent living income to farmers and living wage for workers on certified farms. This is important to safeguard tangible welfare impacts and equity outcomes. Gneiting and Arhin [22] assess different efforts for reaching living income of cocoa farmers and conclude that current company programs focus too much on farm-gate sales prices and neglect input costs, thus overestimating the opportunities for reaching substantial yield increases and neglecting the engagement of women in informal non-farm activities. The latter argument is becoming increasingly important since income and activity diversification are critical strategies for improving household welfare and nutrition [23]. As long as companies mainly consider living income as an issue of effective sourcing and not as the outcome of long-term strategic partnerships, it is very unlikely that these strategies can deliver structural results for rural poverty alleviation. Cordes and Sagan [24] conclude in their comparative study on living incomes in coffee-producing countries that in 8 of the 10 countries, the average income is at or below the poverty line. Only producers in Vietnam and Brazil earn enough from coffee to place them above the poverty line. There is no evidence that the use of voluntary standards alone would enable more producers to achieve a living income.

Systematic reviews about the effectiveness of different strategies for market-reform and commodity certification provide mixed evidence. Several comprehensive studies assess the effects of these strategies for reinforcing the position of smallholder farmers in tropical commodity markets [25–30]. Meemken [26] finds in a meta-analysis of 97 field studies that 20–30 % of certified farmers receive higher prices than their non-certified counterparts, leading to an overall increase in household incomes by 16–22 %. Jodrell & Kaoukji [27] conclude from an evidence mapping of 151 studies that only 21 % of the studies provide reliable evidence on incomes, wellbeing and resilience effects, whereas only 3 % refers to value chain transparency and equable value added distribution. Some 56 % of the studies based on credible methods show positive results, but only few robust empirical impact studies are available.

An overview study published by Evidensia [28] based on 49 field surveys that analysed the effects of voluntary sustainability standards concludes that over half of the certified farms realize higher prices and better crop income. A high proportion of the studies report no significant differences in net household income between certified and non-certified farms, and only one quarter of the certified farms registered higher incomes. While 38 % of the studies find that yields were significantly higher on certified farms, 48 % report no difference and 14 % even register higher yields on non-certified farms. In a similar vein, Mauthofer and Santos [31] conclude from a comparative study on cocoa, coffee and bananas farms that the increase in farm-gate prices is largely lost due to rising cost of production and higher living expenditures. Thus, many Fair Trade farmers interviewed in this study do not perceive a substantial improvement in their net income.

This heterogeneity in outcomes is confirmed in the systematic review of Oya et al. [29] based on 43 studies that analysed welfare effects. Fair Trade generally contributed to the strengthening of farmer's cooperative organization. Modest positive effects on farmer's income were confirmed in 10 studies with mean differences up to 22 %, but negative effects on wages are reported as well. Based on a similar analysis of economic, social and environmental outcomes in 24 rigorous impact studies, deFries et al. [10] conclude that certification is associated with positive outcomes for 34 % of the performance indicators, no significant difference for 58 % of the variables, and negative outcomes for 8 % of the variables. Schleifer and Sun [32] conclude from a review of 37 empirical studies of certification programs that only 7 of them are able to show a direct impact on food security. Bray & Nelson [30] in their synthesis from 51 case studies of coffee certification programs find that better farmgate prices translate into a relatively small increases in household income since most adopters are already well-endowed farmers within their communities.

The evidence presented above provides a clear illustration of the problems that are intrinsic to the market mechanism, and may offer some insights in possible strategies for overcoming smallholder's income bottlenecks and poverty traps. We can identify three major barriers that are overlooked and need to be considered for more effective pro-poor development strategies. First, the role of spot-market prices is generally overestimated since purchase decisions of international enterprises are mainly guided by future prices at global commodity markets that ultimately shape company profits [33]. Local market integration is therefore a useful, albeit not a sufficient solution for

improving exchange conditions to smallholder farmers. As long as international companies remain involved in price speculation at future markets it implies that their transactions on local markets are likely to cause price volatility and could compress farmgate margins. Smallholders would benefit more from a shift from spot prices to long-term contracts that increases their foresight on income prospects and improves their security on the returns to investments.

Second, market reform programs focus too much on prices and margins for raw commodities and thereby disregard the interactions with other value chains agents. Consequently, they overlook the importance of local midstream upgrading opportunities for further processing and packaging of products [4]. Since farm-gate prices usually represent no more than 4–8 % of the final market price, more processing in origin countries can substantially raise the local value added share and increase the size of national surplus, while simultaneously also contributing to a substantial growth in non-farm employment. Consequently, investments in upgrading (for higher quality and/or more sustainability) and improvements in off-farm (physical and social) infrastructures leave greater income and productivity benefits than higher prices.

Third, market-based programs tend to neglect the critical role of payment systems (timing) and governance regimes (trust) for fully transforming market systems and improving smallholder's bargaining position. Adjustments in contractual regimes and governance arrangements create space for innovative strategies that focus on the sharing of information and profits between all value chain stakeholders. This requires a long-term commitments of companies for buying the produce, together with an offer of pre-finance for farmers to support the purchase of inputs and the payment of salaries, and ultimately periodical cash transfers made by international companies to farmers as part of a strategy of profit sharing throughout the supply chain. This is increasingly considered as a key strategy for raising the overall living standard of smallholders and has shown to be very effective for strengthening their position in commodity, credit and labour markets.

3. The potential of direct payments

The rising scepticism against market-based interventions for rural poverty alleviation is mainly based on the disappointing aggregate effects of price support measures on farm production and household incomes. Paying mark-ups for purchasing specific commodities or subsidizing inputs to reduce their production costs could lead to higher aggregate production volumes but may also divert land and labour resources away from other productive activities. This will eventually result in an increase in the land devoted to commercial crops and thus raises their market supply, but at the expense of the production of food crops (for self-consumption or local sales). Sometimes this can even lead to downward pressure on commodity prices [34] that counteract the original intentions of the price support program and have detrimental effects on smallholder' families net incomes. Also household labour may become tied to farm-level activities, thus loosing opportunities for highly rewarding engagement in off-farm or non-farm employment that stabilize family revenues.

There are longstanding experiences with large-scale market-based policies for promoting agricultural production and farmer's income, such as the floor prices used in the Common Agricultural Policy of the European Union (CAP-EU) and the Indian Farmer Income Protection Scheme (known as *Pradhan Mantri Annadata Aay SanraksHan Abhiyan* or PM AASHA) that guarantees minimum support prices to smallholder farmers. Other countries rely on price guarantees for specific products, such as beef (Korea), grains (China) or wheat (Pakistan). These producer price support programs are increasingly considered as a potential source of local market distortions [35,36] and have therefore gradually been replaced by more targeted income-support and payments regimes based on economic, social or environmental performance.

In a search for feasible alternatives, several initiatives have been taken to support smallholder farmers' incomes through other mechanisms. In India, both price support and direct payments have been used to support poor smallholder farmers. Sekha [37] consistently shows that direct payments are far more effective compared to public procurement – and are also a lot easier to implement – compared to price support measures for raising rural incomes. Moreover, part of the costs of income support programs can be recovered through higher tax revenues.

In a similar vein, the reforms of the EU Common Agricultural Policy (CAP) and new European 'Green Deal' have shifted attention away from price support measures and tend to rely more on direct income support measures in order to improve targeting efficiency. Given the limitations of markets for steering the required transformation towards a more resilient and sustainable agricultural sector, it is considered imperative to involve all value chain stakeholders and to aim for structural changes in the governance of agro-food systems [38].

Therefore, both governments and private businesses started to search for a viable alternative. Most attention is given to direct payments and cash transfers offer regular (weekly) payments to farmers during the production cycle to support their farm and family expenditures (see Fig. 2 for the Theory of Change). This is considered as an 'advance' for the delivery of the produce at the end of the harvest that enables families to pay for their food, education, housing and health. Sometimes it is accompanied by technical assistance for the upgrading of production practices (especially better soil fertility management and the control of pests and diseases) that are provided at low costs. Also other conditions may be attached to the transfers, such as the participation of children in primary education (and banishing child labour) or the obligatory attendance of pregnant women to primary health care facilities.

Many of these programs gained experience as (un)conditional cash transfers operated by (semi-)public government agencies, but we observe a growing interest for using similar mechanisms by private businesses in order to improve their linkages to farmers and to guarantee their supply of raw materials. Given the increasing scarcity of tropical products - particularly coffee and cocoa - due to adverse climatic events (i.e. long droughts, excessive rainfall), the construction of reliable sourcing relationships is considered vital for guaranteeing future business partnerships. This is further facilitated by the rapid increase in digital platforms (such as MPensa in Kenya and DigiPay in Nigeria) that can be used for regular and reliable money transfers at low transaction costs. These transfers are by preference made to women, since they take care in a more responsible manner of regular household consumptive expenditures.

The direct payments mechanisms works as follows. The household receives regular (bi)weekly instalments – directly from the purchasing company or channelled through a local NGO - that can be used at their full discretion for any kind of necessary expenditures. An important part is used for the purchase of consumption goods to maintain the family. This also enables farmers to engage in long-term investment decisions (for instance in tree renovation or shifting to more sustainable or organic practices) that guarantee permanent income. Also downstream investments for quality upgrading or processing activities become more feasible. This stabilization of the expenditures pattern tends to support so-called '*consumption smoothing*' that in turn reduces the exposure to risks and increases the time-horizon of farm-households ([39,40]. Such behavioural responses to the financial transfers are registered both in publicly-operated 'cash transfer' programs that usually have a wide regional coverage as well as in privately-managed 'direct payment' facilities that have a more local or sub-regional operation sphere.

The strategy of direct payments has been applied in several agricultural commodity chains in an effort to improve the living conditions of smallholder households. Cooke and Mukhopadhyay [41] document how the NGO Give Directly uses unconditional cash transfers of US $1.000 delivered in three (mobile phone) instalments to coffee farmers in eastern Uganda, resulting after 12–15 month in a 40 % increase in household consumption and almost doubling of coffee revenues. In a similar vein, Gitter et al. [42] show that conditional transfers to coffee

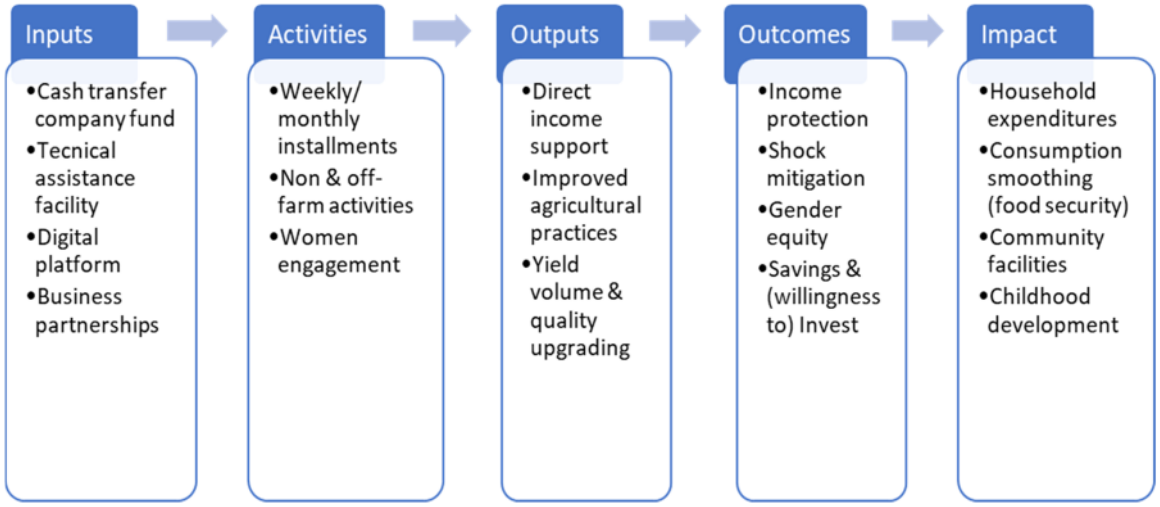

Fig. 2. Theory of Change for Direct Payments.

farmers in Mexico proved to be highly effective for mitigating the negative effects of falling coffee prices on early childhood development.

Similar studies in Zambia find that transfers help households to cope with agricultural production and price shocks and enable them to substantially increase their food consumption and overall food security [43]. Other experiences with monthly cash transfers to cocoa farmers in Ghana indicate that the engagement of children in hazardous work strongly declined for households receiving a monthly amount ranging between US$18 and US$37. These farmers were also better protected against unexpected shocks, such as sickness, and the transfers mitigated the adverse impact of income fluctuations or loss of agricultural production [44]. In Ivory Coast, Nestle launched a Cocoa Accelerator program with transfers up to US$580 for 3 years for farmers engaging in education, improved cultivation practices and income diversification, generating improvements in yields (+18 %) and food security (+12 %) [45].

The response to the recent COVID pandemic generated important new evidence about the potential role of direct cash transfers for reinforcing household welfare. Experiences with (un)conditional cash transfers in more than 130 countries - reaching over 1.3 billion people - proved to be particularly effective for improving resilience and reducing risk, and enabled poor households to overcome income shocks and to make necessary investments for escaping from persistent poverty. Some of these transfers are paid upon participation in primary health care or education programs, but can also be applied to promote sustainable farming practices and to compensate poorer households for climate change mitigation efforts [46].

A wider assessment of the impact of cash transfers for rural households in Mexico by Gertler et al. [47] reveals changes in both consumption and investment behaviour. For each peso transferred, beneficiary households used 88 cents to purchase consumption goods and services, and invested the rest. These investments improved household's ability to generate income and employment. By investing transfers to raise income, farm-households were able to increase their consumption by 34 % after five and a half years in the program. These results suggest that cash transfers to the poor can raise long-term living standards that are maintained after the program ends.

Similar evidence is found from impact studies on cash transfer programs in Sub-Sahara Africa that report on positive effects for household resilience. Transfer programs increased investment in agricultural inputs and assets (farm implements and livestock), allowed households to save and pay off debts, and generally increased the volume and value of crop production [48]. Impact studies show that these programs can increase annual household expenditures up to 0.35 per unit of transfer. Over three years, this implies that increases in household welfare are larger than the initial value of transfers [49].

Direct payments for cash transfers are increasingly preferred as a strategy for raising rural incomes and to improve the position of smallholders in tropical value chains. Such transfers represent a redistribution of value added from downstream market segments back to upstream producers, and are considered particularly effective for stabilizing expected income streams and thus raising farm-household's willingness to invest. Direct payments can be made conditional on specific production systems (organic cultivation) or land use practices (i.e. zero deforestation) and may be partly funded from carbon credits.

By providing a steady and predictable source of income, cash transfers build human and social capital, improve food security, and strengthen households' ability to cope with exogenous shocks. While programs focussing on higher prices or better yields only change gross returns, direct payments of cash transfers have a direct impact on full household expenditures. Cash transfers are also more predictable to fill gaps in cashflow shortages. Whereas production support activities usually end up with male recipients, cash transfers unequivocally reach female recipients and support gender empowerment. They combine poverty reduction with increased resilience, and have well-documented impacts on school participation, eliminating child labour, and the use of health and nutrition services among mothers and children [50]. Small, frequent, and reliable cash payments to poor households have shown to cause improvements in multiple domains, such as per capita consumption, savings, nutrition, mental health, teen pregnancies, child marriages, immunizations and intimate partner violence [51].

4. Evidence base

In order to further substantiate the similarities and differences between price guarantees through commodity certification and direct payments through (un)conditional cash transfers, it is important to clearly distinguish three main categories of producer support: (A) voluntary certification initiatives that support minimum farmgate prices and ex-post premium payments to farmer's cooperatives; (B) public social protection facilities that rely on (un)conditional cash transfers, and (C) corporate procurement arrangements that offer regular direct payments to farmers before the harvest is delivered. Each of these schemes can be complemented with particular contracting arrangements (regarding the application of sustainable production practices or the participation in health and education services). Also (environmental) insurance facilities might be coupled to the payment conditions.

The evidence base for each of these three producer support programs is rather unbalanced. Whereas comprehensive systematic reviews (following international standards from the Cochrane, Campbell or

Prospero protocols) are available for the overall assessment of the results and impact of Fair Trade and cash transfers, for direct payments we only have a limited number of impact studies that are based on robust counterfactual analysis. In Table 1 we included the available evidence from most cited and comprehensive systematic reviews (based on 291 case studies on Fair Trade impact and 136 field studies on cash transfers) and the impact from 4 large-scale direct payment programs through (inter)national companies or local civic organizations with a substantial regional coverage.

We acknowledge that there are important differences in scale and time horizon, but that the comparison of the outcome metrics provides adequate insights in the effectiveness of the respective theories of change (as presented Fig. 1 and 2). Most attention is therefore given to the economic impact on production (yield), prices, input costs, wages and labour conditions, revenues (from crop production) and full household income (including all other activities). In addition, we report on the social effects on savings and investments, food security and nutrition (dietary diversity), health (illness) and school attendance. Since there is usually wide heterogeneity in the outcomes from programs, wherever available we report on the range of outcomes or their standard deviations.

The result from Table 1 show that Fair Trade generates tangible effects at production level (higher yields and better prices) that generally result in higher net crop revenues, but that this is not evenly translated into higher household incomes or better wages. Moreover, the implication for cooperative organization and for women's bargaining positions are rather meagre. This is largely due to the focus on specific crops whereas rural households are involved in multiple other activities. Moreover, there are limited spillovers to other livelihood dimensions, such as education or investments.

Cash transfers, in turn, are widely praised for the impact on incomes and their contribution to poverty alleviation. Consequently, positive health and education effects are reported, particularly if conditionality is applied. Substantial impacts are reached in the areas of household savings and food security [52]. Far less information is available on the durability of the effects after out-phasing of the cash transfer program. It

Table 1
Evidence base on Certification, Cash Transfers and Direct Payments.

Source	Type	Sources	Approach	Welfare effects
COMMODITY CERTIFICATION (Voluntary standards)				
Oya et al. (2018) [29]	Systematic Review (n.s.= not signidicant)	Synthesis of 43 impact studies (45.000 respondents) and 136 qualitative studies	3ie systematic review of certification schemes (using Campbell protocol)	Prices: +14 % (4–24 %) Revenues: + 11 % (2~20 %) Wages: −13 % (−3 ~−22 %) Yield: n.s. / Income: n.s. Schooling: +7 % (0–12 %) Assets: n.s.
Meemken (2020) [26]	Systematic Review	97 robust impact studies on fairtrade and organic produce in 31 countries	Meta synthesis	Prices: +19.6 % Yield: - 3.7 % (−3~+11) Inputs: +2 % (−10~+11 %) Revenues: +32.8 % Income: +16.1 % Assets: 30.5 %
Jodrell & Kaoukji, (2020) [27]	Evidence review	151 field studies on 6 ToC areas	Evidence mapping (traffic lights rating Proportion of studies with positive outcomes)	Yields: 10 % Income: 21 % Investments: 7 % Labour conditions: 6 % Organization: 7 % Gender equity: 6 %
(UN)CONDITIONAL CASH TRANSFERS (Public funding)				
Pega et al. (2022) [50]	Systematic Review of health effects	34 robust impact studies (20 RCTs, 6 CBAs, 3 cohort studies) with 1,1 M participants	Cochrane protocol (likelihood of effect /risk ratios)	Food security: 1,25 Dietary diversity: 0.59 Illness: 0.79 School attendance: 1.06 Extreme poverty: 0.92
McGuire et al. (2022) [52]	Systematic Review	37 RCTs and quasi experiments	Meta analysis with Prospero protocol (effect size in SD)	Mental health: 0.08 Wellbeing: 0.10 Conditionality: +0.04 Impact time: 0.02 SD/yr
Bastagli et al. (2016) [46]	Systematic Review	65 studies on 6 outcome areas (2000–2015)	Outcome mapping (Proportion of studies with positive outcomes)	Expenditures: 71 % Savings: 50 % Education: 65 % Health: 60 % Dietary diversity: 100 %
DIRECT PAYMENTS (Company programs)				
Cooke and Mukhopadhyay (2019) [41]	Case study Uganda coffee farmers	RCT with 3788 households in 44 places (treatment effects)	Impact of US$1.00 transfer in 3 yearly terms over 3 years	Earnings: +71 % Consumption: +40 % Assets: +86 % Food security: +44 %
Habraken & Kuijpers (2025) [45]	Nestlé Cocoa Accelerator Cote d'Ivoire	RCT with 1000 families & scaling for 30.000 farmers	Cond. transfer US$580 for 3 years	Yields: + 18 % Revenues: + 26 % Food security: +12 %
Int. Cocoa initiative/ICI (2022) [44]	Payments to cocoa farmers in Ghana	RCT on shock response with 644 households and 1.100 children	Mobile transfer of US$18–37 per month over 3 years (2019–21)	Assets: +29–35 % Child labour: - 9.3 % Food security: 13 % Resilience: 20.5 %
Lawlor et al. (2019) [43]	Rural households Zambia	Diff-in-diff from 2515 households (2010–2012)	Likelihood of responses to production and price shocks	Food security: + 22 % Savings: + 6 % Resilience: +14 %

is supposed that household incomes become more diversified and stable, but real evidence is still scarce.

Direct payments that rely on regular cash transfers linked to procurement arrangements for cash crops, prove to support farm-level investments (for increasing yield or improving sustainability) and are accompanied by a more direct impact on household food security. These effects mutually reinforce each other, since farmers become less risk-aversive if basic expenditures are guaranteed. Direct payments thus take the best of the two worlds, enhancing crop production while supporting livelihood diversification.

These programs differ in terms of scale, financing, governance, eligibility, and accountability. We therefore only considered the directly observable effects and disregard operational design features (such as targeting efficiency, leakages and political support) that may undermines the internal validity of the comparison. Unfortunately, information of the effects for sustainability of the natural resources or resilience against shocks is notably scarce in most impact studies. There are, however, some thematic studies that point to modest environmental changes from certification programs ([25,32]), whereas direct payments seem to deliver more tangible effects on resilience.

Registered differences in outcomes may also be related to the operational design of the programs. Fair Trade price support and premium facilities have usually a modest size (5–10 % of the gross value of crop revenues; see [53]) but maintain a long time horizon, whereas cash transfers are usually larger (up to 30–40 % of household income) but also have a more limited duration (2–3 years). Social effects are mostly attributed to the conditionalities, even while non-conditional programs also register sizable social outcomes. The role of conditionality is highly contested; Baird et al. [54] conclude that effects are usually larger with conditionality but the difference is empirically not significant. Finally, comparing cost effectiveness is still a big challenge, since reliable information on the costs of interventions is not generally available. Transfer payments vary from US$12 per month to US$50 per month (equivalent to a quarter of family income). Registered changes in crop revenues are usually larger than changes in household income. Smaller transfers have a more persistent impact (pushing more households out of poverty), but larger transfers are considered to be more cost effective. This trade-off asks for an intelligent design of income support programs that balances different dimensions.

5. Comparing price support with direct payments

There are important differences with respect to the conceptual design, the practical organization of the execution and the governance framework for the implementation of price support programs and direct payments that explain to a large extent why the latter can be more effective for sustainable poverty alleviation (see Table 2). Price support and direct payments are based on essentially different '*theories of change*' and also present different types of evidence regarding their impact. Whereas the appraisal of the effectiveness of price support and certification programs is mainly based on local case studies and comparative analyses of small samples that assess changes in farm income and land use, the assessment of the impact of cash transfers is usually based on representative sub-regional studies based on ICTs and robust panel data from a larger number of household and covering a wide amount of community issues. Nevertheless, it is feasible to compare the impact pathways of both types of interventions. Major differences are registered at three levels: (a) the design principles for channelling support activities, (b) the practical procedures and instruments for influencing farm household activities and livelihoods, and (c) the institutional framework for guaranteeing the effective implementation (see Table 2).

At the **design** level, price support measures focus on improving commercial farm-level activities and therefore mainly reach male clients that are engaged in commodity production and trade through traditional intermediaries. Direct payments are more directed towards improving wider rural households' livelihood strategies – including home production and self-employment - and tend to rely more on females as a main entry point. Cash transfers are widely used for linking service delivery through community organizations (health clinics, schools, drinking water and sanitation, etc.). These differences in program design have important implications for the entry points of the interventions and mark a fundamental shift in focus from farm (production) to household (consumption) objectives that is accompanied by a change in agency at the supply side (direct home delivery instead of using intermediaries) and at the recipient side (preference for female clients).

Table 2
Comparing price support and direct payments.

	Price support	Direct payment
DESIGN		
Support level	Farm	Household
Main reiving agent	Males	Females
Delivery Channel	Intermediaries	Mobile installments
IMPLEMENTATION		
Timing	Ex-post	Ex-ante/durante
Amount	Variable	Fixed
Processes	Flow	Stock
Welfare effect	Change	Shift
Income component	Expenditures	Investment
Outcome	Economic wealth	Financial resilience
ORGANIZATION		
Funding	Consumers	Companies
Delivery	Traders	Communities
Implementation costs	High	Low

These different design principles result in contrasting welfare effect at the level of **implementation.** Price support is usually provided at the moment of sales at the end of the production cycle and generates income flows related to the volume of transactions. Consequently, higher incomes that result from better factor returns and revenues are mainly used to finance household's recurrent consumptive expenditures and scheduled maintenance costs (e.g. school fees; house repair, etc.). On the contrary, direct payments are delivered upfront before and during the production cycle, in regular fixed amounts of disbursements (lump sum) and with a predictable time horizon. Therefore, direct payments generate upwards income shifts that increase the stock of resources and are more likely to be used for investment purposes, thus improving the resilience capacity of rural households.

The **organization** and governance structure for price support and direct payments also differ considerably. The costs for price support are ultimately paid by consumers and its enforcement requires a complicated and expensive organization (with certification-holding agencies and local verification firms), whereas direct payments can be easily implemented and are channelled through existing community and company networks. Consequently, transaction costs for the implementation of direct support measures are substantially lower than those for price support programmes, since the latter depend for their delivery on networks of competing traders that exhibit low trust and limited transparency, whereas cash transfers can be channelled through community network that rely on social enforcement.

Direct payments (through regular cash transfers) are therefore increasingly preferred as a strategy for raising rural incomes and to improve the position of smallholders in tropical value chains. Such transfers are based on a redistribution of value added from downstream market segments back to upstream producers, and particularly contribute to more stable expectations on future income streams that raise farm-household's abilities and willingness for in-depth investments. In addition, direct payments can be made conditional on specific land use practices (i.e. zero deforestation or reduced pesticide use) or can be linked to the generation of emission reduction rights in international trade. Finally, cash transfers can be administered in a more transparent manner and are better targeted towards women as key recipients. This enables changes of bargaining power in favour of women within the farm-household, and usually translates into higher family

investments in nutrition and education [47) [49].

The shift from price support through voluntary certification to cash transfers as a contractual compensation mechanism marks a radical change from market-based poverty reduction strategies to institutional agreements for profit sharing throughout the value chain. This is not only related to different payment procedures but involves wider changes in funding responsibilities (*who pays?)* and in the procedures for the selection of final recipients (*who receives?*).

Moreover, cash transfers through direct payment are based on a fundamentally different analysis of the structural causes of chronic poverty. Raising farmgate prices it is not sufficient for breaking the vicious circle of persistent household poverty based on scarce assets and insecure revenue streams [55]. Instead, poor farmers can only escape from poverty if they are allowed to invest in household assets (i.e. better child education, improved housing conditions, etc.) to reduce their vulnerability for risks caused by unexpected shocks as well as to create a longer time horizon for improving farm household resilience.

In summary, direct payment systems allow smallholder farmers to strengthen their bargaining position throughout the value chain and therefore create better prospects for overcoming chronic poverty traps. Even while paying higher prices and better margins remain important as instruments for raising smallholder income, reforms in the payment regimes are required to guarantee structural changes in the financial and exchange relationships that keep smallholders dependent on volatile markets.

6. Discussion and outlook

There are different pathways for improving smallholder integration into commodity markets. Thorpe et al. [56] outline various entry points for engaging marginalized groups into markets, ranging from social protection and local employment training that support market entry from the supply side, and using collective organisation and mutual help and solidarity groups to reinforce the demand side of market participation. Combining approaches that strengthen smallholder's competitive capacities (through training, inputs, finance and entitlements) with activities that improve the performance of markets themselves (such as insurance services and value chain cooperation for building trust and resilience) usually meets highest responsiveness from farmers [7,57].

While cash transfers are recognized as a feasible public policy strategy for enabling rural farm-households to improve their socio-economic position and to overcome poverty traps, reliance on direct payments as it's private sector homologue is still in an experimental stage. In addition to the rationale for social protection that usually underpins cash transfer programs, direct payments also aim to structurally raise living standards, support living incomes and living wages, improve child nutrition and education, and create wider livelihood perspectives for poor rural households.

Most market-based strategies for poverty alleviation that rely on price support and premium payments focus too much on the dynamics of commodity markets and tend to underestimate the role of contract enforcement, and disregard the value chain governance and the mutual insurance mechanisms. Price support can be a useful temporary device for improving farm-household revenues, but it lacks the potential for structurally changing smallholders' welfare expectations and thus creating the required behavioural incentives for investing in sustainable livelihoods.

There are also several limitation that may limit the potential effectiveness for cash transfers and direct payments. Transfers that stay at minimum amounts (compared to regular household income streams) and that are limited to a short (6–8 month) time period tend to leave far less durable benefits compared to programs that comprise regular and substantial direct payments over a longer (2–3 years) time period [46]. Moreover, it is still unclear whether the initial benefits of cash transfers can be maintained once the support programs are concluded. There are also displacements risk when transfers crowd-out existing local insurance arrangements. Transfers can also generate general equilibrium spillovers (higher local prices and wages, debt dynamics) that may potentially attenuate or amplify initial welfare gains.

Given these uncertainties, it may be useful to rely – especially during the transition stage - on a combination of price support and direct payments. Indeed, both the European Union CAP as well as the nationwide Indian Protection Scheme benefit from a careful mix of market-based payments with direct income support. These experiences show that policies and programs for rural poverty alleviation and narket transformation can go hand-in-hand. Price support is somewhat easier to implement but more difficult for reaching effective targeting. Household responses to changes in prices are usually delayed and sometimes counteract the expected welfare improvement. Otherwise, cash transfers might generate more direct welfare effects but require explicit business engagement allowing some revenue sharing.

Another possible strategy for dovetailing these different types of incentives can be based on combination of regular payments (of small amounts) with periodical lumpsum transfers (of larger amounts). While the former payments support current household consumptive expenditures, the latter can be used for more in-depth investments in upgrading of farming systems or improvements in household assets. Such a complementary approach also enables directly targeting the ultra-poor, supporting them simultaneously with a broader package of interventions that includes a lumpsum cash grant or asset transfer (e.g., a dairy cow) along with complementary small regular cash transfers as insurance device. This results in a hybrid social protection system that combines conventional cash transfers targeted at the poorest groups with insurance facilities targeted at the vulnerable nonpoor households in the wake of negative shocks [58].

Finally, it is expected that direct payments generate externalities and multipliers for wider benefits to not directly participating farmers. Contractual commitment to regular payments are likely to raise the local market floor price and could therefore favour a structural realignment of farmer-business relationships. Such positive spill-overs require, however, a highly transparent market structure (e.g. using blockchain) and complementary public controls to guarantee credibility.

It is increasingly recognized that market-based interventions not only need to reduce existing market failures and improve the competitive conditions between different stakeholders in the value chain (i.e. farmers, traders, input providers, processors), but should also adjust the governance framework for market transactions [59]. This implies that – in addition to growing interest for '*making the markets work for the poor'* through better output prices, input costs and wages/salaries [60] – major attention should be given to strategies for reinforcing bargaining processes and anchoring more equal contractual arrangements at different levels of the supply chain (from intra-household responsibilities to market-based delivery contracts). Bottom-up organization through female self-help groups and rural cooperatives appears to be critical for improving bargaining conditions that subsequently can be formalized through long-term contractual arrangements.

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Data availability

All data that are used are from publictly available sources

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