

INDEPENDENT RESEARCH REPORT

An Analysis of Value Distribution Within Fair Trade Coffee

Assessing Return on Investment for Producers Versus Corporations

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Abstract

Fair Trade certification aims to transfer wealth to marginalized producers, yet critiques suggest structural asymmetries impede equitable distribution. This study investigates whether financial benefits reach smallholder farmers or primarily accrue to corporations as a branding and market segmentation strategy. The research engages a comparative quantitative methodology, analyzing the producer share of premium under Fairtrade International and Fair Trade USA governance models using peer-reviewed data and World Bank commodity price series from 1960 to 2024. Empirical results validate that downstream corporations capture 60% to 85% of the consumer premium, while producers receive only 17% to 31%. In the U.S. market, roasters realize a significantly higher return on investment of \$1.13 per pound compared to the \$0.21 per pound received by farmer cooperatives. While Fair Trade International's producer-centric governance yields a higher producer share of premium than the market-centric Fair Trade USA model, both systems are undermined by a sinking price floor from inflation. Longitudinal analysis reveals that the real economic value of the Fair Trade minimum price has eroded by 45.5% for Arabica and 58.3% for Robusta since 1988 due to inflation. The study concludes that Fair Trade functions more effectively as a volatility buffer than a consistent wealth transfer mechanism. Reform efforts should prioritize living income benchmarks and alternative models like Value Chain Profit Sharing to improve producer return on investment.

Keywords Fairtrade · Coffee · Value Chain · Economic Ethics · Value Distribution · Farmers

I. Research Question and Significance

The expansion of Fair Trade (FT) certification over the last three decades represents a significant market-based intervention targeting the endemic poverty and instability faced by smallholder farmers in global commodity markets, particularly coffee. The economic objective of the system, as established by organizations such as Fairtrade International and Fair Trade USA (FTUSA), is the transfer of wealth from ethical consumers to marginalized growers in a market “notorious for the extreme poverty of many of its farmers” (Naegele, 2019, p. 1). This objective is realized through mechanisms like the guaranteed minimum price, intended to stabilize farmer income, reduce vulnerability, and grant a quantity-dependent social premium designed to foster community development (Naegele, 2019). However, the original mandate of the movement also encompassed deeper institutional and political goals, specifically institutional empowerment and disintermediation. Cutting out predatory local middlemen, such as “coyotes” in areas like Oaxaca, Mexico, to create alternative economic structures and bypass exploitative prices, empowering small farmers and supporting the establishment of democratically run farmer cooperatives to strengthen organizational capacity, political leverage, and stability within their local, state, and national systems (Jaffee, 2007; Bennett & Grabs, 2024).

Despite this directive, ubiquitous critiques question the actual financial efficacy of Fair Trade, suggesting that the structural power asymmetries inherent in the global coffee value chain impede equitable wealth distribution. The structural shift led by FTUSA to pursue market expansion and certify large plantations potentially undermines these institutional goals by de-centering the farmer cooperatives, giving them a diminishing share of the total FT coffee business.

This reality necessitates an investigation into the ROI derived by various actors. This study, therefore, addresses the question:

Do farmers actually benefit financially from Fair Trade participation, or does the return on investment primarily accrue to corporations, positioning Fair Trade as a corporate branding and market segmentation strategy?

This question requires an examination of the distribution of value within the supply chain and the share of the Fair Trade premium that reaches smallholder producers. A secondary, comparative dimension motivates this analysis. Fairtrade International and Fair Trade USA embody distinct governance philosophies. Fairtrade International emphasizes democratic representation for producer cooperatives, while FTUSA has pursued a market-expansion strategy that includes larger plantations and multinational partnerships. These differences in governance structure may shape financial outcomes for producers. Therefore, the study also asks:

Does the governance model under Fairtrade International result in a higher Producer Share of Premium compared to the Fair Trade USA model?

Based on more general knowledge and initial research, it seems that this difference in governance structure ought to result in a measurably larger financial share, or Producer Share of the Consumer Premium (PSP), for small producers operating under the FTI system since, “Initially, Fairtrade labeling for coffee was restricted to small-scale farmers” (Naegele, 2019, p. 5). These questions carry practical importance for academics, activists, businesses, and consumers. If the Fair Trade system largely benefits downstream actors, then its value as a poverty alleviation mechanism is limited. If governance structure shapes producer outcomes, then reform efforts should focus on institutional design. This study aims to provide an empirical analysis to evaluate these questions.

II. Literature Review and Theoretical Framework

A. Competing Perspectives on Fair Trade's Redistributive Effectiveness

The existing scholarship presents contrasting views on the efficacy of FT as a mechanism for wealth redistribution and smallholder farmers' welfare. This debate centers on the tension between the movement's stated goals and the structural realities of the global commodity market.

Proponents emphasize features designed to stabilize and improve grower livelihoods. The primary redistributive mechanisms include a guaranteed minimum price and a "social premium of \$0.20 per lb of coffee sold under the Fairtrade label," intended for community investment (Naegele, 2019, p. 4). These funds support educational infrastructure, processing facilities, training, and community development. This system acts as a market volatility buffer, offering a financial safety net for farmers to mitigate the risks associated with fluctuating commodity prices. Participation in FT cooperatives is also associated with positive social outcomes: "Participation in cooperatives boosts incomes and improves education, health, and access to care, especially for long-term participants" (Maradiaga-López, et al, 2024).

Conversely, economic and alternative perspectives contend that the system is inefficient as a pure wealth transfer tool due to structural flaws. FT operates as a "disequilibrium tool" that fixes prices but permits market forces to determine the quantities actually sold under certification terms (Naegele, 2019, p. 6). With oversupply in the certified market, farmer cooperatives consistently cannot sell all of their coffee at Fair Trade prices. Studies estimate that small growers sell only approximately 25%–30% of their output under Fair Trade terms, severely limiting total realized gains (Bennett and Grabs). Furthermore, quantity-dependent benefits are eroded by fixed certification fees (estimated between 3¢ and 5.5¢ per lb of exported coffee) (Naegele, 2019). These fees are typically fixed annual amounts independent of the quantity sold at premium prices, thus compromising the net financial benefits realized by the cooperative.

Beyond quantity restraints, widespread research emphasises that the Fair Trade minimum price often remains below the true floor for a living income. (Naegele, 2019). The defined minimum price often falls short of meeting the actual cost required for sustainable production and achieving a decent standard of living for growers (Canning, 2022). When market prices are high, the minimum price becomes irrelevant; when prices collapse, the system offers some protection but fails to consistently deliver substantial financial improvements necessary to guarantee long-term economic sustainability for farmers (de Janvry et al.; Valkila et al.; Fair Trade USA). This pervasive critique suggests that bypassing the intermediary layers and market power asymmetries of the traditional certification model is necessary to improve the financial returns for growers.

B. Value Chain Asymmetry and Corporate Capture

Analysis of the Fair Trade (FT) premium distribution consistently reveals that the largest portion is captured by downstream corporate actors, specifically manufacturers (roasters) and, to a lesser extent, retailers and commodity traders. This confirms Fair Trade's structural inefficiency as a pure wealth transfer tool (Durevall, 2020; Naegele, 2019).

Empirical data from the U.S. market proxy, for example, show that while consumers paid a premium estimated at around \$1.20 per lb. for certified coffee, the farmer cooperative typically received only approximately \$0.21 per lb. This means the producer organization receives only "about a fifth" (17.5%–20%) of the consumer premium, with the large majority (80%–82.5%) captured by intermediaries, primarily the roaster. The U.S. manufacturer's profit margin, in fact, saw an increase of about \$1.13 per lb. of Fair Trade coffee sold, demonstrating a significantly superior Return on Investment (ROI) compared to the farmer cooperative (Naegele, 2019).

This pattern of downstream value appropriation is widespread. Studies in European markets governed by Fairtrade International (FTI) found that roasters and retailers captured between 61% and 70% of the consumer premium, while the return designated for the producer country ranged only from 24% to 31% (Durevall, 2020). These high margins indicate that the FT label functions as a strategic tool for corporate actors to effectively segment the market and "skim the consumer's increased willingness-to-pay" (Naegele, 2019). The substantial price-cost margins retained by these corporate entities are the reason why the system is considered inefficient at maximizing financial transfer to growers.

C. Governance Divergence

The 2012 separation between Fairtrade International (FTI, formerly FLO International) and Fair Trade USA (FTUSA, formerly TransFair USA) formalized a core divergence regarding the institutional goals and market mechanisms deemed necessary for the Fair Trade movement's expansion. This rupture established two competing governance philosophies that define the contemporary certified ethical coffee market: one focused on institutional empowerment and the other on market scale.

1. FTUSA's Market-Centric Model

FTUSA unilaterally exited the international system to pursue a market-centric approach dubbed "Fairtrade for All. This was driven by the strategic objective of vastly increasing volume and achieving widespread market penetration (Sherman). This expansionist strategy mandated certifying large coffee plantations and independent smallholder farmers not organized into cooperatives, thereby making certification accessible to the powerful corporate partners who dominate the global supply chain. FTUSA's leadership argued that the previous model was restrictive and "hostile to innovation," preventing the system from achieving sufficient volume to impact a larger number of marginalized farmers (Sherman).

2. FTI's Producer-Centric Model

FTI maintained its traditional focus on institutional empowerment and adherence to core organizational standards. This governance philosophy restricted certification primarily to small-farmer cooperatives that are democratically run. This framework is designed to embed stability, political representation, and collective bargaining strength for marginalized producers. FTI standards mandate "inclusive [governance] structures," striving for growers to eventually "occupy half the seats on FTI's ruling general assembly," positioning political influence as a crucial check on corporate power" (Sherman).

III. Working Hypotheses

Based on the literature, the following hypotheses guide this analysis:

- **Hypothesis 1** *Corporate versus Producer Return on Investment:* Downstream corporations such as roasters and traders capture the largest share of the consumer premium, often exceeding eighty percent in the United States market. Their financial return on investment and strategic gains through brand positioning and market segmentation surpass the financial gains realized by small producers.
- **Hypothesis 2** *Governance and the Producer Share of Premium:* The Fairtrade International governance structure, which prioritizes farmer representation and cooperative certification, should yield a higher Producer Share of Premium compared to the Fair Trade USA model.

IV. Data and Methods

A comparative and quantitative methodology is applied to examine how value is distributed within the Fair Trade coffee supply chain. The analysis draws on peer-reviewed economic studies, corporate financial disclosures, and global price series. The intention is to calculate the Producer Share of the Consumer Premium (PSP) under different governance approaches and under different historical price regimes.

A. Data Sources

This study uses three categories of data:

1. **Consumer Price Premium Estimates:** The consumer price premium associated with Fair Trade coffee in the United States is taken from hedonic price regressions conducted by Naegele (2019). These regressions estimate the premium after controlling for brand characteristics, packaging, roast level, and marketing strategies. The most relevant estimate for this study is the average premium of 1.20 dollars per pound.
2. **Value chain distribution studies (U.S., Sweden, Finland):** Detailed breakdowns of price premiums and margins across the farmer, manufacturer, and retailer stages, which are essential for calculating producer capture of the consumer premium. They also allow for a comparison between Fairtrade International and Fair Trade USA governance systems.
3. **Historical World Market Price Data (Pink Sheet):** To see historical variation and performance across different time periods, the World Bank's Pink Sheet monthly global coffee price series for Arabica and Robusta from 1960 to 2024 is utilized. These data include monthly world prices denominated in dollars kg. By matching these prices to the Fairtrade International minimum price schedule, the periods when the Fair Trade minimum price binds can be calculated. When the market price exceeds the minimum price, and the magnitude of the gap between market and minimum prices PSP under binding and nonbinding regimes.
4. **Consumer Price Index:** Due to the long periods of minimum guaranteed FairTrade price stagnation, the effect of inflation is an inherent problem. To expand on the idea of farmers receiving minimal wealth redistribution, the Consumer Price Index (CPI) is employed as a proxy for the inflation of the cost of coffee over the period of Fairtrade's existence (1988-2024). This data simply gives the CPI by month from 1960-2024, which was leveraged to calculate the value of the minimum guaranteed FairTrade price each year in 2024 dollars. This way, the value that farmers lose to inflation can be appraised.

B. Comparative Quantification Strategy (FTI vs. FTUSA)

To quantify the comparative outcomes between the two distinct governance models, a geographical proxy approach was applied. The metric calculated for comparison is the PSP:

$$PSP\% = (Total\ Premium\ Received\ by\ Producer \div Total\ Premium\ Paid\ by\ Consumer) \times 100$$

The metrics are strictly specified based on the methodology used in each source:

1. **FTUSA Market Proxy (U.S.):** The U.S. market proxy uses the data from Naegele (2019) covering 2010–2012. The Producer Share is defined narrowly as the price premium received by the farmer cooperative. This figure represents the price premium paid to the cooperative (composed of the social premium and minimum price benefit) at the farmgate.
2. **FTI Market Proxy (Europe):** These markets are analyzed using data from the Swedish market (Durevall, 2020) and the Finnish market (Valkila et al., 2010). The Producer Country Share in the Swedish proxy (Durevall, 2020) is defined broadly, encompassing the financial return accruing to coffee farmers, cooperatives, middlemen, exporters, and the global Fairtrade organization (Fairtrade International). This value is derived from the Fairtrade social premium and the minimum price received by producer organizations. This scope is not strictly comparable to the narrow cooperative focus of the FTUSA proxy, as it includes Southern middlemen/exporters who receive a slice of the premium before it reaches the cooperative or the farmer, and also includes income retained by FLO.
3. **Note on Finnish Market Proxy (Valkila et al., 2010):** The analysis of the Finnish market (Valkila et al., 2010) calculates the producer share as the proportion of the total retail price remaining in the producer country,

rather than the consumer price premium. This metric is non-comparable for direct PSP percentage testing with the U.S. and Swedish data due to the difference in the denominator.

C. Fair Trade Minimum Price Schedule

Fairtrade International sets minimum prices by bean type and processing method. Since the Pink Sheet provides only Arabica and Robusta world prices, the analysis uses their corresponding Fair Trade minimum prices.

Table 1. Fairtrade International Minimum Prices for Coffee (per lb, USD) (Sources: Starbucks, 2001; Naegele, 2019; Fairtrade International, 2024)

Year	Washed Arabica FT Min	Washed Robusta FT min	Social Premium	Notes
1988-2007	\$1.21	\$1.10	\$0.05	Fair Trade Minimum Price (FTMP) set at 1.21/lb (Arabica) and approximately 1.10/lb (Robusta) plus the fixed 0.05/lb premium.
2008 - Mar 2011	\$1.21	\$1.10	\$0.10	Social premium increased to 0.10/lb (effective January 2008).
Apr 2011-Mar 2023	\$1.40	\$1.01	\$0.20	FMP for Washed Arabica updated to 1.40/lb; Robusta FMP set at 1.01/lb (or equivalent); Social Premium increased to 0.20/lb (effective April 2011).
2023-2024	\$1.80	\$1.25	\$0.20	New FMP for Washed Arabica (1.80/lb) and Washed Robusta (1.25/lb) effective August 2023; Premium remains 0.20/lb.

After converting the Pink Sheet market price data to \$/lbs, the months during which the FT minimum price was in effect (binding) across 444 months is found.

D. Market Binding Analysis Using Pink Sheet Data (1960–2024)

To determine whether the Fair Trade minimum price is binding, the gap was computed: Gap = Fairtrade Minimum Price minus Market Price. If: Gap > 0 then Fair Trade minimum price is binding Gap ≤ 0 then the Fair Trade minimum price is not binding. Then, to test for temporal patterns, binding frequencies are calculated across 3 decades and a six-year period that divides the dataset as evenly as possible. Then, descriptive statistics for these gaps were harnessed to measure the benefit of the Fairtrade minimum price. Here, the foremost focus was on the binding periods when Fair Trade was in effect to measure its benefit. The PSP across these gaps was calculated, and the specific binding periods: The PSP under non-binding conditions is calculated as the social premium acting as the numerator, divided by Naegele's empirical \$1.20 consumer premium. Under binding conditions, this numerator calculation changes to the FT minimum minus the market price, plus the social premium.

F. Value Erosion From Inflation

A simple equation was used to calculate the value of each observed FT minimum price in 2024 dollars.

$$O_{t=2024} = O_t \times (CPI_{t=2024} / CPI_t)$$

Here, $O_{t=2024}$ is the value of an observed minimum Fair Trade Price (O) in 2024 dollars, and CPI_{2024} is the value of the CPI in December 2024. This equation is a standard inflation adjustment formula that allows every observed FT minimum price in 2024 dollars to be seen. Then, looking at the time periods of when the FT minimum price was stagnant, the loss in value is calculated for each period the price remained unchanged by subtracting the ending real price from the beginning real price.

V. Results: Quantification of Value Distribution and ROI

A. Value Distribution Findings in U.S. Market (FTUSA Proxy)

The distribution of the Fair Trade premium in the U.S. value chain is asymmetrical, overwhelmingly favoring the manufacturing stage (middlemen like roasters), validating Hypothesis 1. The Producer's financial capture shows that the farmer cooperative received a price premium of approximately "\$0.21 per lb for the 2010–2012 period" (Naegele, 2019). This figure represents the premium paid to the producer organization, composed of the social premium and minimum price benefit, but it does not account for administrative costs or subsequent distribution to individual members. Meanwhile, the corporate financial capture and ROI (manufacturer/roaster) analysis demonstrated that the wholesale price received by the roaster increased by \$1.44 per lb for Fair Trade coffee. Assuming a consumer price premium of \$1.20 per lb and considering the Fair Trade license fee paid by roasters (\$0.10 per lb before 2012), the change in margins reveals the following financial capture:

$$\text{Manufacturer Gain} = (\$1.44 \text{ per lb}) - (\$0.21 \text{ per lb}) - (\$0.10 \text{ per lb}) = \$1.13 \text{ per lb}$$

The manufacturer's profit margin increased by \$1.13 per lb of Fair Trade-certified coffee sold (Naegele, 2019). This substantial margin increase demonstrates a superior financial ROI for the corporate downstream actor compared to the farmer cooperative. Moving upward in the supply chain, retailers (large corporate resellers) experienced a margin reduction, making \$0.24 less profit per lb on Fair Trade-certified coffee compared to conventional coffee (Naegele, 2019).

B. Producer Share of Premium (PSP) in FTUSA Proxy

Corporate ROI is superior, confirming hypothesis one. Using the estimated average retail price premium (\$1.20/lb) and the corresponding farmer cooperative receipt (\$0.21/lb), the calculation of the PSP in the FTUSA proxy is:

$$\text{Producer Share of Premium (FTUSA)} = \$0.21 \div \$1.20 = 0.175, \text{ or } 17.5\%$$

This calculation confirms that the farmer cooperative receives approximately "about a fifth" of the consumer premium (Naegele, 2019). The remaining 82.5% of the consumer premium is captured by intermediaries, primarily the roaster, which retains an estimated \$1.13 per lb.

C. Similar PSP Findings in FTI Proxy Markets

When comparing the calculated PSP of 17.5% in the U.S. proxy to data from FTI-dominated markets, the necessary methodological caveat that the FTI metric includes Southern middlemen/exporters is acknowledged.

1. *Swedish Market (FTI Proxy)*: Analysis of the Swedish market quantified the distribution of the Fair Trade premium among producer countries, roasters/retailers, and the local certifier (Fairtrade Sweden). The Producer Country Share encompasses the financial return accruing to coffee farmers, cooperatives, middlemen, exporters, and the global Fairtrade organization (Durevall, 2020).

Table 2. Durevall's Financial Return Through the Swedish Value Chain

Metric	Producer Country Share	Roasters/Retailers Share	Fairtrade Sweden Share	Total
Assumption 1: Zero Additional Costs	24%	70%	6%	100%
Assumption 2: High Additional Costs	31%	61%	8%	100%

The methodology in the Swedish study aggregates the return to all these Southern actors into a single percentage (24%–31%) and does not provide sufficient granular data to distinguish the separate slices accruing only to the farmer co-op from the share captured by Southern middlemen, exporters, or other actors within the producer country economic system.

2. *Finnish Market (FTI Proxy)*: Valkila et al. (2010) found that for conventional coffee, 48% of the retail price went to the producer country (farmers, co-ops, exporters), but for Fair Trade coffee, this share dropped to only 35%. This result, where the producer country share is 35% of the total retail price (e.g., EUR 3.71 per package in 2006), cannot be directly compared with the PSP figures from the U.S. and Swedish markets, which calculate the share of the consumer price premium, but still offer insight into economic distribution.

D. Comparative Synthesis (Testing Hypothesis 2)

The derived PSP metrics are compared to address Hypothesis 2, noting the distinction between the methodology used by Naegele (U.S.) and Durevall (Sweden).

Table 3. PSP's Under Different Market Proxies

Certification System	Market Proxy	Producer Share Definition	Producer Share of Premium (PSP%)
FTUSA	U.S.	Farmer Cooperative (Narrow, at farmgate)	17.5%–20%
FTI	Sweden	Producer Country (Broad, incl. middlemen, exporters, FTI)	24%–31%
FTI	Finland	Share of Total Retail Price	35%

The quantification reveals that the FTI proxy markets consistently demonstrate a higher PSP percentage (24%–31%) compared to the FTUSA proxy (17.5%–20%). This difference, quantified as a large improvement of up to 55% on the FTUSA baseline, supports Hypothesis 2 even though the comparison is one of producer country economic transfer versus farmer cooperative receipts.

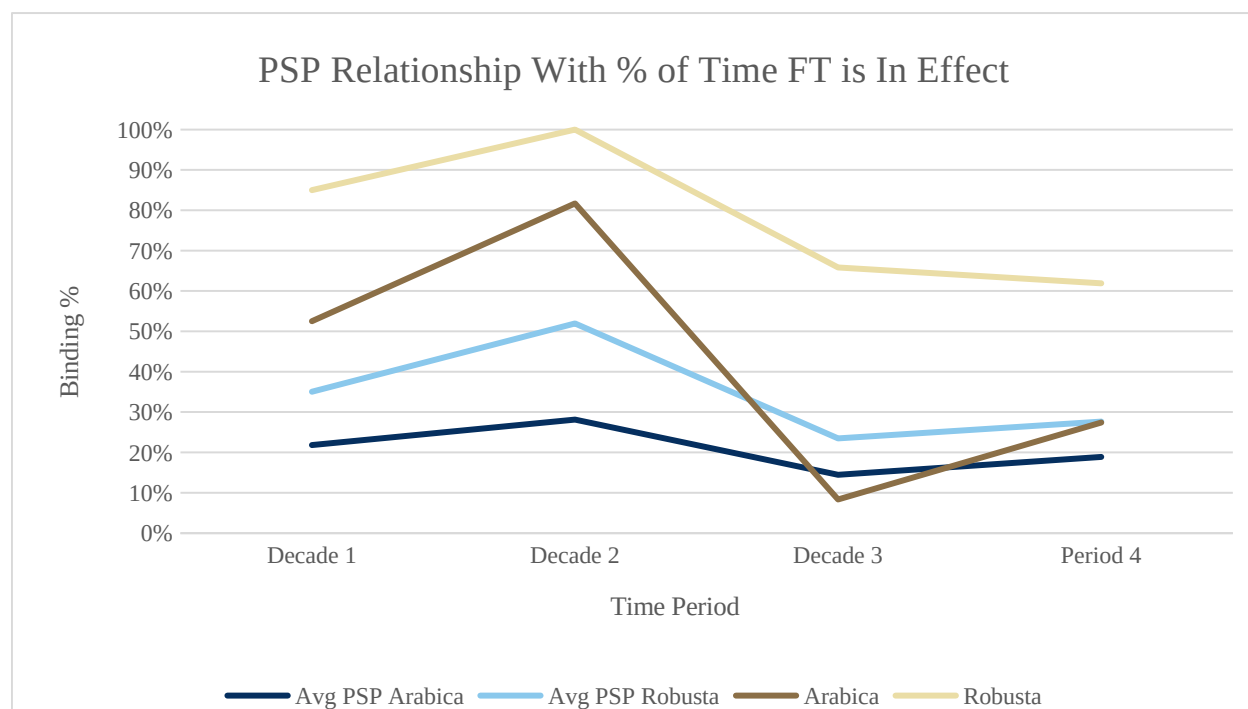
E. Historical World Price Analysis

The longitudinal analysis identifies whether PSP varies across different historical market conditions and whether the period used in the value chain studies represents a typical moment or an outlier. To start, the number and frequency of times the FT minimum was in effect at all was assessed. The Fair Trade minimum price binds 44 percent of months for Arabica and 80 percent of months for Robusta. This shows that Fair Trade provides economic protection for producers about half the time, with significant variation by bean type and time period.

Table 4. Binding Frequency of Fair Trade Minimum Price, 1960–2024

Bean Type	Total Observations	Binding Months	Percent Binding
Arabica	444	194	44
Robusta	444	353	80

Decade Level Variation: Robusta remains consistently protected across all decades, while Arabica varies more. It makes sense that when the minimum is binding a higher percentage of the time, the average PSP is higher, given that the financial benefit is above the social premium during these periods. Within the decade of Naegele's study (2010-2012, decade 3), the market period experienced a historically high price era for Arabica, when the minimum price floor was less likely to bind. The historical analysis confirms that in other eras, the PSP would be significantly higher for Arabica and Robusta.

Figure 1 PSP Relationship With Percent of Time FT is in Effect

It is clear that there is a direct relationship between a binding FT price and PSP.

Table 5. Binding Frequencies by Period

Period	Arabica Binding	Robusta Binding	Arabica Binding %	Robusta Binding %	PSP Arabica	PSP Robusta
1988-1998	63	101	53	84	22%	35%
1998-2008	10	80	82	100	28%	52%
2008-2018	98	120	8	66	14%	23%
2018-2023	23	52	27	62	19%	28%

Gap Magnitudes and Variation: The maximum, minimum, average, and median gaps show how far market prices depart from the minimum. Robusta trades below the minimum price more frequently, confirming that Fair Trade provides stronger protection for robusta farmers.

Table 6. Binding Only Gap Distribution

Bean Type	Max Gap	Min Positive Gap	Average Binding Gap	Median Binding Gap
Arabica	\$0.68	\$0.00	\$0.32	\$0.34
Robusta	\$0.87	\$0.00	\$0.39	\$0.34

Arabica and Robusta's average binding gap of approximately one-third of a dollar per pound indicates that when the price floor binds, it often binds substantially, representing a 30% increase on the Robusta median price per pound (\$1.01) and a 27% increase on the median price of Arabica per pound (\$1.21)

PSP Calculations: The PSP becomes far more meaningful when it is binding, showing that Fairtrade produces large benefits to farmers when it is in effect. Nonbinding values only represent the social premium, yielding an average PSP of 11% for Arabica and 14% for Robusta. When considering all gaps, this increases to an average of 21% for Arabica and 35% for Robusta, and binding percentages were even higher than this. These values confirm that the value chain estimates used in the U.S. and Swedish studies fall close to the historically plausible range of PSP outcomes.

Table 7. Producer Share of Premium

Bean Type	Max PSP	Min PSP	Average PSP	Median PSP
Arabica	61%	4%	21%	17%
Robusta	77%	4%	35%	32%
Binding Arabica	61%	4%	33%	32%
Binding Robusta	77%	9%	41%	39%

The historical PSP values under binding conditions align closely with the FTI proxy PSP levels (24 to 31 percent). This suggests that the statistically observed difference in governance outcomes is meaningful and not an artifact of a specific time period. FTI delivers PSP values consistent with the higher end of the binding PSP spectrum, while FTUSA PSP corresponds to the lower end.

Table 8. Inflation Value Erosion

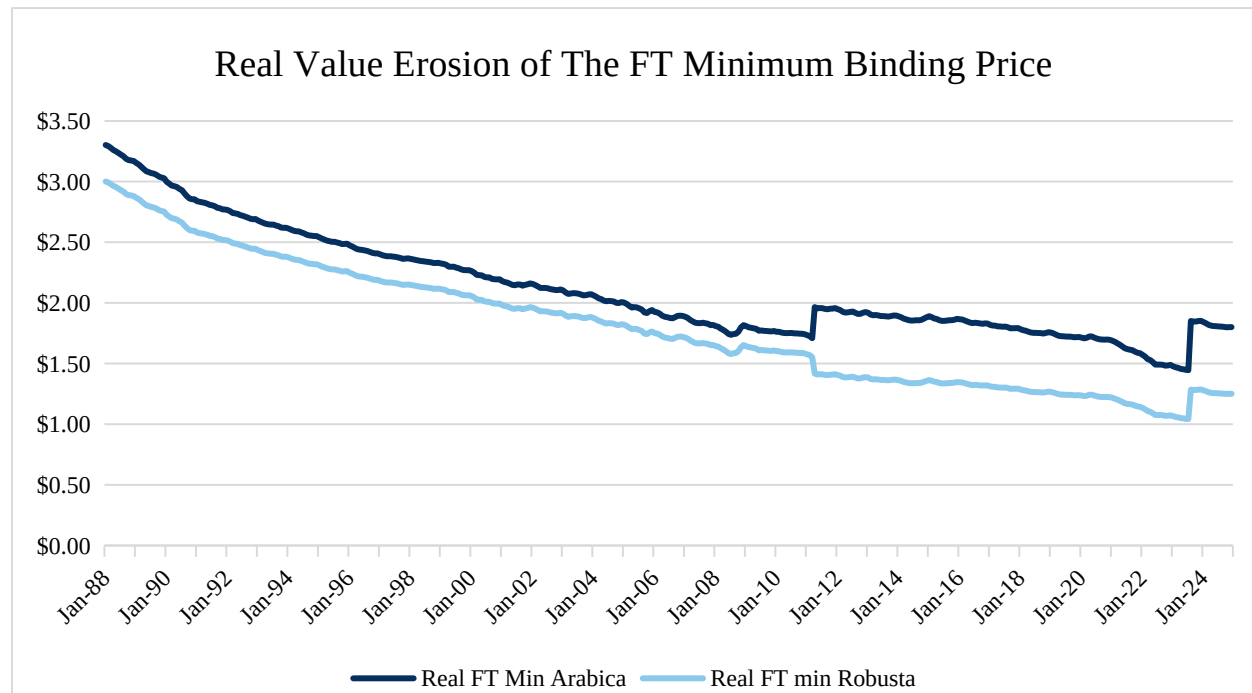
Time	Observations	Starting Arabica	Ending Arabica	Starting Robusta	Ending Robusta	Change Arabica	Change Robusta
1988-2011	279	\$3.30	\$1.71	\$3.00	\$1.55	\$1.59	\$1.45
2011-2023	148	\$1.96	\$1.45	\$1.42	\$1.04	\$0.52	\$0.37
2023-2024	18	\$1.85	\$1.80	\$1.28	\$1.25	\$0.05	\$0.03

The efficacy of the Fair Trade minimum price as a poverty-alleviation mechanism is constrained by its vulnerability to inflation and institutional inertia in price-setting. The FT minimum price is intended to function as a "formal safety net that protects producers from being forced to sell their products at too low a price when the market price is below the FMP" protecting producers from market volatility (Fairtrade Minimum Price and Premium Information).

However, longitudinal analysis using World Bank data reveals a persistent sinking floor, where the real economic value of this safety net has degraded significantly since the movement's inception in 1988.

The Arabica coffee floor price provides a bleak illustration of the disconnect between nominal price stability and real-term purchasing power. In 1988, the real value of the Arabica FT minimum price was approximately \$3.30 per pound. By 2011, this value had undergone a substantial erosion of \$1.59, falling to a real-term value of \$1.71. Despite a nominal adjustment to the floor price in April 2011 (increasing it to 1.40), the real value continued its downward trajectory. By 2023, the real-term floor reached a historical low of \$1.45, and as of 2024, it stands at \$1.80 in real terms. This represents a total loss of 45.5%

The degradation of the Robusta floor price is even more severe, displaying a loss of economic security for farmers in regions reliant on this variety. In the first period 1988–2011 the real-term value of 3.00 eroded by \$1.45 to reach \$1.55. The decline continued through subsequent decades, with the real value falling from \$1.42 to a record low of \$1.04 in 2023. As of 2024, the real value sits at \$1.25, representing a total collapse of 58.3% in real value over 36 years.

Figure 2 Real Value Erosion of The FT Minimum Binding Price

Robusta and Arabica values clearly decrease over time, with sharp walls representing an updated minimum price.

VII. Discussion

A. Assessment of Financial ROI for Corporations

Hypothesis 1, that corporations derive a superior ROI, is validated by the empirical data. The calculated margin increase of \$1.13 per lb for U.S. manufacturers (roasters) compared to the \$0.21/lb received by the farmer cooperative demonstrates a profound structural failure in wealth redistribution (Naegel, 2019). The large portion of the consumer premium captured by downstream actors, which ranges from 61% to 85% across proxy markets, indicates that Fair Trade is structurally inefficient as a pure wealth transfer tool, especially when measured against the ideal of maximizing the PSP (Durevall, 2020). This inefficiency is empirically demonstrated by the finding that the consumer must spend an additional “\$5.71 in order to transfer \$1 to the farmer” (Naegel, 2019).

While Fair Trade may be structurally inefficient in optimizing the consumer premium transfer, it is valuable to assess this relative to the relevant counterfactual: the volatility and devastation inherent in the conventional commodity market. The collapse of the International Coffee Agreement (ICA) in 1989 resulted in intense economic hardship for producers (Jaffee, 2007, p. 37, 42). “The world price hit an all-time low in real terms in December 2001, dropping to an incredible 41 cents per pound (Jaffee, 2007, p.43). During this period, the proportion of the purchase price retained by producer nations “plunged from approximately 30%–33% to less than 8% in just over a decade” (1989–2001) (Jaffee, 2007, p.45).

Fair Trade’s primary efficacy lies not in maximizing the transfer of the consumer premium during periods of high prices, but in functioning as a volatility buffer against market collapse. When international coffee prices were at their lowest (2000–2004), the Fair Trade minimum price system protected certified farmers, with FT coffee “fetching two to three times more than coffee traded on the conventional market” (Jaffe 56). Not to mention the longitudinal analysis showing the highest binding percentages and PSPs. Thus, despite its low transfer efficiency, the Fair Trade price floor is better than what the conventional market would do on its own.

Further supporting the hypothesis one and the higher corporate ROI is the idea of asymmetric price transmission, where “the concentration of market power in the coffee supply chain at the coffee roasting level [...] allows coffee roasters to keep a higher share of the profits” (Ghoshray and Mohan 2021). This concentration ensures that the system remains structurally inefficient in wealth transfer regardless of the market cycle through asymmetric price transmission (Ghoshray and Mohan 2021). Analysis of the retail-international price margin dynamics confirms that:

- “Positive discrepancies tend to persist, whereas negative discrepancies are corrected through time” (Ghoshray and Mohan 2021).
- When the margin has a negative discrepancy (e.g., when commodity prices fall), retail prices adjust at a relatively slower rate compared to international prices to correct the deviation (Ghoshray and Mohan 2021).

This structural behavior confirms that roasters possess the market power to actively maintain or increase their margins across price cycles, ensuring that the corporate capture (Hypothesis 1) remains high even when the minimum price mechanism is providing protection to producers.

The ROI for corporations is strategic as well as financial. By participating in Fair Trade, companies enhance their brand equity and attract consumers motivated by the “warm glow” effect (Fuller, 2022). This investment allows them to differentiate their products, and GMCR even states they seek “to differentiate [...] through [...] socially- and environmentally-responsible business practices,” increasing their market power, a phenomenon supported by the finding that manufacturers capture the largest portion of the premium, while retailers reduce their profit margins (GMCR 2010).

B. Governance Effects and Producer Share of Premium

The comparative quantification provides evidence that the organizational structure somewhat matters to value distribution. The FTI proxy markets, where producer cooperatives possess great input into governance and where certification is typically restricted to democratically run small-farmer groups, show a PSP that is approximately 4 to 13 percentage points higher than the U.S. FTUSA proxy. This difference represents an improvement of up to 55% on the FTUSA PSP baseline. However, the comparison between the U.S. and Swedish PSP data is subject to methodological limitations. Naegel used a methodology focused strictly on the price premium received by the farmer cooperative.

Durevall employed a different measure that includes the share going to Southern middlemen, exporters, and the global Fairtrade organization (FTI). Therefore, the higher PSP range observed in Sweden (24%–31%) versus the U.S. (17.5%–20%) cannot be interpreted as solely a higher payment to the farmer cooperative; rather, it reflects a greater economic retention within the overall producer country system under the FTI governance model. The conspicuously higher share reported for Finland (35%) is not explained by the governance hypothesis (Hypothesis 2) but is instead a direct function of differences in measurement. The Finnish study (Valkila et al., 2010) does not use the same methodology as Naegele (U.S.) or Durevall (Sweden), as it measures the producer share as a percentage of the total retail price (e.g., 3.71/kg in 2006), while the U.S. and Swedish PSP calculations are based on the share of the consumer price premium (the difference between the certified and conventional price). The Finnish figure is not comparable for direct percentage testing of the PSP. Nevertheless, the Finnish study still supports Hypothesis 1 by finding that the price premium paid by consumers largely remained in Finland, paradoxically "empowering roasters and retailers" (Valkila, et al., 2010).

The shift by FTUSA to include large plantations and prioritize growth enabled "large multinationals [...] to benefit from fair trade and other ethical labeling while making few substantial changes to their operations," which likely contributes to the lower PSP observed in the U.S. market proxy (Canning, 2022). The findings reinforce the argument that the tension between achieving scale (FTUSA's priority) and maintaining integrity (FTI's priority) is linked to financial outcomes, suggesting that producer power, though limited, acts as a check on corporate appropriation within the value chain.

C. Interpretation of Historical Analysis

These findings suggest that the central economic value of Fairtrade lies not in raising producer income at all times but in providing insurance against negative price shocks. When world prices collapse, the minimum price redistributes a large share of the consumer premium back to producers. The PSP values documented here imply that a meaningful portion of the retail premium reaches farmers in these specific circumstances. The gap between the Fair Trade minimum price and the world market price varies consistently across the historical period. Arabica's maximum gap of 0.68 dollars and Robusta's maximum gap of 0.87 dollars confirm that the Fair Trade minimum can exceed market prices during low price periods. The lower gaps indicate periods of high prices in which the minimum price does not benefit farmers. These results align with the findings in Naegele's analysis, where high Arabica prices reduced farmers' benefit from the minimum price. The PSP values lie within the full spectrum of possible outcomes and confirm that the PSP calculations reported in prior research mostly represent central tendencies, but may be underrepresenting the usual. The average PSP for Arabica under binding conditions is 33 percent, and the average PSP for Robusta is a bit higher at 41 percent. These results close with the FTI proxy values of 24 to 31 percent and imply that the temporal period used in the value chain studies is slightly unfavorable for Fair Trade producers. The historical analysis shows that when market prices are low, Fair Trade often provides substantial protection for producers. When prices are high, the benefit diminishes. This pattern confirms the theory that Fair Trade functions as a volatility buffer rather than a consistently generous wealth transfer mechanism, and that if the minimum bound were more often, there would be greater farmer benefit.

D. Value Erosion of the Fair Trade Minimum Price Analysis

The longitudinal data concerning the real-term value erosion of the FTMP adds another temporal dimension to the analysis of value distribution with the sinking floor that undermines the movement's purpose. While the FTMP is defined as a "formal safety net" designed to protect producers from market volatility, the data prove that this net has become structurally frayed over the last three decades (Fairtrade Minimum Price and Premium Information). This can be analyzed through the lens of asymmetric risk distribution, the inadequacy of current pricing benchmarks, and the necessity of transitioning toward more equitable, sustainable business models.

The documented degradation of the Arabica floor price by 45.5% and the Robusta floor price by 58.3% since 1988 demonstrates that the fair return originally promised by certification is increasingly insufficient for long-term economic sustainability. This decay in purchasing power is a direct consequence of institutional inertia in price-setting, as the floor price is "infrequently updated" (Naegele, 2019). In real terms, the current Arabica floor of \$1.80 is significantly lower than the historical benchmarks of the 1980s, where the International Coffee Agreement target range would be equivalent to \$3.11–\$3.63 per pound in today's currency.

The fact that nominal price floors erode in real terms between policy revisions not only offers farmers less, but is exacerbated by the fact that the "costs of labour, fertilisers, and other inputs have risen alongside coffee prices [with

inflation,] eroding the potential benefits” (Charles, 2020). The farmers are already wary of FT because of “the high labor burdens and costs, and the only marginally better net returns, of organic coffee production in independent producer organizations [concluding that it is] necessary but not sufficient” (Jaffee, 2007, p.198). The situation is worsened by climate change, which is projected to render “between 63% and 75% of lands” currently used for the dominant coffee varieties “unsuitable for coffee cultivation within the next 30 years,” leading to massive yield losses. These environmental impacts “shift the burden of the most immediate and significant climate change risks onto coffee farmers” who already face “increasing production costs” but frequently “lack the capital needed” to invest in the infrastructure required to mitigate these growing severities (Vieira and Mcmillan Lequieu, 2022). Therefore, because of the rising costs and worsening conditions, fixing the minimum price to inflation so purchasing power does not decrease seems like a bare minimum. Farmers likely need even more than just an inflation-adjusted fix, which they currently do not even receive, emphasizing the importance of this step. The fact that even when the floor is binding, it offers less than half of the economic security it provided in 1988 confirms that the current mechanism is flawed and becomes structurally less efficient every year, failing to fulfill the movement’s original economic objective.

Further, the temporal erosion of the FTMP provides a causal explanation for the persistence of high corporate capture despite consumer ethical intentions. While farmers absorb the full weight of global inflation, downstream players and roasters can artificially maintain or increase their profit margins. This is made possible by the concentration of market power at the roasting level, which allows these firms to employ the Fairtrade label as a tool to “skim the consumer’s increased willingness-to-pay” (Naeglele).

The results show that while roasters in the U.S. proxy market successfully increased their profit margins by an estimated \$1.13 per pound of certified coffee, the retailer endured a margin reduction of \$0.24 (Naeglele, 2019).

This imbalance is further reinforced by “asymmetric price transmission,” where roasters possess the market power to adjust retail prices more slowly than international prices during market drops to maintain their margins (Ghoshray and Mohan). While this was previously mentioned in relation to return on investment and producer share of premium, it is also quite relevant here. The fixed nature of the FTMP allows corporations to meet the minimum standard, while the real value of the transfer to producer organizations evaporates. Consequently, the Fair Trade mechanism functions as a profitable corporate branding strategy that protects roaster margins while offering a diminishing safety net to the most vulnerable actors in the value chain.

The failure of the static minimum price to guarantee a “proper standard of living” necessitates a structural shift toward alternative pricing frameworks that prioritize producer ROI over corporate market share. The data regarding FTMP erosion provides the empirical justification for the transition toward better alternatives like Living Income Reference Pricing and Value Chain Profit Sharing.

E. Limits of Fair Trade and the Role of Alternative Models

The finding that the producer ROI remains low demonstrates the limits of current voluntary certification, especially since the Fair Trade minimum price often “is deemed too low to cover production costs or to contribute appreciably to the overall household income” (Bermudez, Voora, and Larrea, 2022).

1. *Living Income Reference Pricing (LIRP)*: LIRP is a growing framework designed to overcome the inadequacy of the market-based minimum price system. LIRP sets prices based on the calculation of the amount needed for “full-time Fairtrade farmers with adequate, sustainable productivity levels to earn a living income that gives them and their families a sustainable livelihood” (Bermudez, Voora, and Larrea, 2022). Unlike the FTMP, which is a “disequilibrium tool” that allows quantities to be decided by the market, LIRP benchmarks prices against the actual “cost of a decent basic standard of living”. This model requires internalizing external costs, such as the negative impacts of agrochemical use and the necessity of social protections, ensuring that the price paid covers the true cost of sustainable production. Additionally, costs for nutritious food, housing, education, healthcare, and agricultural cultivation costs are included. Fairtrade International has begun applying this, releasing the first Living Income Reference Price for Colombian coffee farmers in July 2021 (Bermudez, Voora, and Larrea).

2. *Value Chain Profit Sharing (VCPS)*:

“A sustainable business model that aims to maximize the amount of value distributed to suppliers by increasing value creation and appropriation, allocating a share of net profits to suppliers, and issuing multiple payments to reflect actual market conditions, without constraining suppliers’ opportunities” (Bennett & Grabs, 2024).

The mechanism relies on a multiple-payment structure designed to maximize the share of value distributed to suppliers while minimizing risk to the company. The first payment, issued upon delivery of raw materials, is a “conservative estimate” (typically market value or higher) that prioritizes the company’s ability to cover operating costs and mitigate risk. The second payment, issued later, reflects a share of the actual net profits received from the final sale, thereby prioritizing the mission of distributing as much value as possible to suppliers.

This two-payment system helps stabilize producers’ cash flow by smoothing crop-related incomes over the course of the year and alleviates the need for high-interest loans for inputs. The model maximizes supplier freedom too, as suppliers are not locked into long-term contracts and may choose annually whether to sell some, all, or none of their product to the buyer (Bennett & Grabs, 2024).

The model is theorized based on two case studies in the coffee sector: Catracha Coffee Company and Thrive Farmers International Inc. The reliance on a limited number of cases in one sector means the model presented constitutes the lower limit of generalizability. However, the VCPS model demonstrates a superior ROI for producers compared to the traditional FT system:

- Catracha Coffee Company suppliers received price increases that averaged a “60% increase per pound” over the local Fair Trade price, with annual increases ranging from 47% to 79% (Bennett & Grabs, 2024).
- Thrive Farmers International Inc. suppliers received prices that were, on average, 20% higher than their next best option, achieving profit increases of up to 300% in some regions (Bennett & Grabs, 2024).

These outcomes suggest that while the data’s representativeness is limited by the small sample size, the ability of VCPS to bypass intermediary layers and market power asymmetries in the standardized FT certification system is necessary to substantially improve producer ROI. The high performance of these firms is contingent on factors such as the founders’ specific skills, access to resources, and high informal accountability to suppliers.

VIII. Conclusion

The data presented in this study confirm that the Fair Trade coffee system provides limited and inconsistent financial benefits to producers. Although Fair Trade offers protection during market downturns and has a modestly positive effect under the FTI governance model, the majority of the Fair Trade premium continues to be captured by corporations. Manufacturers and traders capture between 60 and 85 percent of the premium, while producers capture between 17 and 31 percent, depending on the governance system and market conditions.

The expanded historical analysis demonstrates that these conclusions are robust across multiple decades and that the value chain studies used in the literature represent periods that differ in binding frequencies. They are close within the historical distribution of PSP values, giving merit that the observed disparities are structural. The finding regarding the degradation of the FT minimum price due to inflation corroborates this conclusion, but provides an easy opportunity to make a change quickly.

The findings also suggest that efforts to reform Fair Trade should focus on governance structures, minimum purchasing requirements, and pricing mechanisms based on living income benchmarks. Further research should continue to compare Fair Trade to emerging alternatives such as Value Chain Profit Sharing and should explore how structural reforms could shift value distribution more equitably in global coffee trade.

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Ethics Approval: This is an observational study based on secondary data. As the research involved the analysis of publicly available World Bank price series and existing peer-reviewed literature, rather than human participants or biological material, formal ethics committee approval was not required.

Data Availability: The datasets analyzed during the current study are available from the corresponding author on reasonable request.

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