

THE POWER OF COFFEE

A study of value chains and livelihoods in Timor-Leste:
Vulnerability, empowerment and sustainability in the coffee industry



Photo: Bjørge Bondevik

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Abstract

The coffee industry has the last decades seen a rapid uptake of sustainability standards and informal value chain interventions designed to ensure fair and transparent transactions along the chain. Based on fieldwork in Timor-Leste, this thesis seeks to compare the impact of certified and relationship coffee on farmer livelihoods in the Timorese coffee industry. By incorporating a horizontal and vertical analysis, combining global value chain theory and the sustainable livelihood approach, this research shed light on the broader livelihood impact of value chain interventions. Findings suggest that interventions alter local power dynamics but fail to address major rural livelihood challenges. Although interventions significantly increase farmgate prices, farmer empowerment remains negligible and off-farm opportunities are often preferable.

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Keywords: Value chain interventions, relationship coffee, certified coffee, Fairtrade, sustainable livelihoods, Timor-Leste

List of abbreviations

CCT	Cooperativa Café Timor
FOB	Free on board
FT	Fairtrade
(G)VC	(Global) value chains
ICA	International Coffee Agreement
RC	Relationship coffee
SLA	Sustainable Livelihood Approach
TL	Timor-Leste

1. Introduction

The situation was better even during the occupational time [1975 – 1999], with low expenses and stable income for coffee.¹ Today, expenses are high and coffee income low. Even people working in markets make more than coffee farmers nowadays. (Coffee farmer, p. 33)²

We have the luxury of pushing the cost of low international prices down to the farmers. (Manager of a multinational agricultural enterprise, Own data, 2022)

Economic scholars have for centuries theorized development paths and power dynamics in international business. Spurred by globalization and the vertical disintegration of production in the second half of the last century, scholars started paying more attention to the dynamics of global production networks. With a strong focus on multinational corporations, power, and governance, the research field of global value chains (GVCs) emerged (Ponte et al., 2019) and became a backbone of international business and trade theory.

The statement from the Timorese coffee farmer above is a result of the GVC governance in the coffee industry. In a GVC driven by powerful roasters and global traders, the value capture of coffee producers has been decreasing for decades (Grabs and Ponte, 2019). During the regime of the International Coffee Agreement (ICA) (1962 – 1989), more than half of the value created in the chain remained in the producing country, and the farmgate price accounted for close to 30% (Talbot, 1997). After the breakdown of the regime, the value capture of producing countries fell drastically, and today accounts for around 10% of the chain, while farmers capture around 5% (Panhuysen and Pierrot, 2018; Ponte, 2019).³ In Timor-Leste, coffee production generates an income of between 200 – 500 USD on a yearly basis for an average Timorese producer (Own data, 2023). Smallholder farmers, producing over 70% of coffee globally (Panhuysen & Pierrot, 2020), do not only suffer from low farmgate prices, but they are also exposed to variations in yields, prices, natural disasters, and climate change (Chandra et al., 2016; Panhuysen & Pierrot, 2020).

In the GVC of coffee, farmers are usually the object of the story, thus further enhancing their vulnerability in the chain. Driven by significant power asymmetries in the GVC, the collapse of the

¹ Despite the exploitation of farmers during the occupation is widely recognized (Khamis, 2015).

² Unless specified otherwise, quotations stem from interviews in April, 2023 (Appendix 1)

³ Farmer capture is slightly higher in Timor-Leste (although below 10%). Reasons for low income are many, the price is one of them.

ICA regime, and structural inequalities at the local and global level (Bray and Neilson, 2017; Grabs and Ponte, 2019), the distance between coffee farmers and consumers keeps expanding.

The last decades have seen rapid growth in private initiatives seeking to mitigate these issues, introducing several measures to improve ‘sustainability’ in VCs. These measures can be divided into certification programs characterized by formalized agreements, audits, and requirements for production practices (Grabs, 2020a), and relationship coffee (RC) characterized by informality and (to a varying extent) a direct link between roaster and producer in a relationship built on trust and transparency (Vicol et al., 2018). While 0,3% of the coffee produced in 2000 was certified as sustainable, the number had increased to around 40% two decades later (Ponte, 2019; Bermudez et al., 2022). But how has the increased prevalence of sustainability in the coffee sector transformed into improved livelihoods for farmers? The vast majority of impact studies on certified coffee find no or only marginal social improvements (Bray and Neilson, 2017), while the few published studies of RC indicate effects along the same lines (Vicol et al., 2018; Hernandez-Aguilera et al., 2018; Edelman et al., 2022). Despite this, the story of sustainable coffee diminishing the everyday struggle of farmers in the global South continues to be reinforced through many channels in the global North.

Reasons for the marginal benefits of certified coffee and RC are complex and context dependent. Whereas some actors adopt sustainable practices as a way to increase their power vis-à-vis upstream suppliers and farmers (Ponte, 2019), interventions in the coffee chain do in other instances fail to acknowledge local contexts or the myriad of livelihood strategies (e.g. Vicol et al., 2018; Lerner et al., 2021). Costs of complying with a standard/relationship can outweigh the benefits (e.g. Jena et al., 2012), and the effect is often highly dependent upon pre-existing institutions (Bray and Neilson, 2017).

With this thesis, I seek to better understand how coffee VC interventions affect farmer livelihoods. My primary research question can be defined as: *How does coffee VC intervention alter power dynamics, and what is the consequential effect on farmer livelihoods in the context of Timor-Leste?* The research question is analyzed through three sub-categories, 1) power dynamics in the different VC configurations; 2) livelihood assets and outcomes in the various VC configurations; and 3) why and how altered power dynamics in the VC do – or do not – affect farmer livelihoods. The study is comparative and is based on qualitative and quantitative data from three different VC configurations in Timor-Leste: Conventional (control group), Certified (treatment group) and RC (treatment group). I do not intend to make causal claims, but rather to shed light on and better comprehend how VC interventions affect power relations and farmer livelihoods.

I argue that VC interventions fail to significantly improve the livelihoods of smallholder farmers. Despite altering power dynamics in several ways, as well as improving farmgate prices, farmers are still stuck in a position of dependency, poverty, and vulnerability, and where non-coffee livelihood strategies constitute a better possibility to significantly improve livelihoods. However, as most interventions investigated have been established in the last decade, the study cannot conclude upon the long-term benefits of the interventions. Both real, and the potential for, improved farmer livelihoods are argued to be greater in RC than in certified VCs.

The theoretical framework of this research project derives from an integration of GVC studies and the sustainable livelihood approach (SLA). GVC analysis has long been an important framework in global economic governance. GVC scholars seek to explain power structures between lead firms and suppliers in globalized VCs (Gereffi et al., 2005; Dallas et al., 2019) and through what mechanisms the chains are governed (Gibbon et al., 2008). However, the level of analysis is limited, only focusing on the VC of a commodity, but for most coffee farmers, coffee only constitutes one of several livelihood strategies (Neilson, 2019). SLA, on the other hand, incorporates a range of factors determining farmers' livelihoods and well-being, ranging from subsistence farming to cultural practices (Ashley and Carney, 1999). By building on parts of SLA and GVC that best suit the question at hand, I establish a framework consisting of a horizontal understanding of the complexity of farmer livelihoods, and a vertical understanding of the power structures in the VC, thus building on frameworks proposed by Bolwig et al. (2010) and Neilson (2019).

Importantly, I do not seek to create an integrated framework for GVC and SLA. The framework solely take advantage of the two academic disciplines to better understand how VC interventions affect 1) power along the chain; 2) farmer livelihoods; and 3) how these two elements correlate.

Through this project, I not only add to the emerging research field of RC but I also contribute to the understanding of how RC, from a smallholder farmer perspective, deviates from and compares to certification-based interventions. Furthermore, the project adds to the limited research on coffee production in Timor-Leste – a country in which coffee, despite its low production on a global scale, plays a key role in its future development (MAF, n.d.).

The study is entirely based on fieldwork, in which data was collected over two periods: July 2022 and April 2023. Whereas the former consisted of qualitative interviews with farmers and VC actors to inform the framework and design of the project, the main data collection took place in April, including both qualitative interviews and quantitative farmer surveys.

The thesis is structured into six chapters. Following the introduction, the context of Timor-Leste, both in terms of coffee and history, is outlined. Chapter 2 is composed of a theory section of GVC and SLA and a literature review of certified and RC models. Chapter 3 is dedicated to methodology, including philosophy of science, research design, and limitations. The analysis is spread over two chapters, in which chapter 4 presents descriptive data and discusses power dynamics and livelihood outcomes across all three VC configurations, and where chapter 5 is dedicated to an analysis of how power dynamics and livelihoods are correlated. Chapter 6 concludes the findings, the limitations of the study, and what future research should take into account.

1.2 Context: Timor-Leste

To comprehend dynamics in the coffee VC in Timor-Leste requires attention and insight into the country's long and brutal history. Being Asia's youngest nation, getting its independence in the 21st century, a great majority of the Timorese people have experienced and lived through exploitation and civil wars – a thorough understanding of the livelihoods of Timorese farmers demands attention to their past. After 400 years under Portuguese colonial power (1562 – 1975), followed by a 24-year occupation by Indonesia (1975 – 1999), the country got its official independence in 2002 (Magalhães, 2015). The island of Timor is today divided between east and west, in which the east side makes up Timor-Leste, while the west side is a part of Indonesia.

1.2.1 History of Timor-Leste

Portuguese traders arrived on the island of Timor in the 16th century and established the first trade post on the island in 1562 (Magalhães, 2015). Dutch presence in the western part of the island, made the Portuguese focus on the eastern parts of the island (Lisson, 2008) – creating the present division of the island. Commercial exploration of the colonizers materialized during the 18th century, with sandalwood being the main resource of interest. Coffee was introduced by the Dutch in 1815, and as the available reserves of sandalwood reached an end in the mid-19th century, coffee accounted for the majority of export from Timor-Leste only 50 years after it first was introduced (Khamis, 2015; Howson, 2022). Inspired by the Dutch '*cultuurstelsel*' (The Culture System) implemented in the Dutch East Indies, the Portuguese colonizers introduced in the late 19th century an agricultural system monopolizing land, and forcing labor, to produce the cash crops sugar and coffee (Howson, 2022). The colonizers used coffee cultivation as a means to ensure control and relied on local indigenous leaders ('liurai' and chiefs of 'suco') who through enforcement of the colonial system gained economic benefits (Howson, 2022). To increase productivity and control, the colonizers shifted coffee

production from smallholder farms to large plantations in the early 20th century, forcing ‘agricultural slaves’ to move (Howson, 2022). The Portuguese however failed to build ‘another Brazil’, and towards the end of the colonial period, these plantations only accounted for 40 percent of the production, while Timorese smallholders represented the rest (Khamis, 2015). The region in which this research project is focused, Ermera, housed the biggest plantation (SAPT), and the high density of coffee farmers in close-to inhabitable hillsides in the region remains a symbol of the past (Own data, 2022).

Shortly after the Portuguese retreated towards the end of 1975, Indonesian troops invaded the country, starting what by many is labeled a genocide (Lisson, 2008). During the Indonesian occupation (1975 – 1999), it is estimated that one-fifth of the population died, the majority due to starvation (Howson, 2022). The years following the invasion were characterized by guerrilla-like wars led by the political movement Fretilin (which today is the country’s second-biggest political party), before the Indonesian military gained control in the early 1980s (Lisson, 2008). Although the Indonesians invested significant amounts in education and infrastructure (Magalhães, 2015), the period is characterized by exploitation, political persecution, and a number of grave human rights violations (Lisson, 2008). In the coffee industry, the occupational regime introduced a monopoly in which the coffee had to be sold to the Indonesian company P. T. Denok, with farmers being paid one-sixth of the price compared with the farmers at the west side of the border (Khamis, 2015). During the withdrawal in 1999⁴, Indonesian troops destroyed and damaged 70 percent of Timor-Leste’s infrastructure, and the aggression displaced over one-third of the population (Khamis, 2015). Both the invasion and the withdrawal are characterized by ruthless use of violence, rapes, and massacres – the invasion of the country has been referred to as “one of the most brutal operations of its kind in modern warfare” (Lisson, 2008).

Since its independence, Timor-Leste has experienced progress in several aspects. The country has managed, in a region dominated by authoritarian regimes, to establish a somewhat working democracy (Freedom House, 2022), and economic growth rates have been significant: Poverty rates have been reduced, life expectancy considerably increased, and infant and maternal mortality more than halved (World Bank, 2021). However, major challenges are yet to be solved. Every other child growing up is malnourished to the extent of being considered stunted (World Bank, 2021). Timor-Leste is considered among the world’s most oil-dependent countries, and efforts to diversify the economy have been ineffective (Neves, 2022). At the same time as the country’s major public deficit is predicted to empty the oil find within a decade (World Bank, 2021), the future of the oil and gas

⁴ Withdrawal following a Timorese referendum voting for independence.

reserves is contested (Neves, 2022). As coffee accounts for over 80% of the non-oil export (Howson, 2022), and makes up the main income for one-fifth of households (Ministry of Agriculture and Fisheries, 2019), the coffee industry has become a central piece of the puzzle to diversify the economy and ensure economic sustainability.

1.2.2 Coffee industry

Despite its economic and cultural importance, the industry is, predominantly due to its colonial and occupational history, heavily underdeveloped, leaving productivity and economic profitability low (Khamis, 2015). Production (90% Arabica and 10% Robusta) consists almost exclusively of smallholder farmers, with most farmers producing on less than one hectare of land (Ministry of Agriculture and Fisheries, 2019). Every other coffee producer lives below the national poverty line, and their position in the VC makes their livelihoods highly vulnerable (Khamis, 2015). Income from coffee rarely exceeds 500 USD, thus making the majority of farmers dependent upon subsistence farming and other income streams (Own data, 2023, p. 6;14;23;30). In addition to the structural inequalities of the coffee global VC, domestic challenges including inadequate infrastructure, poverty, low levels of education and training, and political instability have created a challenging environment for industry development (Khamis, 2015). Furthermore, climate change and new weather patterns are likely to increase yield volatility (Chandra, 2016), enhancing the vulnerability of the farmers.

Legacy from the colonial and occupational past play a key role in Timor-Leste's coffee industry. Land rights are among the most prominent issues. With a long history of regimes appropriating land, and the population being internally displaced, questions of land ownership since the independence have been challenging (Cryan, 2015). On the one hand, local communities have claimed ownership based on ancestral roots, emphasizing the importance of land for agricultural production, survival, and identity (Cryan, 2015). On the other hand, the state has, through several land laws, put forward that 'empty land' should be considered state land, arguing that the land will benefit the national economic development (Cryan, 2015). Today, 25 percent of coffee plants are situated on state-owned land, that is occupied and harvested by smallholder farmers (Ministry, 2019). In a situation with contested land tenures, the incentive to rehabilitate old trees is argued to be reduced (Ministry, 2019). Old, poorly managed, and unproductive trees have roots in the violent and turbulent past and remain a key issue for the industry today (Khamis, 2015). During the Indonesian occupation, 90 percent of the coffee plantations were either neglected or destroyed and as of today there are still trees that date to the Portuguese regime (Khamis, 2015). Lack of attention to best practices during the

occupation has created a significant knowledge gap, and implementation of low-cost methods has the potential of tripling the yield (Freedman, 2020). The turbulent past also functioned as an effective hinder to the introduction of pesticides (Freedman, 2020). Although it provides access to niche markets, organic production may hamper yield and profitability (Khamis, 2015), but coffee production remains exclusively organic (Ministry, 2019). As such, productivity is greatly underdeveloped and is estimated to be around 150-200 KG green beans per hectare (Own data, 2023, p. 3; 8; 15) – around 1/10 of productivity in Brazil and 1/5 of productivity in Colombia (Panhuysen and Pierrot, 2020). Within the sphere of organic production, productivity may more than triple by improving practices (p. 15).

Cooperative Café Timor (CCT) has since the independence been the most influential exporter and actor in the VC, with close to half the farming population being members (Howson, 2022). For many years, the ‘cooperative’ (see ch. 4.2 for details) was Fairtrade (FT) and organic certified, which forced conventional actors to adopt to price schemes accordingly. The last years have however seen other conventional actors increasing their market shares, and today three companies: Olam, Timor Global, and CCT control 2/3 of the market (Own data, 2023, p. 13). They operate and purchase coffee through local agents and collectors. Although few farmers are organized in cooperatives (not categorizing CCT as a cooperative, see chapter 4.2), with one reason being the historical brutality in the industry causing a distrust in cooperative leaders and management (Own research, 2022), a few certified-based cooperatives operate in the country. Additionally, a number of RC actors have established themselves in the last decade, first and foremost targeting high-altitude farms. A significant proportion of the production is also being sold – some of it illegal – across the border to Indonesia (Own data, 2023, p. 72).

2. Literature and theory

2.1 Literature

Globally, coffee has throughout the last 100 years been characterized as, and governed through, various systems and arrangements. From an era of a Brazilian monopoly in the early 20th century, a period of fragmentation took place during and after the Second World War as a result of policies and discriminatory mechanisms put into effect by European powers (Daviron and Ponte, 2005). The International Coffee Agreement (ICA), signed by most producing and consuming countries in 1962, regulated production through quotas and marked the beginning of an era in international coffee trade characterized by stable prices and a relatively stable power balance between producer and consumer countries (Grabs and Ponte, 2019). The ICA-regime eventually broke down in 1989, and a period of market liberalization and power concentration of major buying firms began. Since this, the coffee industry has been through a period of diversification, highly spurred by the proliferation of specialty coffee and niche markets, before a wave of acquisitions led conventional actors to reconsolidate power (Grabs and Ponte, 2019).

Today, coffee production can be categorized into conventional, voluntary sustainable standards (VSS) compliant coffee (or simply certified coffee), and non-certified specialty coffee (Bermudez et al., 2022). This is also the case in the Timorese coffee industry.

Conventional coffee – also labeled mainstream coffee – constitutes the base market for coffee and is characterized by a homogenous product traded in future prices on the stock exchange. The VCs are ‘buyer-driven’, with downstream firms playing the lead role in governing the chain and defining upstream production (Grabs and Ponte, 2019): While roasters have reconsolidated power through acquisitions in the last decade, five companies control half of the global trade (Panhuysen and Pierrot, 2020). Coffee prices not only fluctuate substantially, but they have also on a long-term average been constant since the 1970s, without taking inflation into account (Trading Economics, n.d.). At the same time, the value of international coffee at the consumption level has been booming, reflecting a situation in which producers and producing countries are getting a diminishing share of the value creation (Daviron and Ponte, 2005; Lerner et al., 2021). As this project assesses the impact of VC interventions through *certification* or *relationships*, a thorough outlining of these schemes will follow in the next sections.

2.1.2 Certified Coffee

In the absence of state-driven governance of the coffee GVC, private ‘sustainability’ initiatives have the last decades emerged, and received major attention in the industry (Grabs, 2020a). Together with

major industry platforms like the Global Coffee Platform (GCP) and the Sustainability Coffee Challenge (SCC), certification schemes represent the main institutional infrastructure in the sustainable governance of coffee (Ponte, 2019; Grabs, 2020a). Albeit demand growth rates for certified coffee have remained relatively low (between half to one-third of certified coffee is being sold as certified coffee), and GCP and SCC have indicated an interest in tackling the sustainability issues of the industry with other means, around 50% of global production complies to one voluntary sustainability standard (Grabs, 2020b; Bermudez et al., 2022). In 2015, *production* in compliance with the FT and organic standards were, respectively, three and two times the amount of coffee *sold* as FT and organic (Grabs, 2020b). The deviation between FT/organic production and demand not only poses a threat to the volumes of certified production but also represents an economic risk to farmers: if they must sell VSS-complied coffee to the conventional market, they are not compensated for the cost of producing according to the standards (Bermudez et al., 2022).

As FT, in combination with organic certification, constitutes the only certification platform present in Timor-Leste⁵, this literature review is limited to these standards. The fair-trade platform emerged in the 1980s and is today the third-largest certification actor in the industry (Johannessen and Wilhite, 2010; Bermudez et al., 2022). Although FT originated from a movement seeking to expose unjust in value chains, it has gradually transformed into the mainstream industry working at big scale (Grabs, 2020a), in a process often labeled ‘re-commoditization’ (Daviron and Vagniron, 2010). The scheme distinguishes itself from the other major schemes in several ways; it is the only certification that provides a minimum price guarantee; and it focuses (although it has incorporated some environmental aspects in later years) mainly on social and economic aspects (Bray and Neilson, 2017; Ponte, 2019). It is built upon the basis of “fairness”, “partnership”, and “sustainable development”, seeking to establish “greater equity in international trade” (Raynolds, 2009, p. 1085). To obtain the certification, FT producers must adhere to a set of sustainability standards (e.g. mitigation of child labor, discrimination, human trafficking, etc., and adoption of environmental and farming practices) – in which the standards are determined by a combination of actors from producing and consuming countries (FT, 2021). In return, coffee producers are guaranteed a minimum price (at the FOB level in the VC⁶), as well as a price premium of 20 cents per pound, in which the cooperative allocates the premium (FT, 2021). The VC is thus still coupled with the future prices (C-price), although the minimum price eradicates the deepest price drops. According to its ‘theory of change’, FT strives to increase the sustainability of farmer livelihoods, supply chains, and the environment.

⁵ One community investigated is a part of a Japanese certification scheme following the same principles and guidelines as FT/organic certification do but is not officially a part of FLO.

⁶ FOB is short for ‘free on board’ and refers to coffee ready for export.

Organic certification has developed similarly to the fair-trade movement, originating in civil society movements, and is today a public-private standard controlling and certifying organic production, thus only covering environmental sustainability (Grabs, 2020a). By complying to these standards, coffee can access niche markets, and farmers receive (in theory) a premium – if combined with FT (as is frequent combination), 30 cents/lb is added to the FOB price.

Certifications, including FT and organic, can be seen through different lenses. Some argue that it is a method in which downstream actors can comply with a set of environmental and social expectations set by consumers, while also defining and controlling upstream production (Grabs, 2020a). Ponte (2019) describes how the mainstreaming – or ‘meanstreaming’ – of sustainability certifications and standards can be used by downstream buyers to further enhance their power and increase value capture. Giovannucci and Potts (2008) suggest that certifications are a way for consumers to reduce the social and environmental externalities of their consumption and a way for buyers to reduce risk in the supply chain, while Daviron and Ponte (2005) emphasize that transparency in these VCs often run in only one direction, solely providing information to consumers. Grabs (2020a) argue that the path of FT from being a niche movement in its early beginning, to the mainstream big-scale operation it has become, has constrained its potential to provide significant price premiums to farmers. FT’s substantial decrease in the minimum price (taking inflation into account) since it was first established in 1988 (Grabs, 2020a), reflects such a picture. Others, however, argue that certifications should be seen as a social justice movement, evolving with the intent to “lift the living conditions and welfare of the local producers” (Arnould et al., 2009, p. 188).

Although FT keeps advocating their positive impact to mitigate social and environmental externalities in the VC, backed up by reports and research (e.g., Fairtrade, 2022), most independent research suggests that the effects of certifications are either absent or minimal: Reviewing a large number of credible studies, Bray and Neilson (2017) find 24 studies in which the impact of FT was neutral, seven studies with a positive impact, and two with a negative impact. For organic certification, Bray and Neilson find five studies with a positive, 13 with a neutral, and three with a negative impact on smallholders. The authors suggest several reasons for the shortcomings of certifications, including a low effect of price premiums, high costs of certification, reproduction of existing local inequalities, and lack of attention to and cooperation with local institutions. Besides, they emphasize, “Certification schemes are not introduced upon a black canvas. They overlay complex sets of social, economic, cultural, and political institutions, and the varied impacts reported in the literature primarily reflect these pre-existing institutional settings.” (p. 225). In fact, the effect of FT has in many studies been positively related to the length of cooperative participation (Arnould

et al., 2009; Ruben and Fort, 2012) – communities organized within a certain institutional landscape are better equipped to take advantage of the benefits FT may offer. A significant setback to this literature is its methodological challenges in establishing a credible counterfactual – out of 46 relevant studies, Blackman and Rivera (2011) only found 11 to have a credible design. Another setback to the literature is its narrow focus, generally not taking into account a wider set of livelihood elements (Bray and Neilson, 2017), thus deviating from the scope of this research.

2.1.3 Relationship Coffee

«We source coffee directly from the farmer for two main reasons. To guarantee we get the best green beans, and to make sure the farmer is rewarded for the high quality coffee.»
(Coffee Collective, n.d.).

The idea that closer ties between producers and consumers may yield positive development outcomes for producing countries has been present for several decades: Ponte (2002) argues that producers may capture more of the value created by “facilitating the establishment of farmer groups and producer association and of direct links between them and consumers” (p. 1117). The second VC configuration this research project seeks to investigate, the ‘RC model’, is built on the premise that personal relations and direct links between roaster and producer may foster both quality and livelihood improvements (Holland et al., 2016). It is typically defined as “coffee marketed to consumers as being procured through a direct relationship between roaster and producer”, in a VC characterized by “personal interaction, mutual trust, price transparency, a commitment to quality and a stated intention to improve the lives of coffee farmers and their communities” (Vicol et al., 2018: 27). Quality is a key attribute of RC, with coffee being perceived as an artisanal product, and attention is given to superior quality, single origin, and special varieties (Boaventura et al., 2018). Although actors in the VC often portray a close relationship to the local farm in which the particular bean, or ‘microlot’, originates, middlemen and trading firms are frequently being used (Holland et al., 2016; Vicol et al., 2018).

Similar to the ideas of FT, RC is often promoted by roasters to enhance the livelihoods of marginalized smallholder farmers (Vicol et al., 2018). However, the philosophies behind are rather different, and the rise of RC may be seen as a response to the industry of certification programs, emphasizing its bureaucracy and inefficiency (Vicol et al., 2018; Edelman et al., 2022). Opposed to certifications, the model is based on informality and trust, with farmers getting a significantly higher

price based on the quality of the beans (Holland et al., 2016). In contrast to both the conventional and the certified market, RC is de-linked to the C-price, as prices are meant to reflect quality and cost of production (Daviron and Ponte, 2005). The relationship between the roaster and the producer is the key component and the institution which guarantees and supports quality enhancement and livelihood improvements. There are usually no audits, but rather annual visits where the roaster maintains the relationship with the producer (Holland et al., 2016; Own data, 2022).

The literature on the impact on smallholder livelihoods of RC is rather limited, but most available studies suggest the effect on livelihoods to be more disputed than what the majority of the industry actors proclaim. Hernandez-Aguilera et al. (2018) find the model to have a positive impact on various sustainability factors, including environmental (tree diversity, soil health, water use, organic production), and social (access to credit, social services, multi-crops adding new sets of income) factors. However, they do not find any effects on the farm-gate price of intervention.

Vicol et al. (2018) investigated three cases of RC VCs in Indonesia and suggest that participation to a very limited degree leads to livelihood upgrades. The study demonstrates how local elites tend to capture the benefits, with little or nothing dripping down to the farmers. For roasters, they underline, it is economically logical to avoid cooperating with multiple individual farmers, but the cost tends to be local elites capturing the benefits. Consequently, they argue that proximities and abilities to comprehend, and work with, local institutional contexts are key elements for the livelihood impact of the intervention. Edelmann et al., (2020; 2022) provide support for this. They argue proximities to be a decisive determinant in RC models, and propose a framework based on proximities in the VC to analyze such coffee models. Following this framework, Edelmann et al. (2022) found RC interventions to increase not only farmgate prices but also to boost farmers' pride in production and reduce farmers' vulnerability in the VC. However, they argue that farmers' dependency on downstream actors has increased, in which adoption of new practices induces sunk costs, an argument also found in certified VCs (Grabs and Ponte, 2019). Importantly, and a point further discussed in the analysis, Edelmann et al. (2022) argue production of high-quality coffee, a requirement for participating in the VC, to be demanding, which induces a significant opportunity cost, a point also emphasized by Vicol et al. (2018).

As the framework of Edelmann et al. suggests, there is a great diversity within RC VCs regarding structure, proximities, and philosophies (see also Gerard et al., 2019). This is also reflected by my interviews with RC actors – both in Norway and in Timor-Leste. The term RC is by many argued to be very loosely defined, and to many roasters, the label 'direct trade' has lost its legitimacy. While some roasters or green bean importers stay close to the production site all year round, others

work through intermediaries or adopt the use of technical solutions (characterized as “tinder-like operators” (Roaster, Own data, 2022)), and have little or no insight into the production, nor the impact of the VC intervention. And whereas social improvements and farmer livelihoods are at the center of the intervention, others perceive RC solely as a business case (Gerard et al., 2019; own research, 2022)

2.2 Theoretical framework

2.2.1 Global Value Chains (GVCs) and power

As global trade gave rise to integrated world markets, the production of these goods became vertically disintegrated, and spatially dispersed towards the end of the last century, and international production networks emerged. With roots in development theories explaining the relationship between post-colonial societies and the developed world, a research field named ‘global value chain’ (GVC)⁷ gained popularity in the 1990s (Ponte et al., 2019). GVC analysis seeks to understand the determinants and power relations that characterize the governance of a value chain (Gereffi et al., 2005), and is today referring to the “full range of activities that firms, farmers, and workers carry out to bring a product or service from its conception to its end use [...]” (Ponte et al., 2019, p. 1).

Being an influential backbone in the literature, Gereffi et al. (2005) provide the basis framework for governance analysis of GVCs. The model is centered around the ‘lead firm’, being the actor along the chain that is in a position of determining and shaping prices, production, specifications, etc. (Ponte et al., 2019). Relations between actors across various nodes in the chain are determined by the complexity of the information, codifiability of the information, and the capability of the suppliers, creating five different types of governance; market, modular, relational, captive, and hierarchy (Gereffi et al., 2005).

Based on power relations across the chain, Dallas et al. (2019) introduce a wider scope of VC analysis. The authors criticize Gereffi et al. (2005) for analyzing power through a narrow lens, only focusing on dyadic linkages between firms. They argue that power in GVC derives from a wide set of actors and institutions, including NGOs, social movements, multi-stakeholder initiatives, and industry standards (Dallas et al., 2019). In addition to coercive power, they suggest that power in GVCs is transmitted through agenda-setting, preference-shaping, and social construction. Through mechanisms of transmission (direct and diffuse) and arena of actors (dyadic and collective), the authors outline four dimensions of power in GVCs: bargaining, demonstrative, institutional, and constitutive.

⁷ initially labelled ‘global commodity chain’.

	Transmission Mechanisms	
	Direct	Diffuse
Arena of Actors	<p><i>Bargaining Power</i></p> <ul style="list-style-type: none"> Operates in firm to firm relations Can exhibit different degrees of asymmetry in hierarchy, captive, relational, modular, and market linkages Can also operate when powerful firms interact individually with government agencies to carve out exceptions to rules, etc. 	<p><i>Demonstrative Power</i></p> <ul style="list-style-type: none"> Operates through informal ‘transmission’ mechanisms along value chains between buyers and suppliers, or aspiring value chain actors. Can be shaped by quality conventions implicitly accepted by parties to a dyadic transaction Can drive isomorphism among or between lead firms and suppliers, or among non-firm actors
	<p><i>Institutional Power</i></p> <ul style="list-style-type: none"> Operates through government regulation, multi-stakeholder initiatives and/or other institutionalized forms Can leverage and be leveraged through industrial standards and codified ‘best practices’ Can be “agenda-setting” by removing issues from the bargaining table, as well as <i>de facto</i> and <i>de jure</i> standards to support platforms and their ecosystems 	<p><i>Constitutive Power</i></p> <ul style="list-style-type: none"> Operates through broadly accepted norms, expectations and best practices, e.g., isomorphism at the industry or societal levels. Can arise through decentralized collaboration among loosely or un-affiliated actors, sometimes engendering new norms and practices (e.g. non-proprietary, collaborative open source software).

Figure 1: Typologies of power in GVC. Source: Dallas et al., 2017

Transmission of *direct power* is characterized by the exertion of power being intentional and goal-oriented, and the actor in power is easily identified by all affected parties. *Diffuse power*, on the other hand, is transmitted through trends, views upon ‘best practices’, norms, or quality conventions. Diffuse power can also derive from unintended consequences of actions or policies, thus being less explicitly goal-oriented than direct power transmission. A *dyadic* arena of actors derives from linkages between firms in nodes along a VC, whereas a *collective* arena of actors constitutes “collective behaviors of multiple players acting simultaneously, intentionally or not” (Dallas et al., 2019, p. 676).

Bargaining power has been the most common form of power in GVC research, linking lead firms in the Global North and suppliers in the Global South (Ponte, 2019). Although the literature has put most emphasis on bargaining power in the form of inter-firm linkages, this research project employs the concept also between collectors and smallholder farmers. *Demonstrative power* comes into play through informal transmissions, with the powerful actor exerting power through e.g., demonstrating a certain practice imitated by others. *Institutional power* derives from a defined group

regulating or influencing behavior in an explicit way, while *constitutive power* stems from an undefined collective of actors exercising power in which the direct outcomes remain unintended.

Important to note is that these typologies are not mutually exclusive. They are on the contrary often combined and layered in various ways – they coexist and affect each other: Constitutive power can be formalized into institutional power, and institutional power in a VC can shape the bargaining power in a node.

2.2.3 Sustainable livelihood approach (SLA)

Within GVC literature, improvements for VC actors have been seen through the lens of upgrading trajectories. This approach has however been criticized for not considering the heterogeneous landscape of livelihood strategies farmers operate within (Ponte and Ewert, 2009; Vicol et al., 2018). Whereas firms can accept short-term deficits to optimize long-term profits, marginalized farmers are often risk-averse and cannot or will not pursue strategies at odds with a survival logic – stability may outweigh economic gains in the future (Neilson, 2019; Own data, 2022). In Indonesia, Jeffrey Neilson has proposed the term ‘fortress farming’ to explain how coffee farmers pursue a ‘defensive’ strategy, pursuing coffee as a safety net rather than a platform to optimize income (Neilson, 2022). This highlights the importance of comprehending the whole range of smallholder activities, obstacles, and opportunities – also outside coffee production. Similar to Bolwig et al.’s (2010) horizontal and vertical framework of GVC, the power analysis in this project is coupled with a sustainable livelihood approach (SLA) to better comprehend the livelihood impact of the interventions.

The sustainable livelihood approach emerged in the 1990s as a framework seeking to comprehend the complex notion of ‘well-being’ among poor households (Neilson, 2019). The approach builds on various streams from development theory, including ‘intentional development’, ‘integrated rural development’, and ‘human development’. The tradition of intentional development emerged in the 20th century, seeking to help disadvantaged societies through effective interventions. At the same time, the tradition constructed an idea of who is – and who is not – developed, and projects were controlled and governed by rich countries, leading to criticism of the tradition reconfiguring colonialism (Morse and McNamara, 2013). Another influence of SLA is ‘integrated rural development’, which in the 1960s sought to address a wide range of livelihood aspects in development projects as one understood the complex and multi-faceted nature of development questions (Morse and McNamara, 2013). SLA is also linked to the idea of ‘human development’, an idea that emphasized the importance of enhancing human capabilities and enlarging people’s choices (Morse and McNamara, 2013).

Sustainable livelihood refers to “[...] the capabilities, assets, and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term” (Chambers and Conway, 1992, p. 6). Its long and intricate definition reflects how the approach seeks to encompass the many (close to all (?)) dimensions of livelihoods, including both tangible and intangible assets (Chambers and Conway, 1992; Krantz, 2001). At the same time, its complexity comes with a cost as operationalization becomes demanding and measurability challenging (Chambers and Conway, 1992) (see application discussed in the method chapter). A standard approach to livelihood studies is to analyze livelihoods as five ‘assets’, consisting of human, social, natural, physical, and financial assets (e.g. Bray and Neilson, 2017). These assets are mutually dependent: Land capital may be determined by social or economic capital and vice-versa, echoing the importance of a holistic approach. Following DFID’s⁸ framework of SLA, livelihood assets, vulnerability context, and macro-structures all play into the outcomes of livelihoods.

Figure 3 DFID’s Sustainable livelihoods framework

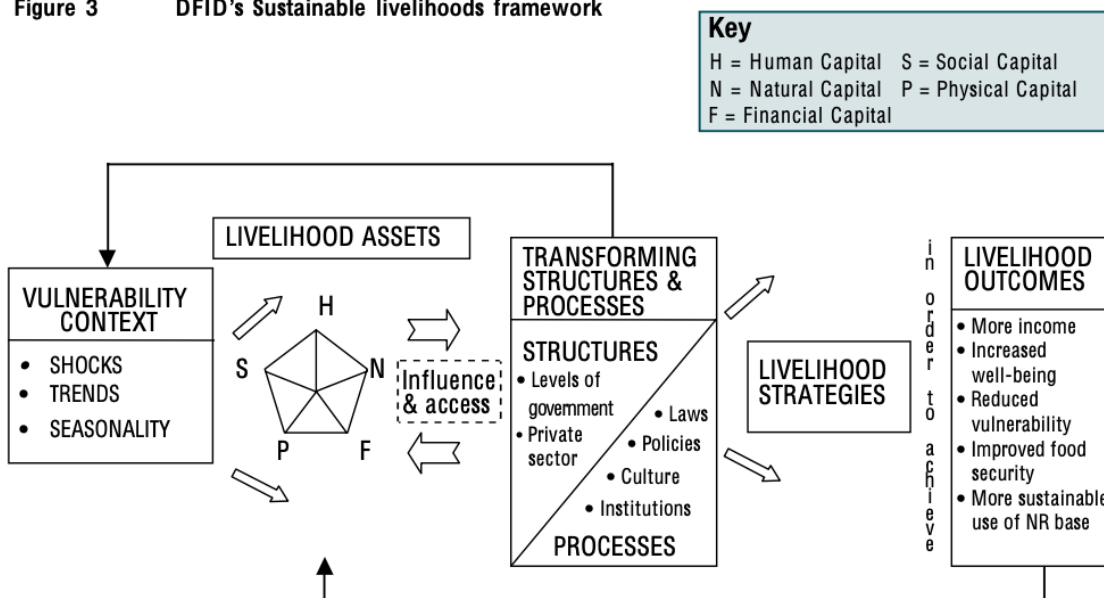


Figure 2: SLA framework, DFID. Source: Ashley and Carney, 1999

In contrast to the tradition of ‘intentional development’, it is a crucial element of SLA to include local communities in the assessment process (Chambar and Conway, 1992; Krantz, 2001). Sen (1984)

⁸ The British Department for International Development.

argues that ‘quality of life’ is improved differently in different contexts, thus emphasizing the importance of including the object of the intervention in the design of the intervention. Poverty, as perceived by poor people themselves, “is not just a question of low income, but also includes other dimensions such as bad health, illiteracy, lack of social services, [...] vulnerability etc.” (Krantz, 2001, p. 2). This underlines the importance of holistic approaches to truly understand and assess livelihoods- Answers to questions of what constitutes progress and development is thus argued to be more complex than proclaimed by the ‘intentional development’-tradition of the last century.

Whereas the framework of power within GVC will analyze the vertical relations in the coffee VC, the SLA framework is applied to comprehend how livelihoods are affected by the interventions – also outside the coffee domain. The methodology section below will go more in depth on how I analyze and measure the two frameworks.

3. Methodology

3.1 Philosophy of Science

To what extent research on a societal phenomenon can produce reliable and objective knowledge remain a philosophical question, in which researchers have taken different strands. Whereas the paradigm of positivism argues that social science researchers can obtain general knowledge, that is reality, by the means of neutral and empirical observations, interpretivists, on the other hand, imply that knowledge is constructed through human interactions, thus rejecting the idea and existence of general and true knowledge (Danermark et al., 2019). Inspired by both, critical realism accepts the positivist stand that there exists a real world independent of our knowledge of it, and the interpretivist stand that knowledge is socially constructed (Danermark et al., 2019), and is the philosophy this project is based upon.

Critical realists hold true that there is a necessary relation between an object and its causal powers but argue that the circumstances in which the causal power occurs are contingent (Danermark et al., 2019). As outcomes are determined by a set of complex and different mechanisms working at different levels, countless amounts of circumstances influence whether a specific causal relation will materialize or not. As such, “causal laws must [...] analyzed as tendencies (Bhaskar, 1978, p. 50, as cited in Danermark et al., 2019), and causality remains a contextual concept (Bergene, 2007).

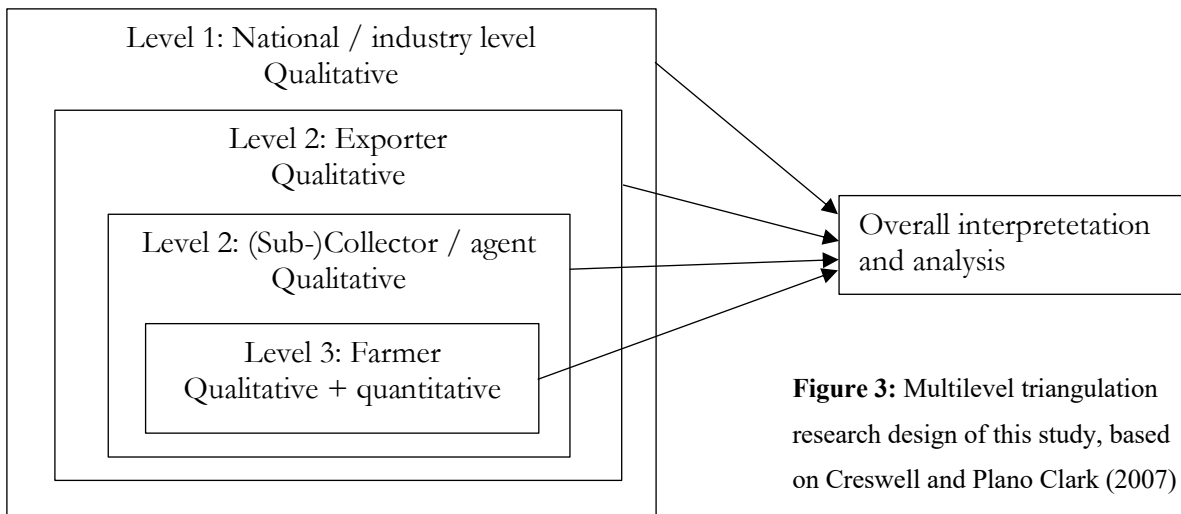
To critical realists, ontology serves a crucial role in the research on social phenomena and is argued to be both deep and stratified (Bergene, 2007; Danermark et al., 2019). Ontologically, society is understood through three different domains; the empirical, the actual, and the real. However, what we experience (empirical), the actual events (actual), and the underlying mechanism (real) rarely fully corresponds (Bergene, 2007). This stems from the understanding of how the social world constitutes elements of heterogeneity, complexity, and contingency, suggesting the study of it to contain ‘double-hermeneutics’, in which the researcher must interpret others’ interpretations (Danermark et al., 2019). As perception is determined by the human mind, knowledge of the external world can thus only be acquired through a critical assessment of perception (Halperin and Heath, 2020). This also entails researchers’ own biases and perceptions to influence the findings of the study, thus rejecting the idea of research as ‘value-free’ (Albert, 2020). Limitations and biases are outlined later in this chapter.

Given the assumptions of critical realism, an object can manifest itself in different ways (contingent causality). As such, a strategy of methodological pluralism, in which the relation between an object and an outcome is analyzed through different lenses, is often preferred by critical realists (Proudfoot, 2023). Thus, this research is enlightened by both a thorough qualitative focus on each level of the VC, as well as quantitative insights into farmers’ livelihoods.

3.2 Research design

Mixed methods

The design of this project is based upon a multilevel triangular research design, in which data is analyzed at different levels before it is merged into an overall interpretation (Creswell and Plano Clark, 2007). There are several reasons why I choose this research design. First, analysis of VCs demands research on different levels (farmer, collector, exporter), which require a different set of research techniques. The means to understand the dynamic in the collector-agent node is undoubtedly distinctive from mapping farmers' livelihoods. Second, mixed qualitative and quantitative data serve different purposes, and when merged, the research stands a better chance of comprehending the complexity at hand (Creswell and Plano Clark, 2007). While quantitative data is deficient as it may lack an understanding of contexts or the underlying mechanisms at play, qualitative research makes up for these weaknesses. And while qualitative data faces shortcomings in terms of researcher interpretation and generalization, quantitative data is less biased and more generalizable (Creswell and Clark, 2007).



All levels of the VCs are analyzed, before being merged into an overall interpretation of the research question. The process of 'triangulation' enables me to cross-check findings across the two various data collection methods, thus strengthening the reliability of the data (Halperin and Heath, 2020). The qualitative and quantitative data are equally weighted, and when the two methods diverge, a discussion on reasons will follow.

Case selection

The next methodological question delves around case selection – how to best select cases to isolate causal effects. Bergene (2007) argues that critical realists base case selection on theoretical insights, deriving from the process of retrodution. Although literature has shaped the case selection substantially, the methodology of this research is also influenced by the work of John Stuart Mill and his ‘method of difference’. The intuition behind the method is to select cases with background variables as similar as possible, with the intent to isolate the effect of the independent variable (‘treatment’ of VC intervention) (Hancké, 2009). As the method require a single-cause hypothesis, it is a well-suited model to answer the question at hand, with the VC intervention being the independent variable of interest. Differences in the outcome variable (elements of farmer livelihood) can thus, in theory, only be explained by the independent variable. However, as widely recognized, the method is demanding, and for it to have causal inference, unrealistic assumptions must be met, including that all relevant variables must be identified prior to the analysis. This assumption makes the analysis susceptible to ‘false positives’, in which it concludes upon causality without considerations of possible unobserved independent variables (George and Bennet, 2005). Hence, the methodology does not consider complex causality, which societal phenomena tend to encompass, and its power as a methodological framework within the sphere of critical realism is limited. The preliminary fieldwork and the thorough literature review prior to the main data collection were pivotal to mapping causally relevant variables, thus being able to better isolate the effect of the intervention.⁹

Case selection and conceptualization

An important methodological consideration in the research design process has been the taxonomy of the VC interventions – how are the categories (i.e., conventional, relationship, and certified) operationalized? Following Sartori (1970), the formation of concepts is crucial to both the external and internal validity of a study. Categories should be operationalized into mutually exclusive ‘containers’ and have sufficient discriminatory power (Sartori, 1970). As coffee VC interventions occur across a wide variety of contexts, and configuration of each intervention – also within each main category – differ greatly, the formation of each concept is challenging, potentially inducing a taxonomic problem (Sartori, 1970). To exemplify, the major conventional coffee buyer in Timor-Leste has for many years been certified. Therefore, to construct a credible counterfactual, a precise and rigorous operationalization – far down the ‘ladder of abstraction’ – is necessary (Sartori, 1970). This enhances the internal and conceptual validity of the study, but hampers its external validity, as inferences become hard to generalize (Halperin and Heath, 2020).

⁹ Although addressing the Millian assumption, it does not infer any claims to be causal.

A retroductive approach

Furthermore, this research has pursued an integrated approach to obtain causal inference, following a retroductive method, which is widely common in critical realism research (Danermark et al., 2019). The approach integrates deductive and inductive methods in sequenced loops, and where insights from theory and empirics combined provide generalizable claims (Bergene, 2007). In this project, the premises of the research question derived from both deductive insight from literature and theory, as well as inductive insight from preliminary research and interviews conducted in Timor-Leste in 2022. The data collection itself was designed based upon theoretical insight (deductive), but adapted throughout the process as empirical insight suggested new elements to be added to the data collection (especially true of the qualitative part) (inductive). In the thematic analysis, categories were determined both based on theoretical categories (deductive) and on thoughts and ideas that came up during the fieldwork itself (inductive). As such, inductive and deductive approaches have been applied in a sequenced loop throughout the whole process.

Quantitative (and qualitative) research strategy

Weak methodological designs have been a reoccurring phenomenon within quantitative comparative studies on the intervention impact studies, with many lacking a credible counterfactual (Blackman and Rivera, 2011). In quasi-experimental research projects, selection bias presents a key threat to the construction of a credible counterfactual, in which the treatment and control differ ex-ante the treatment (Ruben and Fort, 2011). There is a good chance that interventions do not occur randomly, and farmers with a certain set of characteristics are likely more prone to participate in a certified / RC value. In such a situation, the measured outcome of the intervention is heavily biased upon these pretreatment characteristics. To account for this, the data is matched using a propensity score matching technique, where the control (conventional VC) and treatment (relationship / certified VC) group are matched based on a number of pretreatment characteristic that is not – directly nor indirectly – affected by the treatment itself, thus following Ruben and Fort (2011). By controlling for all relevant variables as to why an individual is treated or not, and matching the individuals with a similar likelihood of being treated (propensity score), the credibility of the counterfactual is significantly improved. The data is matched based on the variables altitude, age, hectare of land, access to veteran money, and years resided on the land. The propensity score matching is conducted using a form of nearest-neighbor-matching, in which each treatment unit is matched together with the control unit with the ‘nearest’ propensity score (Greifer, 2023). All R-codes are attached in the appendix.

Analysis of the qualitative data followed a thematic coding method using the software NVIVO. The coding was mainly based on ‘grounded coding’, in which the codes emerge as the data is being analyzed (Halperin and Heath, 2020).

Throughout the analysis, I will integrate results from both research strategies, in which the quantitative survey will highlight general trends and the qualitative interviews will provide insight into the underlying reasons for such trends.

3.3 Fieldwork

Data collection

The main part of the fieldwork was carried out in April 2023 in Timor-Leste, in which data consisting of 62 quantitative farmer surveys, and 24 qualitative interviews was collected. However, background data and insights to this project have been acquired over a longer period. As a part of my engagements in Timor-Leste through the student organization Kria dalan, I have been involved in several rural development projects since 2019. Established in 2022, the organization initiated a coffee project, seeking to produce and sell coffee in a VC based on solidarity and transparency. Parallel to this, I did a preliminary data collection among farmers and exporters in July 2022¹⁰, which informed the continuation of the process. Thus, and although I have strived to maintain a neutral position, my position in the industry makes me biased through an underlying motivation of enhancing farmer livelihoods, which in some ways resemble the approach of ‘action research’ (Riisgaard et al., 2010).

In addition to empirical insight from the preliminary data collection, the fieldwork in April 2023 was informed by a number of earlier studies in the field of coffee VCs and livelihood surveys, including the works of Ashley and Carney (1999), Perez-Escamilla et al. (2009), Blackman and Rivera (2011), Ruben and Fort (2012), Vicol et al. (2018) and Edelman et al. (2022), to name a few. An important consideration in the survey design was the balance between an aggregated and a disaggregated approach. Whereas disaggregated questions leave no room for respondents to synthesize information and for farmers to respond in a strategic way, aggregated questions may obtain answers closer to the true value of the respondent and reduce researcher bias (Jagger et al., 2012). Likewise, with most other elements in the research design, I pursue a diverse strategy, adopting the approach depending on the context. However, as the qualitative data covers many aggregated questions in detail, the survey is predominantly focused on disaggregated questions.¹¹

¹⁰ Interviewing 5 farmers, 1 village leader, 1 cooperative leader and 4 exporters.

¹¹ See the survey in appendix for details

Village	Altitude (MASL)	Data collection	Production	VC	Intervention established ¹²
1	1100	11 farmer surveys (quan) 2 farmer interviews (qual) 1 sub-collector interview (qual)	Arabica and robusta Cherry and parchment	Conventional	N/A
2	1200	8 farmer surveys (quan) 2 farmer interviews (qual) 1 sub-collector interview (qual)	Arabica Cherry and parchment	Conventional	N/A
3	850	11 farmer surveys (quan) 1 cooperative manager interview (qual)	Robusta Parchment	FT and organic certified ¹³ (cooperative 1)	2006
4	1400	12 farmer surveys (quan) 1 cooperative manager interview (qual) 1 farm-leader interview (qual)	Arabica Parchment (to cooperative) and cherry	FT and organic certified ¹⁴ (cooperative 2)	2017
5	1750	8 farmer surveys (quan) 1 farmer interview (qual)	Arabica Parchment	RC	Between 2000 and 2005
6	1400	12 farmer surveys (quan) ¹⁵ 3 farmer interviews (qual) 1 wet mill manager interview (qual)	Arabica Cherry	RC	2018
Other interviews (qual)		1 conventional / certified exporter 1 conventional exporter 4 RC exporters 1 certified exporter 2 experts / non-VC stakeholders 1 cooperative manager (cooperative 3)			

Table 1: Data collected in April 2023. All villages are located within a radius of 12km. All data collected marked as ‘other interviews’ was conducted in the capital Dili. All surveys were conducted in the local language and fully guided by the research assistants, while all farmer and sub-collector interviews were conducted through an interpreter.

Limitations and biases

The distance from a library in Copenhagen to a coffee farm in rural Timor-Leste is hard to overestimate. Consequently, the data collection does not line up perfectly with the research design. The realities of fieldwork, including time and resource constraints and obstacles deriving from weather, infrastructure, and safety, are not easy to fully assess and comprehend in the design phase of the research. Although I earlier have been conducting several projects in Timor-Leste, I failed to acknowledge a set of variables highly influencing the credibility of the study. To access cases based on methodological considerations, including the construction of credible counterfactuals, taxonomy, and conceptual stretching, I had a clear idea of cases to choose. However, due to bad weather, broken infrastructure, and me only staying in the country for 3 weeks, heavily reduced the number of accessible cases to investigate. Hence, the case selection ended up inducing several important biases. First, the prediction of the counterfactual (control group) has major shortcomings, deriving from both the lack of comparable pretreatment characteristics (altitude being a good example and a crucial

¹² When the intervention was established is not equivalent to when farmers joined the VC.

¹³ Certified through a Japanese system – thus not through FLO like the other certified cooperatives.

¹⁴ Three of the surveyed farmers were not a part of the cooperative. One sold to RC and two to conventional.

¹⁵ The selection of farmers is predominantly influenced by farmers also working at a local wet mill, thus not being a representative selection of the population.

confounder) across the VC interventions, as well as a limited number of surveys (n = 62). In fact, due to this, the number of matched observations is so small that I, for parts of the analysis, have disregarded the matching technique, thus primarily using unmatched data as the basis for the analysis.¹⁶ Insight from the qualitative data material anyhow suggests interventions to be chosen more randomly than first projected, with altitude and willingness to join¹⁷ being the only two barriers found. The small N-problem is especially pressing in the certified VC, as only one of the two certified farmer groups serves as a good base for comparison to the other VC interventions.¹⁸

Second, all VC intervention is unique in their nature, and a continuous scale of multiple axes would be a more accurate operationalization than a set of three conceptual ‘containers’ (conventional, certified, and RC). This induces a taxonomic problem, diminishing the internal validity of the study. For instance, the two certified VCs studied (village 3 and 4) differ greatly, and although they both are instances of certified coffee VCs, village 3 may be closer to its RC counterparts in a set of decisive variables (see chapter 4). The case selection also impedes the external validity of the study, as generalization becomes difficult due to the lack of credible counterfactuals and taxonomic issues.

As already emphasized, my position and history in the context of the Timorese coffee industry induce an important bias. As the coffee project I am running resembles elements of RC, I might also be biased towards those interventions. In addition to the selection bias already discussed, I have been depended upon my Timorese network to gain access to farmers, and to what extent this has given me access to a selection of farmers similar to the real farmer population is uncertain. This potential bias is further strengthened by the fact that in most communities, access was provided by local farm leaders, suggesting the selection of farmers interviewed and surveyed to be predominantly influenced by farmers affiliated with the local farm leader. Participant bias, especially in the certified interventions in which farmers and cooperative managers are subject to audits, has also likely occurred in the data collection phase.

To conclude, based on the limitations outlined and within the realm of critical realism, this study does not aim at establishing a causal relationship between elements of VC interventions and livelihood outcomes. Nor does it seek to produce findings generalizable to coffee VCs across a range of contexts. It is rather an attempt to understand the coffee industry in Timor-Leste through the lens of power and to better comprehend the links between VC interventions and livelihoods.

¹⁶ References in the text to the regressions will as a ground rule be based upon the unmatched regression

¹⁷ Willingness to join is hard to measure and may encompass many significant unobserved confounders.

¹⁸ Village 3 is located at 850 MASL, produces robusta, and the VC configuration bear in some ways a resemblance of RC.

4. Analysis

The analysis will be structured as follows: First, a short introduction with a descriptive overview of the data and the VC. The main analytical part is divided into three sections; 1) power analysis of the various VC configurations, following the framework put forward by Dallas et al., 2019; 2) livelihood outcomes across the various VC configurations following the framework of SLA; and 3) discussion on the livelihood impacts of VC power relations (presented in chapter 5).¹⁹ Throughout the analysis, quotes – as a default – stem from the qualitative interviews in April 2023 (appendix 1).

4.1 Descriptive statistics

Descriptive statistics - survey

Following the structure of this project, the VCs in Timor-Leste are categorized into conventional, certified, and RC VCs. The descriptive statistics are based on 62 quantitative surveys across the three configurations, and, with a few exceptions, all answers have been answered by all surveyed farmers (see Table 2).

The descriptive overview shed light on some important aspects of the industry. Close to all farmer livelihoods depend upon subsistence production, and over half of the farmers took on loans the last year with an average interest rate above 50%. Farmers in all VC configurations report a high dependency upon coffee, educational levels remain low, and many report their health to be below adequate. Farmers' self-reported hectare size is significantly greater than the official data states (MAF, n.d.), indicating a lack of knowledge and/or a selection bias in which the survey is predominantly influenced by farmers closer to the elites of the community. Off-farm income has a high standard deviation but is for many surpassing incomes from coffee (see discussion in chapter 5.1).

¹⁹ Disclaimer: Throughout the whole analysis, I refer to actors with 'he'. I do not intend to write exclusively; I simply just mirror reality in the best possible way. Although there are some women working in the industry in the capital Dili, the VC is close to exclusively occupied by men.

A selection of important descriptive statistics	Conventional (N=22)	Certified (N=19)	Relationship (N=20)	Overall (N=61)
Age (years)				
Mean (SD)	46.7 (15.2)	40.3 (12.7)	38.4 (12.5)	41.8 (13.8)
Median [Min, Max]	46.5 [24.0, 75.0]	34.0 [24.0, 68.0]	41.0 [20.0, 56.0]	39.0 [20.0, 75.0]
Education (1-6)				
Mean (SD)	2.36 (1.76)	2.79 (1.62)	2.55 (1.67)	2.56 (1.67)
Median [Min, Max]	1.50 [1.00, 6.00]	2.00 [1.00, 5.00]	2.00 [1.00, 6.00]	2.00 [1.00, 6.00]
Educational expectation for children (1-6)				
Mean (SD)	5.00 (1.95)	5.65 (1.22)	6.00 (0)	5.49 (1.45)
Median [Min, Max]	6.00 [1.00, 6.00]	6.00 [1.00, 6.00]	6.00 [6.00, 6.00]	6.00 [1.00, 6.00]
Health (1-4)				
Mean (SD)	2.55 (1.10)	1.89 (0.875)	2.30 (0.923)	2.26 (0.998)
Median [Min, Max]	3.00 [1.00, 4.00]	2.00 [1.00, 4.00]	2.00 [1.00, 4.00]	2.00 [1.00, 4.00]
If I disagree, I will object (1-5 (likert scale))				
Mean (SD)	3.48 (1.60)	3.89 (1.63)	3.95 (1.67)	3.77 (1.62)
Median [Min, Max]	4.00 [1.00, 5.00]	5.00 [1.00, 5.00]	5.00 [1.00, 5.00]	5.00 [1.00, 5.00]
Trust in local economic institution (1-5 (likert scale))				
Mean (SD)	3.95 (1.76)	5.00 (0)	5.00 (0)	4.62 (1.16)
Median [Min, Max]	5.00 [1.00, 5.00]	5.00 [5.00, 5.00]	5.00 [5.00, 5.00]	5.00 [1.00, 5.00]
I am very dependent upon coffee (1-5 (likert scale))				
Mean (SD)	4.00 (1.54)	4.53 (0.772)	4.20 (1.11)	4.23 (1.20)
Median [Min, Max]	5.00 [1.00, 5.00]	5.00 [3.00, 5.00]	5.00 [2.00, 5.00]	5.00 [1.00, 5.00]
Sold to different companies last 3 years (1 - Yes, 0 - No)				
Mean (SD)	0.895 (0.315)	0.444 (0.511)	0.700 (0.470)	0.684 (0.469)
Median [Min, Max]	1.00 [0, 1.00]	0 [0, 1.00]	1.00 [0, 1.00]	1.00 [0, 1.00]
Size of farm (Ha)				
Mean (SD)	2.42 (1.50)	2.64 (1.89)	1.66 (0.676)	2.26 (1.50)
Median [Min, Max]	2.00 [0.500, 6.00]	2.00 [0.200, 7.00]	2.00 [0.500, 3.00]	2.00 [0.200, 7.00]
Subsistence farming (1 - Yes, 0 - No)				
Mean (SD)	0.947 (0.229)	0.824 (0.393)	0.947 (0.229)	0.909 (0.290)
Median [Min, Max]	1.00 [0, 1.00]	1.00 [0, 1.00]	1.00 [0, 1.00]	1.00 [0, 1.00]
Received training on farming practices (1 - Yes, 0 - No)				
Mean (SD)	0.409 (0.503)	0.789 (0.419)	0.850 (0.366)	0.672 (0.473)
Median [Min, Max]	0 [0, 1.00]	1.00 [0, 1.00]	1.00 [0, 1.00]	1.00 [0, 1.00]
Price arabica cherry (USD (avg 2020 - 2022))				
Mean (SD)	0.343 (0.0260)	0.401 (0.0472)	0.459 (0.0880)	0.397 (0.0796)
Median [Min, Max]	0.350 [0.300, 0.400]	0.379 [0.353, 0.475]	0.465 [0.227, 0.590]	0.360 [0.227, 0.590]
Price arabica parchment (USD (avg 2020 - 2022))				
Mean (SD)	1.52 (0.241)	1.81 (0.739)	2.97 (0.0494)	1.92 (0.702)
Median [Min, Max]	1.50 [1.23, 1.93]	1.50 [1.25, 3.00]	2.98 [2.90, 3.05]	1.63 [1.23, 3.05]
Income from cash crops (USD (last year))				
Mean (SD)	203 (462)	180 (271)	62.5 (187)	147 (331)
Median [Min, Max]	0 [0, 2000]	50.0 [0, 1000]	0 [0, 800]	0 [0, 2000]
Income from off-farm work (USD (last year))				
Mean (SD)	584 (1160)	253 (392)	592 (695)	486 (831)
Median [Min, Max]	175 [0, 4700]	50.0 [0, 1500]	280 [0, 2000]	125 [0, 4700]
Savings (1 - Yes, 0 - No)				
Mean (SD)	0.273 (0.456)	0.316 (0.478)	0.100 (0.308)	0.230 (0.424)
Median [Min, Max]	0 [0, 1.00]	0 [0, 1.00]	0 [0, 1.00]	0 [0, 1.00]
Loan (in 2022) (1 - Yes, 0 - No)				
Mean (SD)	0.529 (0.514)	0.722 (0.461)	0.400 (0.503)	0.545 (0.503)
Median [Min, Max]	1.00 [0, 1.00]	1.00 [0, 1.00]	0 [0, 1.00]	1.00 [0, 1.00]
Interest rate of loan (%)				
Mean (SD)	0.770 (0.319)	0.320 (0.164)	0.586 (0.430)	0.562 (0.366)
Median [Min, Max]	1.00 [0.350, 1.00]	0.200 [0.200, 0.500]	0.500 [0, 1.00]	0.500 [0, 1.00]
Physical capital total (1-3 (3 - highest score))				
Mean (SD)	1.73 (0.357)	1.64 (0.366)	1.94 (0.362)	1.77 (0.376)
Median [Min, Max]	1.75 [1.00, 2.75]	1.50 [1.00, 2.50]	2.00 [1.25, 2.50]	1.75 [1.00, 2.75]
Farmer perception on food security (1-5 (5 - high security))				
Mean (SD)	3.45 (1.26)	3.47 (0.905)	3.60 (0.821)	3.51 (1.01)
Median [Min, Max]	3.00 [2.00, 5.00]	4.00 [2.00, 5.00]	3.50 [2.00, 5.00]	3.00 [2.00, 5.00]

Table 2: Descriptive statistics of the survey. All coffee prices are per KG.
Source: Survey, 2023

Value chain overview

Figure 4.1.2 illustrates the three different VCs (domestically) and their nodes. In addition, some basic price information is added to give an impression of value distribution in the chain.

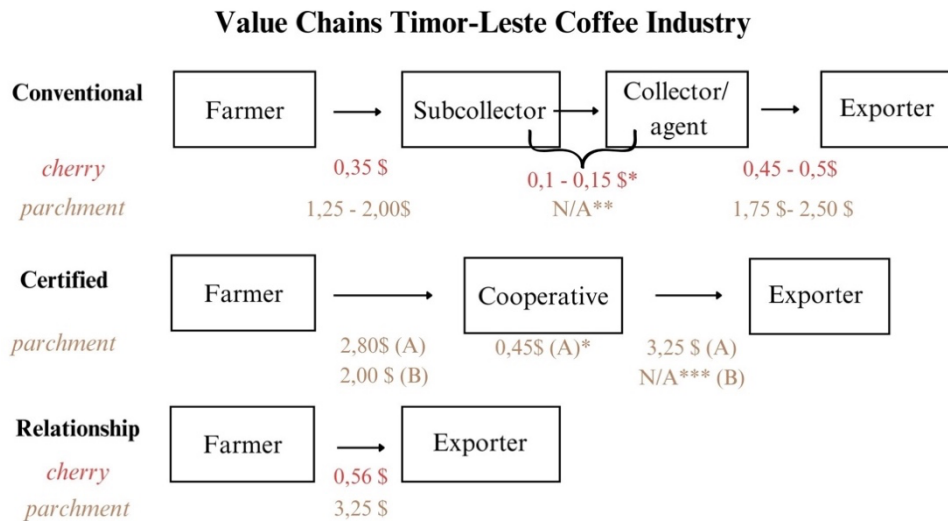


Figure 4: A descriptive overview of the three domestic VCs in the Timorese coffee industry studied in this project. All prices are per KG.

* The value capture by downstream intermediaries

** The value capture of collectors in quality differentiated products remains unknown

*** The value for exporters of B-graded certified coffee remains unknown

Source: Survey and interviews, 2023

The conventional VC consists of at least three actors – farmers, sub-collectors, and exporters. Depending on local structures and downstream networks, the VC may also include a second collector as well as an agent. Whereas the cherry has no differentiation in quality – neither at the farm level nor at the nodes further downstream, the exporter buy parchment at different quality rates. To what extent this trickles down to the farmer is unknown. In the certified VC, the collector is substituted by the cooperative who (in the cases I observed) both collects and transports the parchment and distributes the money. Prices are determined based on quality and differ substantially.²⁰ In the relationship VCs, intermediaries are substituted by exporters picking up the cherry themselves or local agents doing it on behalf of the exporter for a set price. In the investigated VCs, exporters only accept high-quality grades²¹ and are giving farmers a fixed rate for such a grade.

²⁰ The small-N induces great uncertainty for this data.

²¹ Other relationship actors offer a lower base price, and premiums based on quality grade.

4.2 Power in Coffee VCs

The next part of the analysis will primarily focus on the power effects of the VC interventions, but as the conventional market serves as a basis for comparison (counterfactual) to certified and RC interventions, a thorough understanding of the conventional VC in Timor-Leste is required. The analysis is guided by the framework of Dallas et al., 2019, as outlined in the theory section. However, as constitutive power often coincides with arguments at a wider livelihood level, the analysis in chapter 4 will mainly focus on bargaining and institutional power (chapter 5 will focus more on diffuse transmission of power).²² As the typologies are often intertwined, the analysis below is not structured by typologies, but rather by nodes.

4.2.1 Conventional VC

Operationalization of the Conventional VC

The history of coffee in Timor-Leste is rather unconventional. Thus, the operationalization of what is conventional is not as straightforward as in other contexts: The historically most important actor, Cooperative Café Timor (CCT), has controlled close to half the market, while at the same time being FT and organic certified (Howson, 2022). The company was founded during the end of the Indonesian occupation and inherited parts of the colonial, hierarchical, and exploitative structures that characterized the pre-independent Timorese coffee industry (Howson, 2022). With close ties to USAid, the company set up a vertically integrated VC, exclusively buying cherry from their over 20 000 members and conducting all the processing steps within the company. Although providing a number of social services in rural areas, including health clinics, the criticism of the company has been massive (Howson, 2022). The company is reported to have a hierarchical structure without a democratic distribution of value and a VC characterized by no transparency and traceability. It is widely recognized that CCT purchases coffee from both members and non-members, and they recently lost their FT certification. Furthermore, they set the farmgate benchmark price in the market. Thus, I perceive members of CCT – and farmers selling to CCT – as conventional farmers.

CCT is such an enigma of an entity. [...] It is a company with ‘cooperative’ in the title.
(Industry expert, p. 69)

Both ‘conventional’ farmer groups I have surveyed and interviewed have been selling to both CCT and other conventional companies, but farmers are often unaware of which company.

²² Demonstrative power is discussed under RC power analysis.

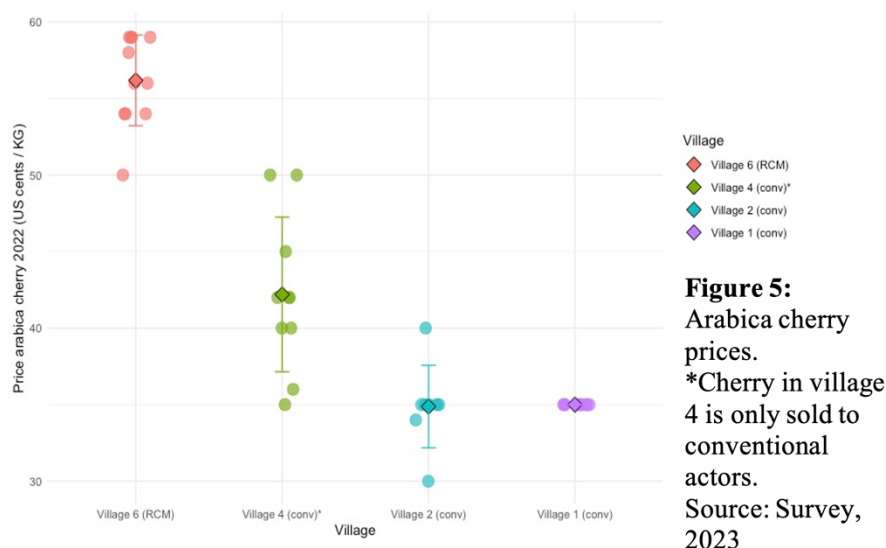
4.2.1.1 Farmer – collector-node:

The key feature of power in the Timorese coffee industry is of no surprise: The marginalized farmer. Regardless of how a chain is set up, the farmers are price-takers, and never in a position of being able to negotiate on price, thus securing a superior bargaining position for the downstream actor.

They [CCT] just come and buy. They never ask us anything. CCT sets the price, and we have no other option than to accept it. (Farmer, village 2, p. 62)

Farmer dependency and local competition

The farmer-collector node constitutes many characteristics, but in which dependency and lack of information and transparency are the two most prominent. First, without a local sub-collector, farmers will in many instances not be able to access a market. Timor-Leste is a mountainous country, and infrastructure is in many rural areas poor – even short distances of less than 10 kilometers may take over an hour to reach by car. Because of this, most companies rely on agents and collectors to pick up coffee from the farmers. And while some farmers may have access to a motorbike, a truck costs more than what most farmers would make during their lifetime. Consequently, farmers are 100 percent dependent on the system of collectors to reach a market. This is a major contributor to the bargaining power of the sub-collector vis-à-vis the farmer. The power imbalance is further strengthened by the lack of local competition – in rural villages it typically exists one sub-collector or one network of them, thus being the only channel for farmers to make an income from coffee. Figure 5 illustrates the dynamic, with conventional prices being significantly higher in village 4 (where competition among downstream buyers is present) compared to village 1 and 2 (with no downstream competition).



Information gap

Second, there is a major information gap, with farmers having no knowledge and insight into downstream prices, practices, or dynamics. Except for one farm leader with family ties to the sub-collector, no farmer talked to or surveyed in the whole project had any information about downstream prices – not even the price the sub-collector would get. An example from village 1 clearly shows the dynamic: The sub-collector argues that he in 2022 sold arabica parchment directly to an exporter for 2.00\$, whereas the exporter states that the floor price for buying parchment was 2.85\$. As parts of the lot transported may have quality shortcomings, the collector may not get 2.85\$ for all the parchment but is on average likely getting way above 2.00\$. Back in the village, the collector paid on average 1.70\$ to the farmers, making him capture between 15 – 40% of the chain upstream of dry milling.²³

In village 2, the collector sold arabica cherry to the company for 0.45 – 0.50\$ in 2022, while the farmers on average received 0.35\$. This indicates that the collector(s) captured 22 – 30% of the farmgate value. The collector, and his employees, served the entire village area of 800 households, securing a yearly revenue stream likely to exceed 30 000\$.²⁴

Price data from 2021 and 2022 also reflects an interesting story about competition and information asymmetry (figure 6). Primarily due to unusual weather patterns, coffee yields were down around 40% in 2022 compared to 2021. This, in addition to increasing international prices, made the competition at the node downstream (collector/agent – buyer big and prices consequently increased. Nevertheless, for most conventional coffee farmers the price of arabica cherry remained unchanged²⁵, reflecting the marginalized position of the farmer in the VC. In village 4, however, farmers captured parts of the increased downstream price, with the farmgate price on average increasing by 15%²⁶, likely caused by the intense local competition. With the information asymmetry likely being the same in Village 1,2 and 4 (considering the conventional market in village 4), increased local competition in the latter reduces the bargaining power of the collector.

²³ Depending on whether the collector on average got 2.00\$ or 2.85\$ from the exporter.

²⁴ A moderate estimation: 400 coffee-producing entities, producing on average 750 KG cherry, the collector buys for 35 cents and sells for 45 cents: $400 \cdot 750 \cdot (0.45 - 0.35) = 30\,000\$$. Collector claimed that no other intermediaries were involved between the farmer and exporter. ‘t

²⁵ Only 4 out of 20 farmers in village 1 and 2 had an increase in prices for arabica cherry. In arabica parchment, the average increase was 6%, but many also saw decreasing farmgate prices.

²⁶ The effect is not significant. Although farmers in village 4 are part of a cooperative, the cherry they sell is to the conventional market.

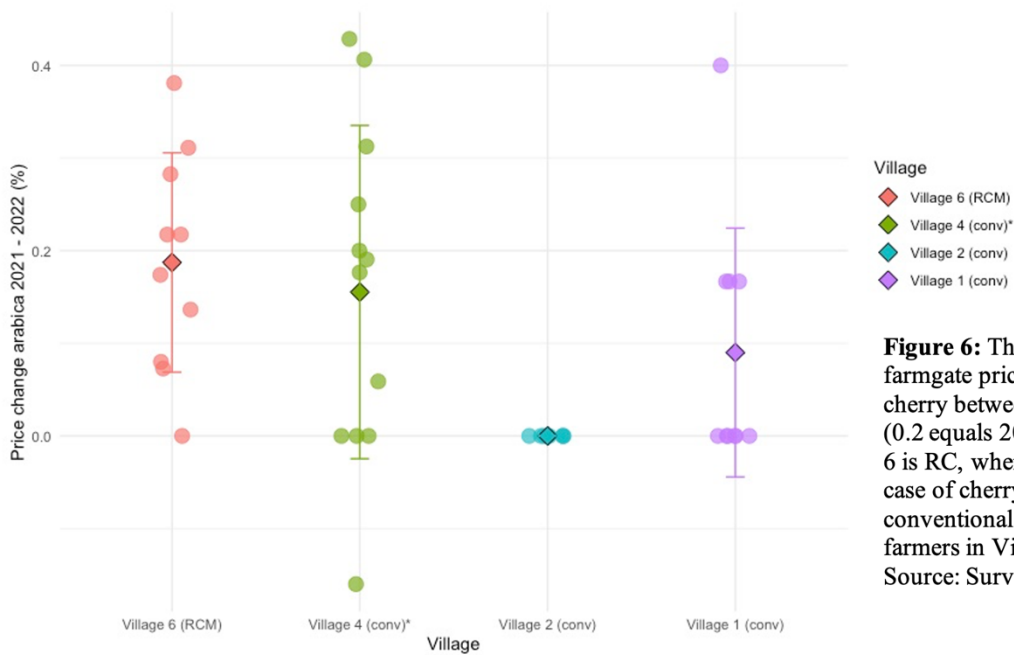


Figure 6: The plot indicates the farmgate price increase for arabica cherry between 2021 and 2022 (0.2 equals 20% increase). Village 6 is RC, whereas the rest (in the case of cherry) sell to the conventional market, including farmers in Village 4. Source: Survey, 2023

The information gap is further strengthened by the narrative the local collector tries to establish. The sub-collector in Village 1 emphasized that he does not benefit financially from transporting the coffee and that he is doing the service as a courtesy to the community. He points to the costs of maintaining the truck and portrays the company as the enemy and the ones pushing prices down. The collector in Village 2 advocated that he is content with the status quo, and, as the only actor in conventional VCs I interacted with, does not welcome any interventions. For local collectors to sustain their privileges, it becomes important to maintain the narrative of a symbiotic relation and is exerting demonstrative power by doing so. In the villages I observed, it seemed to be a harmonic relationship between the farmers and the sub-collector. It goes beyond the scope of this project to determine the origin of such a dynamic, but it may derive from a lack of downstream insight, farmer dependency upon the collector, or cultural and historical explanation, including colonial and occupational suppression. In some cases, the local coffee powerhouse coincides with the *Uma Lulik* – the spiritual leader that holds a key position in all local communities. This will be further discussed in chapter 5.

Moneylenders and sub-collectors

Third, as many farmers depend upon loans to survive throughout the year (over 50% of farmers took loans the previous year), the sub-collector again becomes an important part of the puzzle. In most

cases, the local sub-collector also functions as the local moneylender, providing households with rice, oil, and money in the awaits of a new harvest. The interest rate is high (averaging 77%, see Table 2) and is often being paid back in coffee. This further increases the bargaining power of the local sub-collector and leads to many farmers becoming stuck in a bad cycle, in which low income constrains investment on the farm to increase productivity and makes farmers dependent on these structures – it is a reinforcing mechanism.

This node can in many ways be summarized as such: *A farmer is as dependent upon the local collector as he is exploited by him.* Thus, the relationship can be seen through different perspectives, and while some see it as a symbiotic relation, others emphasize the power imbalance:

[The power asymmetries between farmers and collectors are substantial] especially in the districts. They have a lot of influence and power over the farmers. [...] The farmers could get 20-50% extra by selling directly to us. (Manager of exporting company, p. 13)

The sub-collector is a necessary bridge between the company and the farmer. It is a symbiotic relationship. Exploitation may occur based on local differences, but not so much. What would be the situation if there was no local collector? (Management of industry association, p. 23)

4.2.1.2 Sub-collector/collector/agent – company

Is it cynical? It is a power disparity. When there is a disparity in the quality of information, there is an opportunity to make money. So of course they keep that information to themselves. (Exporter, RC VC, p. 51)

The information gap is still present ...

Whereas the power dynamic at the first node of the VC is heavily in favor of the local sub-collector, the dynamics further down the chain are more balanced – but still in favor of the downstream actor. Similar to the upstream node, sellers are price-takers and are not aware of the prices further down the chain. Despite the widespread uptake of modern information technology, collectors and agents are likely not capable of decomposing the cost structures of the exporters – even though they may be aware of the international C-price. Additionally, they very likely do not possess the ability to fully understand the finance of international coffee, and whereas exporters follow future prices and

forecasts, collectors and agents follow the Timorese ‘C-price’. This discrepancy may be taken advantage of: When exporters believed the market would rise in 2021, they early on initiated contracts with agents and bought as much as possible for a low price.²⁷

... but competition is higher

Despite the information gap, there is an important difference in the power dynamic in this node compared to the upstream one, namely the potential for competition. Collectors, agents, and companies interact in a competitive environment, where the seller will sell to the highest bidder, and where companies compete on price. This reduces the bargaining power of companies vis-à-vis collectors.²⁸ The power relation alters in networks where the sub-collectors do not have their own resources, in which the downstream actor – agent or company – can equip local actors with trucks and finances, making the sub-collector more of an employee rather than a power actor in the VC. The ‘threat’ of downstream actors establishing own systems of suppliers constrains the potential power of local collectors vis-à-vis regional collectors and agents. Thus, and despite being a relationship in which the upstream actor (collectors) has significantly higher bargaining power than in the upstream node (farmer – collector), the exporter still narrates, defines, and orchestrates the relationship vis-à-vis the collector.

Cooperative Café Timor (CCT) and power

CCT, as outlined in chapter 4.1, has played an influential role in designing the industry, exerting power in various ways. First, CCT, in which 40 percent of the farming population were members, is setting the benchmark price for arabica cherry, in which every other company follows. Although CCT likely did not have any intention of setting the benchmark price, they have – through this mechanism exerted demonstrative power, which over time has become an institutional power, with CCT every year announcing the price post-harvest. As CCT historically has been both FT and organic certified, farmgate prices have been higher in Timor-Leste than in other countries, which means that farmers – also conventional – have benefitted from this institutional power. This has also caused a disconnection between the international C-price, and the (by many referred to as) ‘Timorese C-price’. In years with a very low international price, CCT has, through certifications, been guaranteed a minimum price internationally, impacting the whole industry (through their institutional price-setting power). In years with a higher international price, the increased FOB price often does not trickle down to the

²⁷ Only one source pointed to this dynamic in 2021.

²⁸ This is especially true in the case of parchment. Cherry requires wet mill processing within a time limit, giving collectors less flexibility.

farmers, given the present power dynamics. As a result, the price for arabica cherry rarely falls below 0.3\$²⁹ (0.25\$ is the lowest I have encountered), and rarely goes beyond 0.45\$. The institutional power of the benchmark price can thus be argued to reduce farmer vulnerability through reduced price volatility.³⁰ This institutional power also imparts bargaining power, as farmers have no option other than to accept the price set by CCT.

On the other hand, the above-stated dynamic can be detrimental to conventional farmers. In 2019, some companies stopped purchasing coffee from farmers due to low international prices, turning dry milling stations into ghost towns. As CCT at the time was FT/organic certified, thus guaranteed a minimum FOB price, the ‘Timorese C-price’ – set by CCT – was high compared to what conventional exporters would get in the international market. This (allegedly) led conventional buyers to stop their operations.³¹

Second, CCT has for many years been buying arabica cherry without any considerations to quality or premium of high quality: “CCT would buy anything – green, yellow, red – everything” (wet mill operator, RC). Although there are many reasons for the lack of attention to coffee production among Timorese farmers (which will be further examined in chapter 5.1), CCT, being of such importance in the industry, has exerted a great deal of demonstrative power, stating that quality does not matter. Following the proposed set of VC drivers by Gibbon et al., 2008, CCT has ‘normalized’ the ignorance of quality, not incentivizing farmers to rehabilitate their farms and to avoid strip-picking (the latter being a great challenge in the industry). This ingrained perception of quality at the farmer level imposed by CCT is however being challenged by other major conventional actors that are paying premiums for high-quality coffee, prices equal to those in RC chains. Again, and as often in the conventional VC, power dynamics and lack of transparency and traceability raise doubts about the upstream capture of high-quality production.

4.2.1.3 Government influence

Timor-Leste has one of the world’s highest rates of public expenditure, with government budgets making up 86% of the economic activity (World Bank, 2021), hence being an essential actor in the coffee industry. The government exhibits institutional power in several ways. As old and unproductive coffee farms remain the key challenge in the industry, in addition to most farmers too

²⁹ Due to the FT minimum price. Between 2012 and 2023, it has been 3.09\$/KG at FOB level. 0.3\$ for cherry equal 1,67\$ green bean (conversion rate of 5,56) suggesting farmers to capture 54% of the domestic value.

³⁰ Between 2016 and 2023, the farmgate price volatility has been ~ 30% (from 0.3\$ to 0.4\$) – less than C-price fluctuations.

³¹ This is not confirmed by the companies and relies on two external sources.

poor to invest on their own and companies rarely willing, the government possesses an important role in rehabilitation programs. The government announced a program worth over two million dollars in 2022, covering 12% of the total coffee-producing area³², in which a farmer (directly) would get 340\$ per hectare of land rehabilitated. As rehabilitation (pruning and new plants) leads to a short-term reduction of production, such strategies are not feasible from a smallholder farmer's perspective. Given its importance for the industry, with easy measures having the potential of more than doubling production, public interventions are an important institutional power in the coffee industry.

The government has also since the country's independence exerted institutional power through land tenure issues, possibly hampering the development of the industry. Issues related to land disputes have for many years been prevalent in Timor-Leste, fueled by colonial and occupational rulers, and internal displacements (Cryan, 2015). 25% of the coffee land is owned by the state, and in many areas, land disputes remain an issue (MAF, n.d.). The government has put forward several laws claiming ownership of disputed land (Cryan, 2015), possibly affecting farmers' incentive to invest time, energy, and resources into rehabilitating the farm. As such, land tenure issues affect the general notion of coffee farming (thus translating into a constitutive power), which will be further discussed in chapter 5. Interestingly though, every single farmer surveyed responded that they perceived themselves as owning the land.

Through public schemes rewarding veterans from the occupational resistance movement with monthly payments significantly higher than income from the coffee sector, the government is also impeding the incentive for many to improve farming practices. Through these institutional arrangements, the government is also conserving a local structure in which veterans hold a respected position, which may affect value distribution in the coffee sector.³³

Timorese coffee farmers have for centuries been accustomed to the ruling government regulating the industry with a firm hand. Under both Portuguese and Indonesian rule, the government used the coffee industry as an instrument of socio-economic dominance (Khamis, 2015; Howson, 2022). After the independence, and with another goal in mind, former (and current) President José Ramos-Horta established (or made efforts to do so) a regulatory framework with minimum prices for farmers in 2007.³⁴ The system, which did not last for a very long time, guaranteed farmers over 3.00\$ for arabica parchment and over 0.50\$ for arabica cherry and likely had a drastic effect on the bargaining power in the VC in favor of the farmer. Several farmers interviewed emphasized how

³² According to ACT, 7000 hectares were rehabilitated, accounting for around 12% of coffee land (MAF, n.d.)

³³ Only one source highlighted this.

³⁴ This stems from two different farm leaders, but I have not found reports, articles or academic publications stating this.

regulatory frameworks are favorable from a farmer's point of view, altering the local power dynamics and allowing farmers to report on actors disobeying the regulations. Albeit reports indicated very low farmgate prices during the Indonesian occupation (Khamis, 2015), two senior farmers in the two conventional VCs investigated, highlighted that they preferred the conditions under the occupation rather than those of today, where there were *predictable*, yet low, prices.³⁵ Although the decreasing international coffee price, if considering inflation, plays a role, institutional power applied by governments, in this case as price regulations, has had a significant impact on the power structures in the Timorese VC.

Summary

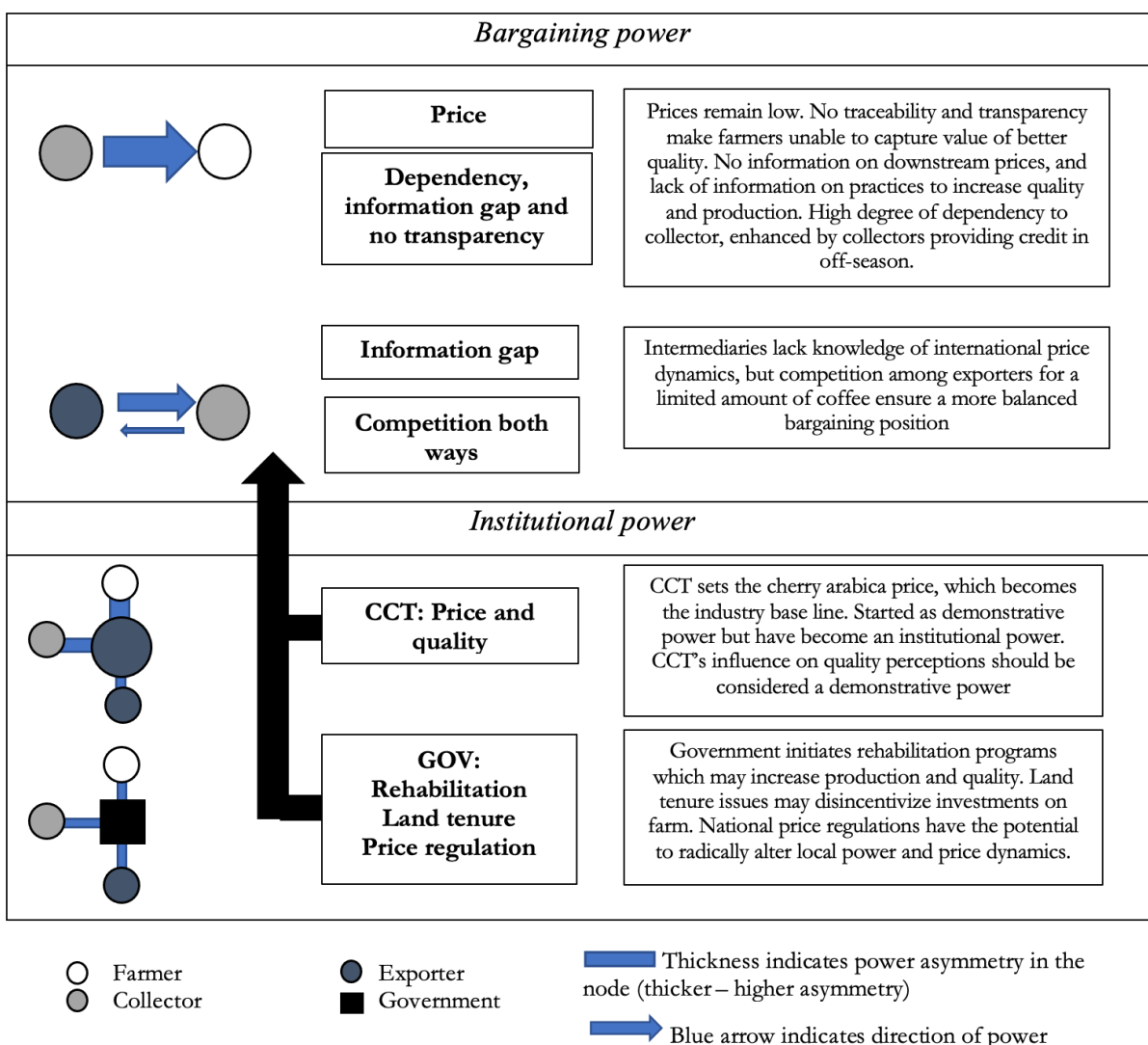


Figure 7: Power in conventional VC in Timor-Leste

Own illustration and analysis. Illustrative framework adopted from Dallas et al., 2017
 Source: Survey, 2023

³⁵ These preferences may also stem from production likely being higher due to younger trees.

The power imbalance between the farmer and the collector is extensive, in which a high degree of dependency and lack of transparency, traceability, and information leaves the farmer in a weak position with low prices. The bargaining power between the collector and the exporter is more balanced, but still in favor of the downstream actor, spurred by an information gap and (in some cases) capital access. Institutional power heavily influences the bargaining power, both through the private sector in which CCT possesses institutional power being price-setters, and through governmental actions (or lack of actions).

4.2.2 Certified value chain

Operationalization of certified VC interventions

Certification in Timor-Leste consists exclusively of the globally widespread combination of FT / organic certification. These are therefore the two certifications this project has focus on. The two farmer groups surveyed within this VC configuration differ substantially, and the analysis of the power structures in each chain is therefore somewhat diverse.

Cooperative 2 and 3 consist each of over 2000 members that are dispersed over several regions. Out of the two cooperatives, I only surveyed farmers in cooperative 2 (village 4), which obtained their FT certification in 2017 and their organic certification in the early 2000s. The cooperatives are managed from the capital and are selling all their coffee to one of the main exporters in the country.

Cooperative 1 deviates significantly from cooperative 2 and 3. It is built on a relation with a Japanese NGO, is certified organic (through a Japanese certification system), and designed on a set of 'FT principles'. However, it is not certified through FLO, as the certification scheme has yet to become widespread in Japan. Rather than audits, the system is enforced through trust, like RC chains, but is designed very similarly to FT-certified VCs.³⁶ The cooperative receives a premium equal to that of FT (0.42\$/KG), and faces requirements on production, democracy in the cooperative, and how to allocate the premium. Contrary to cooperative 2 and 3, the proximity of the relationship between the downstream actor and the cooperative is higher, and the VC is shorter. Due to its low altitude, the cooperative only produces robusta, thus making comparisons to the other villages on income and price hard difficult³⁷.

³⁶ The local cooperative manager believes the cooperative holds both certifications.

³⁷ All other villages sell arabica. One of the conventional farmer groups produces both arabica and robusta.

Power in certified VCs

In general, the power dynamics in the certified VC resembles the conventional chain in many aspects. Farmers are still price-takers and are fully dependent on goodwill from downstream actors to obtain a better position. Certified farmers rarely have access to more and better information than conventional farmers, but the VC structure enhances their bargaining position (see analysis below). The interventions, especially regarding the big cooperatives, do not alter the moneylending structures, which in many aspects remain the same. Downstream, the cooperative is, like conventional collectors and agents, price-takers and do not possess insight into further downstream price dynamics. All institutional power exerted by the government remains equally influential in the certified and in the conventional VC.³⁸ Nevertheless, certified VC intervention modifies the power dynamics in many ways.

As outlined earlier, certified VCs can be configured in different ways, with the two certified groups surveyed in this project being a good example. The analysis will thus often distinguish between cooperative 2 and 3 on one side, and cooperative 1 on the other side (see chapter 4.2.2 for details).

Table 4 indicates a small, and non-significant, price increase for arabica parchment, whereas farmers in village 3 (producing Robusta) earn a significantly better price compared to conventional ones. Without being significant, both off-farm income and income from other crops are lower among certified farmers.

³⁸ Except to some extent the governmental effort to set a fixed price system.

Selected regressions - FT/organic certified coffee								
	Dependent variables							
	Price arabica parchment (US cents/KG) (1)	Price robusta parchment (US cents/KG) (2)	Off farm income (USD/year) (3)	Income other crops (USD/year) (4)	Access to different buyers (1/0) (5)	Received training (1/0) (6)	Loan (1/0) (7)	
FT/organic intervention	28.7 (18.8)	18.9*** (4.6)	-375.8 (292.2)	-43.5 (127.0)	-0.7*** (0.1)	0.3** (0.1)	0.2 (0.2)	
Constant	152.3*** (9.7)	87.0*** (3.5)	614.7*** (203.8)	213.6** (88.6)	0.8*** (0.1)	0.4*** (0.1)	0.5*** (0.1)	
Observations	26	19	37	37	40	41	35	
R ²	0.1	0.5	0.05	0.003	0.4	0.1	0.1	
Note:							*p<0.1; **p<0.05; ***p<0.01	
Selected regressions - FT/organic certified coffee (matched)								
	Dependent variables							
	Price arabica parchment (US cents/KG) (1)	Price robusta parchment (US cents/KG) (2)	Off farm income (USD/year) (3)	Income other crops (USD/year) (4)	Access to different buyers (1/0) (5)	Received training (1/0) (6)	Loan (1/0) (7)	
FT/organic intervention	30.8 (23.5)	15.9** (6.5)	-640.2 (376.1)	-197.1 (167.1)	-0.7*** (0.1)	0.4** (0.2)	0.1 (0.2)	
Constant	150.2*** (14.7)	89.1*** (5.5)	887.3*** (293.0)	338.5** (128.7)	0.8*** (0.1)	0.3** (0.1)	0.7*** (0.2)	
Observations	18	14	28	27	29	30	26	
R ²	0.1	0.3	0.1	0.1	0.4	0.1	0.01	
Note:							*p<0.1; **p<0.05; ***p<0.01	

Table 3: A selection of variables indicating the difference between certified coffee and conventional VC farmers. Prices for coffee cherry are composed of numbers from 2020-2022. Information on Off-farm income, income from other crops, and loan is provided with the last year as the base. Data for ‘access to different buyers’ must be read with precautions and is highly influenced by village 3. Source: Survey, 2023

4.2.2.1 Farmer – cooperative

In all three cooperatives investigated, in which two of them are included in the survey, the local sub-collector is substituted with the cooperative. At the village level, the certification therefore contributes to an alteration of the power dynamics. The question thus becomes if the cooperative is reproducing the power dynamic earlier occupied by the sub-collector, or if they have a more democratic structure.

Democracy in cooperatives: Institutional power

The level of democracy varies across the two types of cooperatives. In cooperative 1, the small size enables them to give each farmer a vote in general assemblies, and the distribution of premium and cooperative savings is discussed in a local context and are primarily spent on community development. Conversely, in cooperative 2 and 3, power is distributed between a cooperative board, and the general assembly, in which the general assembly is constituted by delegates representing 50 other farmers. The dispersed demography of the cooperatives suggests that common grounds need to be found across a wide range of communities, regions, and local structures. Without having insight into the local election of delegates, I contend that it is likely that current power structures are being reproduced in such a system.³⁹ Both types of cooperatives exhibit a form of institutional power

³⁹ Neither managers of cooperatives 2 and 3 had a focus on countering local power structures.

through general assemblies, affecting farmers and communities, but members in cooperative 1 have significantly better chances of influencing decisions.

The power structure of the big cooperatives is further highlighted by the distribution of the FT premium. In both large cooperatives, 75% of the premium is allocated to operational costs⁴⁰, and 25% to projects in communities. The 25% going to the communities have almost exclusively been allocated to quality-enhancing equipment⁴¹, with the main reason for the absence of other development programs being the premiums that are too low. And although the potential for farmers to increase income through high-quality production is prevalent⁴², many farmers in my survey were not able to meet the quality requirements. On the other hand, the premium in the small cooperative is to a much bigger extent oriented towards social projects, including funds to households affected by natural disasters, housing materials, water, and diversification of production. Interestingly, farmers in certified VCs (in both types) appear to have a greater trust in local economic institutions and cooperation (see Table 4).⁴³

Trust in local cooperation				
	Dependent variables			
	Trust in local econ institutions	Trust that I will get help if needed	Trust in moneylender	I will object if I disagree
	(1)	(2)	(3)	(4)
Certified intervention	1.1*** (0.4)	0.5 (0.5)	0.9** (0.5)	0.1 (0.5)
Constant	3.9*** (0.3)	4.0*** (0.3)	3.8*** (0.3)	3.6*** (0.4)
Observations	41	41	41	40
R ²	0.2	0.03	0.1	0.002

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 4: Source: Survey, 2023

Quality requirements: Institutional power

The exporter, through the cooperative management, also exerts its institutional power to influence production through quality control and processing. All cooperatives investigated only buy parchment, thus incentivizing farmers to produce in a certain way (depending on the village, farmers may be able to sell cherry to the conventional market). The cooperative also incentivizes a certain quality standard, reflected not only by the above-explained premium allocation but also by the price scheme in which higher quality gives a higher price. Although the farmer may increase his earnings by producing high-

⁴⁰ Management costs, FT fees, transportation for staff, training programs etc..

⁴¹ Cooperative 2 has recently been doing some water tank projects in some villages.

⁴² Several farmers surveyed in village 4 received a price close to the price received in RC VC's.

⁴³ Result prone to participation bias as their certification status depends upon yearly audits, making them inclined to answer positively to external researchers.

quality coffee, it is in the interest of the exporter to increase quality to ensure international demand. A discussion of the opportunity cost of producing high-quality coffee will follow in chapter 5. From the dataset (Table 5), it seems to be a tendency in which certified farmers have less off-farm income and less

	Alternative cost of coffee production		
	Dependent variables		
	Off farm income (1)	Other crops income (2)	Subsistence farming (3)
Certified intervention	-375.8 (292.2)	-43.5 (127.0)	-0.1 (0.1)
Constant	614.7*** (203.8)	213.6** (88.6)	0.9*** (0.1)
Observations	37	37	36
R ²	0.05	0.003	0.03

Table 5: All variables responded on a Likert scale from 1 – 5, in which 5 equal “I agree”. Source: Survey, 2023

subsistence production of food than conventional ones, but the difference is not statistically significant. Quality and processing standards make farmers have to produce in a certain way not decided by themselves, thus, isolated, reducing their bargaining power.

Traceability: Institutional power

All the cooperatives are designed to ensure a VC with greater traceability than in conventional chains. Despite several sources disputing the level of traceability to be low, with coffee ‘coming through the back door’⁴⁴, traceability gives farmers the potential of capturing the additional value of high-quality production, contrary to most conventional VCs. A price scheme for a given quality is set up, and although it depends upon local competition, it may give farmers increased bargaining power vis-à-vis their downstream buyers. In the dataset, certified farmers receive higher prices for their coffee, but – especially in the big cooperatives – the deviations are great. Whereas some received up to 3.00\$ per KG parchment, others only got 1.25\$. The major difference is likely to originate from some selling dry and others selling wet parchment but may also stem from factors hampering the bargaining power of farmers, including lack of price and quality insight and local power structures.

Local structures and the power inhabited by local leaders are important determinants of how a certified VC intervention alters power dynamics: Whereas in some communities, individuals work directly with the cooperative, in others, community leaders function as the sole intermediary, thus creating the potential for value leakage. As such, the centralized management of the big cooperatives makes them less capable of overcoming these local institutional differences compared to a less dispersed setup.

⁴⁴ Non-certified coffee entering the certified VC.

Price data from cooperative members from village 4 suggests this to be partly true (Figure 8). Despite the price downstream increased, none of the cooperative members in village 4 sold arabica parchment at a higher price in 2022 compared to 2021. Although the data is limited, it suggests that the cooperative and the exporter captured all the increased value. This reflects a VC in which the bargaining power to a big extent remains with the downstream actors, and where the cooperative takes advantage of low transparency and information flow. Seen in combination with the distribution of the premium (within the two large cooperatives), in which three-thirds is allocated to operational costs, these cooperatives do – in one way – bear a resemblance to a profit-maximizing entity.

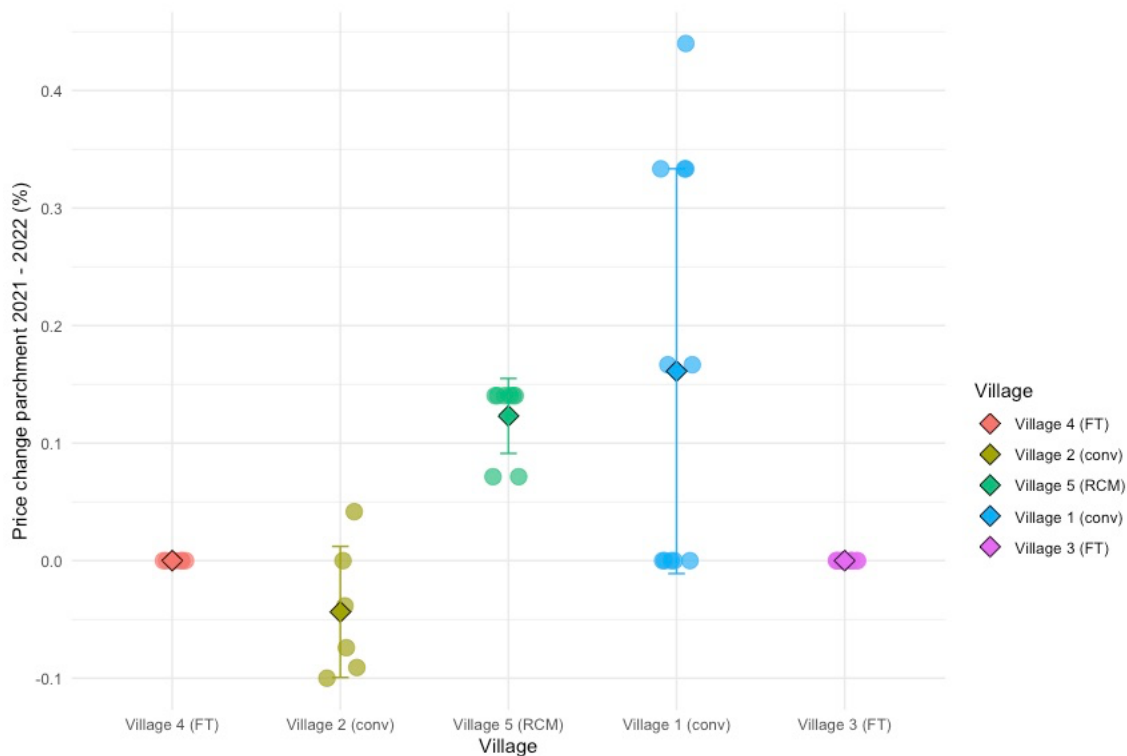


Figure 8: The plot indicates price change for parchment (all arabica except village 3 (robusta)). No farmer in either of the two certified VCs surveyed experience an increase in income per unit coffee. Comparisons between village 3 and other communities must be read with precautions as they produce robusta. Source: Survey, 2023

The dynamics of the FT minimum price reflect the same story. The minimum price guarantee system, an institutional framework designed to ensure farmers a given price in the case of low international prices, is based on the FOB level of the VC – making only the exporter guaranteed a price. The system is thus fragile to downstream actors capturing parts of the minimum value ensured by the certification scheme. The manager of cooperative 2 explained that a farmer – if he produces above a certain quality grade – would earn 2\$/KG when the minimum price kicks in, suggesting a

farmer capture of around 66% of the FOB value.⁴⁵ Although I do not possess insight into FOB prices in the conventional VC, farmer capture (in percent) is unlikely substantially lower than in the certified VC.⁴⁶

Competition

Another reason for the price dynamic in village 4 might be competition.⁴⁷ As in the conventional VC, local competition is an important factor, and despite farmers being members of a cooperative, they will rather sell to a conventional collector if he pays more. The relationship between the farmer and the cooperative is therefore not isolated, and the local price scheme – although likely more regulated than in the conventional chain – is highly influenced by other actors operating. Cooperative 3 would some places buy coffee for 2.75\$ and pay 3.15\$ in other communities, making cooperatives – in one aspect – operate like a conventional collector. This also highlights the importance of competition for the local bargaining power dynamics.

Farmer training

Another potential alteration of power dynamics in the certified VC is the possibility for two-way communication and increased farmer empowerment through training. In the dataset (table 3), significantly more farmers in certified VCs have received training than in conventional ones, which makes them better equipped to not only produce higher quality coffee (thus often getting better paid) but also to better comprehend the difference between the various grades of quality.⁴⁸ As farmers are more aware of the value of their products, they may be in a better negotiating position vis-à-vis the downstream actor. From another point of view, farmer training can be seen as a means for the cooperative to better control farming practices and ensure compliance with certain requirements. When the cooperative, e.g. through FT, has a workshop on democracy, their intention is likely a combination of farmer empowerment and ensuring that the audit will be passed. The insight the downstream actor acquires about the production through the certification requirements can also be taken advantage of, potentially enhancing the bargaining power of downstream actors.

⁴⁵ Per April 2023, the FT + organic minimum price was 1,7\$/lb, equal to 3,747\$/KG (Fairtrade.net, n.d.). 2\$/KG parchment equal ~2,5\$/KG green bean.

⁴⁶ Claim based on several sources indicating a relatively high value capture at the farm level in Timor-Leste.

⁴⁷ I have no insight into the competition in the village in 2021, only in 2022. Claims must be perceived thereafter.

⁴⁸ Based on interviews with centralized and local management.

Farmer empowerment

In the small-sized cooperative, the local management can also request training from the downstream buyer, thus resembling a dynamic frequently seen in RC models. Although farmers ultimately depend on goodwill from downstream actors to facilitate such a dynamic (CCT is an example of a ‘cooperative’ that, despite certification, had (and has) a very hierarchical structure), a channel in which farmers make requests downstream suggests a situation with increased bargaining power in favor of the farmer. This may translate into the farmers’ bargaining power vis-à-vis other local institutions as well, as certified farmers respond having significantly greater trust in local moneylenders (Table 4) and are able to take up loans at lower interest rates than conventional coffee farmers. On the other hand, no significant differences were found in the question asking the respondents if they would object if they disagreed during a community meeting, thus arguing against the claim of empowered farmers in certified VCs.

4.2.2.2 Cooperative – exporter

As collectors and agents in the conventional VC are price-takers, the cooperative has little influence on price vis-à-vis its downstream counterpart. However, the institutional power of certifications makes the bargaining power of the exporter less extreme, especially when the C-price falls below the FT minimum price. The framework is, contrary to the conventional chain, based on a contract and not competition. In both cooperative 2 and 3, a contract with a fixed price between the cooperative and the exporter is set ex-ante every harvest season and does not change based on competition like often is the case in the conventional chain. At the same time, the dynamic follows in many ways along the same lines as in the conventional chain: With cooperative managers having limited insight into downstream prices, the financial dynamics of international coffee, and the cost structure of the exporter, the exporter set the conditions for the contract. The price in the contract is therefore based upon the predicted price for parchment (the future of the ‘Timorese C-price’), thus following the conventional dynamics, with the organic premium added on top.

Although the institutional framework makes the bargaining power of the downstream actor less extreme in certain ways, other and opposite effects may occur. Using 2022 as an example, the supply shortage in the country made prices increase throughout the harvest. The contractual relationship between the cooperative and the exporter made the cooperative take all the loss of this increase. As the exporters are likely to have better insight into future price developments, they can use such contracts as a means to minimize risk.

Summary

The power structures in certified VC are somewhat altered, and farmers have a higher likelihood of being in a better off bargaining situation vis-à-vis downstream actors. Traceability and training facilitate farmers to capture more value, and participation in the cooperative can give farmers a – although limited – voice. The institutional power, to some extent, also ensures a lower price limit, with all these effects being greater in the smaller and less dispersed cooperative 1. However, I have also argued that cooperatives in some ways resemble a profit-maximizing entity, with a structure likely to reproduce local power dynamics and a distribution of the FT premium with limited value for producers.

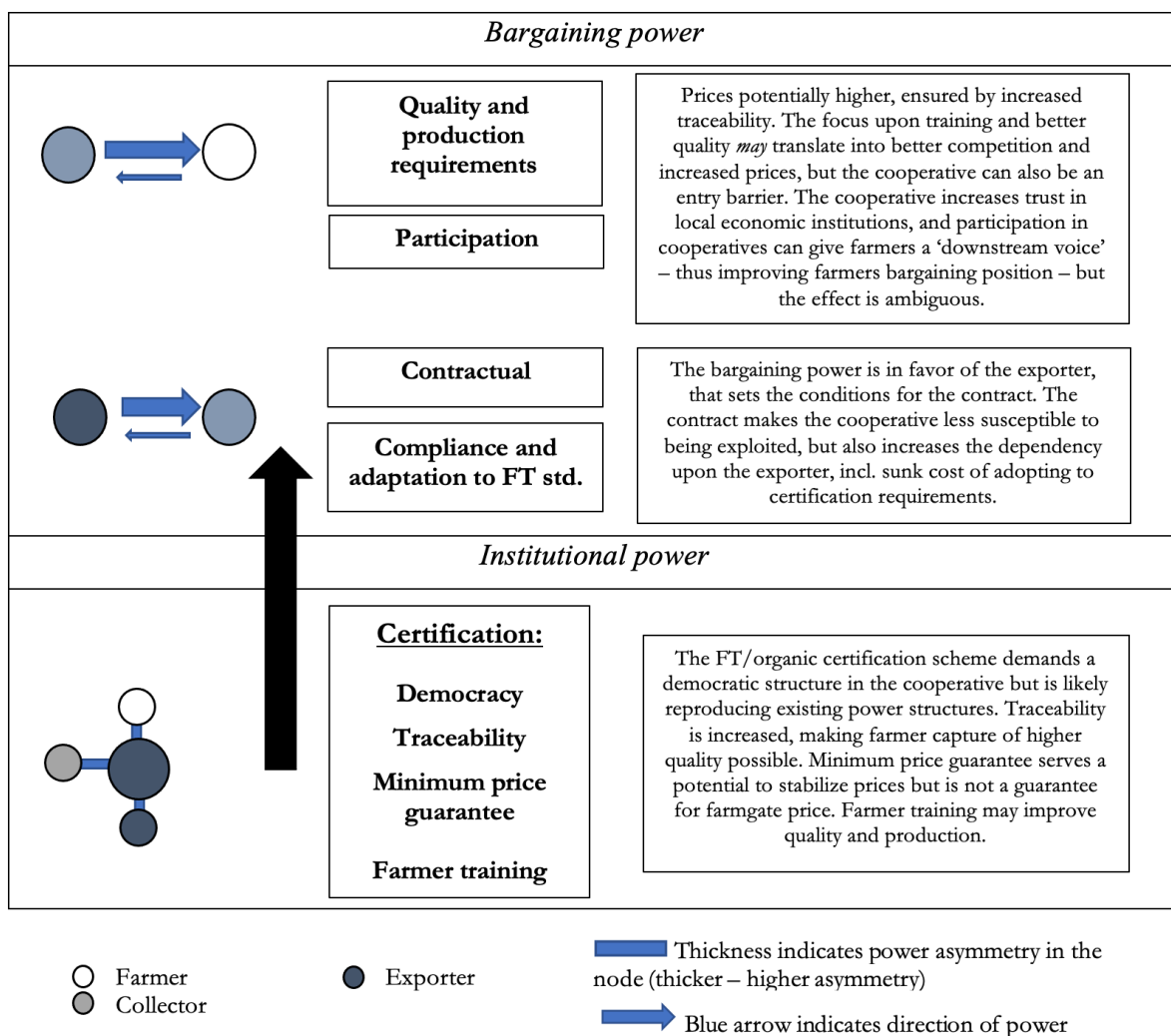


Figure 9: Power in FT / organic certified VC in Timor-Leste

Own illustration and analysis. Illustrative framework adopted from Dallas et al., 2017

Source: Survey, 2023

4.2.3 Relationship coffee value chain

Operationalization of Relationship coffee VC interventions

The last VC configuration is also the most difficult to operationalize, as each VC differs from another. In addition to the already outlined definition in the literature section, I define RC as VCs in which the buyer⁴⁹ (either directly or through internal employees) has a strong presence in the community and is engaging on a continuous basis with farmers. This operationalization is based on the importance of proximities as a proxy for the nature of an RC model, following both Edelman et al., (2022) and my observations from the Timorese industry. Thus, I exclude all configurations in which the buyer interacts with the producer with a low level of proximity or only through local leaders.

I have surveyed two RC communities and interviewed managers of five RC actors, of which four can be defined within the given operationalization. They differ first and foremost on two dimensions – size (structure) and overall goal. Whereas one buys from and maintains a relationship with only a couple of hundred, the other is buying from over 3000 coffee households. And although all interventions emphasize both social improvements and the production of high-quality coffee, the balance between the two goals differs substantially.

Power in the Relationship coffee VC

As RC, by design, evolves around the dynamic between the farmer and the exporter, I concentrate on the dyadic relationship in this section, thus mostly considering bargaining and demonstrative power. Its influence on constitutive power will be discussed in chapter 5.

As earlier outlined, the proximity of the relationship is a decisive determinant of the power relations within the VC. As they differ, also within the defined operationalization of RC in this thesis, the analysis will be guided by different VC characteristics.

This discussion begins with a reflection note I wrote after one of my visits to a community with farmers in a RC VC:

At the end of the day, farmers are subject to their own VC possibilities. Regardless of how good a farmer's cup score may be, they don't rule over who's in town, who's buying their coffee, or what price these actors are willing to pay. They may be fortunate that there is an actor with goodwill and determination to empower them, but once this actor is gone, they are back to square one if nothing happens to the structural inequalities in the VC.

⁴⁹ Here, buyer is understood as the exporter of green bean, and the one selling directly to roasters in consuming markets.

Selected regressions - Relationship coffee							
	Dependent variables						
	Price arabica cherry (US cents/KG) (1)	Price arabica parchment (US cents/KG) (2)	Off farm income (USD/year) (3)	Income other crops (USD/year) (4)	Access to different buyers (1/0) (5)	Received training (1/0) (6)	Loan (1/0) (7)
RCM intervention	12.0*** (2.1)	146.8*** (8.4)	-95.2 (328.7)	-146.8 (119.0)	-0.4** (0.2)	0.5*** (0.1)	-0.2 (0.2)
Constant	33.9*** (1.5)	150.3*** (4.6)	687.1*** (238.8)	209.3** (87.5)	0.8*** (0.1)	0.4*** (0.1)	0.6*** (0.1)
Observations	36	26	36	37	37	39	34
R ²	0.5	0.9	0.002	0.04	0.2	0.2	0.03
Note:							*p<0.1; **p<0.05; ***p<0.01

Selected regressions - Relationship coffee (matched)							
	Dependent variables						
	Price arabica cherry (US cents/KG) (1)	Price arabica parchment (US cents/KG) (2)	Off farm income (USD/year) (3)	Income other crops (USD/year) (4)	Access to different buyers (1/0) (5)	Received training (1/0) (6)	Loan (1/0) (7)
RCM intervention	11.5*** (3.0)	149.4*** (9.9)	-192.2 (439.8)	-264.9* (150.8)	-0.3 (0.2)	0.6*** (0.2)	-0.3 (0.2)
Constant	33.4*** (2.3)	150.0*** (5.9)	841.8** (334.0)	293.0** (116.1)	0.8*** (0.2)	0.2 (0.1)	0.7*** (0.2)
Observations	24	17	26	27	25	27	23
R ²	0.4	0.9	0.01	0.1	0.1	0.4	0.1
Note:							*p<0.1; **p<0.05; ***p<0.01

Table 6: A selection of variables indicating the difference between RC and conventional VC farmers. Prices for coffee cherry is composed by numbers from 2020-2022. Off-farm income, income from other crops and loan is responded with the last year as the base. Source: Survey, 2023

Looking at some key figures (Table 6), coffee prices are considerably higher than in the conventional chain – for parchment, the price has doubled. Conversely, off-farm and other crops income has decreased, but not significantly.⁵⁰ Contrary to conventional farmers, the great majority of relationship farmers have received training.

4.2.3.1 Farmer – exporter

As the note above reflects, RC interventions, like certified ones, do not reshape all power dynamics in the VC. In all VC configurations in the industry, farmers are price-takers also in RC, with little or no negotiating power as such. Like certified VCs, RC actors rarely involve themselves with the local moneylending structures, which often are intertwined with sub-collectors and local elites, thus not altering this structure. However, RC interventions do impact power relations in many aspects.

Conversely to conventional VCs, the power of the local sub-collector in the VC is in most cases marginalized. The power dynamic between the exporter and the farmer, as reflected by the reflection above, remains highly unequal in many ways, but the VC is to a bigger extent designed to meet the farmer’s needs, first and foremost through a higher farmgate price, being significantly higher than in the other VC configurations (see Table 6). These prices do however not control for quality,

⁵⁰ Significant at 0.1 for the matched dataset. Regardless, numbers must be read with great precautions due to the small number of observations.

which will be further discussed in chapter 5. Some farmers may thus sell parts of their coffee to conventional actors for lower prices.

Varying from the different RC VCs, the buyer either collects coffee from the farmers himself, hires a truck, or uses local collectors but in which transparency and flow of information constrain the collector from capturing a great part of the chain. Furthermore, instead of collectors giving a price to the farmer based upon the benchmark price set by CCT, most relationships between buyer and farmer in these VCs are built upon a promise of keeping prices steady or increasing every year – regardless of the conventional price.

The transformed power dynamic locally is one reason for increased farmgate prices among farmers affiliated with RC VCs. Another reason is quality improvements. Close to all RC farmers have received training on farming practices, being both more frequent and perceived as more useful than training in the other coffee VCs

(Table 7).

This finding is not a surprising one – quality is one of the key attributes of RC, and investment in farmer knowledge and harvest/processing techniques is a critical component in the strategy of all RC actors operating in

Timor-Leste. From the farmer’s point of view, the production of high-quality coffee yields a significant price premium in all RC VCs, with most relationship actors paying a premium between 50-100% (both for cherry and parchment). However, it also affects the power dynamics in the VC.

RC as a catalyzer for competition and increased farmer bargaining power

In addition to improving farmers’ bargaining position through transparency and information flow in the VC, the intervention can also increase farmers’ bargaining power through increased competition. As earlier noted, competition is a key determinant to the bargaining power of farmers in all VC configurations and was in 2022 a bigger contributor to increased farmgate prices in the RC VCs than the relationship themselves.⁵¹ Well-implemented training programs lead to increased farmer knowledge of best practices and over time enhanced quality of coffee. As the supply of high-quality coffee is a scarcity in the country, competition is likely to be more intense in such areas. This effect

	Farmer training		
	Dependent variables		
	Received training	Quantity of training	Training perception
	(1)	(2)	(3)
RCM intervention	0.5*** (0.1)	0.7*** (0.2)	1.0** (0.4)
Constant	0.4*** (0.1)	0.5*** (0.2)	3.7*** (0.4)

Table 7:
Quantity of training: 0 – 0 days, 1 – 0-5 days, 2 – 5-10 days (the last year)
Training perception: likert scale from 1-5
Source: Survey, 2023

⁵¹ Competition pushed prices up more than what most RC actors planned upon increasing the price.

is further amplified by the constitutive effect of the RC intervention, further discussed in chapter 5, in which the intervention creates a notion of quality expectations in the given area. In a competitive environment, the farmer’s acquired knowledge of high-quality production amplifies his bargaining power. In village 5, farmers have been affiliated with the RC actor for over 20 years, and there are now multiple coffee buyers in the area. Several farmers surveyed sold some coffee (parchment) to the longstanding buyer for 3.25\$, and some coffee to a newcomer for 3.26\$.

Looking at the price development between 2021 and 2022, the same patterns are present. As earlier outlined, low production and high international prices made the downstream price significantly higher. But contrary to the certified VC, over 90% of the RC farmers experienced a price increase (see Figures 6, 8, and Table 8), thus reflecting a VC in which farmers are able to capture value when downstream prices increase. This dynamic suggests increased farmer bargaining power and is likely to stem from a combination of the shorter and more transparent VC, as well as high-quality production making competition stronger.

In addition to training on farming practices, most interventions – but not all – include components of empowerment outside the agricultural sphere, but in which the level of proximity and engagement to social issues determine the magnitude of such activities. Actors with a strong presence and a deep commitment to community development are, in the case of Timor-Leste, more likely to educate farmers on the dynamics of the VC, including value distribution, prices, and international markets. Furthermore, they are more likely to interact in two-way communication with individual farmers – not only through lead farmers. Such communication *may*⁵² form a platform for 1) locally adapted social projects; 2) production and procurement on the terms of the farmer, and 3) overcoming value capture by local elites, which all have the potential of increasing the bargaining position of the farmer. Table 9 underlines these dynamics, showing that RC intervention is positively correlated with trust in local economic institutions (except moneylending structures, which still are done by local agents), and trust that they will receive help if there is an emergency.⁵³

Farmgate price change 2021 - 2022		
	Dependent variables	
	Cherry (1)	Parchment (2)
RCM intervention	6.3*** (1.4)	16.3 (13.0)
Constant	1.4 (0.8)	18.8** (7.2)
Observations	27	26
R ²	0.4	0.1
Note:	* p<0.1; ** p<0.05; *** p<0.01	

Table 8: Numbers in cents. Despite conventional farmers having an increase in parchment price (statistically), the majority had no change.
Source: Survey, 2023

⁵² RC actors talk about this, but the execution of such projects remains rare. Chapter 5 will discuss this further.

⁵³ This effect is not seen in the certified VC (Table 4).

As RC – by default – is built upon a relationship rather than an institutional framework (certified VCs) or strict market mechanisms (conventional VC), the buyer has the incentive to empower the farmer and to have the farmer appreciate the relationship. If the farmer does not, he can simply sell low-quality coffee and pursue off-farm strategies. This dynamic induces a situation in which the buyer becomes dependent on the farmers, thus increasing the bargaining power of the farmer.

Trust in local cooperation				
	Dependent variables			
	Trust in local econ institutions	Trust that I will get help if needed	Trust in moneylender	I will object if I disagree
	(1)	(2)	(3)	(4)
RCM intervention	1.2*** (0.4)	1.1*** (0.4)	0.2 (0.6)	0.4 (0.5)
Constant	3.8*** (0.3)	3.8*** (0.3)	3.9*** (0.4)	3.5*** (0.4)
Observations	39	39	39	39
R ²	0.2	0.2	0.002	0.02

Note: *p<0.1; ** p<0.05; *** p<0.01

Table 9: All responses collected on a Likert scale from 1 – 5, in which 5 = “I agree”.
Source: Survey, 2023

Dependency and lock-in effects

From another perspective, these interventions may lead to a situation of dependency, which may have a deteriorating effect on farmer empowerment. Dependency may occur through two channels: 1) quality requirements, and 2) lack of local ownership and participation. First, as high-quality production remains a key aspect of RC models, farmers need to adapt their practices to meet the requirements. This may only include selective picking instead of the less time-consuming strip-picking but can also relate to processing techniques in the case of parchment production. Farmers may also be incentivized to rehabilitate the plants and improve farming practices, all of which may affect the farmer’s allocation of resources vis-à-vis other livelihood strategies. These adaptations can be perceived as a sunk cost, making farmers vulnerable if the downstream actor chooses to withdraw from the relationship. Second, if these interventions fail in transferring responsibility, ownership, and management skills to local actors, the VC will only sustain itself in the presence of downstream (foreign) management. In Timor-Leste, there are examples of RC actors both pulling out of relationships and becoming entrenched due to inadequate transfer of knowledge to local actors. From the point of view of the exporter, farmer dependency and other lock-in effects may even be a resource: One RC exporter is currently designing a credit system (although with better interest rates than local moneylenders offer) in which farmers

become locked-in in the current VC. I will discuss the consequences on the farmer's livelihood of this in chapter 4.3.

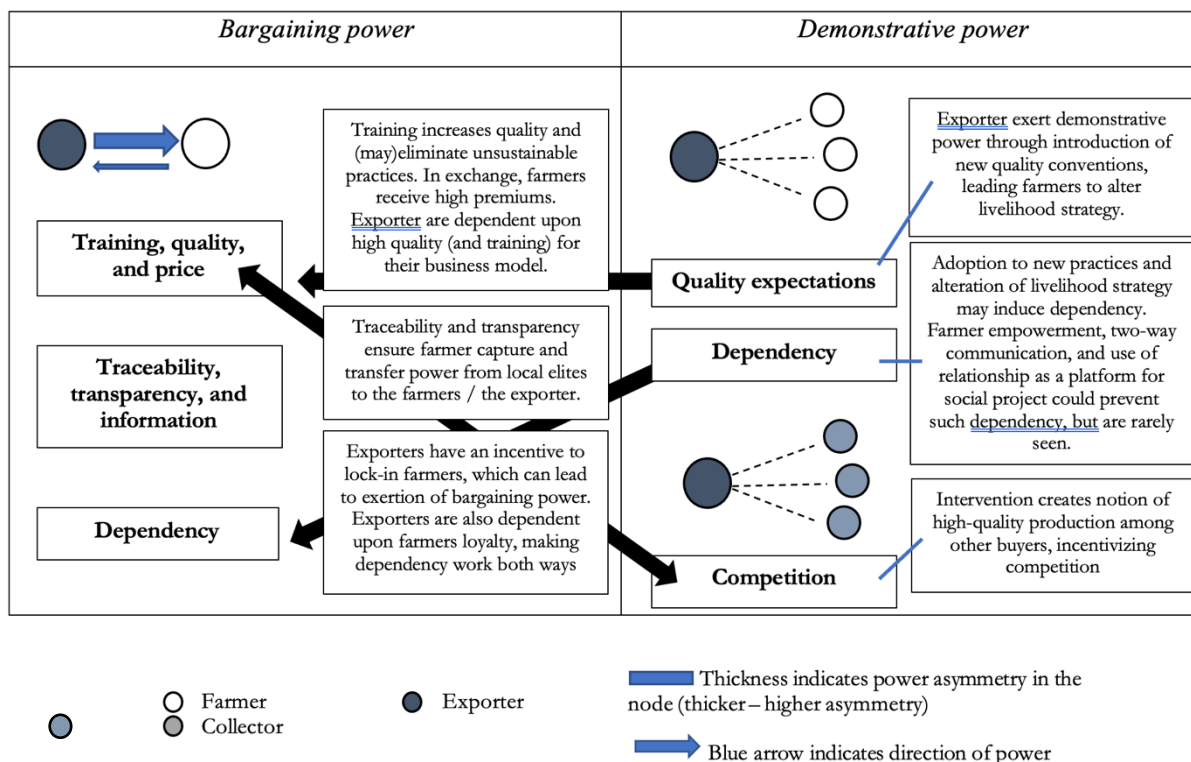


Figure 10: Power in Relationship coffee VC in Timor-Leste

Own illustration and analysis. Illustrative framework adopted from Dallas et al., 2017. Source: Survey, 2023

The interventions alter the bargaining power between farmers and downstream buyers to some extent, both through transparency and information flow and quality enhancements (potentially) leading to increased competition. Downstream exertion of demonstrative power can also lead to increased farmer dependency, but the exporter is also dependent upon the farmer, thus (isolated) reducing the exporter's bargaining power. Quality expectations and premiums may alter farmers' livelihood strategies significantly, which demonstrates the bargaining power of the downstream actor.

4.2.4 Comparison of RC and certified VCs

Both RC and certified VC interventions do alter the local power dynamics in significant ways but with different means. First, in all interventions, the power of the local sub-collector is highly diminished, and where the substitution (cooperative / exporter) often secures a higher degree of value capture through traceability and premiums for high-quality coffee. The likelihood of increased value capture at the farmgate level is significantly higher in RC compared to certified coffee (see Figure 11), but quality requirements are also stricter. The price difference between the VC configurations is

further strengthened by most RC actors paying a higher premium than what FT/organic certification does. Higher value capture is also heavily associated with traceability in the chain, which is enhanced in both cases, but to a greater extent in RC VCs. Increased capture between 2021 and 2022 for RC farmers (see Table 11) – but not certified farmers – may have different sources, but it reflects a VC in which farmers are better positioned.

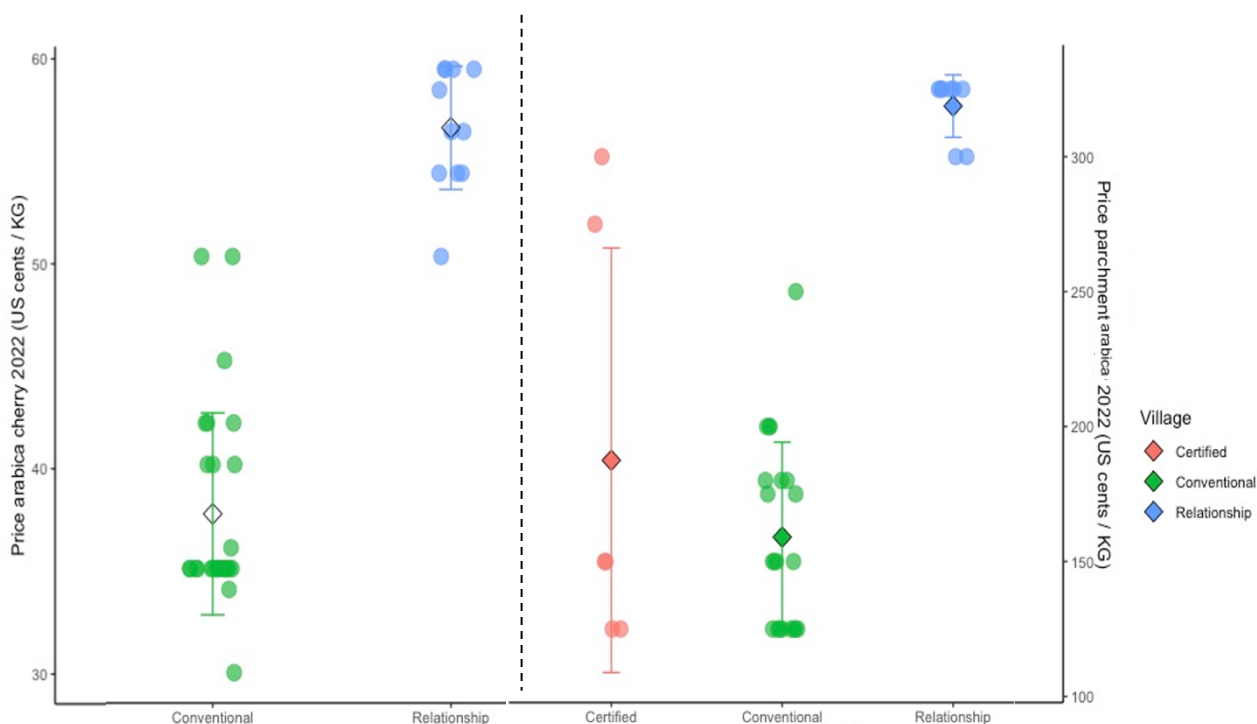


Figure 11: The figure illustrates the farmgate prices across the VC configurations. The right side shows prices for arabica parchment, and the left side arabica cherry. Source: Survey, 2013

Selected regressions - Relationship: treatment, FT/organic: control						
	Dependent variables					
	Percent change in coffee price 2021 - 2022	Off farm income (USD/year)	Income other crops (USD/year)	Trust I will get help if needed (1-5)	Training quantity (0-2)	Training perception (1-5)
	(1)	(2)	(3)	(4)	(5)	(6)
Relationship intervention	0.2*** (0.02)	353.0* (186.3)	-135.3* (75.3)	0.5* (0.3)	0.1 (0.2)	0.8 (0.5)
Constant (FT/organic)	0.0 (0.02)	238.9* (133.5)	197.8*** (54.6)	4.5*** (0.2)	1.0*** (0.2)	3.9*** (0.3)
Observations	36	37	38	40	40	33
R ²	0.6	0.1	0.1	0.1	0.004	0.1
*p<0.1; **p<0.05; ***p<0.01						
Selected regressions - Relationship: treatment, FT/organic: control (matched)						
	Dependent variables					
	Percent change in coffee price 2021 - 2022	Off farm income (USD/year)	Income other crops (USD/year)	Trust I will get help if needed (1-5)	Training quantity (0-2)	Training perception (1-5)
	(1)	(2)	(3)	(4)	(5)	(6)
Relationship intervention	0.2*** (0.02)	402.6** (197.0)	-144.4** (70.3)	0.3 (0.3)	0.2 (0.3)	0.9* (0.4)
Constant (FT/organic)	-0.0 (0.02)	247.1* (134.9)	172.6*** (49.7)	4.6*** (0.2)	1.0*** (0.2)	4.1*** (0.3)
Observations	32	32	32	34	34	27
R ²	0.7	0.1	0.1	0.04	0.01	0.1
*p<0.1; **p<0.05; ***p<0.01						

Table 10: Source: Survey, 2023

Second, both interventions exert power through quality conventions and process practices but in different ways and through different means. The power of the certified interventions is first and foremost institutional power deriving from the centralized certification itself, in which production must comply with the given requirements. RC interventions also transmit power directly and can require a set of practices from the farmer. The demands are however less institutionalized and can thus better adapt to local contexts: Several actors (not investigated in this study) buy both cherry and parchment – depending on what the farmer prefers. In terms of quality, certified cooperatives buy coffee with different quality grades and do not exert demonstrative power on quality expectations, thus having farmers themselves decide how much effort to put into quality enhancement. In RC interventions, the exporter only buys high-quality coffee⁵⁴, thus providing farmers with less flexibility. This dynamic can both constrain farmers' power in the VC (in which they have to produce high-quality coffee to take part in the VC), but it can also be perceived as a framework enhancing farmers' bargaining power in which a fixed price gives less latitude for the downstream actor to exploit farmers lacking knowledge on quality grades (see price data, Figure 11). How these differences interfere with farmer livelihoods, particularly with regard to the opportunity cost of producing high-quality coffee, will be further discussed in chapter 5. Both types of interventions provide training to improve practices and quality (on average 0-5 days a year), but where the training is perceived as more useful among RC farmers (see Table 10).

Third, RC interventions do often enable two-way communication in which farmers access a channel to address needs, whereas for certified interventions, this was only seen in cooperative 1, which had several characteristics resembling an RC VC. As discussed above, this has the potential to empower farmers, and, given that farmer needs (to some extent) are considered by the downstream actor (RC), this increases their bargaining power in the industry. The channel for farmers to address their needs in certified VCs is restricted to the general assembly, which only takes place once a year, and constitutes a democracy likely to reproduce existing power dynamics.

4.3 Livelihood assets and outcomes

In this section, I will first provide an overview of the livelihood assets across the three VC configurations and emphasize some decisive disparities. Thereafter, I will discuss elements related to livelihood outcomes, including what farmers perceive as important for their livelihood. This analysis

⁵⁴ Close to all. I only encountered one actor that also buys lower quality.

is first and foremost descriptive, and I do not engage in a thorough discussion on the correlations between livelihood assets and outcomes.

4.3.1 Livelihood assets

The measure of livelihood assets is composed of a great number of variables, based on a combination of 1) the widely applied operationalization of SLA by the British Department for International Development (DFID), 2) an application of SLA with regards to smallholder coffee farmers (Neilson and Bray, 2017), and 3) an adaptation to the Timorese context and available information for this study. A thorough elaboration of all livelihood aspects is outside the scope of this project.

The capitals are operationalized in the following way (Table 11):

<i>Human</i>	<i>Social</i>	<i>Natural</i>	<i>Physical</i>	<i>Economic</i>
Education	Trust in local institutions	Size of farm	House facilities	Price per KG coffee
Food security	Object if disagree	Subsistence farming	Access to motorbike	Income other crops
Health	Presence of security net	Multi-crop strategy		Off-farm income
Received training	Access and selling to different buyers	Rehabilitation activities		Savings
				Veteran money from gov
				Loan (if they had to loan)

Table 11: Source: Survey, 2023

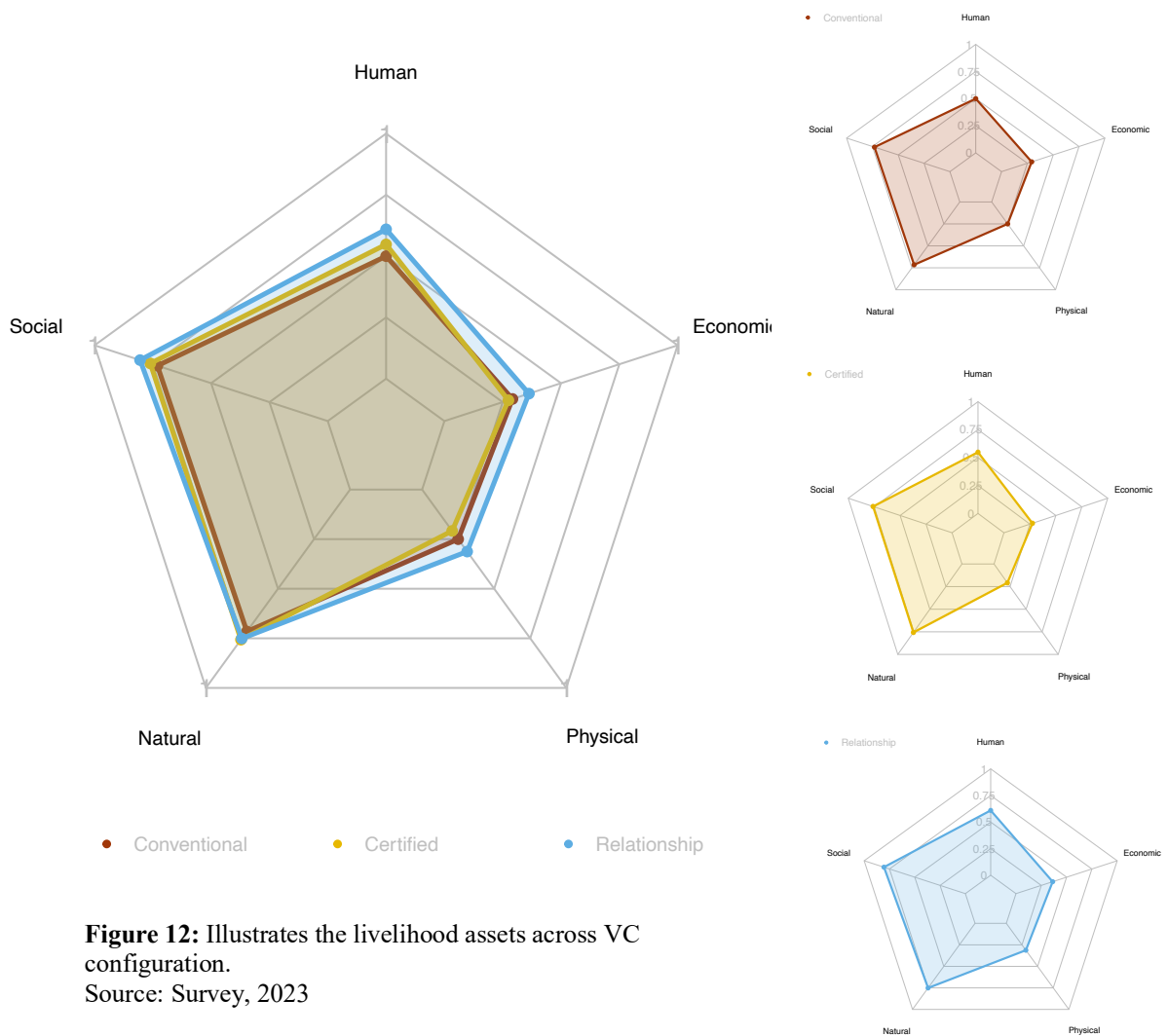


Figure 12: Illustrates the livelihood assets across VC configuration.
 Source: Survey, 2023

Figure 12 illustrates the livelihood assets across all three VC configurations. Despite farmers affiliated with RC VCs score better in all livelihood assets (not statistically significant), the livelihood assets are remarkably similar across the VC configurations. However, within the various capitals, there are some important and significant differences.

Human

Conventional farmers score slightly lower on human capital⁵⁵, but this is predominantly because of the difference in farmer training, which is significantly higher in both RC and certified VCs. While health in fact has a lower score in the certified and RC VCs, they tend to have higher expectations for their children’s education than conventional farmers.⁵⁶

⁵⁵ 7% lower (significantly lower) than the two other groups.

⁵⁶ Health effect is significant at $p < 0.1$, and education expectation significant at $p < 0.05$.

Social

The data material suggests social capital to be improved in RC VCs, but the difference is rather uncertain and small.⁵⁷ There are however some important differences across the VC configurations. Social capital on aggregate seems relatively similar across all VC configurations, but sub-categories differ. Farmers in intervened VCs report a higher degree of trust in local economic institutions, as well as a greater trust that they will receive help in the case of an emergency, with the effect being higher in RC VCs.⁵⁸ If the belief that they will receive help in the case of emergencies does in fact materialize, the impact on farmer vulnerability can be significantly improved through VC intervention. This, and the fact that both types of interventions link farmers to a downstream ‘rich uncle’, can be a component that positively contributes to farmers’ network and social capital.

On the other hand, weakening the way I have operationalized social capital, is the fact that farmers in intervened VCs seem to be more dependent upon one downstream buyer – a significantly higher proportion of conventional farmers report access and having sold to different downstream buyers.⁵⁹ This has the potential of increasing farmer’s vulnerability – especially in cases where the intervention fails. This effect may be caused by the fact that farmers in conventional VCs are less incentivized to produce either cherry or parchment (in some of the interventions, the downstream buyer only procures either cherry or parchment). It may however also be caused by the intervention leading to high prices or expectations of so, making the presence of conventional actors less likely. Thus, although several findings suggest improved social capital, the results are ambiguous. The possible long-term impact of the network effect is further discussed in the conclusion chapter.

Natural

No major differences regarding natural capital are found across the three groups. Whereas RC farmers report smaller farm sizes⁶⁰ (which are not affected by the intervention), subsistence farming and multi-crop strategy are close to equally important for all surveyed farmers. A slightly higher proportion of farmers in certified and RC VCs have done some form of rehabilitation on the farm, but the difference is not significant.

Physical

The dataset suggests no differences across the VC configurations regarding physical capital.

⁵⁷ The social capital increases from 0.74 (conventional mean value) to 0.84 (RC mean value) at $p < 0.1$. For certified VCs, the difference is positive but marginal and not statistically significant.

⁵⁸ Both measures are statistically significant.

⁵⁹ Both being statistically significant ($p < 0.5$). The proportions are lowest in certified VCs.

⁶⁰ As the question of farm size is based solely on farmers perception of it, numbers must be analyzed thereafter.

Economic

The economic capital in the case of smallholder coffee farmers is a rather complex variable, consisting of many components. Only considering the financial capital deriving from coffee, the interventions do have a significant effect – especially in the RC VCs. In the case of cherry, farmers in RC earned in 2022 50% more per kilo than in the conventional VC.⁶¹ Looking at parchment, the price difference between conventional and RC was in 2022 over 100%, while the surveyed certified cooperative producing arabica did not provide a significant price premium compared to conventional farmers.⁶² Contrary, looking at cooperative 1, producing only robusta, the premiums ensure that farmers on average receive prices 20% higher than in the conventional market for robusta.⁶³

The positive effect on economic capital is however hampered by the fact that for many, coffee income is only one of several livelihood strategies – and in many cases only constitutes a minority of the household income. The data on non-coffee income is rather limited and the biased selection of farmers induces sources of error⁶⁴, but indicates both off-farm income and income from other crops to be higher in conventional VCs.⁶⁵ Regarding access to veteran money, savings, and size of loan, no significant differences are found – thus suggesting the intervention to not affect these variables. Despite the price effect from coffee production being substantial and significant (especially in the RC chain), the overall economic capital remains rather similar across all VC configurations.

4.3.2 Livelihood outcomes

How do you define, operationalize and measure someone's livelihood? In an attempt to avoid replicating the longstanding European tradition of an 'intentional development'-approach, in which an external part defines what is understood as an improvement, a part of this research has been dedicated to comprehending what Timorese coffee farmers perceive as important for their own livelihood. Findings from this effort provide the foundation for how livelihood outcomes should be perceived, and thus to what extent a livelihood improvement across the VC configurations is prevalent.

In addition to qualitative interviews, the survey collected data on which of the following livelihood outcomes farmers would prefer, asking every farmer to rate the elements from most important to least important: 1) higher income – but volatile, 2) less volatile income – but on average

⁶¹ Taking the last three years into account, the difference is slightly smaller.

⁶² The data is limited and uncertain from village 4, with extensive variations between farmers.

⁶³ $p < 0.01$

⁶⁴ In village 6, 50% of the surveyed farmers were last year working part-time at the wet mill.

⁶⁵ Difference is not significant due to the high standard deviation.

less than alt. 1), 3) education and health, 4) food security, and 5) fulfillment of expectations related to the cultural belief system (*Uma lulik*, see chapter 5.2 for details).

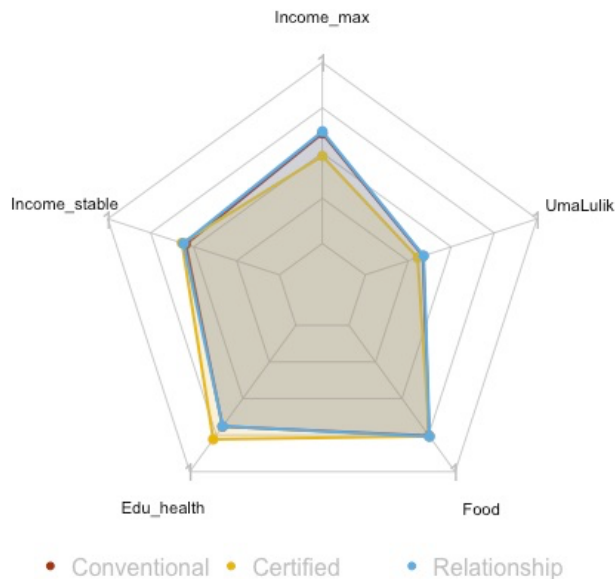


Figure 13: Illustrates the perceived importance of different livelihood outcomes from a farmer perspective
Source: Survey, 2023

As Figure 13 suggests, preferences remain highly similar across the VC configurations. Food security and education and health are the two most important livelihood elements in all configurations, while fulfillment of expectations to the cultural belief system of *Uma lulik* scores significantly lower than the other elements.⁶⁶

As some of these livelihood elements are rather sensitive questions, cultural sensitivity – especially being an external researcher engaging with the community for only a day – became important, thus constraining parts of the data collection. I therefore do not have any

materials on e.g., to what extent a farmer was able to fulfil cultural expectations.

The livelihood outcomes consist of five main categories. They mainly derive from my perception of what is important for Timorese farmers’ livelihoods, building on insights from my experience in the country, as well as the fieldwork in 2022. Selection of outcome variables is also inspired by the DFID operationalization of SLA. Elements that very likely not have been affected by a VC intervention are not included, e.g. level of education for the farmer.

⁶⁶ See 5.2 for a discussion on this element.

Livelihood outcomes are thus operationalized in the following way (Table 12):

<i>Income (max)</i>	<i>Income (stable)</i>	<i>Education&health</i>	<i>Food security</i>	<i>Wellbeing</i>
Price per KG coffee	Level of diversified economy ⁵⁴	Educational expectation for farmers children	Subsistence farming	'Concerns for the future'
Income from other farm activities	Dependency on coffee for income	Farmer health	Questions on food security and quality	'Content life'
Income from off-farm activities	Access to VC that ensure minimum price		Dependency on food from the market	

Table 12: Source: Survey, 2023

While the perceived importance of each livelihood component does not vary significantly across VC configurations (Figure 13), the story at the individual level is different. Thus, to calculate the livelihood outcomes, each individual's preference is taken into account, and where their first preference is given the weight 1, the second the weight 0.8, etc.

Figure 14 illustrates the livelihood outcomes. The findings will be analyzed across the VC configurations and not across the livelihood components.⁶⁷

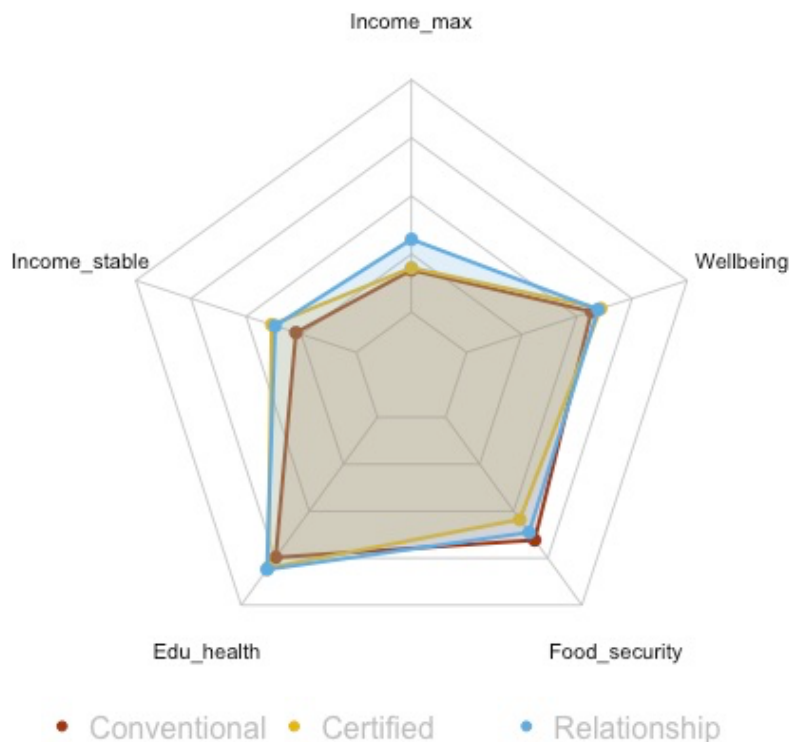


Figure 14: Illustrates the livelihood outcomes across the three VC configurations. Source: Survey, 2023

⁶⁷ Comparison between the elements is difficult due to the way they are operationalized. E.g., it is very difficult to obtain a max score in income (max) as the elements are mutually exclusive.

Findings

Income

As earlier noted, while RC – and to some extent certified – VCs do increase the coffee price, income from other economic activities is in fact lower. This reflects the potential opportunity cost of producing high-quality coffee, which will be further discussed in chapter 5.

As visible in Figure 14, the level of income stability deviates less across VC configurations.⁶⁸ Whereas conventional farmers on average is less dependent upon coffee for their income and have a greater diversification in their livelihood strategy, neither effect is significant. Both RC and FT interventions do, although through different means, offer some kind of minimum price guarantee, thus making farmers' income from coffee more stable.⁶⁹

Education and health

The data suggests that farmers' health is better in the conventional chain compared to the other⁷⁰, while educational expectations are slightly higher in the intervened VCs.⁷¹ Neither difference is of a substantial size, suggesting these livelihood outcomes to be relatively similar across VC configurations.

Food security

Without differences being substantial, the data do suggest food security to be highest among conventional farmers. Although there are no differences in farmers' perceptions of their own food security, farmers in RC and certified VC are more dependent upon coffee production to sustain a steady food supply. Despite differences in the level of subsistence farming being minor, for conventional farmers subsistence production constitutes a significantly greater portion of the household's food supply compared to the other VCs⁷², suggesting that their food security is less vulnerable to volatility in monetary income. Furthermore, conventional farmers responded that their food supply is less dependent upon coffee production than farmers in the other VC configurations.⁷³

⁶⁸ Sample bias induces an important source of error in the measure of 'level of diversified economy. See chapter 3.

⁶⁹ How the FOB minimum price translates into a minimum farmgate price is inconclusive based on the data at hand (see chapter 4.2.2).

⁷⁰ $p < 0.1$

⁷¹ $p < 0.05$

⁷² $p < 0.05$

⁷³ $p < 0.1$

Wellbeing

Being the livelihood outcome most difficult to operationalize, it is no surprise that no significant differences are found across the VC configurations.

Limitations

These findings do however face significant limitations – higher than for the rest of the analysis. As livelihoods, like argued, are composed of a complex set of elements, it becomes harder to control for biases, and the magnitude of multiple variables and confounders impossible to control for increases, thus causing both selection bias and omitted variable bias. The livelihood outcomes are also based on unmatched data (due to a lack of comparable variables (see chapter 3), which further increases the selection bias at hand. Livelihood models are also susceptible to simultaneity bias, which occurs when the dependent variable (here: livelihood outcome) determines the independent variable (here: livelihood assets, institutional setting, and VC characteristics). Thus, the diversification of farmers' income affects the natural capital of a farmer (e.g., how much energy he uses on rehabilitation), but the natural capital also affects the level of diversification. This bias does not hamper the validity of the livelihood asset, nor the outcome, stating that livelihood outcomes remain close to equal across all VC configurations, but it makes it very difficult to assess where the asset or outcome originates from. For that reason, I do not engage deeply in a discussion of correlation and causality in this chapter, but rather provide a descriptive picture.

5. Discussion: Livelihood and power dynamics

Farmer livelihoods are complex and are constituted by a vast number of factors. As coffee for many farmers is their primary source of income, it remains an important part of their livelihood strategy. But farmer livelihoods are influenced by a myriad of local aspects, and factors external to the coffee VC are often more influential. For a Timorese smallholder farmer local structure inherited from the colonial time, local cultural power dynamics, or access to health and education institutions may all compose livelihood components more important than coffee.

Despite the potential of increased farmer income through higher prices, the VC interventions investigated in this project show that no or mixed effects have been found taking a wider livelihood perspective into account (chapter 4.3). Isolated, only considering the coffee VC, the interventions have increased the bargaining power of farmers, thus enabling them to capture more value at farmgate, receive a more consistent price, and produce higher quality coffee. This effect is, as argued in chapter 4.2, greater in RC VCs. For most farmers, this is a livelihood improvement in itself: For a Timorese smallholder farmer that lives in extreme poverty, income remains a critical property. The discussion below does not seek to undermine this, but rather to comprehend the interventions as part of a wider livelihood perspective, as livelihoods take place in a complex environment and consist of many components – with coffee production only being one. The lack of improvements in farmer livelihoods, despite the intentions of the interventions, is likely caused by a set of reasons. The discussion below will seek to answer why and how the alteration of power dynamics in the VC does not translate into livelihood enhancements. The analysis will maintain a focus on constitutive power and how it unfolds both in the coffee VC and in the broader social and cultural environment.

The first part of the discussion will analyze how constitutive power deriving from historically determined notions of hierarchy, culture, and farmer identity, as well as constitutive power exerted by VC actors, shapes how livelihoods are impacted by the intervention. Included in this section, and affiliated with the umbrella term ‘farmer empowerment’, is a discussion upon notions of quality and opportunity cost, and a term I label ‘farmer paradox’ will be presented. The second part of the analysis seeks to comprehend the constitutive power exerted by local (not explicitly VC) actors and the cultural system of *Uma lulik*, which is of great importance in most Timorese communities.

The chapter will be guided by a wide understanding of livelihood, informed by the livelihood preferences of chapter 4.3. It is important to note that the discussion in this chapter does not constitute a comprehensive list of elements that influence livelihood outcomes for coffee farmers. It is rather an effort to shed light on some aspects constraining the impact of coffee VC interventions, and consists

of the elements I have found to be most relevant in answering the question at hand: *What constrains altered power dynamics in the coffee VC from significantly changing farmer livelihoods?*

5.1 VC power dynamics and farmer empowerment

Coffee is – like most other modern global VCs – an industry driven by buyers, with power centered among multinational companies in the global North (Ponte, 2019). The further upstream in the VC, the weaker becomes the power to influence the industry. Through this imbalance, downstream buyers can define production methods, prices, and practices. This has constrained farmers from taking part in value-added activities, causing a situation in which the farmers' capture of the entire chain has decreased from 20% in the 1970s to below 5% today (Ponte and Daviron, 2005; Ponte, 2019). For farmers to increase their value capture and regain some ownership in the industry, farmer empowerment has been argued to be crucial (e.g., Edelman et al., 2022). Empowerment is also considered an element 'intrinsic' to the SLA (Ashley and Carney, 1999; Krantz, 2001). In this section, empowerment is understood both as a personal attribute (knowledge, abilities, self-determination, etc.) and as a social attribute (horizontal and vertical networks, etc.).

The question thus becomes to what extent the VC interventions in question lead to farmer empowerment, whether they constrain it, or whether social and cultural aspects stimulate unintended impacts of the interventions.

In a country such as Timor-Leste, in which colonial and occupational powers until recently governed, the importance of empowerment cannot be overstated. In the coffee sector, this is true along the entire VC. Although exceptions exist, the industry can, to highlight the importance of empowerment, be summarized as such: Farmers lack the knowledge of how to pick, and the capacity to process, high-quality coffee, farmers lack the insight of how to increase productivity, and farmers lack the skillset and ability to 'move up the ladder' in the VC. Downstream institutions are poor, often exploitative, and do not support education, creativity, entrepreneurship, and ownership – very few Timorese has a major management position in the industry. A thorough analysis of reasons for this is another thesis on its own, but I will highlight a couple of them.

Empowerment: A historical background

Creativity and farmer knowledge are by many argued to be heavily constrained by colonial and occupational history. Timorese have since the Portuguese first established themselves in the 16th century been playing the inferior role and been accustomed to obeying the colonial rulers, thus not incentivizing creativity and entrepreneurship. Historically, Timorese living in the west side of the country – including the biggest coffee district Ermera (the focus area of this project) – were by the Portuguese labeled *calades* (Kammen, 2010), which can be translated to ‘keep silent’, highlighting how the locals obeyed the rulers even though they disagreed. These structures are still prevalent and constitute a power dynamic (constitutive power) ingrained into the Timorese mentality: One-quarter of the farmers surveyed responded that they will not object at a community meeting although they disagree (see Table 13). I find no differences in this variable across the VC configurations.

Furthermore, the colonialized production of coffee never gave Timorese the opportunity to develop the industry and learn from it. The occupation by Indonesia made matters much worse, leaving plantations unmanaged for decades, causing a disruption of knowledge by many argued to be an important reason for the lack of farming skills today (Khamis, 2015). In combination with internal displacement during the occupation, and colonial structures in which locals were forced to work on a plantation (Howson, 2022), this has created a situation in which a great portion of farmers do not act – nor have they ever aspired to act – as farmers.⁷⁴ With many coffee farmers being people that live on a land with coffee plants, a more accurate account would perhaps be “Farmers by accident” (Industry expert, p. 68), or “Coffee harvesters rather than coffee farmers” (Exporter, p. 8). Many do not come from a long line of coffee farmers, and some may be either descendants of coffee workers on Portuguese plantations or internally displaced people that live in a place with coffee trees. As such, historical structures and incidents have led to the current situation in which many farmers do not seem to be very engaged with farming, thus being a constitutive power affecting the Timorese coffee industry. Consequently, farmers’ dedication to being farmers, as well as their potential to acquire a sufficient farmer skillset, is hampered. This situation is further strengthened by the earlier discussed

	Object if I disagree	
	Dependent variables	
	If I disagree in a community meeting, I will object	
	(1)	(2)
Certified intervention	0.1 (0.5)	
RCM intervention		0.4 (0.5)
Constant	3.6*** (0.4)	3.5*** (0.4)
Observations	40	39
R ²	0.002	0.02

Note: *p<0.1; **p<0.05; ***p<0.01

Table 13: The variable is measured with a Likert scale (1-5).
Source: Survey, 2023

⁷⁴ This opinion is hold by many VC stakeholders.

demonstrative power exerted by CCT (chapter 4.2.1.2) supporting the practice of producing a low-quality product, as well as the institutional power deriving from the government's policy on land tenure. As discussed in 4.2.1.3, questions of land tenure – one of many legacies from the colonial and occupational periods – is a prevalent issue in many areas, argued (e.g., MAF, n.d.) to constrain the incentive to rehabilitate. It may also hamper the likelihood of the farmers – or harvesters – belonging to the group 'farmers by accident' to identify themselves as true coffee farmers if they do not legally own the land on which they live.

This situation is for instance reflected by the many old trees – some of which date back to the colonial era – suggesting that many coffee plantations have been neglected or badly maintained.

We have recently done some rehabilitation. But historically, we have just been waiting until the coffee tree dies. (Farmer interview in village 2, p. 65)

As such, the constitutive power deriving from these historical structures has a great impact on the coffee industry of today, shaping an environment in which farmer empowerment becomes a key attribute to address.

Empowerment: VC initiatives

All VC interventions investigated are primarily focusing on farmer empowerment through knowledge enhancement on best practices. Focusing on RC VCs, the goal of this empowerment is primarily not to improve the bargaining position of farmers vis-à-vis local collectors, or to radically improve their livelihoods but to source high-quality coffee. The specialty coffee industry, into which RC usually is embedded, has quality as its most identifying characteristic, making these actors dependent upon sourcing coffee above a certain quality grade. Not only does it exclude farmers that live below a certain altitude (in Timor-Leste, the cut for most RC VCs goes at around 1400 MASL), but it also makes interventions biased toward improving quality. Improved knowledge of how to produce high-quality coffee has the potential of increasing farmers' bargaining position, especially in the presence of local competition among buyers, and it also provides farmers with a price premium. At the same time, at least half of the RC actors only purchase cherries, thus farmers not improving downstream processing techniques and know-how.

More importantly, neither price – nor demand – is the main problem for Timorese farmers: Productivity remains the bottleneck of the industry, and the main component constraining farmers

from significantly improving income.⁷⁵ This is highly intertwined with the inattention and underdevelopment deriving from historical sources (as discussed above).

Yield is 10-15% of what it should be. We should be able to produce, being organic, 60-70% of what a conventional coffee farm would get if the farmer practices were done properly.

Now we produce on average 100 – 200 KG green beans per hectare. We believe [...] that we can reach 700 KG/hectare and still produce organic. (Exporter, conventional VC, p. 14)

Thus, with the current level of production, a 50% increase in price will for the majority of farmers not constitute more than a 100 – 200 USD increase in yearly income. Yet, to my knowledge, no – or very few – interventions have succeeded in achieving this, considering both VC configurations. One reason may be that it is costly, with farmers that live in extreme poverty not having rehabilitation as a feasible livelihood strategy. But, contrary to quality improvements, buyers lack the same incentive to increase productivity, making them less likely to invest in expensive rehabilitation programs. For many farmers, they thus end up in a downward spiral, in which low income makes rehabilitation difficult, which again hampers future income.

Coffee and Culture

Despite the colonial roots, the brutal history, and the fact that many farmers do not manage their plantations in a very efficient way, coffee remains an important part of the local culture. Close to all farmers I have encountered throughout the project emphasize how coffee is an important cultural heritage inherited from their ancestors, and a tradition necessary to sustain. These dynamics constitute a constitutive power – deriving from colonial structures – essential to understanding the logic of farmer livelihood strategies. When the RC intervention took place in village 6, many farmers who had moved on to off-farm jobs gave up on these livelihood strategies to again pursue coffee. Although the off-farm activity for most led to a higher, more stable, and more consistent income than coffee, people prioritized coffee due to its cultural value and identity marker.

Coffee was, as earlier outlined, introduced early in the 19th century, and forced upon the Timorese population by the colonial rulers. Despite this history, they perceive production as so culturally important and with such an amount of pride that they give up better paid off-farm options. At the same time, they still have not acquired the skillset to manage production in an efficient way. This relationship, in which culture refrains people from economic upgrading, despite many being

⁷⁵ Not a single industry actor I interviewed disagreed on this point.

poor farmers, I label the *'farmer paradox'*: Farmers are culturally bounded to an industry in which they have few opportunities to succeed. Paradoxically, the colonial era both introduced coffee, making it an important cultural heritage, and developed structures making it difficult for Timorese to flourish in the industry.

Consequently, interventions 'empowering' rural communities through improved farming practices may influence them – with culture a crucial property – to continue or return to a livelihood strategy characterized by volatile yields and no continuous income throughout the year. Many farmers thus become stuck in a bad cycle, unable to invest in an unproductive farm. Every single exporter, even the ones with the highest proximity and levels of social commitment, argued that they provide farmers with an additional opportunity, without considering the opportunity cost of time-intensive high-quality coffee farming. I do not argue that exporters take advantage of the cultural influence coffee constitutes, but the deeply rooted perception and historical value of coffee certainly affect strategic livelihood decisions of farmers. The earlier explained Timorese mentality of subordination to an oppressor, deriving from centuries of colonialism and decades of occupation, further strengthens this dynamic.

Opportunity cost

And as in many other coffee-producing communities, the opportunity cost of coffee production is considerable (e.g., Vicol et al., 2018; Fairtrade.net, 2023). Even the worst paid job I encountered in rural Timor-Leste, that gave 3\$ a day, would more than double the income of most coffee farmers on a yearly basis.⁷⁶ Income from coffee is also highly volatile, with both prices and yields varying greatly, and where climate change possesses an immense challenge for the future (Chandra, 2016). The interview below describes a situation after the RC intervention in village 6 took place, clearly demonstrating the relationship between culture, coffee, and the opportunity cost, suggesting interventions to further nourish the constitutive power of culture in coffee production.

A lot of farmers had businesses: Kiosks, selling vegetables, transportation. When the intervention took place, farmers started to focus more on coffee and rehabilitation. We got information on practices and motivation. [*What happened to the total income?*] Income before was higher. Income from coffee is only once a year. Off-farm income is both more stable and higher. Farmers liked their old business life, but they would also like to take care

⁷⁶ 3\$/day - 18\$/week – 936\$/year. With some days off, an income of 800\$ is not without reach. Coffee farmers income average at around 300-400\$/year (Own data, 2023).

of their culture and heritage. It is more work with the coffee, but it is a part of our identity, and we appreciate it. (Local manager, RC, p. 60).

As earlier discussed – without being significant⁷⁷ – the dataset suggests off-farm and other crop income to be greater in conventional value chains (Table 14).

However, the constitutive power of culture to maintain coffee production in Timor-Leste may be changing. The rapid uptake of modern technology among youth – even in rural areas – has exposed many future farmers to other ideals and lifestyles, possibly constraining the power of coffee as a cultural heritage. And despite culture and tradition still being important among the younger generation, it is to my

knowledge a great deviation between generations on how deeply rooted these cultural norms and beliefs are. Several young heirs of coffee farmers described to me a situation in which they do not perceive farming to be their main source of income in the future: They will pursue off-farm jobs but come back and harvest coffee once a year. From a rational economic point of view, such a strategy makes sense, although the magnitude of the opportunity cost (only taking economic factors into account) may be contextual and vary. If the ‘cultural cost’ of pursuing off-farm jobs diminishes with a new generation less attached to the historical importance of coffee (i.e., the constitutive power of culture weakens), the opportunity cost of coffee production may strengthen the narrative of coffee farming as an unfavorable livelihood strategy. On the other hand, it is worth noting that off-farm careers in Timor-Leste come with challenges. Unemployment rates are high (UNDP, 2018), and a livelihood strategy composed of off-farm activities is not certain to be neither sustainable nor available. One of the interviewees argued that several farmers in his community had returned to farming after failed efforts to get off-farm jobs or to establish off-farm activities.

Alternative cost of coffee production			
	Dependent variables		
	Off farm income (1)	Other crops income (2)	Dependency on coffee for food security (3)
Value chain intervention	-152.2 (232.9)	-86.4 (91.9)	0.4 (0.3)
Constant	584.0*** (186.7)	202.9*** (74.0)	4.0*** (0.3)
Observations	56	57	61
R ²	0.01	0.02	0.02
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01			
Alternative cost of coffee production (matched)			
	Dependent variables		
	Off farm income (1)	Other crops income (2)	Dependency on coffee for food security (3)
Value chain intervention	-359.3 (306.1)	-222.8* (116.8)	0.4 (0.4)
Constant	809.2*** (259.9)	310.3*** (99.2)	3.9*** (0.3)
Observations	43	43	46
R ²	0.03	0.1	0.03
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01			

Table 14: (1) and (2): USD/year. (3): 1-5. I have no quantitative income data on non-farmers.

Source: Survey, 2023

⁷⁷ Other crop income is significant (p<0.1) for the matched dataset.

Production and influence of high-quality coffee also face opportunity costs on the farm, as most farmers in Timor-Leste (all farmers in my survey) pursue a multi-crop strategy. More time and energy put into coffee may impede the production of other crops, but since harvest and management of the various crops take place at different times throughout the year, the time spent on high-quality production is more likely to affect off-farm activities. The distribution of land between coffee crops and other crops may be more likely to be affected by these VC interventions: As the unit income for sold coffee increases, so does the incentive to produce more. The data (Table 15) provides ambivalent results, and where no effect is seen on the distribution of land between coffee and other crops⁷⁸, RC farmers have a significantly smaller proportion of their annual food consumption from subsistence production.

As the dataset is rather limited, conclusions are hard to draw. If the VC interventions do in fact lead to farmers being more dependent on monetary income to provide food for the household, it might make farmer

livelihoods more vulnerable. As shown in chapter 4.3, the dataset clearly suggests food security to be an important property for farmer livelihoods – substantially more important than income. One of the few farming women interviewed (RC) emphasized that she would prefer a livelihood strategy composed of a higher degree of subsistence production rather than the monetary-dominated composition the household currently pursued. On the other hand, the substitution of subsistence farming with food from a market also has its advantages, enabling a more diverse intake of nutrients⁷⁹.

The tendency in the data, in which farmers in RC VCs, and to some extent in certified VCs, prioritize coffee crops over other crops may also derive from another source: the constitutive power exerted by the exporter. Opposite of the norm set out by CCT (see chapter 4.2.1.2), RC and cooperative actors educate farmers on quality grades and practices with the goal of altering the basic

Alternative cost of coffee production (Certified intervention)			
	Dependent variables		
	Diversified intake of nutrients (1)	Proportion of food from subsistence production (2)	Distribution of land: Coffee vs other crops (3)
Certified intervention	0.1 (0.2)	-0.1 (0.4)	-0.01 (0.4)
Constant	0.6*** (0.1)	2.9*** (0.3)	3.0*** (0.3)
Observations	41	22	22
R ²	0.01	0.003	0.000
Note:			*p<0.1; **p<0.05; ***p<0.01
Alternative cost of coffee production (RCM intervention)			
	Dependent variables		
	Diversified intake of nutrients (1)	Proportion of food from subsistence production (2)	Distribution of land: Coffee vs other crops (3)
RCM intervention	0.2 (0.1)	-1.0*** (0.3)	-0.2 (0.4)
Constant	0.6*** (0.1)	2.8*** (0.3)	3.0*** (0.3)
Observations	39	29	30
R ²	0.1	0.2	0.01
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 15: (1): 0-1. (2) and (3): 1-5. The regressions suggest the RCM intervention to alter domestic food production, while no significant differences are seen in certified VCs. Source: Survey, 2023

⁷⁸ This variable has several sources of error.

⁷⁹ Table 15 indicates that RC farmers believe their food intake is more diverse than the other VC, but the difference is not statistically significant.

notion of quality. For farmers to access the premium price (or to receive 100% of it), they adopt, and by such the intervention transforms the fundamental idea and philosophy of coffee production among producers. This changed perception has also transformed the notion of coffee production on an individual level, and several farmers emphasized a greater feeling of pride in the process, potentially being more likely to prioritize coffee production – not based on an economic incentive. The constitutive power of the downstream actor to reshape the norm of production may thus strengthen the tendency to pursue a less diversified livelihood strategy (less subsistence production, and more dependency upon the coffee yield).

Thus, although coffee VC interventions alter the local power dynamics, establishing relationships in which the farmer often has a better bargaining position compared to conventional farmers, and the premium (especially in the RC VC) is significant, the opportunity costs confine and/or neutralize the income effect of the intervention.

Conclusion farmer empowerment

Above, I have argued that coffee farming takes place in an environment heavily influenced and constrained by colonial structures and occupational history, both causing what I refer to as the ‘farmer paradox’. The opportunity cost of high-quality production is to some extent debatable, but arguably prevalent in many cases. Based on the constitutive power of RC and certified VC interventions, often leading farmers to pay more attention to coffee farming, such interventions must incorporate farmer empowerment at a more fundamental level. Following Edelman et al. (2022)’s concluding discussions on the impact of RC interventions, empowering farmers must not only take into account “acquiring knowledge about physical and sensory quality, its definition, and the world of consumers”, but also “establishment of horizontal and vertical networks, self-determination, and personal development to advocate for themselves” (p. 32). Such a development would enable Timorese themselves to take ownership and responsibility in the VC, with the potential of overcoming some of the colonial legacies (e.g., constrained creativity) still prevalent.

Unfortunately, this is in most VCs in Timor-Leste only the case to a very limited extent. Certified VC interventions have no elements of farmer empowerment except a limited amount of training on farming practices and some education on cooperativism.⁸⁰ RC actors, however, tend to have a stronger engagement in quality enhancement (given the fundamental significance of quality for their business model), but does rarely do – or have the capacity – to run projects aimed at

⁸⁰ FT have initiated a girl school in Timor-Leste with public funds, but the number of students remains low (20 students).

empowerment at a deeper level, with the proximity of the relationship being an important determinant (see chapter 4.2.3). Some interventions that took place soon after the independence are by some argued to have become entrenched, thus not making room for locals to take leadership responsibility. Consequently, interventions that do not enable Timorese to take part of the development of the industry may reproduce colonial dynamics rather than countering them. An interview with a Timorese stakeholder argues in the following way:

[How much of the low productivity is due to the colonial and occupational history?]

A lot. During the colonial time, we lacked initiative and creativity. Even if we knew something was wrong, we would still do it and say it was good. And then during the occupation, our mentality got disrupted, and we lost a lot of knowledge. And when we got independence, NGOs came and gave us money and helped us without giving us ownership. We still haven't learned. *[Do you think RC interventions contribute in a positive or negative way?]* I think it is good – after the independence, they ensured a market for coffee. But we need to give more power to the farmers. *[What do you mean by power?]* Ownership. We must prepare locals to take over and manage the structures and export. [...] We should let the locals run the business, and have their own creativity. *[Do you believe some of these interventions constrain Timorese creativity?]* One must make a reflection if a community can take ownership. But I think it is time, it has been 20 years already (since the independence). It is not sustainable if the farmer remains dependent on these structures. (Industry actor, p. 24)

One might thus make the argument that quality requirements, based on a demand-driven (and defined) notion of quality, increase the barrier to local ownership. In demand-driven VCs, upstream producers have to adjust their production with regard to the downstream requirement, creating an environment in which the downstream actor sets the condition and defines the power relations (Ponte, 2019). The higher requirements or the more such requirements deviate from local practices, the more dependent farmers and local stakeholders become to achieve a level of skills and knowledge to independently manage the domestic VC. In such cases, farmer empowerment and knowledge transfer become even more important for it to truly benefit and (potentially) enhance farmer livelihoods. This argument holds true for both RC and certified VCs.

On the other hand, brain drain constitutes an important challenge for a development path in which downstream management is adopted by Timorese, with many skillful young Timorese seeking

opportunities overseas. One RC actor described a situation in which the majority of his young Timorese local staff resigned from the positions – albeit it being “interesting and valuable positions”, where they became a “big part of the project”⁸¹ – to pursue educational or job opportunities abroad. This raises more fundamental questions about value distribution in the whole GVC – not only domestically in production countries. Is it possible to ensure that young local talents invest their time in such an industry (if given the chance) as long as the vast majority of value distribution in the coffee GVC, as well as the power to define it, remains within downstream actors located thousands of kilometers from the production site?

The discussion above underscores the complexity of the problems at hand, and which is difficult for coffee actors – regardless of how philanthropic or development-oriented their interventions may be – to address. At the end of the day, these interventions are first and foremost based on an exchange centered around coffee: A farmer produces coffee in a certain way and is rewarded with a somewhat better price. And despite roasters and importers advocating their positive impact on farmer livelihoods to the end consumer (both prevalent in certified and RC chains), no exporter, manager, or stakeholder interviewed in this project perceive these interventions to significantly change farmer livelihoods. The complexity of the development issues at hand may thus require public-private initiatives targeting issues at local, regional, and national levels. The government rehabilitation program is such an example, but whether the government possesses the capacity, resources, and willingness to maintain such programs (apparently, they have a tendency to coincide with elections), remains highly uncertain.

5.2 VC power dynamics and local institutions

A number of studies on coffee VC interventions suggest that local institutions are an important determinant of whether interventions lead to farmer livelihood improvement or upgrading trajectories (Arnould et al., 2009; Ruben and Fort, 2012; Vicol et al., 2018). This is also the case in Timor-Leste. I have argued that in both RC and certified interventions, the local sub-collector is often substituted with an entity increasing farmers’ bargaining power. But coffee is not an isolated system, operating outside the demise of local hierarchies and structures.

In communities, several authorities exist, including the elected *xefe sucu* (chief of village), veterans from the occupational war, and the *Uma lulik*. In some cases, these authorities can be involved within the coffee VC, for instance as or through sub-collectors. Regardless of this, their main effect on farmer livelihoods remains outside the coffee VC sphere.

⁸¹ Citations from the RC exporter

Important in all communities is the *Uma lulik* and the belief system affiliated with it. *Uma lulik* is, briefly explained, both a physical entity (a ‘sacred house’) and a belief system closely affiliated with animism (Christiansen and Bexley, 2017). Every Timorese belongs to an *Uma lulik*, determined by the family roots of the man in the family. Families must provide a set of sacrifices (often animals or money) to events or happenings determined by the person in charge of the *Uma lulik*. And whereas some describe the consequences of not fulfilling these cultural expectations as purely spiritual – e.g., a belief that something bad will occur, others emphasize how it is a fear-based system with both spiritual and social (e.g., social belonging, local respect etc..) set of consequences if one does not comply with the expectations. Although most farmers perceive *Uma lulik* as less important than food, income, and education in the survey (see chapter 4.3.2), many interviewees explain it to be a comparison hard to make: Good health and education, sufficient food and coffee yield all originate from *Uma lulik* – many believe it to be a prerequisite for most livelihood elements.

The expectations to *Uma lulik* differ widely across communities, likely affiliated with local power structures. In some villages, one has agreed to reduce the size of sacrifices, with households paying less than 50 USD in relation to an event. In other villages, these expectations may be significantly higher, with 1500 USD⁸² being the highest sum I encountered during the fieldwork. An interview with a Timorese cooperative manager highlights the consequences of fulfilling such requirements.

If I have to pay Uma lulik, but don't have the money, I will have to borrow. [*How do get the money to pay it back?*] Sometimes farmers sell the land they have. Sometimes they have things with value that they can sell. But if you don't pay, people believe they will die (Cooperative manager, p. 21)

Thus, this institution constitutes an important part of many Timorese's identity, as well as being a potential extractive local institution.

These deep-rooted cultural traditions exert a constitutive power (which often partly is materialized as an institutional power) way more influential than any coffee VC intervention ever will be. Another question is to what extent overcoming these power structures is perceived, from the farmer perspective, as a positive development. All Timorese actors interviewed emphasized the system as an important part of the culture and their identity, and an institution to be respected. As these structures are deeply embedded and ingrained into the worldview of most Timorese, external

⁸² Either in form of an animal worth that much or in combination with money.

efforts to fundamentally change it resemble a continuation of colonial structures. Despite having focused a lot on decomposing this structure, I have not gained insight into how the money is being distributed, who pulls the strings, and how it is affiliated with the coffee industry – similar to the experiences of other foreign coffee actors. Thus, should interventions, driven by foreign agents, in any way try to overcome these structures?

It is, on the other hand, not possible to ignore the possible harmful effects this institution may have on farmers' livelihoods. Not only from a research point of view, but the majority of the Timorese interviewed in this project also highlighted the consequences for smallholder farmers. If an intervention seeks to have legitimacy in claims on its social impact, these institutions are of great threat and may capture great parts of the benefit, especially with most VC interventions contributing to livelihood improvements through monetary premiums.

Comparison of different VCs' ability to work with local structures

The ability to work with local structures and ensure that farmers capture as much as possible (even in an environment with extractive institutions) is significantly higher in RC than in certified VCs.⁸³ The closer the relationship with individual farmers or communities, the better they comprehend the need of farmers in relation to these structures. Presence in the community and a high degree of proximity remains especially important as the practice of *Uma lulik* deviates significantly across communities and regions. One RC actor, characterized by a high degree of proximity and social commitment, had for instance established a pig farm, in which local farmers could buy a pig if needed to *Uma lulik* for a low price and potentially save around 800 USD⁸⁴ – significantly more than what most farmers would make from a coffee harvest. Another RC actor argued in the following way:

[How do you avoid elite capture in the VC?] Time and being on the ground. You have to be here. If we weren't on the ground, I believe the local value capture would change massively. *[In what direction?]* Probably towards the Liurai.⁸⁵ A farm leader was an old Liurai, and he felt he was entitled to more than the rest. *[How do you see these structures working out in other communities?]* You have to look at the *Uma lulik*, the hierarchical structures around that. Look at when the cultural events are coming, when someone dies, and who is pulling the strings in the background. (Exporter, RC, p. 43)

⁸³ There are significant differences also within the VC categories, and the argument is therefore meant as a general remark.

⁸⁴ Compared to the 'conventional' alternative.

⁸⁵ Liurai refers to rural indigenous leaders or simply 'king' (Howson, 2022).

The FT-certified cooperatives I investigated had several shortcomings making them less effective in countering these structures. First, the focus is primarily on compliance rather than development. The answers of both managers of cooperatives and local farm group leaders reflected the idea that if the activity is in compliance with the certification requirements, it is considered sufficient. Second, the FT system is set up with a minimum price at the FOB stage of the VC, potentially causing less focus to be targeted toward upstream local structures. Evidence of significant deviations – although the reasons to it remain inconclusive – between FOB and the farmgate price is found in the dataset (see chapter 4.2.2.3). Third, the institutional framework of certifications, in which local actors must comply with a set of centralized requirements, makes adaptation on behalf of local structures challenging. I have earlier argued that the institutional power exerted by the certification alters parts of the coffee VC power dynamic in favor of the farmer. However, its ‘one-size-fits-all’ rule-based characteristic makes it difficult to acknowledge and account for structures that is, isolated, not a part of the coffee VC, but highly influential for the farmer livelihood.

RC, on the other hand, especially the way it is defined in this project, is to a much greater extent in a position in which they can adapt practices and *develop* rather than *comply*. They are thus in a much better position to overcome or minimize elite capture – but the willingness to prioritize resources to it differs across VCs.

As a concluding remark, it is relevant to raise the question of whether VC interventions possess the power to overcome deeply rooted local structures, and to what extent a previous colony is better off with yet another foreign intervention altering local power dynamics. Susie Khamis, having written one of the few papers on the Timorese coffee industry in the last decade, emphasizes that coffee VCs are way too complex for any certification to fundamentally alter key dynamics. She concludes in the following way:

“For the foreseeable future, it is likely that small-scale initiatives will remain insufficient to categorically lift Timor-Leste’s coffee sector from a position of relative and absolute weakness” (Khamis, 2015, p. 496).

A reflection from an RC exporter tells the same story. On the question of whether he perceives the intervention to improve farmer livelihoods, he responded:

I don't think you expect to make quick changes in Timor-Leste, and if you think that you don't know the local context. If you don't build things slowly, it will be a house of cards falling down. Government and local institutional levels all play in. So, do I think that we change things in a dramatic way? No. Do I think farmers are better off than before? Yes. Do I think that this is a work in progress and require time? Yes, every relationship is that way.
(p. 42)

6. Conclusion

Through this project, I have sought to understand and decompose how 1) VC interventions affect power structures in the Timorese coffee VC, and 2) how such alterations of power structures enhance – or not enhance – farmer livelihoods. Despite the magnitude of the effects differing substantially, VC interventions have the potential to significantly alter power structures in the VC. I have argued that FT and organic certified VCs substitute the local sub-collector, enabling farmers to capture more of the value created through a shorter, more efficient, and more traceable VC, in which the institutional power deriving from the certification alters local bargaining power. The traceability of the chain ensures the *possibility* of capturing the premium of high-quality production. At the same time, the ability of cooperatives to overcome local power structures, which I argue to be significant, remains highly questionable: Several findings suggest the value distribution in the chain to be undemocratic, especially as cooperatives grow in size. In fact, competition seems to be a better proxy for enhanced value capture at the farm level.

I have also argued that RC interventions are – to a greater extent than the certified one – revising the local power dynamics, enhancing farmers' bargaining power by eradicating the power of the sub-collector, and setting up traceable and efficient VCs giving farmers access to significant premiums. The interventions do also ensure farmers a channel for two-way communication, enabling farmers to raise their voices. The combination of farmer training, high-quality production, and VC insight may induce higher competition in which farmers stand a better chance at capturing more value, thus altering the bargaining power in favor of the producer. The RC intervention, depending on the proximity of the downstream actor, does also have a greater potential than certified interventions to comprehend and work with local institutions. The level of proximity may however constrain the interventions' ability to upscale – in contrast to certified interventions who is designed to work in scale (e.g., Grabs, 2020a).

In theory, both VC configurations possess great features designed to improve farmer livelihoods. However, neither certified nor RC VCs seem to have made a significant impact on farmer livelihoods. As argued in chapter 5, livelihoods are composed of a great number of variables. Only considering income, farmers face a myriad of livelihood strategies, including subsistence farming, coffee farming, other cash crops (although the market is limited in many areas), as well as off-farm opportunities. As coffee rarely is the most lucrative option economically, the opportunity costs are significant. Interventions incentivizing farmers to pay more attention to coffee (and less attention to other activities) may thus have a deteriorating effect on farmer livelihoods. Another problem is that interventions co-exist against the backdrop of colonial and occupational structures, having put

Timorese smallholder farmers in a marginalized position from the very start, and constitutes structures difficult to overcome. Besides, the data suggests livelihood aspects outside the (immediate) coffee sphere to be considered as most critical. Historically and culturally bounded institutions, being important determinants for such non-coffee aspects, possess a great deal of constitutive power, and influence farmer livelihoods way more than any intervention is likely to ever do. Thus, to fundamentally improve farmer livelihoods, coordinated private-public interventions targeting central livelihood properties, farmer empowerment, and local structures are necessary.

Although I find little evidence that the VC intervention significantly improves farmer livelihoods, I cannot conclude that they will not have an impact over time, as findings face a number of limitations. As discussed in chapter 3, selection bias is likely to be present, both due to small sample sizes making the matching technique difficult to apply, and the practical challenges of fieldwork. Another major limitation to the credibility of the findings derives from many of the intervention being established recently. With both institutions and interventions not having had the time to fully flourish, they may comprise a greater impact than identified in this project. This argument is strengthened by the fact that the development issues at hand are of great complexity – many actors interviewed emphasized that change occurs over time. A small improvement from an intervention after five years may lead to a major enhancement in 50 years. Studying such interventions does however induce methodological challenges, as credible counterfactual becomes harder to obtain. To assess the long-term effect of VC interventions in relation to livelihood impact and further fill the research gap, future research should map and compare value chains established decades ago. If the construction of credible counterfactuals is possible, such research would provide reliable insight into how VC interventions truly affect the life of coffee producers.

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8. Appendix

All appendices are uploaded to this OSF-link:

https://osf.io/26ntp/?view_only=8a3d06b475944b13aed2709a2800ed62

Appendix 1: Qualitative interviews April 2023 (Own data, 2023)

Appendix 2: Quantitative survey questions

Appendix 3: Quantitative survey results

Appendix 4: R-codes

Appendix 5: Qualitative interviews July 2022 (Own data, 2022)