

Coffee, Poverty &

Kafé, Pobreza &

Economic Development

Dezenvolvimentu Ekonomia

in Timor-Leste

iha Timor-Leste

RESEARCH REPORT

2013



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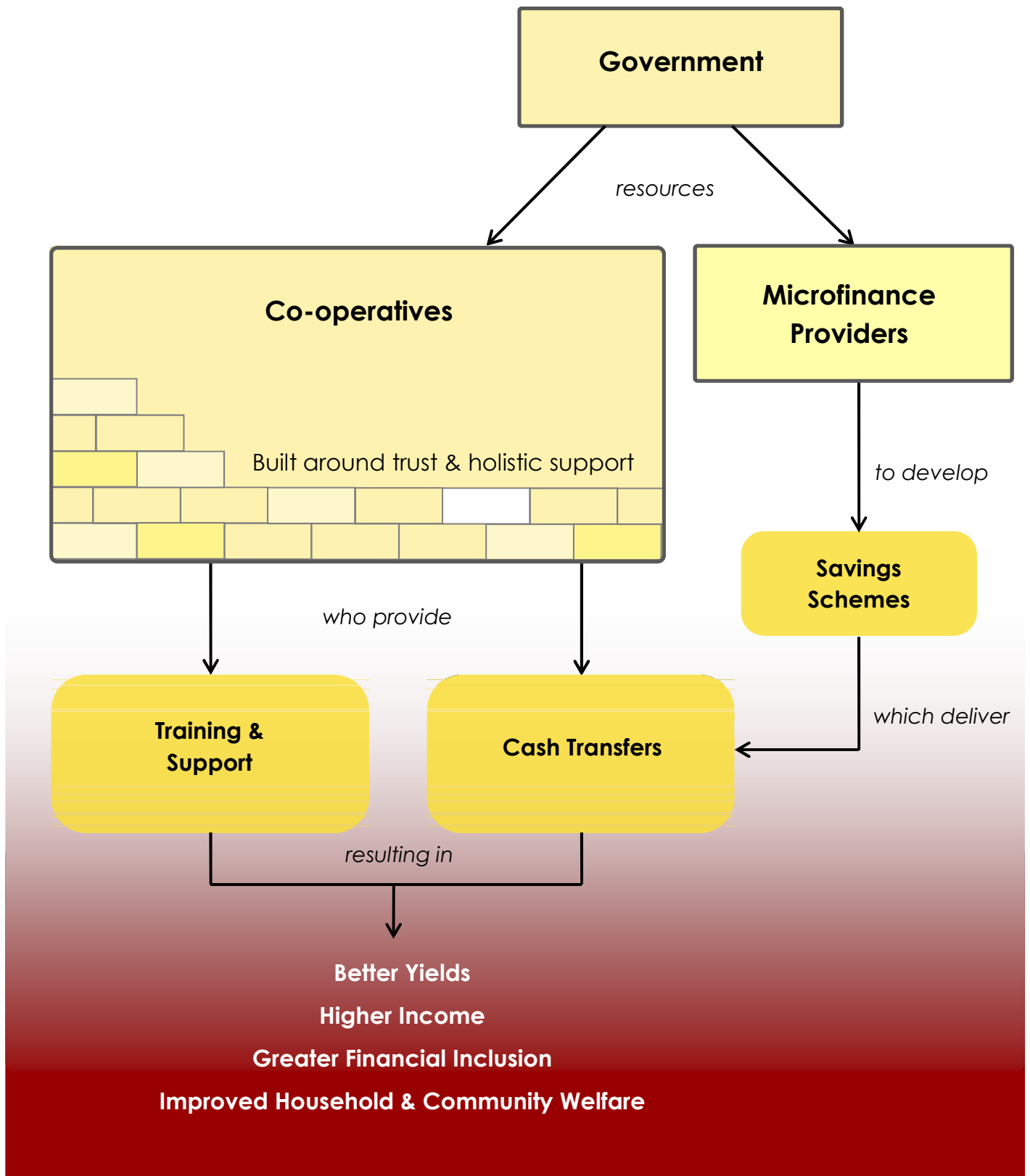
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CREATIVE APPROACHES TO ADDRESSING POVERTY



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1 OVERVIEW

SUMÁRIU JERÁL

This report provides the main findings of a study that has examined the ways in which the coffee sector operates in Timor-Leste. Focus has been at the household level, seeking to understand the ways in which coffee producing households manage their coffee production and interact with the market. The study also examines the social impact on household members of being heavily reliant on coffee as their main source of income.

Relatóriu ida ne'e kontein rezultadu xavi hosi peskiza kona-ba maneira setór kafé funsiona iha Timor-Leste. Peskiza ne'e foka ba nivel uma-kain, buka atu kompriende maneira uma-kain produtór kafé atu maneja sira nian produsaun kafé hodi koopera ho merkadu. Peskiza ne'e mós ezamina impaktu sosiál ba uma-kain ne'ebé depende ba kafé hanesan sira nian fonte prinsipál ba rendimentu.

This report provides a brief and nontechnical overview of the research and main findings and recommendations. More details on various issues touched on in this report are found in related technical papers that are at various stages of completion.

1.1 Funding

Finansiamentu

The project has been supported by an AusAID Australian Development Research Award 2010-2012.

1.2 Contributors and Acknowledgements

Kontributór no Agradesimentu

Brett Inder (Monash University), David Lloyd (Southern Cross University) and Katy Cornwell (Monash University) were the main investigators named on this AusAID-funded project. Kerrie Stimpson has contributed enormously to the success of the project in many and varied ways as part of her PhD study with Southern Cross University (SCU). Zeferino Tilman (UNTL) has been the leading researcher on the team based in Timor-Leste, and has provided much leadership. Other Australian-based team members include Sumith Pathirana (SCU), Kristin den Exter (SCU), Leon Toh (Monash), Sarah Crouch (Monash), Lisa Walker (Monash) and others.

Brett Inder (Universidade Monash), David Lloyd (Universidade Southern Cross) no Katy Cornwell (Universidade Monash) mak peskizadór prinsipál iha projetu peskiza AusAID ne'e. Kerrie Stimpson fó ona kontribuisaun ne'ebé bo'ot ba susesu peskiza ne'e atravez maneira oi-oin nu'udar parte ida hosi nia estudu Doutoramentu iha Universidade Southern Cross (SCU). Zeferino Tilman (UNTL) lidera ona ekipa peskizadór iha Timor-Leste no fó ona lideransa ne'ebé diak. Membru ekipa sira seluk mak inklui Sumith Pathirana (SCU) no Kristin den Exter (SCU), assistensia peskiza hosi Leon Toh (Monash), Sarah Crouch (Monash), Lisa Walker (Monash) no sira seluk ne'ebé nia valór bo'ot tebes.

A large research team undertook the enormous task of visiting more than 800 households twice, to learn firsthand how these households live and engage in coffee production. The survey teams were ably led by Zeferino Tilman, Mateus de Jesus Gomes, Guilhermino da Cruz, Armando B. M. Afonso, Joao Americo. Team members were: Rumao Caetano de Carvalho, Luis da Cruz, Joao Rui Pinto, Mario da Silva Lemos, Sandra Araujo Carvalho, Delfim da Costa, Jose Americo S. Madeira, Sandra X. de Jesus, Apolinario dos Santos Goncalves, Serafim Fernandes, Marcio A. Sanches Pacheco, Joaquim de Fatima Salsinha, Donata Olandina de Araujo.

Ekipa peskiza ne'ebé halao vizita dala rua ba uma-kain 800 resin hodi aprende diretamente oinsa uma-kain hirak ne'e nia moris no involve iha atividade produsaun kafé. Ekipa peskiza ne'ebé lidera hosi Zeferino Tilman, Mateus de Jesus Gomes, Guilhermino da Cruz, Armando B. M. Afonso, Joao Americo. Membru ekipa: Rumao Caetano de Carvalho, Luis da Cruz, Joao Rui Pinto, Mario da Silva Lemos, Sandra Araujo Carvalho, Delfim da Costa, Jose Americo S. Madeira, Sandra X. de Jesus, Apolinario dos Santos Goncalves, Serafim Fernandes, Marcio A. Sanches Pacheco, Joaquim de Fatima Salsinha, Donata Olandina de Araujo.

In addition a number of staff from the Ministry of Agriculture and Fisheries in Timor-Leste undertook training in the use of GPS devices and GIS software.

No mós pesoál balun hosi Ministériu Agrikultura no Peska Timor-Leste ne'ebé halao treinamentu kona-ba uza software GPS no GIS nian.



2 BACKGROUND

ANTESEDENTES

2.1 Timor-Leste

Hafoin independensia, maski dalan sei naruk, Timor-Leste atinji ona susesu barak. Governu Timor-Leste iha komitmentu atu promove dezenvolvimentu no reduz pobreza. Hafoin setór agrikultura sai hanesan Timor-Leste nian atividade ekonomia prinsipál no maioria ema pobreza sira involve iha agrikultura, hadi'ak produtividade no sustentabilidade iha setór ne'e sei fó benefisiu ba ema barak. Industria Kafé partikularmente, iha potencia ne'ebé bo'ot ba ida ne'e.

As a new nation in 2002 following decades of foreign rule, Timor-Leste inherited little functional infrastructure, few operating institutions and widespread poverty. A strong commitment to development in the years that followed has seen notable progress in a range of social indicators, particularly in governance and education. However, despite the commendable achievements, Timor-Leste remains the poorest nation outside of sub-Saharan Africa in measures of multidimensional poverty (UNDP, 2013). Per capita gross domestic product ('GDP') is on par with that of Tanzania and Chad (2011 GDP per capita was \$1393 in 2005 purchasing power parity) and 37% of the population live on less than US\$1.25 per day (UNDP, 2013).

Much of the infrastructure in Timor-Leste is still underdeveloped and a significant proportion of the population does not have access to basic services. It is estimated that 31% of people in Timor-Leste lack access to an improved water source, 61% are without improved sanitation and 82% do not have electricity (UNDP, 2010; WHO, 2013). With among the lowest number of physicians per head of population across the globe, health measures are particularly poor: the average life expectancy is 64 years, the under-five mortality rate is 54 deaths per 1000 live births, and 45% of children under five are underweight – the highest in the world (WHO 2010, 2013).



In recognition of the challenges the nation faces, the government of Timor-Leste has committed itself to promoting development and reducing poverty by fostering economic growth, investing in human capital and infrastructure, and strengthening public institutions (Government of Timor-Leste, 2007; Government of Timor-Leste, 2010a). A core element in the plan for growth is to improve the productivity and sustainability of the agricultural sector.

Agriculture is the country's main economic activity, constituting the primary source of employment for 84% of the labour force (Ministry of Finance, 2008), amounting to 30% of non-oil GDP and 90% of non-oil exports (World Bank, 2011). As highlighted in the Strategic Development Plan 2011-2030, agriculture has an important role to play in reducing poverty, promoting rural development and assuring Timor-Leste's food security – both through food production and as a principal source of income for many of the rural poor (Government of Timor-Leste, 2010a; Government of Timor-Leste, 2012; World Bank, 2007).

A key challenge in this plan is that of converting the agricultural sector's potential to drive growth and poverty reduction into reality. A sensible starting point is to identify those areas within the agricultural sector that offer the greatest opportunities to generate significant welfare improvements for a large number of people. The coffee industry, as a primary employer, and in particular, a large employer of the poor in Timor-Leste, has been identified as having the greatest potential in this regard (World Bank, 2011); for this reason the coffee industry is the focus of this research.

The agricultural sector – and in particular the coffee sector – has the greatest potential to generate significant welfare improvements for a large number of people.

Setór agrikultura – partikularmente setór kafé – iha potensia ne'ebé bo'ot hodi hadi'ak moris-diak ema barak nian.

2.2 The Coffee Sector

Setór Kafé

Aproximadamente uma-kain ¼ iha Timor-Leste, sira nian fonte prinsipál rendimentu mak kafé. Maibe, produsaun kafé ki'ik tebes – média 21% deit kompara ho pais-sira ne'ebé produz kafé iha Ázia Sudeste no 10% hosi plantasaun kafé – ai-hun seluk mak moris no ai-hun tuan, ai-hun ne'ebé nia tahan buras tebes no taka loron-matan ka hetan infesaun ferrujen no mós pratika kultivasaun ne'ebé ladun diak.

The coffee industry is a central part of Timor-Leste's economy, society and history, having been a valuable source of employment and foreign exchange within Timor-Leste for over a century. Coffee is the principal source of cash income for approximately one quarter of the nation's households (UNDP, 2006).

Despite this, Timor-Leste's coffee landscape is characterised by overgrown and ageing trees, with coffee canopies that have grown too tall to be harvested, and shade trees that have not been pruned and now block too much sunlight or are infected with rust disease and no longer provide shade, impeding coffee yields (Old & Dos Santos

Cristovao, 2003; UNTAET, 2000). In addition, production lacks industrial effort towards crop cultivation, including weeding, pruning, planting and managing pests and disease (Amaral, 2003). In consequence, the World Bank (2011) estimates that Timor-Leste's harvests are a mere 21% of the average in other coffee-producing South Asian nations.

Concerted effort towards overcoming the above issues is an obvious way in which the Timor-Leste coffee industry can be developed and expanded. The merits of developing the coffee industry, however, are not unanimously agreed upon: the international coffee market is a market characterised by intense competition and a declining long-term world price (International Coffee Organisation, 2009; World Bank, 2007). Heavy reliance on the coffee industry also renders the nation more vulnerable to price shocks, balance of payments problems and the risk that, by focusing on commodities rather than manufactured goods, the nation is limiting its earning potential (Panitchpakdi, 2010).¹

Despite the risks associated with the coffee industry, the Timor-Leste government is strongly committed to promoting the sector, and in 2010 held the inaugural International Conference on Coffee in Timor-Leste to discuss ways to increase the quality and quantity of Timor-Leste coffee (Government of Timor-Leste, 2010b).

There are two tasks in achieving real poverty-reduction among coffee growing households:

Iha servisu prinsipál rua hodi alkansa redusaun pobreza ba uma-kain produtór kafé:

(1) Improving productivity to increase household incomes.

Hadi'ak produtividade hodi hasa'e rendimentu uma-kain.

(2) Ensuring the increases in income are converted into improvements in actual household welfare.

Peskiza ida ne'e foka ba análise ekonomia hodi haree koneksaun entre atividade produz kafé no uma-kain sira nian moris-diak, buka atu rezolve diretamente problema redusaun.

¹ Historically the terms of trade for commodities, compared with manufactured goods, have been in decline, and commodities offer fewer opportunities for productivity gains and value-adding (Panitchpakdi, 2010).

Achieving productivity improvements in the coffee industry demands policies that tackle the weaknesses within the sector, including overcoming growers' reluctance to re-plant and prune their coffee and shade trees,² developing coffee growing, harvesting and processing expertise, improving local infrastructure, and establishing certification programs and quality standards as part of a coffee marketing program (UNTAET, 2000).

Addressing poverty also requires ensuring that increases in household income as a result of productivity gains are converted into improvements in household welfare. It is often presumed that this will occur automatically, but evidence suggests that is not the case. For example, many coffee growing households in Timor-Leste experience seasonal hunger due to the fact that the bulk of their income is earned during harvest season. It follows that assisting these households to manage the seasonality of their incomes is critical to alleviating poverty.

With its focus on an economic analysis of the connection between coffee growing activities and welfare at the household level, this project seeks to directly address these issues around poverty reduction among coffee growing households. It has the potential to yield insights that can be used to address central development issues in Timor-Leste.

Peskiza ida ne'e foka ba análise ekonomia hodi haree koneksaun entre atividade produz kafé no uma-kain sira nian morisdiak, buka atu rezolve direktamente problema redusaun pobreza iha uma-kain produtór kafé. Peskiza ne'e iha potencia hodi rezulta koñesimentu ne'ebé bele uza hodi rezolve problema dezvoltamentu sentrá iha Timor-Leste.



² UNDP (2006) suggests that growers are reluctant to rehabilitate their trees because doing so leads to a short-term fall in the amount of coffee the trees produce and thus the amount of income the growers earn. Accordingly, it recommends developing credit policies to smooth out growers' incomes over this period. Another policy option is to give coffee growers tenure over the land they harvest (or property rights in the coffee trees they use, as in Côte D'Ivoire (Audibert, Brun, Mathonnat & Henry, 2006)) so that they have an incentive to invest in the coffee plantations (UNTAET, 2000; Oxfam, 2003). However, there is the possibility that in practice this recommendation may not be as effective as expected, because the World Bank's (2001) coffee survey suggests that in Timor-Leste lack of land ownership is not a strong disincentive to working the land.

3 METHODOLOGY

METODOLOGÍA

Peskiza ne'e iha elementu tolu: survey ba uma-kain, Mapeamentu GPS no entrevista ho informante xavi iha industria kafé. Atividade survei involve entrevista uma-kain 825 (pesoál 5334) atravez distritu Ermera dala rua iha tinan-2011: primeiru iha Febreiru, no segundu iha Agustu/Setembru iha tempu kollieta nia rohan. Ida ne'e permite ami atu ezamina dependensia ba rendimentu hosi kafé no oinsa ho uma-kain sira nian moris-diak – ezemplu rendimentu, konsumsaun, saúde – hetan influénsia hosi tempu.

3.1 Household Survey

While much is known about the workings of the coffee sector in Timor, little is known about how it affects the most vulnerable in the industry, coffee producing households. Most knowledge about coffee producing households is anecdotal and based on limited personal contact and experience. A very important part of this research project is to fill this gap in knowledge by making the household the primary focus of some extensive data collection.

The sample comprises 825 households, with information collected on 5334 individuals. All households were based in Ermera district: it was decided that a large sample from just one district would allow better comparisons across households.

The sample involved choosing a random subset of 4-6 sucos from each of the 5 sub-districts of Ermera, and then sampling approximately 20 households within each suco.

Each household was visited twice in 2011, the first time in February, and the second in August/September, just after the conclusion of the annual coffee harvest.

The focus of the household survey was centred around understanding:

- Coffee producing activities at the household level, and the extent of reliance on income from coffee.
- The impact of seasonal income on household welfare – income, consumption, health (hence the visits twice).

The research was conducted by teams of researchers, comprising staff from the Ministry of Agriculture and UNTL, with staff from Monash University and Southern Cross University in Australia providing overall direction and support.

A copy of the actual survey instrument and data sets of results are available from the authors on request.

Follow-up qualitative interviews of eight households were also conducted in November 2012 to explore further aspects of co-operatives.



3.2 Geographical Information Systems

While household surveys were being conducted, GPS devices were used by the survey enumerators to identify the location of each household. Data was also collected on some local community characteristics.

The location data, alongside the other information collected about each household, allows us to relate locational and spatial characteristics of households and communities to their economic and social outcomes.

Geographical Information Systems (GIS) methods are used to capture the spatial patterns in household outcomes. By drawing on other data sources, we are also able to relate land use to households' economic and social outcomes.

3.3 Interviews of Key Informants

While the focus of this research is at the household level, it is equally important to understand the wider context of the coffee industry and related training and development, and the way in which the household interacts with them.

Through the course of this research, a number of key informants in the coffee industry have been interviewed. This includes representatives from the Ministry of Agriculture and Fisheries, senior representatives of some specific coffee buyers / processors / exporters, including the Café Cooperative Timor (CCT) and Alternative Trade Timor (ATT), and certain people from various development agencies who focus on agricultural / rural development, including SEEDS for life, World Vision, and others.

4 MAIN RESEARCH FINDINGS

REZULTADU XAVI HOSI PESKIZA

4.1 Coffee Production and Yields

Produsaun Kafé no Kollieta

In this section we will present a brief snapshot of the coffee production and income of growers interviewed in the survey. Data on coffee production was collected from households in the second round of the survey (August-September 2011), and thus relates to the 2011 harvest. Global International Coffee Organisation data for total annual production³ suggests the 2011 harvest was very similar to the 2007-2009 harvests, but 25-40% lower than production in 2010 and 2012. Accordingly, the survey results will paint a more pessimistic picture of incomes and yields than in the immediate surrounding years.



Surveyed households were asked to report total production in the current harvest, in the form by which they were sold – cherry, parchment, dried bean, etc., as well as the area of land with coffee trees available from which to harvest. Data on yields are constructed from this information. It is important to consider the form in which the coffee is sold, as not only does this impact the sale price and calculation of yield, but it also provides insight into the realisation of the trade-off between identifying quality and storage.⁴

³ Available at: http://www.ico.org/new_historical.asp.

⁴ Our key informants advise us that quality can be determined by plushness of the cherry, however once picked the cherry must be sold within 24 hours. Bean with the cherry flesh removed can be stored, however the quality is not as easily identifiable.

4.1.1 In What Form is Coffee Sold and to Whom?

Kafé ne'ebé Fa'an ho Forma saida no Fa'an ba Se?

Kafé kulit tasak mak forma ida ne'ebé predominante wainhira uma-kain fa'an sira nian kafé (68% hosi uma-kain) no maoria uma-kain hirak ne'e fa'an sira nian kafé ho forma kulit tasak duke prosesa ba hasai kulit ka habai maran (hosi uma-kain hirak ne'ebé mak fa'an kafé kulit tasak, 64% eskluzivamente fa'an kafé kulit tasak).

Cherry is the predominant form in which households sell their coffee (68% of households), and a large proportion of these households sold their coffee solely as cherry rather than processed parchment or dried bean (of those who sold cherry, 64% sold exclusively cherry).



The vast majority of cherry sales were to CCT (around 81%), while virtually all parchment sales were to other major companies (e.g. Timor Corp, Timor Global and Elsaa Café). This reflects the dominance of CCT in the coffee industry in Ermera District.

4.1.2 What Price Did they Receive?

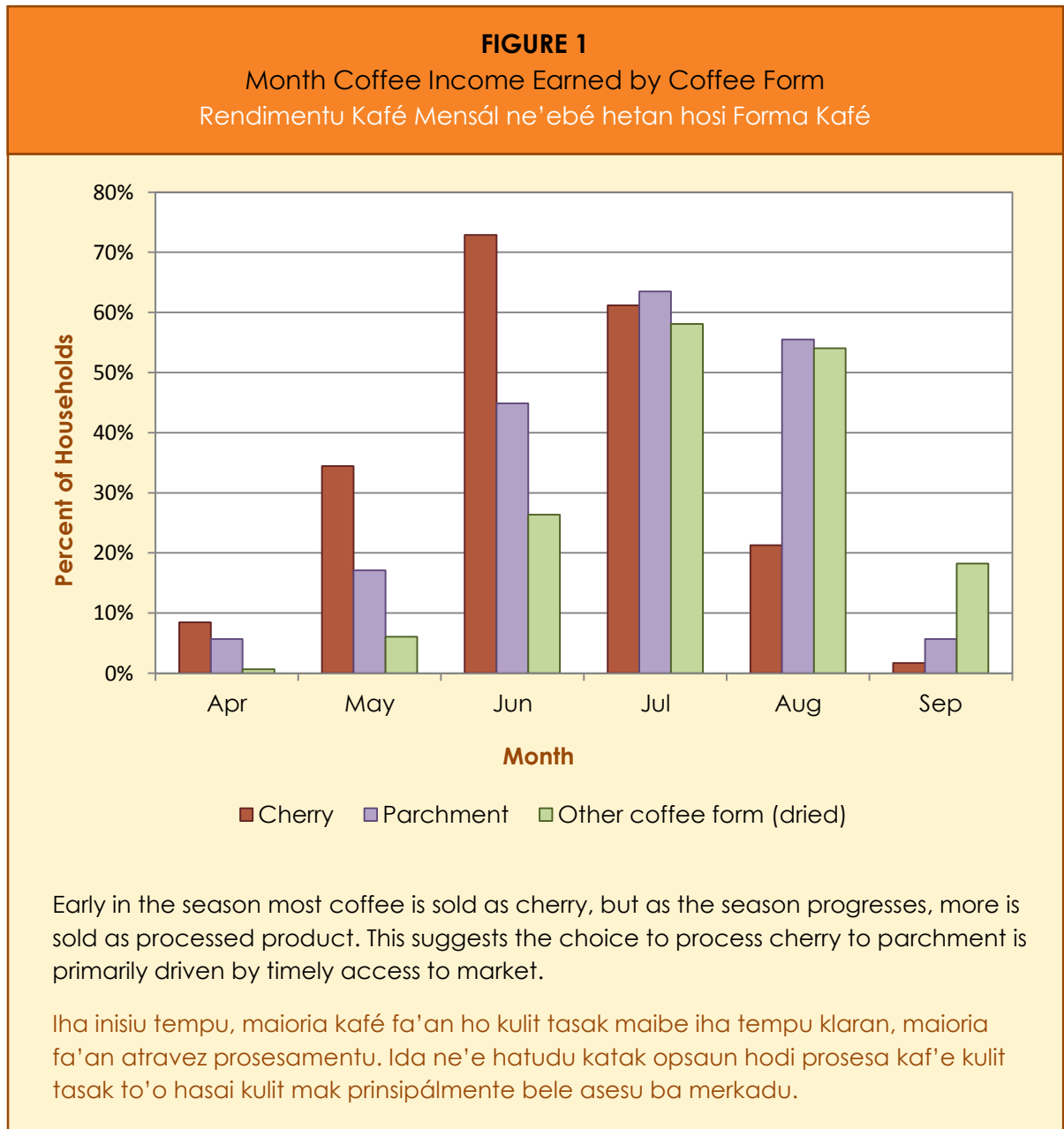
Sira Hetan Presu Hira?

Kafé kulit tasak maoria fa'an ba 50 sentimu per kilograma, kafé hasai kulit la habai maran fa'an kuaze besik \$2.00 per kilograma. Ida ne'e reprezenta taxa returnu ne'ebé ki'ik hosi fa'an kafé kulit tasak.

Producers report a range of prices for their coffee. Cherry sold mostly for 50 cents per kilogram, with some variation – prices falling as low as 20 cents, and going as high as \$1.00 per kilogram. Prices are very similar across buyers (CCT, others), and varied little throughout the season. Parchment sold for an average of almost \$2.00 per kilogram. Notably, this represents a lower rate of return than selling cherry, assuming 5kg of cherry is needed to produce 1kg of parchment. This is despite the extra work involved in processing cherry to parchment.

Why would a producer bother with processing to parchment when on average, a better return is available from cherry? Some argue that households often have no choice, as the cherry needs to be sold within 24 hours of being picked, and lack of access to buyers is often an impediment to selling cherry. Others argue that when the quality of the cherry was poor (e.g. unripe, diseased), buyers reject the product and the producer has no choice but to process to parchment.

Figure 1 lends support to the argument that the choice to process cherry to parchment is primarily driven by timely access to market. It shows that early in the season most coffee is sold as cherry, but as the season progresses, more is sold as processed product. With the need to sell cherry within 24 hours of it being picked, the late-season sales are quite likely product which was harvested earlier, and could not be sold at the time due to lack of access to the market.



When the survey participants were asked about their choice of form, we find that the choice between selling as cherry or parchment seems to have little to do with price – less than 1% of producers identified price as factor. It is revealing that the most common response had little to do with maximising return on the harvest or lack of access to buyers. Instead, buyers mostly referred to financial constraints: 62% reported selling coffee as cherry because they needed the money quickly to cover basic essentials.

Wainhira iha survei, ami husu mós ba partisipante sira kona-ba opsaun ba forma kafé, ami identifika katak opsaun entre fa'an kafé ho kondisaun kulit tasak ka hasai kulit senti iha relasaun ne'ebé ki'ik ho presu kafé – uma-kain menus hosi 1% mak identifika presu hanesan fatór ida. Ida ne'e hatudu katak resposta ne'ebé komún liu, iha relasaun ne'ebé ki'ik ho maximiza returnu iha kollieta ka menus asesu ba kompradór: problema finanseiru: uma-kain 62% mak relata katak sira faan kafé ho kondisaun kulit tasak tan problema finanseiru – sira presiza osan urjenti atu hola nesiedade baziku.



SUMMARY BOX 1

Cherry or Parchment? Kafé Tasak ka Kafé Hasai Kulit?

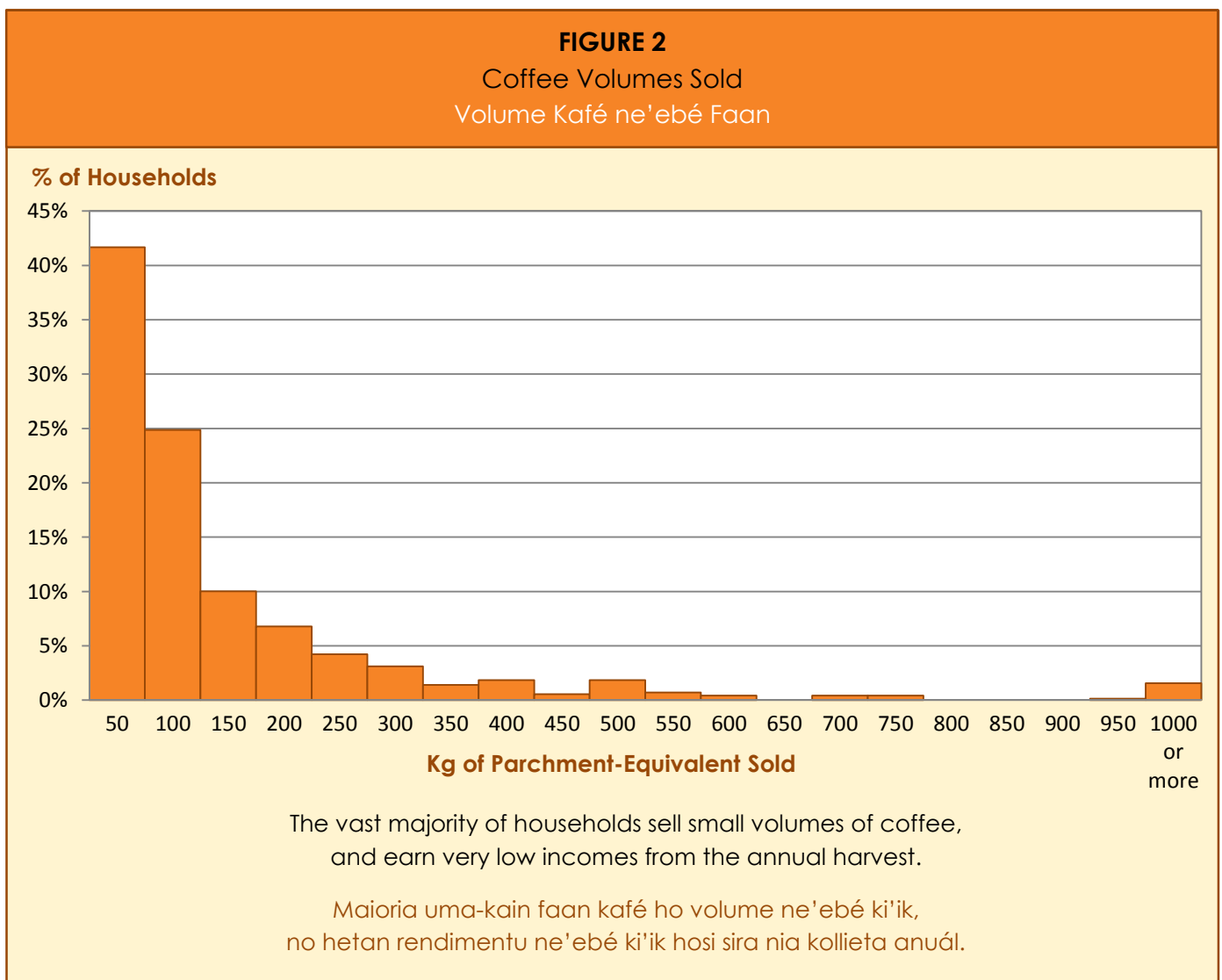
The best possible returns to growers can be achieved by a network of locally operated processing facilities that are accessible to growers, with shared ownership in a co-operative set-up, and where there is sufficient local expertise to ensure consistency of quality.

Posibilidade returnu ne'ebé diak ba produtór kafé bele atinji atravez liña servisu hosi facilidade prosesamentu lokál ne'ebé mak asesivel ba produtór sira, fahe propriedade ho kooperativa no wainhira iha rekursu umanu lokál hodi aseguara konsistensia ba kualidade.

4.1.3 What Volumes Did Households Sell? Volume Kafé Hirak mak Uma-Kain Faan?

Pratikamente, uma-kain sira faan kafé 750kg ka menus, ekivalente ho kafé hasai kulit la habai maran (Forma kafé hotu-hotu fa'an durante períodou kollieta – kulit tasak, hasai kulit no kulit maran – konverta ba kilograma hosi sira nia ekivalente iha forma kafé hasai kulit la habai maran) no uma-kain 67% faan 100kg ka menus hosi ida ne'e.

Figure 2 shows the distribution of volume of parchment-equivalent – that is, coffee sales from all forms of coffee sold over the harvest season (cherry, parchment, dried bean) converted to kilograms of their equivalent in parchment form. The data is concentrated in the very low levels, with 98% of households selling 750kg or less, and 67% 100kg or less. At an average price of \$2-\$2.50 per kilogram, this represents very low levels of annual income for the vast majority of households – two-thirds of these households earned \$250 or less from their annual coffee harvest.



Other sources of income such as that from paid labour employment, running a business and the sale of crops other than coffee does not substantially boost average household incomes –more than half of the households surveyed rely on coffee for the majority of their income, with coffee comprising an average 53% of household income across the survey. This concentrated reliance on one volatile commodity leaves households vulnerable.



4.1.4 What Yields were Achieved? Kollieta Hirak mak Atinji Ona?

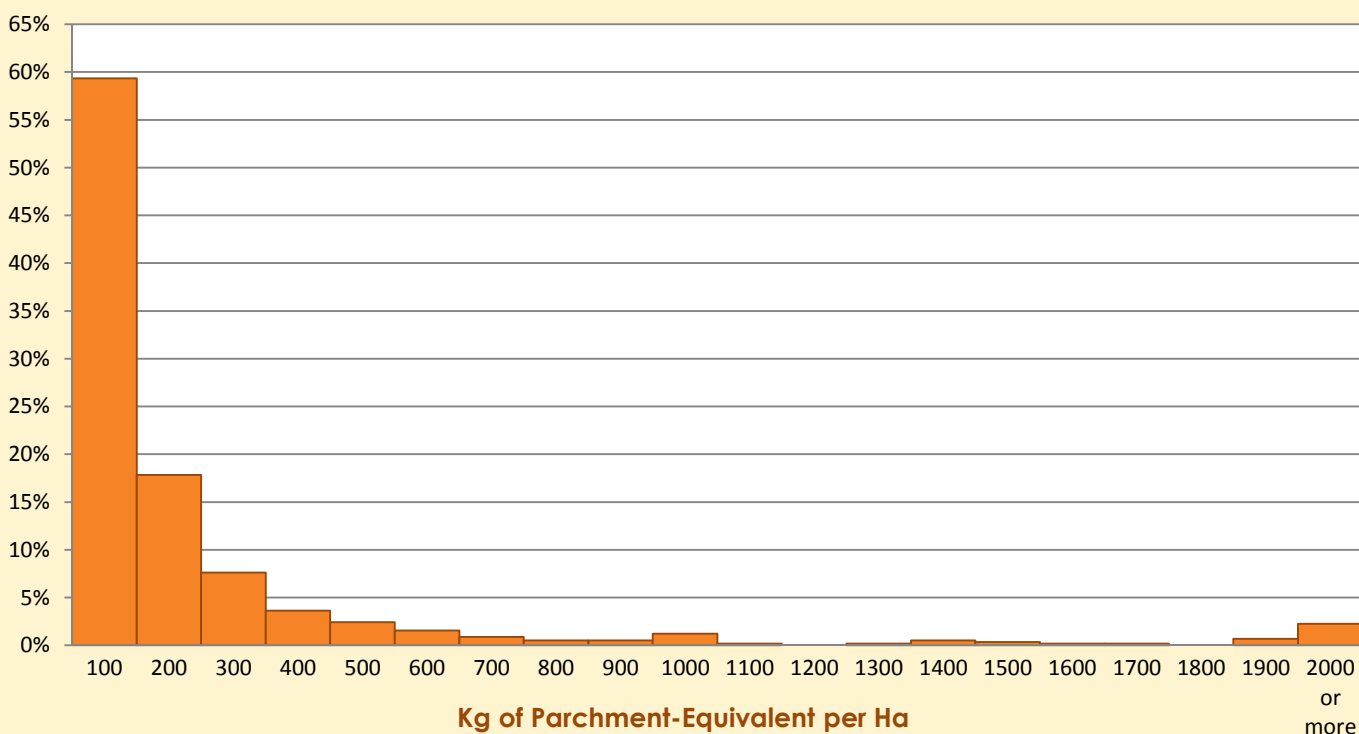
Média kollieta ba uma-kain sira mak 204kg/ha, kuaze 20% hosi média iha rejaun produtór kafé ne'ebé ki'ik no 10% atinji hosi plantasaun kafé.

Combining estimated land area used for coffee trees with household production data, we are able to estimate yields per hectare for households.

Figure 3 shows the distribution of total household coffee yields in kilograms of parchment-equivalent per hectare. The message from this data is one of very low yields by international standards: the average yield for these households is 204kgs/ha, around 20% of average in the region for smallholder coffee (World Bank, 2011), and 10% of that typically achieved with plantation coffee. This average is actually made higher by a few households with very good yields; for the majority, yields are much lower than the 204kgs/ha average – for example, around 60% of households have yields of less than 100kgs/ha.

FIGURE 3
Coffee Yield
Kollieta Kafé

% of Households



Yields are very low by international standards: around 20% of average in the region for smallholder coffee, and 10% of that typically achieved with plantation coffee.

Bazeia ba padraun internasionál, kollieta ki'ik tebes: kuaze 20% hosi média iha rejiãun produtór kafé ne'ebé ki'ik no 10% atinji hosi plantasaun kafé.

Previous studies have sought to identify causes for Timor-Leste's characteristic low yields, noting a high prevalence of old and unproductive trees (covering more than 50% of the land area), and poor practices around caring for trees and land (Ministry of Agriculture and Fisheries, 2009). Regarding the economic implications of such low yields, the message is clear: households are receiving very low incomes from coffee, but there is potential for significant improvements in income by strategies aimed at improving yields.

SUMMARY BOX 2

Coffee: Very Low Income and Yields Kafé: Kollieta no Rendimentu ne'ebé Ki'ik

- Most households rely on coffee for the majority of their income and are earning very little from coffee.

Maioria uma-kain depende ba kafé hanesan sira nian rendimentu prinsipál no sira hetan osan ne'ebé ituan tebes hosi kafé.

- Yields per hectare are very low by world standards, suggesting there is room for sizeable improvements in income per household by targeting improvements to yield. But how can the improvements be achieved?

Bazeia ba padraun intenasionál, kollieta per ektare ki'ik tebes, hatudu katak iha possibilidade hodi hadi'ak rendimentu uma-kain no hadi'ak alvu ba kollieta. Maibe oinsa mak atu atinji melloramentu ida ne'e?

4.1.5 Has Anything Been Done to Improve Yields?

Karik Halo Ona Buat Ruma hodi Hadi'ak Kollieta?

Uma-kain 14% mak relata tuir treinamentu iha tinan 4 liu ba, maioria hosi CCT.

The discussion so far leads us to the obvious question about what efforts are currently taking place to improve yields. Indeed there is much happening to this end through activities of various parties – the Ministry of Agriculture and Fisheries, various coffee processing companies and NGOs. The survey allows us to identify perceptions of training from the point of view of coffee producing households – are they receiving training, in what areas, and is it making a difference?

In the sample of households, 14% reported receiving training in the previous four years, which is a surprisingly low figure considering Ermera is perceived as one of the more well-supported coffee producing districts. More than half of these households report that their training came from CCT, with 35% coming from Ministry of Agriculture and Fisheries staff. Training was reported to be mainly around pruning, dealing with disease, and rehabilitation and rejuvenation of coffee trees.

4.1.6 Did Training Make a Difference to Yield? Treinamentu ne'e FÓ Diferensia Ruma iha Kollieta ka Lae?

Hosi uma-kain ne'ebé tuir treinamentu, 77% informa katak sira koko pratika koñesimentu foun ne'ebé hetan hosi treinamentu ne'e no 83% hosi sira informa katak hafoin ne'e, sira nia kollieta rezulta diak. Maibe, montante melloramentu iha kollieta ki'ik tebes: média 6%.

Of those who received training, 77% say they tried new practices as a result of the training, and in turn, 83% of these reported improved yields as a result. So the perception of farmers is that once they take up training opportunities, they do bring benefits.

Of course, perceptions are not always accurate, so another window into the benefits of training is to compare yields for households that have received training with those who have not. Those who reported taking part in training have yields per hectare which are 6% higher on average. This is a strikingly low figure, made worse by the likely bias caused by the non-random selection of who undertakes training. Typically, those who commit to training are more dedicated to their productive activities; such higher level of commitment means they would be expected to have higher average yields than those who do not pursue training opportunities, even before the benefits of training are experienced. So the 6% difference in yields is most likely to *overstate* the yield benefits of training *per se*.

SUMMARY BOX 3

Improving Yields Hadi'ak Kollieta

While there is scope for very large improvements in coffee yields and production, current approaches to training have little reach and impact. New approaches to engaging coffee producers in improving their yields are needed.

Maski iha espasu ne'ebé bo'ot hodi hadi'ak produsaun kafé no kollieta, aproximasaun foun hodi involve produtór kafé hodi hadi'ak sira nia kollieta, nesesariu tebes.

4.2 Poverty and Coffee Production

Pobreza no Produsaun Kafé



The results reported to this point suggest that coffee producing households live with very low yields, and ultimately receive very low incomes as a result of their coffee-producing activities. In this section we look to paint a broader picture of the lives of a typical household in our sample. While they may have low incomes from coffee, are there other more substantial income sources? What kinds of assets and resources do households have access to?

4.2.1 Household Assets and Wealth

Uma-kain nian Materiál no Rikeza

Table 1 summarises the main results in the survey around the wealth situation of households – the kinds of amenities they have access to, the types of dwellings they live in, and what assets they own. This paints a rather dismal picture of the quality of housing, access to basic facilities and wealth of households.

TABLE 1

Quality of Housing, Use of Basic Facilities and Asset Ownership among Households
 Qualidade Uma, Uza Fasilidade Baziku no Nain ba Propriedade entre Uma-kain

	% Households		% Households
Toilet Type		Main Wall Material of House	
Private traditional latrine	48 %	Palm, bamboo, rattan, wood	35 %
Private flush toilet	28 %	Corrugated iron, tin	32 %
Public/shared toilet (flush or traditional)	7 %	Concrete, brick	28 %
No toilet (open defecation)	17 %	Other	6 %
Lighting Source		Physical Assets Owned	
Oil/kerosene lantern, candles	57 %	Mobile phone	46 %
Electricity, including privately-generated	30 %	Radio	32 %
Other, e.g. solar cell	13 %	TV	13 %
Water Source		Motorbike	7 %
Natural source (spring, river, lake)	47 %	Farm equipment	4 %
Public tap/well	33 %	Car	1 %
Private tap/well	20 %		
		if Owned, Average Number	
Livestock Owned			
Pig	71 %	2.0	
Chicken	67 %	4.5	
Cow	31 %	2.3	
Goat/sheep	17 %	2.0	
Horse	9 %	1.3	

Most coffee-growing households have low quality housing, lack access to basic facilities and own few physical assets or livestock.

Maioria uma-kain sira produtór kafé hela iha uma ne'ebé kondisaun ladiak, menus asesu ba fasilidade bazíku no iha materiál fiziku balun ka animal moris.

- Note how many households live with very poor quality housing and lack of amenities – less than 30% have houses made from solid brick walls or have electricity, and even fewer have easy access to running water.
- Households have few assets that facilitate transport or communication, with the exception of relatively high prevalence of mobile phones (46%).
- A reasonable number of households have a small amount of livestock, although overall, the numbers are very low and there is little in the way of livelihood that could be gained from these low asset levels.
- Nota, uma-kain hirak mak moris iha uma ne'ebé nia kualidade át tebes no menus fasilidade – menus hosi 30% mak hela iha uma ne'ebé harii ho tijolu ne'ebé forte ka iha eletrisidade no ituan deit mak hetan asesu ba bee-moos.
- Uma-kain sira iha propriedade balun ne'ebé facilita transportasaun ka komunikaun, ho eksepsaun ba prevalénsia telefone ne'ebé relativamente ás (46%).
- Iha número ne'ebé razoavel ba uma-kain balun ne'ebé hakiak animal moris, maibe jeralmente, número ne'e ki'ik tebes no oportunidade ba moris ki'ik tebes hosi nivel propriedade ki'ik hirak ne'e.

4.2.2 Other Sources of Income Fonte Rendimentu sira Seluk

On the income side, it is first interesting to note the level of reliance on coffee income as the households' main source of income. Figure 4 shows that about 27% of households report that virtually all their income is from coffee; of the remaining households, there is quite a variation in the extent to which households rely on coffee income, but most households rely on coffee for the majority of their income.

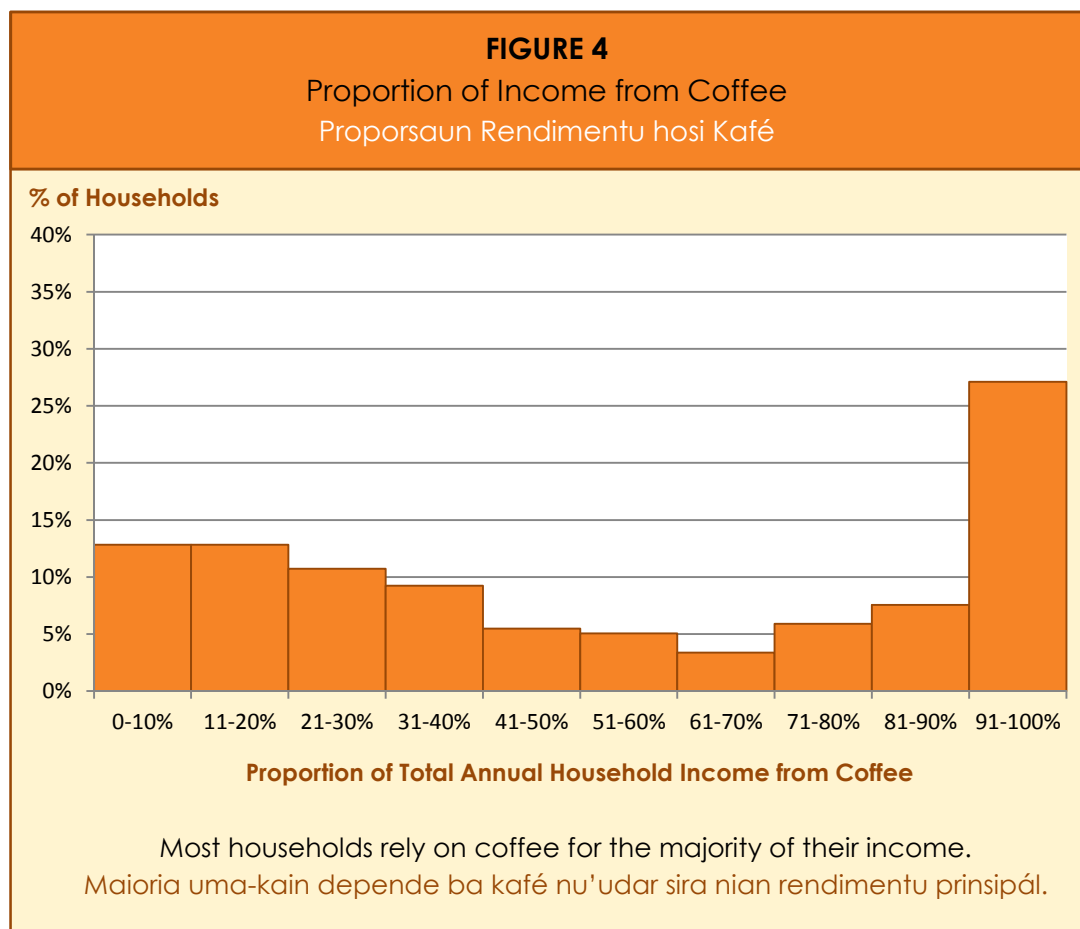
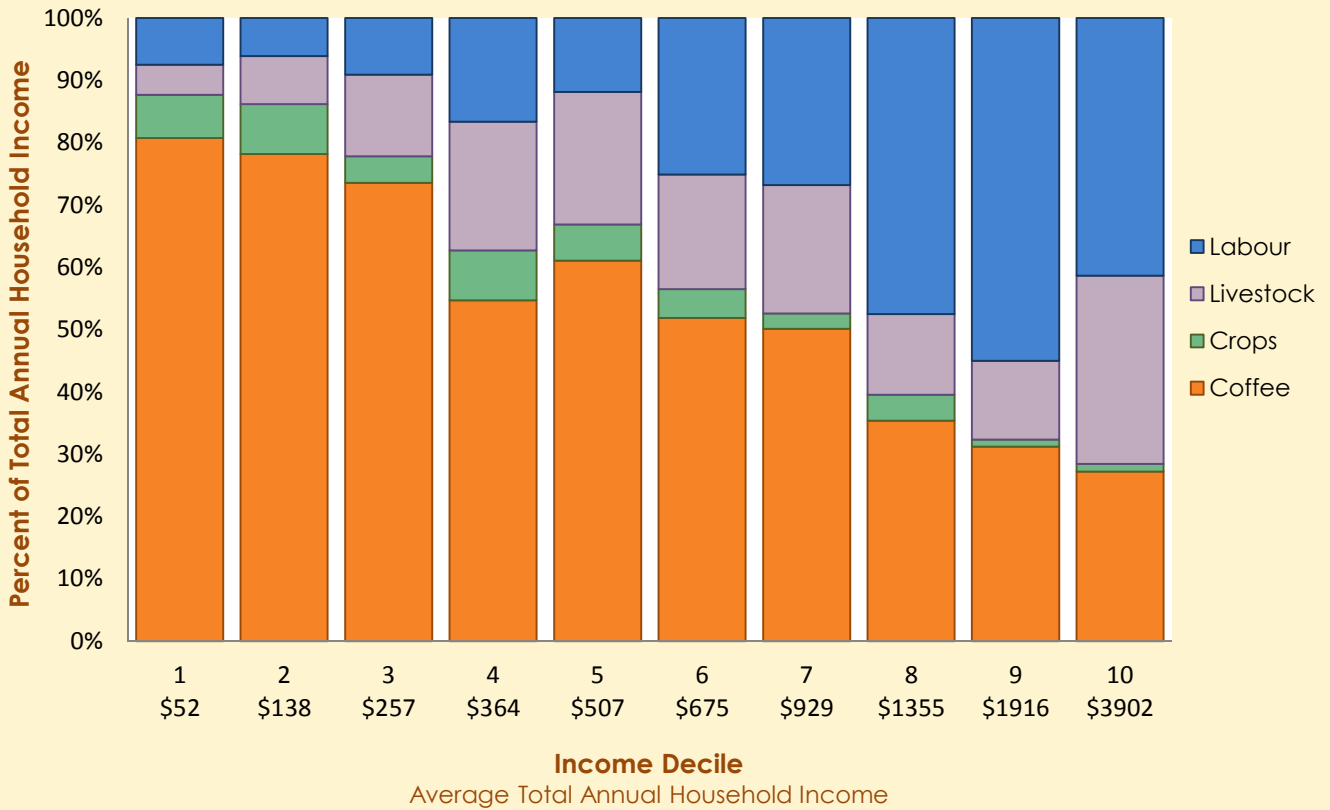


Figure 5 shows how the mix of income sources varies as total income varies. Households have been divided into 10 groups, from the 10% with lowest income to the 10% with highest income. For each group, each bar shows how their total income is divided between coffee income, labour income, income from crops and from livestock.

FIGURE 5

Contribution to Total Annual Household Income, by Income Source and Income Decile
 Kontribuisaun ba Totál Rendimentu Anuál Uma-kain, hosi Fonte no Nivel Rendimentu



Households with higher incomes achieve them through labour income.

Uma-kain sira ne'ebé hetan rendimentu bo'ot, sira hetan liuhosi saláriu servisu nian.

- Coffee is for most households a very large proportion of total income.
- The proportion of income earned from coffee is lower for those with higher total income.
- While the share of income from coffee declines as income increases, the amount earned from coffee does increase with overall income. The share of income from coffee declines because other income sources increase at a faster rate than coffee income.
- Income from crops is very small at all income levels.
- Income from livestock is also relatively low, ranging from 5% of total income for the poorest decile up to 30% of total income in the highest decile.
- It appears that the less poor households are able to achieve their higher incomes largely from labour income - roles such as teachers, drivers, security guards etc.
- Maioria uma-kain sira nian proporsaun totál rendimentu bo'ot liu mai hosi Kafé.
- Proporsaun rendimentu hosi kafé mak ki'ik tebes ba sira ne'ebé ho totál rendimentu ne'ebé ás.
- Maski fahe rendimentu hosi kafé tun no rendimentu sa'e, montante rendimentu ne'ebé hetan hosi kafé jeralmente sa'e. Fahe rendimentu hosi kafé tun tan fonte rendimentu sira seluk sa'e iha nivel ida ne'ebé lais duke rendimentu hosi kafé.
- Rendimentu hosi kollieta mak ki'ik tebes iha nivel rendimentu hotu-hotu.
- Rendimentu hosi hakiak animal mós relativamente ki'ik, hahu hosi 5% totál rendimentu ba ema mukit sa'e ba 30% hosi total rendimentu iha nivel ne'ebé ás liu.
- Ida ne'e hatudu katak uma-kain ne'ebé ladun ki'ak bele atinji rendimentu ne'ebé ás hosi sira nian saláriu mensál – kna'ar hanesan mestre, kondutór, guarda sivil no sst.

Putting all this together, virtually no household is earning high incomes as a result of coffee. Coffee is a poor person's income source. Any who are earning relatively large total income (although mostly still small by Dili standards) are doing so by virtue of some other form of labour income / employment, or possibly diversification into other agricultural income, particularly livestock.

SUMMARY BOX 4

Income Sources apart from Coffee
Fonte Rendimentu aleinde hosi kafé

In the current rural economy, almost the only viable path out of extreme poverty is to find non-agricultural labour income.

Dadaun ne'e iha ekonomia rurál, dalam atu elimina ki'ak mak buka rendimentu hosi servisu naun-agrikultura.

4.3 Household Welfare and Food Security

Uma-Kain nian Moris-Diak no Seguransa Ai-Han

Households which rely on coffee as their primary income source face the additional difficulty of experiencing a high degree of seasonality in their income, deriving from the annual coffee harvest. Comparisons of survey responses in August (the end of harvest time) with the same responses for February allow us to identify the extent to which this seasonality of income affects the welfare of members of the household.

Uma-kain sira ne'ebé depende ba kafé hanesan fonte prinsipál ba sira nian rendimentu, esperiensa hetan sira nian rendimentu ne'ebé bo'ot bazeia ba tempu kollieta deit.



4.3.1 Seasonal Effects on Food Consumption Impaktu Tempu ba Konsumsaun Ai-Han

Survei hatudu evidensia ne'ebé klaru kona-ba balansu konsumsaun baziea ba tempu. Iha Febreiru, kada loron uma-kain 50% konsume hahan ida ka menus. Iha Agustu, 21% deit mak konsume ai-han ho número ne'ebé ki'ik. Ida nee afeita ba uma-kain sira nia moris-diak: iha Febreiru, pesoál 6.6% mak falta ba sira nia atividade lor-loron, razaun tan kondisaun saúde ladiak, maibe iha fulan Agustu, iha deit 1.5%.

How well do coffee producing households smooth their consumption throughout the year? Are there times of the year where, because of lack of funds, their access to food and other essentials is much lower than at other times? The survey provides clear evidence of uneven consumption. Because the survey was undertaken twice, we are able to compare food consumption across these two periods. Table 2 shows the number of meals each household consumed at the two times of the year. Numbers on the diagonal represent the households who consumed similar amounts in the two periods, while values above the diagonal represent households who consumed more in the harvest period than in February.



First consider the level of food consumption in the two time periods. Looking at the last column of the Table, we see that 50% of households had an average of one meal or less per day in February. Contrast this with August, where just over 21% had this small number of meals. Looking at the values off the diagonals, some 45% of households consumed fewer meals or smaller meals each day in February than in August.

Not surprisingly, this disparity in food consumption leads to other welfare effects on household members: for example, in the February round, 6.6% of individuals were absent from their daily activities due to poor health, while in August this rate was only 1.5%.

TABLE 2
Average Number of Meals per Day, Last 4 Weeks
Média Número Ai-Han kada Loron, Semana 4 Ikus

		Number of Households Reporting Meals per Day in August (Round 2, Harvest Period)				Total Number of Households	% Households
		0.5 meal	1 meal	2 meals	3 meals		
Meals per Day in February (Round 1)	0.5 meal	1	2	13	4	20	3 %
	1 meal	1	100	179	54	334	47 %
	2 meals	1	37	150	68	256	36 %
	3 meals	0	10	44	46	100	14 %
	Total Number of Households	3	149	386	172	710	
% Households		0.4 %	21 %	54 %	24 %		100 %

Proportion of households consuming:
Proporsaan konsumsaan hosi uma-kain:

The same number of meals regardless of season: 42 %
Número ai-han ne'ebé hanesan kualker tempu:

More in harvest season: 45 %
Barak iha tempu kollietta:

In the non-harvest season 50 % of households ate 1 meal or less per day, on average.
In the harvest season only 21.4 % ate this small amount.

Iha Febreiru, kada loron uma-kain 50% konsume hahan 1 ka menus. Iha Agustu, 21% deit mak konsume ai-han ho número ne'ebé ki'ik.

4.3.3 Seasonal Effects on School-Aged Children Impaktu Tempu ba Eskola-Oan Sira

In the harvest season, it is common for school-aged children to help with the family's coffee harvest. Even though part of the harvest period is covered by annual school holidays, 44% of secondary school children who helped with the harvest did so during school time. This represents a substantial disruption to the education of these children.

Weather plays another strong part in access to schooling for many rural children – in the rainy season of round 1, bad weather was a common reason for school absence.

Tempu mós afeitadu ba eskola-oan sira nian edukasaun: iha tempu kollieta, labarik eskola primária 44% mak ajuda kollieta durante tempu eskola. Iha tempu udan, iklima ne'ebé ladiak mak hanesan razaun ida ne'ebé komún liu atu falta eskola.



SUMMARY BOX 5

Seasonal Hunger

Tempu menus Ai-han

The evidence is strong for the existence of 'hungry months' where households consume much less than at other times of the year, because of financial constraints. This has sizeable welfare implications, especially for children.

Evidensia ba ezistensia 'bulan lapar' forte tebes, ne'ebé uma-kain sira konsume ai-han menus liu kompara ho tempu sira seluk iha finan ida nia laran, tan problema finanseiru. Ida ne'e fó implikasaun bo'ot ba uma-kain sira nia moris-diak, liu-liu ba labarik-oan sira.

4.3.4 Smoothing Income and Consumption

Konsumsaun no Rendimentu ne'ebé Sustentável

Why don't households save their harvest income to spread it more evenly across the year?

Tan sá mak uma-kain sira la-poupa sira nia rendimentu hosi kollieta no uza durante finan ne'e nia laran?

There is a great deal of research in economics into the question of consumption smoothing: when income is not received steadily across a year, households develop strategies for spreading this income out so that consumption expenditure (especially on food and other essential non-durables) is more evenly spread across the year. The challenge of dealing with lumpy income is particularly strong in households that depend on one main crop like coffee for their income, and in particular where that crop has just an annual harvest.

Savings?

Poupansa?

The most obvious mechanism for consumption smoothing is the use of savings and borrowings to redistribute income across time. In a relatively poorly developed financial system such as Timor-Leste's (especially in rural areas), it is the widely held view that saving and borrowing is not as common as in other parts of the world, not least because there is very little access to formal financial institutions. Our survey actually suggests a significant level of savings, indicating that there is a culture of saving, although not as widespread as one might expect given the temporal distribution of income. When asked in February whether households had saved income earned in the previous harvest, almost 40% indicated that they had saved some of the income. The vast majority of this income was then spent in the December / January / February period, some 4-6 months after harvest. While this indicates a nontrivial degree of savings, it still means that more than 60% of households did not save their harvest income at all. Furthermore, the amounts that were saved were typically quite low, mostly less than \$50.

Borrowings?

Impréstimu?

Do households instead rely on borrowings to meet their consumption needs? When asked in February if they had borrowed in recent weeks, more than 50% indicated that they had, with borrowings typically in the \$50-\$100 range. Almost 70% borrowed from friends or family, with less than 4% making use of formal lending institutions. Most borrowings were said to be used for essential needs including food and schooling costs.

Two basic messages emerge from the analysis of savings and borrowings:

Mensajem baziku rua ne'ebé mosu hosi análiza ba poupansa no impréstimu:

- There is a significant amount of saving and borrowing, indicating that despite the lack of formal institutions, many households are resourceful in finding means of redistributing income across the months of the year.

Iha montante poupansa no impréstimu ne'ebé signifikante, indika katak maski menus instituisaun formál, uma-kain barak iha idea ne'ebé diak hodi redistribui sira nia rendimentu iha tinan ida nia laran.

- Saving and borrowing through these existing informal means is insufficient to be able to adequately smooth consumption.

Poupansa no impréstimu atravez meius informál hirak ne'e, ladun sufisiente hodi halo konsumsaun diak liu tan.

One possible means of improving the capacity of households to spread their consumption expenditure is by providing a structured or formal means by which they can spread their income. For example, in some contexts a coffee buyer may be able to act as a form of savings institution by staggering payments for the product, rather than having one upfront payment for coffee. In this survey we asked households whether they would be interested in such a scheme, and if not, why not. The responses here give some insight into how they view their coffee income and the need to save for future consumption.

An overwhelming 96% of respondents indicated that they would not like their payments for coffee to be paid in instalments. The reasons given are quite revealing: a significant number considered that their income from coffee sales was so small that they needed it all immediately simply to cover the costs of daily living in the near future. If income is already at or below subsistence level, it is hard to find a way to justify saving. For a number of others, the question of delaying payment seemed to be a non-question: they are accustomed to living in an economic system based on a simple exchange model: money is given in exchange for goods at that point.

One of the issues with payment by instalments is that of trust: how will I know that you will honour your commitment to make future payments? The research uncovered a variation on the instalments model that is currently practiced by an NGO amongst its member households. The model involves assessing in February what the likely harvest will be for a given household. A partial payment is made for that coffee at that time. The remaining payment is made at harvest time when the coffee actually changes hands. Under this model, the risk is with the buyer, rather than the household. The buyer is more able to diversify this risk, so it makes sense for them to carry it rather than the household. The scaling-up of this model would seem worthy of consideration.

SUMMARY BOX 6

Creative Approaches to Saving and Borrowing
Aproximasaun Kreativu ba Poupansa no Impréstimu

Poor, rural households need accessible means of borrowing and saving that are built on relationships of trust.

Uma-kain mukiŋ iha rurál presiza meius ne'ebé asesivel ba poupansa no impréstimu ne'ebé harii hosi relasaun fiar malu.

ACADEMIC RESEARCH

Perceptions and Reality?

In an ideal setting, a rational economic agent would achieve maximum utility by smoothing consumption of food across the year as much as possible. The evidence is clear that households are not doing this. Does this suggest they are irrational, displaying poor ability to plan or show foresight?

Rather than dismiss this behaviour as a sign of poor abilities to plan, we are seeking in this research to understand the possible reasons why households behave in this way. This understanding will help ensure that solutions are consistent with how rural households view their situation, and therefore more likely to be more effective. This is the subject of some more detailed academic analysis as part of this project. We summarise some of this research here.

Some possibly rational reasons for why consumption is not smooth:

- The survey responses suggest that in many cases the income received at harvest time is so low that it barely allows households to reach a subsistence level of food consumption in the immediate future; it is just not enough to be able to consider saving.
- Some of the windfall gain from harvest income is spent on community celebrations. From an outsider's point of view these can be seen as wasteful, when only months later the household cannot meet their basic food needs. However, there is evidence that community celebrations help to build community loyalty and social capital, that will benefit households later when they need the support of their family and neighbours.
- While it is not desirable to live with less food than one would like for a portion of the year, there is little evidence of people actually starving in the hungry months. The actual experience of rural people is that they have the resources in their families and communities to survive the hungry months. The fact that they somehow they get by in the hungry periods means they are thus less worried than outsiders perceive they ought to be.
- The survey has uncovered a systematic 'anchoring' bias in subjects' recall of how much food they actually consumed at other times of the year. When asked at harvest time (with relatively good income and food supply), about 50% of households recall their non-harvest food consumption as being different to what they reported at the time. In 95% of these cases, their recall error / bias is in the direction of their actual reported consumption in the present (harvest) time. More specifically, many households' recall of the hungry periods is that things were better than what they actually were. If this is the case, they will presumably have a similar expectation of future hungry periods and not save to the level required for consumption to be kept at a consistent level.

This point is illustrated in a different way with the data in Table 3. Both columns relate to the average number of meals per day households reported consuming in February 2011 (non-harvest time), but at different survey rounds: the first column as reported at the time in February (non-harvest, reproduced from Table 2); the second column as remembered in round 2 (harvest time). Comparing these two columns, the recall at harvest time (column 2) paints a far more optimistic picture of how much food was consumed in February compared with the actual responses given at the time (column 1). This insight into producers' understanding of their situation across time suggests that simply providing better financial institutions to enable savings and borrowing is not going to be sufficient to help households better smooth consumption across the year.

TABLE 3
Average Number of Meals per Day in February

	% of Households	
	As Reported in Round 1 (February, Non-Harvest) from Table 2	As Remembered in Round 2 (Harvest)
0.5 meal	3%	5 %
1 meal	47%	33 %
2 meals	36%	53 %
3 meals	14%	9 %
Total	100%	100 %

Column 1 shows that 50% of people reported 1 or less meals per day in February, but column 2 shows this significantly lower at 38% when recall is 'anchored' to the experience at harvest time.

SUMMARY BOX 7

How to Best Support Households' Consumption Decisions across Time?
Dalan Diak atu Fó Apoiu ba Desizaun Konsumsaun Uma-Kain iha Tinan ida nia Laran?

- The most effective next step to enabling households to smooth consumption is for households to see a significant increase in harvest income that meets immediate needs and allows them to save.

Faze tuir mai ne'ebé efetivu liu hodi garante uma-kain sira halo konsumsaun ho diak mak uma-kain sira presiza atu haree aumentu ne'ebé signifikante iha rendimentu hosi kollieta ne'ebé bele atende sira nia nesesidade imediata no permite sira halo poupança.

- Alongside this increased income, saving is best facilitated by providing a means of staggering the payments for coffee. Partial pre-payment for a portion of coffee harvest is the most viable existing model, forming part of the activities of a trusted, well-functioning local co-operative.

Aleinde iha aumentu ba rendimentu ida ne'e, poupança mak meius ida ne'ebé diak hodi halo pagamentu ba kafé. Pagamentu sorin balun ba kollieta kafé sorin balun, hanesan modelu diak ida ne'ebé dadaun ne'e eziste, forma hosi atividade kooperativa lokál ne'ebé fiar-malu.

4.4 Rice and Price

Foos no Presu

Because of its focus on coffee production and its impact on households, this survey considers only a few of the many important food security issues. We did, however, focus on one important question around access to basic food needs that initial research highlighted as a concern to many households.

The survey collected information on the price that households paid for rice in both rounds of the survey – rice is the most commonly used source of basic nutrition. While official (Direcção Nacional de Estatística – ‘DNE’) data sources provide very good information on prices of rice and other basic foods, these are Dili-based. Prices in rural areas can differ, and often in rural areas rice is purchased in much smaller quantities than a sack, particularly when households are credit constrained. The data collected in this project showed that rice prices (when bought by the 25kg sack) averaged around 68 – 78 cents per kilogram with the following important variations (Figure 6):

Presu foos (wainhira sosa saka 25kg) nia média kuaze sentimu 68 – 78 per kilograma, maibe (Figure 6):

- Households report paying an average of \$2.50 (10 cents per kilogram) more for their sacks of rice in February than in August (see Figure 6a). This difference is not reflected in the Dili market prices, so it is not immediately obvious why such a difference would occur. The most plausible explanation is to do with high transportation costs and stock wastage in the wet season (February).

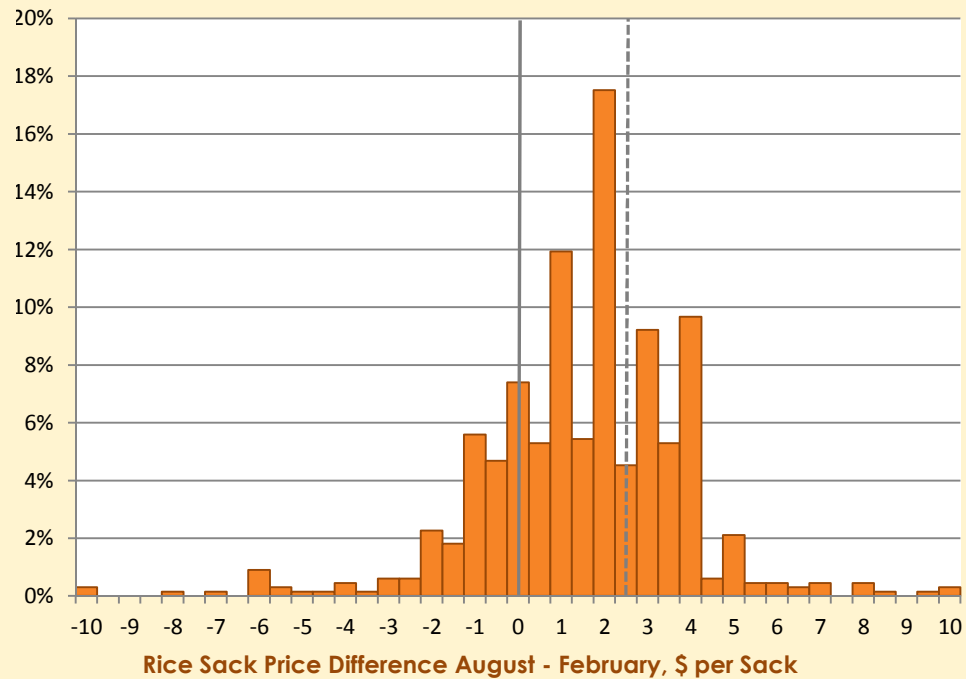
Uma-kain sira relata katak sira sosa iha média \$2.50 (sentimu 10 per kg) barak liu iha fulan Febreiru duke iha Augustu, ida ne'e tan kustu transportasaun no foos rezerva ne'ebé estraga deit iha tempu udan.

- It is common for households to purchase rice in small tins weighing less than 1kg. Rice purchased this way costs 30-40 cents per kilogram more than the sack price (a 50% price mark-up, see Figure 6b). As a consequence, those who are credit constrained pay significantly more for their rice.

Komún tebes ba uma-kain sira hodi sosa foos iha lata ki'ik menus hosi 1kg. Nia kustu sentimu 30-40 per kg karun liu duke sosa saka (presu sa'e 50%, Figure 6b). Nia konsekuensia, uma-kain sira ne'ebé iha impréstimu tenki hasai osan barak hodi sosa sira nian foos.

FIGURE 6

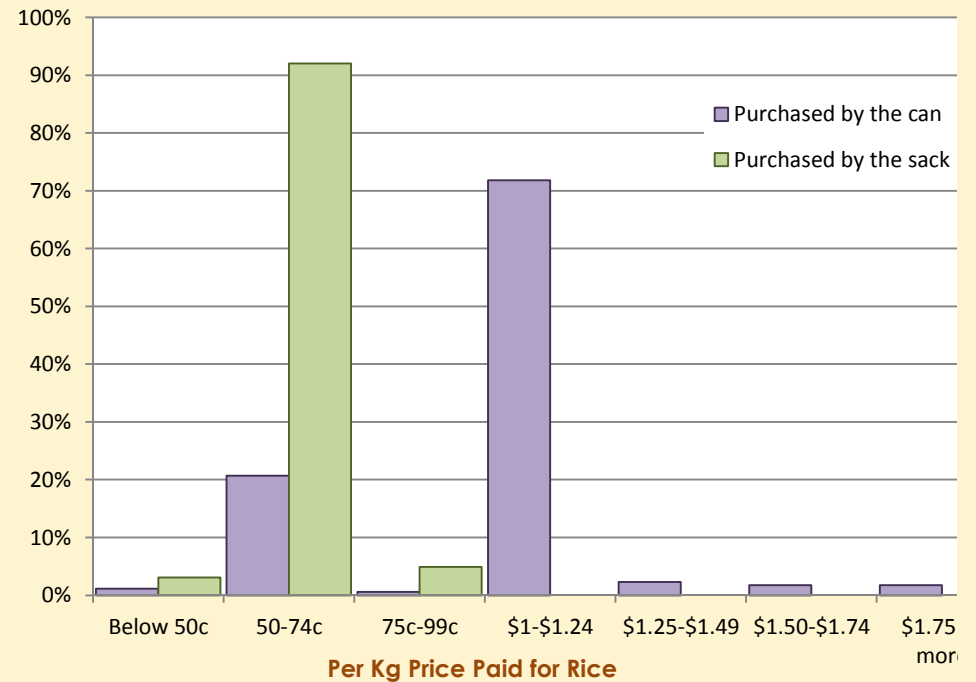
a
 Difference in the Price of Rice across Seasons
 Diferensia kona-ba Presu Foons atravez Tempu



Households pay on average \$2.50 more for their sacks of rice in February than in September.

Uma-kain sira sosa foons saka ida iha média \$2.50 ka liu, iha fulan Febreiru duke Setembru.

b
 Difference in the Price of Rice by Can and Sack
 Diferensia Presu Foons entre Lata no Saka



Households pay around 50% more for their rice if purchased by the can rather than by the sack.

Uma-kain sira sosa sira nian foons karun liu 50%, se karik sira sosa ho lata duke saka.

This finding suggests that the rice market adds considerable extra burden on households' budgets in the non-harvest season, showing up in higher prices for rice per sack, plus a price premium for purchasing rice in smaller quantities. In other words, the majority of households are paying substantially more for their rice at the time when they are most short of income. It is not surprising that we then observe significantly lower food consumption in this period, a contributing factor to the high levels of malnutrition in rural areas.

The majority of households are paying substantially more for their rice at the time when they are most short of income.

There are two price premiums: higher prices in the non-harvest season, plus higher prices for small-quantity purchases.

Maioria uma-kain sira, substansialmente sosa barak liu ba sira nia foos iha tempu ne'ebé sira nian rendimentu ituan liu.

Iha presu prémiu 2: presu ás iha tempu laos-kollieta no presu ás wainhira sosa ho kuantidade ne'ebé ki'ik.

SUMMARY BOX 8

Improving Local Buying Power
Hadí'ak Podér Kompradór Lokál

Co-operation at the local level in buying and transporting food will allow poor rural households to avoid paying higher prices for essential food items.

Kooperasaun iha nivel lokál hodi sosa no transporte ai-han sei permite uma-kain mukit iha área rurál hodi evita sira selu presu ne'ebé ás ba ai-han esensíal.

5 DISCUSSION AND FUTURE ACTION

DISKUSAUN NO ASAUN TUIR-MAI

In this section we discuss some implications of the research findings for policy and future action. Addressing rural poverty in Timor-Leste will require a multi-prong focus, which we categorise into three broad areas: (I) strengthening the role of the coffee sector in poverty reduction, (II) diversification into other agricultural activities and (III) increasing opportunities for labour employment. We will mainly emphasise the place of the coffee industry in poverty reduction, and suggest some ways forward in improving the productivity and welfare of those in the coffee sector. We will advocate a holistic approach that involves increasing yields, providing financial services, establishing pro-poor seasonal programs and improving access to basic foods. This section will conclude with some brief comments about the other areas of agricultural diversification and labour employment.

(I) STRENGTHENING THE ROLE OF THE COFFEE SECTOR

FORTALESIMENTU PAPEL SETÓR KAFÉ

Rendimentu hosi kafé mak xavi ba uma-kain mokit sira nian moris-diak no iha potencia ne'ebé bo'ot hodi hasa'e sira nian rendimentu atravez hadi'ak kollieta. Iha kurtu no médiu prazu, investimentu hodi fó apoiu ba atividade kafé ne'ebé dadaun ne'e eziste, sei produz returnu ne'ebé efikaz duke esforsu hodi kria oportunidade ekonomia foun.

It is argued in some quarters that reliance on a cash crop like coffee will never provide sufficient income to allow households to move out of poverty. Critics also point to vulnerability of households to global market conditions and prices, and to an over-reliance on global cash crop income at the expense of productions for local and own-consumption.

A large proportion of the poor can be reached through a holistic approach to strengthening the coffee sector.

Fortalesimentu setór kafé atravez aprosimasaun olístiku ida bele alkansa númeru populasauñ pobreza ne'ebé bo'ot.

While such arguments might have appeal at an ideological level, the evidence in this research is that they do not hold at a practical level. First, coffee income is vital to households' immediate wellbeing, providing the vast majority of cash income, especially for poorer households. Even very poor / subsistence households find cash is vital for providing basic needs, for supporting schooling and health, and for

creating access to markets and other income sources. Secondly, the results have shown that there is great potential for increasing income through improved yields. In the short and medium term, providing greater support for the existing coffee activities will produce a much more effective, timely and broad-based return than attempts to create whole new economic opportunities.

Here we suggest some creative approaches to improving coffee income as a means by which to reduce poverty.

5.1 Improving Coffee Yields

Hadi'ak Kollieta Kafé

This research has highlighted that coffee yields are very low by international standards. An average yield of around 200kg of parchment per hectare is around 10% of that of many other coffee producing countries. There is clearly very large scope to increase incomes by improving yields of high quality coffee. In turn, evidence suggests that increasing incomes will indeed make a sizeable difference to household welfare – health and education of children, for example.

The Timor-Leste Strategic Development Plan 2011-2030 discusses a broad approach to rural development, focusing on improved food security and increasing income. This will be achieved by sizeable improvements in production of basic foods such as rice and maize, as well as significant increases in yields for cash crops like coffee. The strategy with cash crops relies primarily on training and expert advice – it is summarised as follows (p. 128): “Farmers will be offered subsidies, training and expert advice ... to ensure that the expansion of the cash crops sector over the next 20 years contributes to Timor-Leste’s goal of food security and creating jobs in rural areas”. The key words in this sentence that form the basis of a plan for action are *subsidies, training and expert advice*. We will advocate for creative and new approaches, arguing that more of the status quo is not able to deliver the kinds of improvements needed.

Dadaun ne'e, bazeia ba padraun internasionál, kollieta kafé iha deit 10-20%. Klaru katak iha oportunidade ne'ebé bo'ot hodi hasa'e rendimentu ba ema barak atravez hadi'ak kollieta kafé ne'ebé iha kualidade diak. Estratéjia sei inklui subsídiu treinamentu no konsellu hosi tékniku ka espesialista sira.



5.1.1 Creative Approaches to Training and Expert Advice

Aproximasaun Kreativu ba Treinamentu no Konsellu hosi Tékniku ka Espesialista Sira

5.1.1.1 New and Effective Approaches are Needed!

Aprosimasaun ne'ebé Foun no Efikaz, Nesesariu Tebes!

Iha uma-kain balun deit mak relata katak sira tuir ona treinamentu no konesimentu ne'ebé sira hetan hosi treinamentu hodi hadi'ak kollieta ladun ás ida. Importante tebes atu fó apoiu no treinamentu ne'ebé efetivu.

The evidence from this research project is that relatively few households report receiving training, and more notably, that training has produced little or no appreciable benefits in terms of yield. It is not clear that simply putting more resources into training will give the desired improvements in yield and quality. What is needed is some clarity about how training and support can be delivered effectively.

Stakeholders in the coffee industry often express dismay of the lack of effectiveness of training in improving yields and quality of coffee. Research shows quite clearly that significant improvements in yield are achievable by basic activities such as pruning, planting new trees, mulching and weeding, and there are no real technical impediments to these being implemented. We resist the temptation to go for easy explanations along the lines that growers are lazy or short-sighted, or simply satisfied to be poor. There is some evidence in our research findings to challenge all of these possible explanations. Instead, we would argue there are quite rational explanations for farmers making the choices they do, and understanding these is vital to offering positive ways forward.

SUMMARY BOX 9

Diffusion of Innovations

by E.M. Rogers (2003)

Rogers' influential theory is built on the premise that innovations spread more rapidly when instead of focusing on persuading individuals to change, the focus is more on reinvention of technology or processes so they better fit the needs of individuals and groups.

Rogers emphasises:

- Compatibility with existing values and practices;
- Simplicity of use;
- The importance of trusted peer networks.

5.1.1.2 Principles for Effective Training Prinsipiu ba Treinamentu ne'ebé Efikaz

We argue that training and support for producers needs to be built on a platform of relationship. We propose three principles that need to undergird the relationship between the farmer and those offering support or training. These are based on influential work of Rogers (2003), who explores the factors behind why certain innovations are adopted more quickly than others, and emerging economic theories of induced innovation (for example, Ruttan, 1997).

Presiza atu dezenvolve apoiu no treinamentu ba produtór bazeia ba plataforma relasaun ho prinsipiu xavi 3: konfiansa, apoiu holístiku no ekonomia insentivu.

(i) Trust

Konfiansa

When a farmer is being offered advice from an outsider, and is urged to undertake different practices, not surprisingly there will be a degree of scepticism. Advice will not be taken seriously unless the farmer has a demonstrable reason to trust the outside advice. This is well recognised in the agricultural development literature, and fundamentally boils down to risk: do I take the advice of outsiders that may improve things or may make my situation worse, or do I stick with current practices whose outcomes I have come to know well?

Sei la foti konsellu ho sériu anaunserke agrikultór prezenta razaun ne'ebé diak hodi fiar konsellu hosi liur.

(ii) Holistic Support

Apoiu Holístiku

Poor, smallholder farmers view their agricultural production activities as an integrated part of their whole family and village community life. They view any intervention with the perspective of its impact on the whole household and community. Support and training will be better received if it builds on the existing social capital in the community, and considers all the needs of the household and the community, rather than seeing farmers purely as producers of a commodity.

Treinamentu sei lao ho diak wainhira treinamentu refere dezenvolve bazeia ba kapitál sosiál ne'ebé dadaun ne'e eziste iha comunidade no konsidera nesiedade hosi uma-kain sira no comunidade.

(iii) Economic Incentives

Ekonomia Insentivu

Any support or training seeking to improve quality or yield needs to provide demonstrable improvements in economic wellbeing. This is not as simple as it sounds: improved practices such as pruning, planting, weeding involve extra labour, and even when labour is underutilised, households still make trade-off decisions about whether investing time in a productive activity produces a worthwhile return on labour.

Kualker apoiu ka treinamentu hodi hadi'ak kualidade ka kolleita, presiza atu demonstra melloramentu iha ekonomia ne'ebé diak – uma-kain sira presiza atu tetu didiak tempu ne'ebé sira uza ho nia returnu ba ekonomia.

5.1.1.3 Industry Structures that Facilitate Effective Training

Estrutura Industria hodi Fasilita Treinamentu ne'ebé Efikaz

Can we leave it to the market?

Karik ita bele husik ida ne'e ba merkadu?

In principle, training need not be provided from the public or NGO purse. Most training in Ermera district is currently provided by CCT, with a relatively small amount of training provided by other commercial buyers. However, for commercial operations like CCT and others to justify investing resources in support and training to growers, there needs to be an incentive for them to do so. Currently, the way the market works, there are inadequate incentives. For example, one company could invest in training and support for a group of producers, and then these producers sell their coffee to a competitor, providing no direct return on the investment in training.



Em prinsípiu, Instituisaun públiku ka ONG-sira presiza fó treinamentu. Maibe, ba kompañã komérsiu hanesan CCT no sira seluk, justifika investe rekursu hodi fó apoiu no treinamentu ba produtór-sira, presiza atu fó insentivu mós ba sira hodi halao atividade ida ne'e. Dadaun ne'e, maneira funksionamentu merkadu la-fornese insentivu ida. Ezemplu, kompañã ida bele investe hodi fó apoiu no treinamentu ba grupu produtór ida no tuir-mai produtór hirak ne'e faan sira nia kafé ba kompetitór-sira no la fó returnu ba iha investimentu treinamentu refere.

Can contract farming help?

Kontratu agrikultura bele ajuda ka lae?

The international trend in agriculture is towards contract farming models, where a contract between producer and buyer binds the producer to sell to that buyer, in return for receiving training and other support. There is evidence that such approaches can work even when producers are largely smallholder farmers (for example, see Kirsten & Sartorius, 2002). While on the surface this may seem to be a sensible way forward, it is not clear that the Timor-Leste coffee sector is ready for this type of contract farming. Such arrangements require a level of reciprocal trust and enforceability of contracts, which is unlikely to be appropriate at this stage of development of the sector.

While private / commercial buyers ought to be encouraged to provide training and support, there is a need in the short-to-medium term for ongoing support for training that is provided by non-government organisations without the profit motive. Such organisations are more naturally able to work with farmers in ways consistent with the principles of trust and holistic support.

Ladun klaru katak setór kafé Timor-Leste prontu ona atu adapta kontratu agrikultura. Arranjus ida ne'e presiza nivel konfiansa no aplikabilidade ba kontratu refere no iha faze dezvoltamentu setór ida ne'e ladun apropiadu ida.

Do local co-operatives offer a solution?

Karik kooperativa lokál bele sai hanesan solusaun ida?

Internationally, it is found that often the most effective means of delivering assistance and training to poor rural farmers is by establishing co-operatives. Co-operatives allow small producers to benefit from the economies of scale in acquiring inputs, sharing processing equipment, etc., and to have some market voice through collective association. They also create opportunity for greater market access. Co-operatives need to be big enough to reap the benefits of economies of scale, but not so large that they lose the benefits of member participation and empowerment, and of trust through relationship.

Internasionalmente, identifika ona katak dalabarak maneira ne'ebé efetivu liu hodi fó assistensia no treinamentu ba agrikultór rural mak estabese kooperativa. Kooperativa permite produtór ki'ik sira hetan benefisiu hosi absorsaun ekonomia, fahe uza ekipamentu no sst no iha lian ba merkadu atravez asosiasaun ne'ebé kolektivu. Sira mós kria oportunidade hodi asesu ba merkadu ne'ebé diak. Presiza kooperativa ne'ebé bo'ot hodi atrai benefisiu ba ekonomia maibe laos bo'ot liu ne'ebé sira bele lakon sira nian benefisiu nu'udar membru, kapasitasaun no relasaun ne'ebé bazeia ba konfiansa.



Follow-up qualitative interviews with a selection of households uncovered some very positive benefits of training for a small number of households associated with medium scale networks of local initiatives. The research suggests that the best impact of training occurs when it is focused, intensive, smaller group localised training (for example, see Nwankwo, Peters & Bokelmann, 2009). There is better level of follow through in these cases, a vital aspect of seeing new practices implemented.

Training that is built around collective involvement with others at the local level also brings other benefits such as building trust and allowing participatory decision making. The co-operative can also take an interest in other community needs (such as creating access to other sources of income beyond coffee, assisting with saving and borrowing, etc.), providing a holistic approach to supporting coffee-producing households.

The co-operative model is a structure built around trust and holistic support of households, and also focuses on empowering households to make decisions about their economic futures and community needs.

Sistema kooperativa mak estrutura ida ne'ebé harii hosi konfiansa no apoiu holístiku ba uma-kain sira no mós focus ba kapasitasaun hodi foti desizaun kona-ba sira nia futuru ekonomia no nesesidade comunidade.

Follow-up ba intervista kualitativu ho uma-kain balun deskobre benefisiu pozitivu balun hosi treinamentu ba grupu ki'ik hosi uma-kain balun ne'ebé asosiadu ho liña-servisu eskalaun médiu hosi iniciativa lokál. Peskiza ne'e hatudu katak impaktu hosi treinamentu sei diak wainhira treinamentu nee halo ho intensive, fokus no pesoál ne'ebé partisipa ituan deit. Iha nivel follow-up ne'ebé diak, ezemplu hirak ne'e mak aspeitu xavi hodi haree pratíka foun bele implementasaun. Treinamentu ne'ebé mak dezenvolve hosi involvimentu kolektivu ho uma-kain sira seluk iha nivel lokál mós bele lori benefisiu seluk hanesan dezenvolve konfiansa no permite partisipasaun iha prosesu foti desizaun. Kooperativa mós bele halo buat seluk ne'ebé comunidade interesse (hanesan kria asesu ba fonte rendimentu sira seluk aleinde kafé, ajuda maneja poupança no impréstimu no sst.), fornese aproximasaun holístiku ida hodi fó apoiu ba uma-kain produtór kafé.

It is our strong recommendation that a greater emphasis within the industry be given to supporting existing small and medium-sized co-operatives that have strong local connections, and towards establishing new such co-operatives. The evidence is that the most effective training and support is taking place via model co-operatives of this type.

Ami nia rekomendasaun ne'ebé forte mak enfaze bo'ot iha industria hodi fó apoiu ba kooperativa eskalaun ki'ik no médiu ne'ebé dadaun ne'e eziste ona, iha koneksaun lokál ne'ebé forte no tuir mai estabele kooperativa foun ida hanesan nee iha futuru. Nia evidensia mak bele implementa apoiu no treinamentu ne'ebé efetivu liu atravez modelu kooperativa ida hanesan ne'e.

NEXT STEPS ON INDUSTRY STRUCTURE FAZE TUIR MAI BA ESTRUTURA INDUSTRIA

This recommendation could be actioned with the following steps:
Rekomendasaun ne'e bele implementa ho faze tuir mai ne'e:

1. Identifying small-medium sized co-operatives that are working among coffee growing households.
Identifika kooperativa ho eskalaun ki'ik no médiu ne'ebé mak servisu hamutuk ho uma-kain produtór kafé.
2. Evaluation of the effectiveness of these households under various criteria for effective co-operatives.
Halo avaliasaun efikaz ba uma-kain hirak ne'e, atravez kriterias balun ba kooperativa ne'ebé efetivu.
3. Building a template for the functioning of an effective coffee grower's co-operative, based on lessons learned from existing co-operatives.
Dezenvolve formatu ida ba funsionamentu kooperativa produtór kafé ne'ebé efetivu bazeia ba lisaun aprendida hosi kooperativa ne'ebé dadaun ne'e eziste.
4. Seed funding for establishing co-operatives in target communities.
Inisiu finanseiru hodi estabelese kooperativa ne'ebé nia alvu orienta ba comunidade.

5.1.2 Creative Approaches to Subsidies – Economic Incentives Aproximasaun Kreativu ba Subsídriu – Ekonomia Insentivu

Tuir mai ami koalia kona ba problema ekonomia insentivu hodi propoin aproximasaun ida ba subsídriu ne'ebé bele hadi'ak ekonomia insentivu. Investe tempu barak iha servisu agrikultura laos sein kustu. Uma-kain mukit sira iha atividade sira seluk ne'ebé sira presiza halo, hodi bele moris no nee presiza tempu no enerjia. Iha mós risku ne'ebé sira bele halo liuhosi adopta prátika hanesan tesi ai-hun no sst, especialmente, iha kurtu prazu. Ami fiar katak presu ne'ebé selu ba produtór kafé sira kí'ik liu no insentivu ne'ebé la-adekuadu ba sira hodi adopta prátika foun hodi hasae rezultadu.

The economic benefit from investing additional time in farm work must outweigh its costs.

Tenki iha balansu entre investe tempu adisionál ba iha servisu agrikultura ho benefisiu ekonomia ne'ebé uma-kain hetan.

The co-operative structure we are advocating is designed to address the need for training and support that is built on relationships of trust and on a commitment to holistic support of coffee producing communities. Next we address the issue of economic incentives by proposing an approach to subsidies that builds in improved economic incentives.

Our assertion is that the price paid to coffee growers is so low that there is inadequate incentive for them to increase output. Estimates by the Ministry of Agriculture and Fisheries (2009) show that traditional farming methods with little pruning or replanting of trees yields a modest but not insignificant return for each work day. While improved practices can triple average output and hence income, it is estimated that they also require three times the amount of labour, so the estimated average return to a day's work is almost identical. It is normally argued that there is a vast amount of idle labour in rural communities, which effectively means that it is rational to undertake any activity that produces a positive net economic return, because the alternative is zero-return idle labour. Hence the additional work associated with improved practices ought to be undertaken even if the daily return was much smaller than this.

However, there is reason to challenge this analysis. Investing more time in farm work is not without costs. Poor, rural households have a number of other daily tasks they must undertake just to survive, including collecting water and firewood, growing and processing their own food, etc. These take time and energy. In addition, households often have low calorie intake, and hence much lower energy levels than they would if food was in plentiful supply, so while they have idle time, they may need to ration their energy.

Added to this is the risk associated with adopting practices that, from the farmer's point of view, are unproven, and in the short term may cause a loss of output as a result of pruning and replacing trees. There appears to be little in the price of coffee to compensate for these risks.

Cash transfer proposal:

Proposta transferensia osan:

We propose a scheme whereby income supplementation is provided via a network of locally run village committees associated with coffee producer co-operatives. We recommend trialling the following approach to determining such payments: households receive an additional payment in the non-harvest months (for example, six months after harvest), which is a fixed amount per kg of coffee sold in the previous harvest. For example, the amount might be 50 cents per kilogram of parchment sold (10 cents per kilogram of cherry).

There would be some upper limit to this amount (say, 750kg of parchment, which would be relevant to less than 2% of producers, based on the survey data collected in this study).

Ami propoin sistema suplementasaun rendimentu ne'ebé fornese atravez liña-servisu implementa hosi konsellu suku asosiadu ho kooperativa produtór kafé. Ami rekomenda esperimentasaun saida mak bele sai hanesan aproximasaun kontra-intuitivu hodi determina pagamentu hanesan: uma-kain sira simu pagamentu adisionál iha fulan laos tempu kollieta (ezemplu, fulan 6 hafoin kollieta) ne'ebé nia montante fixu kafé per kg faan iha tempu kollieta liu ba. Ezemplu, nia montante bele sentimu 50 per kg ba kafé hasai kulit la habai maran ne'ebé faan (kafé kulit tasak sentimu 10 per kg).

Sei iha limitasaun balun ba montante ida ne'e (ezemplu, kafe kulit maran 750kg ne'ebé menus hosi 2% ba produtór bazeia ba survei koleasaun dadus iha peskiza ida ne'e).



Why do we recommend a program that is essentially a regressive cash transfer, where the very poor may receive less than the less poor (because they produce less coffee)? As noted, one reason for low agricultural productivity is that producers receive such low prices for their product that there is little incentive to work hard during the off-season to care for the land and trees with a goal of maximising yield. A transfer that is tied to the previous harvest provides an incentive to undertake such off-season activities, knowing that it will be rewarded with what is effectively a higher price.

Transferensia ne'ebé relaciona ho tempu kollieta liu ba nee, fornese insentivu ida hodi halao atividade ne'ebé mak bele hadi'ak kualidade no kollieta, klaru ida ne'e efektivamente sei hetan presu ida ne'ebé ás.

One economic rationale for this approach is found in a version of the well-known efficiency wages hypothesis, where employers often pay more than the market wage in order to increase workers' productivity or efficiency (for an early example of the application of this theory to poor farmers, see Stiglitz, 1976). There is also ample evidence that poor producers do respond to price incentives with increased effort and increased output (for example, a World Bank study of cocoa in Ghana finds that "a variety of models estimating the sensitivity of production supply to farm gate prices find that small-scale cocoa producers in Ghana have responded positively to these price incentives" (Kolavalli & Vigneri, 2011, p. 209)).

At a practical level, payments tied to actual physical production / sales are also easier to administer and more transparent.



Iha nivel prátika, pagamentu ne'ebé relaciona ho produsaun fiziku atuál mós fasil atu rejista no transparente liu.

The obvious criticism of this proposal is that the assistance does not target those who need it most – the poorest of the poor. We appreciate this is a difficult trade-off, but international evidence about development assistance is that it is very easy for welfare interventions to unintentionally create dependency, and to discourage households from investing in strategies that will help them bring themselves out of poverty. This proposal is designed to reward those who work hard and take the initiative to improve their coffee yields. In addition, our next set of recommendations is around programs that specifically target the very poor. They would provide complementary assistance that is specifically pro-poor.

Krítika ne'ebé klaru mak alvu assistensia la-orienta ba sira ne'ebé presiza liu – mukit hosi mukit. Ami apresia ida ne'e hanesan difikuldade trade-off, maibe evidensia internasionál kona-ba assistensia dezentvolvimentu mak fasil liu ba intervensaun moris-diak hodi involuntariamente dezentkoraja uma-kain hodi investe iha estratéjia ne'ebé sei ajuda sira sai hosi mukit. Proposta ida ne'e dezeña hodi apresia sira ne'ebé servisu maka'as no foti iniciativa hodi hadi'ak sira nian kollieta kafé.

A number of important issues need to be addressed around this proposed cash transfer scheme, and we will briefly discuss two key issues here. Firstly, how would such a scheme be funded? Initially the proposal is for a trial only, but if the cash transfer was applied to all coffee production, at 50 cents per kilogram of parchment, we estimate it would cost approximately \$5 million per annum. While this is no small sum, it is a relatively small proportion of the overseas development assistance that is received annually in Timor-Leste. It also represents only a tiny fraction of the annual funds available from the Petroleum Fund. Utilising a very small part of this fund for a broad-based cash transfer of this type would provide an arguably fair dividend to the rural people of Timor-Leste, as well as producing potential long term benefits in the form of improved future productive capacity.

Is such a scheme sustainable? As already emphasised, the cash transfers are designed to provide a greater incentive for farmers to increase yield and quality of their coffee. If the scheme is successful in achieving this objective, then within a few years, households will be experiencing increased incomes through higher yields and volumes sold, as well as possible quality premiums. We would thus argue that the cash transfer scheme need only be in place for 3-5 years, with the possibility of it being phased out gradually in the final year or two.

NEXT STEPS FOR ECONOMIC INCENTIVES FAZE TUIR MAI BA EKONOMIA INSENTIVU

We recommend trialling the cash transfer scheme in certain areas, with implementation via one of the established medium-sized producer co-operatives, and evaluating its effectiveness in improving yields.

Esperimentasaun modelu transferensia osan iha área balun ho kooperativa produtór kafé ne'ebé estabelese ona no avalia nia efikaz hodi hadi'ak kollieta.

5.2 Accessing Financial Services

Asesu ba Servisu Finanseiru

Iha montante ida ne'ebé simples kona-ba poupanza no imprestimu entre uma-kain sira, maibe ida ne'e ladun familiar iha instituisaun finanseiru formál sira. Rendimentu hosi kollieta ne'ebé ás halo uma-kain sira sei posivel atu konsidera halo poupanza hosi sira nia rendimentu. Atu efikaz liu, uma-kain sira presiza asesu ba instituisaun ne'ebé iha kredibilidade hodi kria poupanza no imprestimu asesivel. Pagamentu anuál kona-ba transferensia osan bele mós halo ho eficiente liuhosi transferensia ba iha kada uma-kain sira nian konta banku. Instituisaun ida ne'ebé apropriadu liu mak instituisaun mikro-finansia ho eskalaun médiu duke banku-sira ne'ebé kontrola hosi sentrá. Instituisaun hirak ne'e eziste ona iha Timor-Leste maibe bele espande liu-tan sira nian asesu ba iha área rurál liuhosi programa transferensia osan ne'e.

The survey reveals a modest amount of savings and borrowings behaviour, although this is heavily constrained by the low incomes of households. In addition, this saving and borrowing is very rarely with formal financial institutions. It is widely recognised that access to financial services is a crucial aspect to development among poor communities (AusAID, 2010).

A cash transfer scheme could provide the impetus for more accessible financial services.

Modélu transferensia osan bele motiva servisu finanseiru ida ne'ebé asesivel liu-tan.

The significant increases in harvest income that would occur with higher prices and improved yields make it possible for households to consider saving some of their income to enable consumption smoothing. To facilitate this saving, households need access to trusted institutions which make savings and (possibly) affordable loans accessible.

We propose that provision of simple and affordable financial services products be substantially expanded among rural households, and used as the institutional vehicle through which the cash transfer scheme proposed above is implemented. Payment of the annual cash transfer would take place via transfers into each household's savings account. This is an efficient way to deliver the transfer, and has additional benefit of opening up access to formal savings and borrowings. The most appropriate institutions are likely to be medium sized microfinance institutions, rather than centrally-controlled banks. These institutions exist already in Timor-Leste, but their reach in rural areas can be significantly expanded with the initial impetus provided by the cash transfers.

NEXT STEPS FOR FINANCIAL SERVICES FAZE TUIR MAI BA SERVISU FINANSEIRU

We recommend selected microfinance institutions with a track record of operating in rural areas be resourced to establish savings accounts for the coffee producers who will be part of the trial of the cash transfer scheme. Initially, the account would function just as a basic, affordable and accessible savings scheme.

Ami rekomenda instituisaun mikro-finansia ne'ebé iha kredibilidade atu bele funsiona iha área rural hodi estabelese konta bankaria ba produtór kafé ne'ebé mak sei hola parte iha prosesu sistema transferensia osan. Iha inisiu, konta banku ne'e simplesmente bazíku no asesivel ba sistema poupança.

5.3 Establishing Pro-Poor Seasonal Programs

Estabelese Programa Pro-Poor Seasonal (Pro-Miskin Musiman)

The research suggests that food consumption among low income rural households is much lower in non-harvest season. There are many detrimental long term effects of low nutrition for health, child development and education and productivity.

Peskiza ne'e hatudu katak konsumsaun ai-han iha uma-kain ne'ebé ho rendimentu ki'ik mak menus liu iha tempu laos-kollieta. Iha impaktu negativu barak kona-ba menus nutrisaun no iha tempu naruk bele estraga saúde, dezvoltamentu labarik, edukasaun no produtividade.

In the short term, the chronic and repeated lack of access to food is not a problem that can be ignored. Short term solutions are difficult, as they are costly, involve significant co-ordination and logistics, and most importantly, interventions must be designed in such a way as to not create disincentives for households and communities to work toward long term solutions. For example, while the distribution of food in hungry months may be a solution, this may well lead to poorer long term planning and savings in future years, only increasing the magnitude of the problem.

The cash transfer scheme described above has a consumption smoothing aspect, in that we recommend the additional payment be made 6-8 months after the harvest season has concluded.

Modelu transferensia osan ne'ebé deskreve iha leten iha nia aspetu konsumsaun, tan nee ami rekomenda pagamentu adisionál halo iha fulan 6-8 hafoin tempu kollieta ramata ona.



Ami mós rekomenda katak estratéjia transferensia osan, bele akompaña ho alvu ida ne'ebé espesifiku ba nesesidade grupu nian iha tinan ida nia laran wainhira sira vulneravel liu. Maski, pagamentu transferensia osan dezeña atu fornese insentivu hodi haree melloramentu ne'ebé signifkante iha rendimentu produtivu, programa sira seluk bele implementa hodi ajuda ema mukit sira.

We recommend that this cash transfer strategy be accompanied by specific targeting of needy groups at times of the year when they are most vulnerable. While the cash transfer payments are designed to provide an incentive to see significant improvements in productive income, other programs can be put in place that assist the very poor. Poverty incidence analysis based on other research and the results of this survey suggest a few key factors in targeting:

- Geographic location is a key determinant of extreme poverty. At a national level, there is a reasonable amount of geographic diversity in the incidence of poverty, and within districts, communities that are more isolated tend to have lower incomes, and hence would appropriately be the target of these programs.
- Programs that target children would be a high priority. The survey results suggested that when food was in short supply and some members of the household had to eat less than normal, 51% of the time it was the children who were specifically mentioned as the ones receiving less food.
- It is important to see programs that address needs at particular times of the year, especially wet season and non-harvest hungry months.

Existing institutions such as schools and health centres could be useful vehicles for delivering specific wet season / hungry months programs aimed at nutrition and health.

5.4 Addressing Issues with Distribution of Basic Food (Rice) Rezolve Problema ho Distribuisaun Ai-han Baziku (Foos)

Peskiza ida ne'e foka ona ba merkadu nia failla relasiona ho presu foos ne'ebé fó impaktu bo'ot ba uma-kain sira wainhira sira iha problema krédito ne'ebé afeita ba sira nia problema finanseiru. Iha kazu ne'ebé bo'ot mai hosi rezultadu balun ba intervensaun ne'ebé koalia kona-ba limitasaun ai-han baziku iha tempu balun iha tinan ida nia laran.

It is well documented that malnourishment is prevalent in Timor-Leste, especially in rural areas. This research has highlighted market failings in the pricing and distribution of rice which have their worst effect on households when they are the most credit constrained, adding substantially to their financial burden. Large measurable welfare costs are thus incurred by poor households, most directly the lower levels of food consumption in the non-harvest season. There is a strong case coming from these findings for some kind of intervention that addresses the shortage of affordable basic food at certain times of year.

There is at this point limited understanding of the key issues that currently lead to market failure in the distribution of rice; the most likely areas that need addressing are poor households' credit constraints and issues with transportation and storage of food in the wet season. While the cash transfer proposal above would help address the credit constraints to some extent, this will not address the problems with transportation and storage that appear to be driving the inflated wet season prices.

At a broader level, a greater understanding is needed of supply mechanisms for essential foods, with a view to identifying the main causes of market failure. More research along these lines would provide greater clarity about what are the most necessary interventions.

NEXT STEPS IN FOOD DISTRIBUTION FAZE TUIR MAI BA DISTRIBUISAUN AI-HAN

We recommend trialling a program which provides for secure local (suo-level?) storage of bulk quantities of rice, transported during the dry season and then made available for sale/distribution in the wet season when access is an issue.

Ami rekomenda programa provizionál ida ne'ebé mak fornese armazenamentu lokál (nivel suco?) ne'ebé seguru ba foos ho kuantidade bo'ot, transporta durante tempu bai-loron no disponivel ba ema atu sosa / distribui iha tempu udan wainhira asesu sai hanesan problema ida.

(II) DIVERSIFICATION INTO OTHER AGRICULTURAL ACTIVITIES DIVERSIFIKASAUN BA ATIVIDADE AGRİKULTURA SIRA SELUK

The survey results show that in the Ermera district at least, most coffee-producing households generate virtually no income from other agricultural activities, with the exception of some income from livestock. There are obvious benefits to diversifying income, in terms of providing income at other times of year, providing alternative income sources that are not vulnerable to global commodity price fluctuations, improving yields on land and increasing use of rural labour.

If there are so many benefits to broadening the range of income sources, why is there so little income generated from these sources? Why are local producers unable to gain ready access to markets beyond their local, small scale area?

The lessons of coffee are relevant here: our argument is that establishing alternative crops will involve major investment at all stages of the production and supply chain, from production, processing, transport and other logistics, to creating and building markets. Coffee has been grown as a cash crop in Timor-Leste for many years, and there is a well-established supply chain. The very large number and high concentration of producers mean there is capacity for sharing of expertise and knowledge, there are several buyers and processors, many avenues for transport of the product to processing facilities, well established international markets and supply routes. Even despite this, coffee producers still experience failures in the supply chain at times (e.g. inability to sell coffee cherry in good time that leads to spoilage).

When considering diversification into other products, the many challenging issues with the supply chain must be addressed. Each stage is critical – if some critical stages are not managed well, the whole effort will likely fail. Scale is also important: small scale production in isolated pockets will not easily lend itself to cost effective or reliable operations across the supply chain.

Diversifikasaun ba atividade agrikultura bele ajuda rendimentu inseguransa sira seluk iha industria kafé. Maski obstaklu barak relasiona ho supply chain tenki rezolve no kada faze kritíku tebes. Eskalaun mós importante – problema supply chain fasil liu atu rezolve ho atividade sira ne'ebé involve produtór barak no volume ne'ebé bo'ot.

Establishing alternative crops will involve major investment at all stages of the production and supply chain.

Estabelese kollieta alternativu involve investimentu bo'ot iha faze produsaun no nia korenti fornesimentu (supply chain).

(III) INCREASING OPPORTUNITIES FOR LABOUR EMPLOYMENT HADI'AK OPORTUNIDADE BA SERVISU

This research shows clearly that the higher income households in the sample appear to achieve their higher incomes largely via labour income. The challenge with making this aspect an avenue for reducing poverty is with the lack of options for employment in rural areas. As a consequence, rural-urban migration is seen as an increasingly attractive option for many (especially the young) – for example, a survey of rural households by Housen, Hopkins and Earnest (2012) finds that more than 40% of households have at least one migrant, with the vast majority being aged 15-34. Given large household sizes, large numbers of youth and young adults and low rural incomes, this rate of rural-urban migration is likely to be sustained for some time yet. The issue of rural poverty will increasingly become one of large scale urban unemployment.

Oportunidade ba servisu bele sai nu'udar xavi hodi atinji rendimentu ne'ebé ás. Ne'eduni, oportunidade ba servisu iha área rural importante tebes, se lae mokit iha rural sei sai hanesan indikadór ida dezempregu iha sidade.

The issue of rural poverty will increasingly become one of large scale urban unemployment.

Mokit iha rural sei sai hanesan indikadór ida dezempregu iha sidade.



6 CONCLUDING REMARKS

KONKLUZAUN

The challenges of development in Timor-Leste are great, especially in poor, rural areas. The findings of this research suggest that in the medium term at least, investment in building the incomes of coffee producers will provide a viable and broad-based means of improving welfare of poor, rural households. We hope that the recommendations in this report can be a stimulus to further progress towards this end.

Desafiu ba dezenvolvimentu Timor-Leste bo'ot tebes, partikularmente iha área rural ne'ebé mokit. Rezultadu hosi peskiza ne'e hatudu katak iha médiu prazu, investimentu hodi hasa'e rendimentu agrikultór kafé sei hadi'ak moris-diak ba uma-kain mokit iha área rural. Ami espera katak rekomendasaun iha relatóriu ne'e bele sai estimula ida ba progresu ne'ebé diak iha nia rohan.

Thanks go to the many people in the district of Ermera who took the time to tell us their stories of struggle and hope. Their perseverance and hospitality is an inspiration; our desire through this research is to see improvements in their lives that strengthen them individually, as families and communities, and as a nation.

Obrigado barak ba populasaun iha distritu Ermera ne'ebé fó ona sira nia tempu hodi fahe esperiensa kona-ba sira nia susar no esperansa. Sira nia perseveransa (ketekunan) no sira nia óspitalidade (keramahan) sai hanesan inspirasaun ida; ami nia hakarak atravez peskiza ida ne'e mak atu haree melloramentu iha sira nia moris ne'ebé bele haforsa sira nu'udar pesoál, familia, comunidade no nasaun ida.



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