Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) Project

Final Evaluation Report

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LIST OF ACRONYMS

Acronym	**Full Term**
ANOVA	Analysis of Variance
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
CAR	Cordillera Administrative Region
CBSG	Capacity Building Service Group
CSO	Civil Society Organization
DA	Department of Agriculture
DAC	Development Assistance Committee
DID	Difference-in-Difference
DOST	Department of Science and Technology
DTI	Department of Trade and Industry
FFPr	Food for Progress
FGD	Focus Group Discussion
GAP	Good Agricultural Practices
GCB	Green Coffee Bean
Ha	Hectare
HH	Household
KG	Kilograms
KII	Key Informant Interview
LGU	Local Government Unit
LOP	Life of Project
MinPACT	Mindanao Productivity in Agriculture Commerce and Trade
MSA	Market System Actor
NCR	National Capital Region

NGO	Non-governmental organization
NRM	Natural Resource Management
OECD	Organization for Economic Co-operation and Development
PCQC	Philippine Coffee Quality Competition
PhilCAFE	Philippine Coffee Advancement and Farm Enterprise
PHP	Philippine Pesos
PO	Producer Organization
RFP	Request for Proposal
RPB	Pearson Correlation Coefficient/Point Biserial Correlation Coefficient
SMFM	Sell More For More
SD	Standard Deviation
SE	Standard Error
SO	Strategic Objective
SOW	Statement of Work
Sq.m.	Square meter
SUC	State Universities and Colleges
TOC	Theory of Change
USDA	United States Department of Agriculture

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Finally, while acknowledging the valuable contributions of all the individuals and organizations mentioned above, CBSG stands by the conclusions drawn during the PhilCAFE final evaluation process, considering them well-founded based on the available information and evidence. The final evaluation team takes full responsibility for any errors or omissions found in this report.

– PhilCAFE final evaluation team of CBSG

EXECUTIVE SUMMARY

Background

The final evaluation of the United States Department of Agriculture (USDA) Food for Progress (FFPr)-funded Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) project, conducted by the Capacity Building Service Group (CBSG) between August and December 2023, assessed the interventions targeted at tackling the decreasing coffee and widening supply-demand gap in the Philippine coffee industry—a challenge aggravated by the COVID-19 pandemic. The Philippine Coffee Industry Roadmap for 2021–2025 and prior initiatives of the Mindanao Productivity in Agriculture Commerce and Trade (MinPACT) project laid foundational efforts toward revitalizing the industry by focusing on productivity, sustainability, and global market competitiveness.

PhilCAFE was implemented by ACDI/VOCA between October 2018 and June 30, 2024. The project intervened to enhance the Philippine coffee sector by targeting 13,700 farmers to substantially increase conventional and specialty coffee production, with a target of boosting national output by over 50% and expanding coffee exports tenfold. By engaging 350 value chain actors, including financial institutions and producer organizations, the project aimed at fostering inclusive economic opportunities for marginalized groups, potentially benefiting around 54,800 people indirectly. With a focus on strategic improvements across multiple regions, PhilCAFE emphasized public-private coordination, extension services, reduction of post-harvest losses, and bridging financial gaps. In addition, the project promoted youth involvement, gender equality, and climate resilience to ensure sustainable development and global competitiveness of the Philippine coffee sector.

Evaluation Scope and Purpose

The final evaluation of PhilCAFE critically analyzed its design, implementation, and outcomes across the Philippines. Following Organization for Economic Co-operation and Development (OECD)/ Development Assistance Committee (DAC) evaluation criteria and outcome harvesting methodology, the final evaluation focused on Phil Café's relevance, effectiveness, and sustainability within key regions across Mindanao, Luzon, and the Visayas. It intended to capture successes, areas for improvement, achievements, potential scalability, and recommendations for future initiatives, thus exploring a comprehensive overview of its impact on the coffee industry, including inclusivity and the livelihoods of coffee producers.

Methodology

The evaluation of PhilCAFE adopted a mixed-methods approach, integrating both qualitative and quantitative techniques to thoroughly assess its impacts. The methodology encompassed literature reviews, key informant interviews (KIIs), focus group discussions (FGDs), and extensive surveys, engaging 1,794 respondents across Luzon, Visayas, and Mindanao to evaluate changes attributed to the project. Specifically, the team executed 21 FGDs and 76 KIIs, employing the outcome harvesting methodology to pinpoint both anticipated and unforeseen project outcomes, while quantitative data was meticulously analyzed using Stata, Difference-in-Difference (DID) analysis, correlation analysis, and rigorous data management practices. This diverse evaluation strategy, reinforced by strict ethical standards and data quality assurance measures, aimed to provide a nuanced understanding of the project's efficacy, capturing a wide range of stakeholder perspectives and informing strategies for future interventions within the coffee sector in the Philippines.

Study Limitations

Limitations of this study included difficulties with the availability of respondents for data collection, difficulties locating and reaching respondents due to their remote locations, ineligible respondents (e.g. those without a coffee farm) that were replaced, and a few respondents who refused to participate in the surveys (6% refusal rate).

Respondent Characteristics

The PhilCAFE evaluation revealed significant insights through surveys and demographic analyses among coffee farmers, market system actors (MSAs), and firms, showing diverse engagement and impacts of the interventions. The farmer survey highlighted that all respondents of the participant group benefited from PhilCAFE's support in various forms, including technical training and financial assistance, with significant participation in events. Conversely, farmers of the comparison group relied on their own resources to increase production without receiving direct project support. Surveys with the respondents from MSAs and firms depicted the same spectrum of support given to participant coffee farmers, including grant assistance. Demographic data across these groups indicated a majority female representation (52.97%), particularly in firm leadership roles, and a significant engagement from younger demographics (21.51%) in the participant group, suggesting openness to adopting new agricultural technologies.

Key Areas Findings and Learnings

Technology Adoption: The final evaluation of PhilCAFE revealed contrasts in technology adoption between participant and comparison groups, showing different agricultural practices could impact coffee quality and yield. The participant group leaned toward basic agricultural practices like proper planting (30.83%) and hole digging (29.49%), while the comparison group leaned more toward shading (39.83%) and proper pruning (26.07%). This variation suggests diverse strategic priorities, access to appropriate technologies, and technical assistance received that influenced coffee production outcomes. Notably, adoption rates for climate risk reduction and post-harvest technologies varied, with certain techniques like agroforestry being underutilized, especially by the participant group, hinting at potential barriers in knowledge or resource accessibility. Additionally, management practices differed, with the participant group focusing on processing and the comparison group on recordkeeping and marketing, pointing to varied operational focuses.

Regionally, a significant percentage (92.79%) of respondents from the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) region noted an increase in coffee quality due to technology adoption, unlike in the Cordillera Administrative Region (CAR) (3.02%) and Region 6[1] (0.02%), where most saw no change, underscoring the importance of context-specific technology application, existing skills, and technical assistance received. The emphasis on sustainable practices like proper planting distance and organic fertilizer use suggests a shift toward sustainability, though the underuse of pest management technologies flags an area for enhancement. These findings indicate the importance of tailoring future intervention strategies to local needs and conditions to boost coffee production quality and sustainability. Future initiatives should ensure that technology dissemination and training programs are well-suited to the unique challenges and opportunities of different farming communities.

In BARMM, for instance, the tri-people community (Muslim, Indigenous Peoples, and Christians) has specific cultural practices that may limit their willingness to adopt certain methods. An adult-learning approach tailored to Islamic or Indigenous perspectives is essential. Interventions could focus on promoting specific coffee technologies that align with local customs, rather than an off-the-shelf package from nursery to cup. Tailored needs should be identified during the baseline assessment, and the findings should inform project strategies. Project staff must recognize these

[1] Also known as the Western Visayas.

differences to achieve long-term sustainability, rather than simply cascading existing technology packages.

Yield and Cost of Production: The coffee yield analysis, incorporating the DID and Pearson correlation analysis, showed fresh cherries as the most harvested and sold form of coffee product, reflecting market demand influences. The average yield of the participant group is 500 kilograms per hectare (kg/ha) converted as green coffee beans (GCB.) Education was identified as a crucial factor in adopting new technologies, emphasizing the need for focused interventions to improve agricultural practices. Post-harvest losses presented a significant challenge, with disparities in losses between groups and regions, impacting efficiency. The DID analysis on coffee yield per hectare among PhilCAFE farmer participants showed a positive and statistically significant improvement. The DID coefficient showed a positive trend in yield improvement, suggesting intervention effectiveness and distinguishing it from comparison group changes. This analysis underscores the effectiveness of targeted interventions in enhancing coffee yield per hectare, especially when considering regional differences in cultivation practices, environmental conditions, and crop maturity stages. The evaluation team also noted a difference in coffee production efficiency between the two groups despite similar farm sizes. Participant group farms, averaging 0.9 hectare, produced a higher yield of 500 kg/ha. Comparison group farms, averaging 1 hectare, yielded only 410.5 kg/ha.

The evaluation highlighted the financial complexities of coffee farming, noting an average production cost of PHP 3,495.80[2] per hectare annually, with significant regional cost-efficiency variations. Loan interest emerged as the primary expense, followed by costs for fertilizers, pesticides, and transportation. Between 2019 and 2023, 28.58% of the participant group saw an increase in production costs, contrasted with 47.28% of the comparison group, showcasing relative cost stability among the participant group. Institutions similarly identified loan interest as their most substantial cost but differed by prioritizing paid labor over fertilizers and pesticides, suggesting operational differences between institutions and farmers. The DID analysis further demonstrated PhilCAFE's effectiveness in reducing 51.2% annual production costs per hectare for the participant group, emphasizing the project's impact on enhancing cost-efficiency in coffee production.

Sales Pricing and End-Market: The evaluation of PhilCAFE revealed notable regional disparities in achieving sales targets among coffee producers, with the participant group outperforming the comparison group's 42.72% achievement rate in some areas, notably reaching a 79.2% success rate in CAR. This variation underscores the influence of regional differences in market access and efficiency of post-harvest practices on agricultural productivity and market success. Post-harvest losses emerged as a substantial obstacle across both groups, with 18.1% of the participant group and 43.55% of the comparison group experiencing such losses, highlighting the critical need for better post-harvest handling and facilities to improve sales volumes and reduce losses, especially in regions like Region 6. Moreover, the participant group reported higher satisfaction with coffee prices received, suggesting more effective marketing strategies or quality of produce compared to the comparison group.

The DID analysis on coffee sales indicated a positive trend for the participant group, though without statistical significance, calling for further investigation to attribute effects directly to PhilCAFE interventions. These evaluations highlight the complex dynamics of agricultural productivity and the essential role of tailored, context-specific strategies to address the coffee sector's challenges, underlining the importance of continuous efforts to enhance coffee production and market engagement. This change reflects not only the effectiveness of the interventions but

[2] As of June 1, 2024, 1 USD = 58.5208 PHP.

also how regional factors, such as market access, local demand, and economic conditions, may have played crucial roles. The significant improvement in sales performance for the participant group by 2023, contrasted with the stark decrease in the comparison group, underscores the potential impact of targeted interventions tailored to regional market dynamics and challenges in the coffee sector.

Institutions were identified as key players in the coffee supply chain, influencing sales dynamics, with producer organizations leading coffee sales activities. The analysis showed that fresh cherries were the product achieving the highest sales volume while parchment reported the lowest, pointing to the significant impact of product type and quality on market prices, with ground coffee securing the highest average selling price. Additionally, the correlation analysis highlighted the positive impact of farming practices like genetic improvement and the use of specific coffee varietals, e.g., Excelsa, on enhancing yields and sales. These findings emphasize the importance of strategic investments in farming practices, addressing post-harvest challenges, and diversifying market strategies to bolster the economic outcomes for coffee farmers.

Credit and Financing: The evaluation across 10 regions highlighted differences in financial behaviors and credit access among farmers in the participant and comparison groups, revealing a higher financial inclusion rate among the participant group, with 32.02% holding savings or share capital versus 22.35% in the comparison group. However, only a minor percentage (6.48%) accessed formal credit, suggesting barriers to financial services. The DID analysis shows that the participant group had fewer ($p<.05$) challenges in credit access compared to the comparison group. The participant group's lower use of alternative credit sources and more favorable credit terms point toward the positive impact of PhilCAFE interventions on improving financial access and encouraging strategic investments in coffee production. This suggests that the project not only influenced farmers' financial behaviors toward more strategic agricultural investments but also facilitated better access to capital, underlining the importance of financial access in agricultural development.

Income of the Smallholders: The DID analysis on the annual income of smallholder farmers, as presented in the evaluation, demonstrated a statistically significant increase in income for those in the participant group who benefited from PhilCAFE interventions compared to the comparison group. Initially, in 2019, the participant group's average annual income was PHP187,561, lower than the comparison group's PHP 220,244. However, by 2023, the participant group's income rose to PHP 224,367, surpassing the comparison group's decreased income of PHP 185,673, with the DID estimator indicating an intervention-attributable income increase of PHP 38,694 ($p<.05$). This analysis underscores PhilCAFE's effectiveness in enhancing smallholder farmers' economic outcomes by isolating the project's impact from external factors. Further correlation analysis revealed positive relationships between income and factors like farm size, coffee sales, technology adoption, and production costs, highlighting the multifaceted influences on economic success. The regional disparities in income outcomes suggest the importance of tailored, context-specific strategies to maximize the economic benefits of agricultural interventions, emphasizing the necessity for comprehensive and informed approaches to support sustainable agricultural development.

Market System Approach: The final evaluation revealed limited access to key coffee production resources among participant group farmers in seven regions, with only 12.47% having access to dry storage facilities and a mere 1.53% acquiring specific coffee production equipment, indicating a critical need for expanded infrastructure and technology adoption support. The impact of PhilCAFE interventions was evident, with 14.47% attributing their access to dry storage to the program, though challenges in accessing technology and inputs persist. Additionally, about 29.16% of respondents accessed external market information with a preference for monthly and quarterly updates, emphasizing the need for better dissemination of market insights to align with

agricultural cycles. On the other hand, the pursuit of coffee farm certification by 22.27% of producer groups under PhilCAFE's guidance points to a strategic effort to enhance market competitiveness and quality, highlighting certifications' role in encouraging higher production standards and technological adoption. These findings illustrate the complex dynamics of agricultural market systems, where projects like PhilCAFE have facilitated infrastructure and quality management improvements but also reveal ongoing barriers to technology adoption and effective market information flow. Addressing these challenges is crucial for improving production efficiency, quality, and competitiveness in the coffee sector, underlining the importance of comprehensive support for sustainable agricultural development.

Employment and Labor: The evaluation of farm labor and employment dynamics in coffee farming highlighted significant differences in labor sourcing strategies between the participant and comparison groups across 10 regions, with a notable reliance on family labor in both groups (82.76% in the participant group versus 89.4% in the comparison group) as PhilCAFE emphasized farming as a family business approach. However, the comparison group exhibited a higher utilization of hired labor (55.3%) compared to the participant group (40.25%), indicating possible variations in farm operational strategies or resource availability. Interestingly, employment changes were more volatile in the comparison group, suggesting differences in labor management or external factors affecting labor needs. Equitable gender representation in labor employment was observed among non-governmental organizations (NGOs) and civil societies within the participant group, reflecting commitments to gender equality. The overall labor market within the coffee farming industry showed a dynamic trend, with institutions reporting a 6.95% net increase in farm labor, indicating ongoing adjustments to labor demands and practices influenced by various factors. The DID analysis revealed a discernible positive impact of PhilCAFE interventions on employment outcomes, with a less pronounced decrease in employment among the participant group, suggesting that interventions may have mitigated employment reductions despite a general decline in total employment likely influenced by external factors like COVID-19 restrictions or technological advancements.

Capacity Building: PhilCAFE's capacity-building initiatives revealed a substantial engagement with external sources for enhancing agricultural skills among the participant group, with 78.36% of farmers accessing the project’s support, showcasing its significant contribution to agricultural development. Despite this, only a minor 3.36% received assistance from state universities and colleges (SUCs) extension staff, indicating a reliance on non-governmental and private sector support. The effectiveness of these capacity-building efforts varied, with PhilCAFE programs receiving a range of moderate to excellent quality ratings from participants, while SUC extension staff services were rated higher in quality. This highlights the crucial role of the provider's approach in determining the perceived value and impact of training efforts, underscoring the need for continuous improvement and adaptation of such programs to ensure their effectiveness and relevance to the agricultural community's needs.

Gender, Youth, and Inclusion: In terms of promoting gender equity and youth inclusion, PhilCAFE implemented targeted training and mentorship programs, significantly increasing the participation of women and youth in the coffee sector. Women's empowerment was notably enhanced through their involvement in post-harvest processing roles, contributing directly to coffee quality and market value. Furthermore, the project's initiatives to attract youth to the coffee industry through innovative technologies and sustainable practices indicate a strategic approach to bridging generational gaps and making the sector appealing to younger demographics. These efforts reflect a comprehensive approach to fostering inclusivity and diversity within the coffee industry, laying the groundwork for a more equitable and dynamic sector aligned with sustainable development goals and emphasizing the importance of leveraging the full potential of all community members for economic growth and innovation.

Key Observation According to OECD Evaluation Criteria

PhilCAFE's capacity-building initiatives showed a heavy reliance on partner SUCs and non-governmental and private sector support for enhancing agricultural skills among coffee farmers, with PhilCAFE playing a significant role by providing support to 78.36% of respondents. Despite a small percentage receiving assistance from SUC extension staff, their services were rated higher in quality, indicating the importance of the provider's approach to training effectiveness. Efforts in promoting gender equity and youth inclusion led to increased participation and empowerment within the coffee sector, especially empowering women in post-harvest processing roles and engaging youth through innovative technologies and practices.

The project was aligned with key agricultural initiatives of the Philippine government and USDA, emphasizing its role in sustaining USDA coffee interventions and expanding support to address the broader needs of the Philippine coffee industry. Despite minor under-achievements and challenges posed by the COVID-19 pandemic, PhilCAFE demonstrated resilience by adapting its operational and training modalities, successfully executing major coffee events and making significant strides in promoting Philippine coffee internationally, particularly through Specialty Coffee Expos.

Despite COVID-19 challenges, PhilCAFE reported positive impacts across the coffee sector, including enhanced management practices, improved access to market information, and increased quality of agricultural products. Training delivery adjustments received positive feedback, although traditional face-to-face methods were preferred. The project's impact was significant in increasing coffee yield and pricing, contributing to higher household incomes and profits for farmers and MSAs, and expanding the trade of coffee products both domestically and internationally.

PhilCAFE's efforts toward sustainability focused on establishing regional coffee councils, fostering public-private partnerships, and supporting key governmental departments. It advocated for a robust coffee market system and encouraged farmers to diversify their agricultural practices. The project exceeded its target in establishing buyer and seller agreements, indicating sustainable future commercial linkages and emphasizing the importance of collective action in ensuring the coffee industry's enduring success.

The project's initiatives have had an initial impact on improving the quality of land and water resources, expanding the trade of coffee products, and enhancing the national standards for coffee production in the Philippines. The engagement of the private sector and the culture of innovation and quality among coffee producers, as well as the broader commitment to enhancing the sustainability of coffee production, suggest a promising direction for the Philippine coffee sector, highlighting PhilCAFE's significant contributions to its growth and development.

Key Learnings

PhilCAFE has effectively strengthened market linkages for coffee Market System Actors (MSAs). Qualitative data analysis indicates that these linkages have been substantially enhanced through initiatives such as the PCQC and other coffee-centric competitions and events. Moreover, the project has successfully facilitated the development of connections via supported Producer Organizations, playing a crucial role in advancing the project's objectives. Training preferences leaned toward in-person sessions enriched with visual aids, with challenges in adopting new technologies due to resource gaps. Despite varying perceptions of the benefits from adhering to quality standards, the project made strides in gender and social inclusion, with increased participation across genders and efforts to involve youth and indigenous communities. The project underscored the need for strong buyer-seller relationships, capacity building, and accessible

inputs and technology, aiming to foster sustainable practices and environmental responsibility for the coffee industry's future growth.

PhilCAFE significantly contributed to the Philippine coffee industry by improving production, quality, and market access, thereby enhancing smallholder incomes and trade. It prioritized sustainability, inclusivity, and resilience against climate change, suggesting future growth foundations. Recommendations highlight the necessity for better financial management, agricultural technology, post-harvest improvements, and enhanced market information access. Emphasizing capacity building and certification could further position the Philippine coffee industry competitively on a global scale, offering a roadmap for ongoing development and sustainability.

Recommendations

To optimize the positive outcomes of PhilCAFE on the Philippine coffee industry, the following priority recommendations are articulated based on the final evaluation findings:

- **Enhance Financial Services and Literacy**: Prioritize the expansion of affordable financial services tailored for coffee farmers, coupled with comprehensive financial literacy programs. This strategy is vital to overcome financial barriers and improve farmers' competence in managing finances, especially considering the current underuse of credit facilities by the community.
- **Subsidize Production Inputs and Logistics**: Implement subsidy programs for l production inputs such as fertilizers to increase yield and transportation to reduce production costs. This will help in making coffee farming more profitable for the farmers, and give them the opportunity to reinvest capital in their farms. This should include training for farmers to understand the importance of investing in their coffee farms, especially if basic food needs are a concern.
- **Expand Digital Access to Market Information**: Leverage digital platforms to provide farmers with extensive access to market and price information. This initiative will empower them with the necessary knowledge to make informed decisions regarding crop management and sales, ultimately enhancing profitability.
- **Promote Certification and Quality Improvement Programs**: Encourage greater participation among coffee farmers in planting material certification programs and quality improvement initiatives. Given the current underutilization, such engagement could markedly elevate the market competitiveness and attractiveness of Philippine coffee.
- **Invest in Post-Harvest Technologies**: Address the critical issue of post-harvest losses by investing in advanced storage and drying technologies. This investment is crucial for maintaining the quality of coffee and minimizing waste, which is instrumental in sustaining profitability and environmental sustainability.
- **Diversify Agricultural Practices**: Advocate for the diversification of agricultural practices among coffee farmers. This recommendation is made to reduce dependency on coffee farming alone, thereby enhancing the resilience and economic stability of farming households through alternative income sources.
- **Strengthen Research, Development, and Capacity Building**: Focus on research and development for climate-resilient coffee varieties and continue capacity-building initiatives to support the sector's sustainability. In addition, promoting gender equality and youth involvement, along with bolstering international marketing efforts, are imperative for fostering a vibrant, inclusive, and globally competitive Philippine coffee industry.

These recommendations are designed to holistically address the multifaceted challenges faced by the coffee sector while maximizing the beneficial impacts of PhilCAFE interventions.

SECTION A: BACKGROUND

1.1. PROJECT CONTEXT AND RATIONALE

Coffee has been an integral agricultural commodity in the Philippines for over four centuries, deeply rooted in the country's culture and economy. The widespread love for coffee among Filipinos, both as a beverage and a health drink, alongside its profitability for farmers and stakeholders, establishes the coffee sector as a significant contributor to the nation's economic growth. However, despite its established presence and demand, the productivity and scale of coffee farming and trade, especially in exports, remain well below their potential. Over the last decade, from 2018, the Philippines has seen a continual decline in coffee production coupled with an uptick in consumption rates, indicating a growing disparity between supply and demand.

The COVID-19 pandemic exacerbated these challenges, affecting coffee harvests due to restrictions and shifting consumption patterns toward coffee takeaway from cafes and coffee carts and home brewing. In 2021, the average coffee consumption in the Philippines was 3.05 kg/person, with forecasts predicting an increase to 3.78 kg/person over the next three years, marking a significant 23% growth and an anticipated rebound and expansion in coffee intake post-pandemic. Despite this potential for domestic market growth, the local coffee supply has historically met only 15% of the total demand, attributed to several factors, of which the largest was the low yield and low farmgate prices, and included inadequate farming practices, limited access to credit, and gaps in knowledge across the coffee value chain. These issues underscore the critical need for improvements in technology, knowledge sharing, and support systems within the Philippine coffee industry to harness its full potential and meet the increasing consumer demand.

1.2. POLICY ENVIRONMENT: PHILIPPINE COFFEE INDUSTRY ROADMAP

In 2016, the Department of Agriculture (DA) and the Department of Trade and Industry (DTI), in collaboration with stakeholders, launched the Philippine Coffee Industry Roadmap for 2017–2022 to promote coffee as a key agricultural product and rejuvenate the industry. Given ongoing implementation and new challenges, the roadmap was revised with the addition of the Department of Science and Technology (DOST) to address these challenges with specific goals for 2021–2025.

This revision aligns with DA's Top 5 Priority Recommendations for food security and self-sufficiency in the coffee and cacao industries, including developing local-quality products, creating an online industry database, promoting local consumption, establishing partnerships between farmers and coffee shops, and profiling coffee and cacao varieties for authenticity. Separate roadmaps for coffee and cacao have been prepared, with targets ranging from short-term to long-term to enhance industry growth and productivity.[3]

[3] Philippine Coffee Industry Roadmap 2021–2025.

1.3. MINPACT: A RELATED USDA FOOTPRINT

MinPACT, supported by USDA Food for Progress and implemented by ACDI/VOCA in the Philippines, aimed to enhance the incomes of smallholder farmers in Mindanao. It focused on improving their farming skills, productivity, and market access over four years. Serving as a foundational pilot, MinPACT generated valuable insights that informed the large-scale development of PhilCAFE. Specifically targeting cocoa, coconut, and coffee growers, the project delivered training, superior agricultural inputs, financial products, and mobile technology solutions to elevate farm management and product quality. Building on MinPACT's success, the USDA awarded PhilCAFE to ACDI/VOCA in September 2018. This project represents an extension of MinPACT, aimed at fortifying the capacity of the Philippine coffee market.

1.4. PHILCAFE DESCRIPTION

Awarded by USDA through its Food for Progress (FFPr) program,[4] ACDI/VOCA launched the $25,466,929.86 PhilCAFE in October 2018 and ran it until June 2024. PhilCAFE aimed to create lasting impact by strengthening the capacity of Philippine coffee market system actors toward a 50% boost in national coffee production and a tenfold increase in coffee exports from the Philippines. PhilCAFE's key objectives include:

- To increase coffee production and productivity in the Philippines by improving access to high quality seedlings and other inputs, increasing adoption of good agricultural practices, and facilitating the renovation and rehabilitation of existing coffee farms.
- To strengthen Philippine research planning and capacity and industry institutions and organizations in the coffee sector, such as public and private universities, regional coffee councils, and producer organizations, to offer extension and marketing services to producers.
- To expand access to domestic and international markets for Philippine produced coffee by improving marketing and branding skills, facilitating direct linkages to buyers, and increasing access to premium markets.

To achieve this, the project proposed to work with 350 key players in the coffee value chain, including financial institutions, SUC, producer organizations, input suppliers, roasters, retailers, and others. The project also aimed to create economic opportunities for marginalized rural communities, including indigenous people. By doing so, it aimed to encourage investment and trade with U.S. and global businesses and positively impact around 54,800 indirect participants by improving their livelihoods.

PhilCAFE implemented the following activities in strategic regions and provinces in Mindanao, Luzon, and the Visayas:

- Improve public-private coordination to promote the coffee industry.
- Expand extension services to increase the adoption of good agricultural practices (GAP) and improved technologies.
- Support the establishment of nurseries and strengthen retail input agents.
- Increase the capacity of POs as a critical link in the value chain.
- Improve post-harvest handling and processing to maintain quality characteristics.

[4] Cooperative Agreement No.FCC-492-2018/ 001-00

- Facilitate agricultural lending to close the financing gap across the value chain.
- Leverage public and private investment to scale and sustain results.
- Highlight the diversity of Filipino coffee origins and facilitate linkages to specialty and conventional coffee buyers.

These activities and their respective outputs and outcomes addressed elements of FFPr strategic objectives (SOs), in particular, SO 1 and SO 2:

- SO1—Increase agricultural productivity: Activities under SO1 will center on improving productivity through the training of producers, producer organizations, and agribusiness service providers and the provision of grants.
- SO2—Expand trade of agricultural products: Activities will focus on identifying market system constraints and improving post-harvest management and product quality, adding value to smallholder agriculture products, providing grants, and increasing access to markets.

Utilizing a market systems approach, the project collaborates with producer organizations and service providers to improve market access and credit availability. Additionally, it prioritizes climate change adaptation, inclusivity, and youth involvement, integrating ACDI/VOCA's commitments to gender equity and environmental stewardship into all activities. (See Annex 1: Theory of Change)

Target Beneficiaries

PhilCAFE targeted to assist 13,700 coffee producers, focusing 70% of its efforts in Mindanao, 20% in Luzon, and 10% in the Visayas, across 10 regions and at least 25 provinces. Beneficiaries were individuals and organizations involved in the coffee market, with the project areas including regions producing both Robusta and Arabica coffee. PhilCAFE established project offices in strategic locations, including Davao City, Central Mindanao University in Bukidnon, Sultan Kudarat State

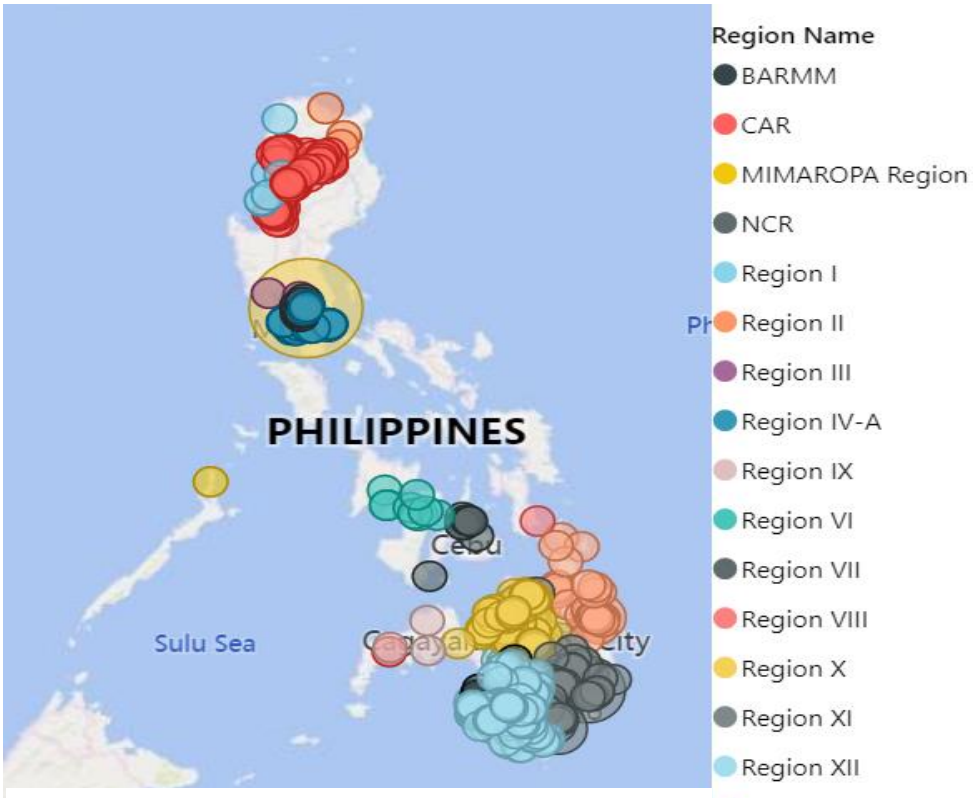

Figure 1: PhilCAFE Project Target Areas

University in Tacurong City, Cavite State University in Indang, Cavite, and Mountain Province State Polytechnic College in Bontoc, Mountain Province.

Project Reach

By the end of its fifth year, PhilCAFE had surpassed its direct engagement targets, involving 22,443 individuals (11,242 males, 11,179 females, and 22 other gender) and 791 organizations/firms.[5] It has made its mark across 17 regions and at least 83 provinces, demonstrating its widespread impact and commitment to transforming the coffee industry in the Philippines. Table 1 presents project reach by individual groups, firms, and organizations. See Annex, Table 13 for details.

Table 1: PhilCAFE Project Reach by Target Audience

Target Audience and Reach	83 Provinces across 17 regions
Individual Groups	
Civil Society	959
Government Agency	1,022
Laborer	603
Private Sector	2,015
Farmer/Producer	17,844
Firms and Organizations	
NGOs/Civil Societies	32
Private Sector (including universities and colleges)	216
Producer Organizations (including enterprises)	359
Public and Government Agencies (including SUCs)	184

1.5. PHILCAFE'S STRATEGY TO COVID-19

As COVID-19 spread to metro Manila by February 2020, the Philippines implemented a lockdown starting March 12, 2020, with subsequent restrictions expanding to other regions in response to increasing cases. This pandemic significantly disrupted PhilCAFE, which was just beginning to gain momentum after its initial year, affecting its progress due to the lockdown's extensive impact on both individual livelihoods and the broader economy. Despite the introduction of innovative strategies aimed at mitigating these effects, the project struggled to maintain its pre-pandemic pace of progress, highlighting the profound challenges posed by COVID-19.

In response to the pandemic and lockdown measures, PhilCAFE adapted by shifting to remote work and leveraging digital platforms to engage with coffee stakeholders across the country. This shift involved conducting training sessions, workshops, and coaching online, as well as utilizing radio, TV broadcasts, social media, and coffee mentors to ensure broader and more inclusive outreach. One notable initiative was the virtual coffee forum "Kape't Kwentuhan," which successfully reached a wide audience, demonstrating the project's ability to innovate and continue its mission despite the challenges posed by the pandemic. This digital pivot allowed for continued engagement and support within the coffee industry, showcasing resilience and adaptability in the face of unprecedented global disruptions.

[5] PhilCAFE Final Evaluation RFP_Revised

1.6. RESULTS FRAMEWORK

This theory of change outlines a comprehensive strategy to enhance agricultural productivity (Strategic Objective (SO) 1) and expand trade in coffee (SO2).

SO1: Increased Agricultural Productivity. Results under MinPACT have shown that activities that support GAP and technology adoption (FFPr 1.2), improve land and water resources (FFPr 1.1), and improve farm management (FFPr 1.3), collectively have also led to increases in coffee yields from 0.169 to 0.433 Mt/Ha. Improved extension services under PhilCAFE's **Activity 2** aims to increase access to information on GAPs (FFPr 1.2.4) and facilitate adoption of improved practices and technologies (FFPr 1.2). The USDA Cooperative Extension System in the U.S. has integrated teaching, research, and extension services. A study by USAID[6] highlights evidence and lessons for replicating such university-based extension systems. We apply this same approach under PhilCAFE. It further targets farmers linked to cooperatives and utilizes information and communications technology (ICT), which has been shown to improve farmer willingness to seek out and pay for information[7]. ACDI/VOCA's experience in the Philippines has shown that an integrated approach to farm management (FFPr 1.3) is critical on small landholdings (<2 Ha). It facilitates planning for lean season expenses while intercropping helps to overcome income gaps. Additionally, farm budget training under **Activity 2** aims to contribute to improved farmers' business planning (FFPr 1.3.1).

Quality seedlings with a good root system are the foundation of the coffee business[8]. The development of nurseries under **Activity 3** facilitates access to quality planting material (FFPr 1.2.1) to increase adoption of these seedlings by isolated coffee farmers, particularly those growing Arabica (FFPr 1.2.4). The planting of coffee trees also provides ecosystem services and environmental benefits to water and land resources (FFPr 1.1)[9].

Activity 6 addresses access to finance (FFPr 1.2.3) for tree planting, which remains a critical constraint to coffee production. A study[10] by the World Bank indicates a broad lack of credit for coffee farmers, which impacts their ability to make productive investments. For this reason, we adjusted the USDA FFPr Results Framework to include a link to FFPr 1.2 improved use of agricultural technology.

SO2: Expanded Trade in Agricultural Products. The National Coffee Roadmap identifies quality as a key constraint and establishes a vision "aligned with global quality standards." Decommodification will improve value and price (FFPr 2.1) and enable access to specialty coffee markets (FFPr 2.2) and buyers who prefer direct trade coffee (FFPr 2.3). Buyers such as Equilibrium Intertrade Corporation indicate that improved processing and storage (FFPr 2.1.2.2)

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[6] USAID. Literature Review of Agricultural Education and Training, 2011.

[7] Babu et al. Farmers' Information Needs and Search Behaviors. IFPRI Discussion Paper 01165, 2012.

[8] Kuhn, D., coffee expert quoted in Philippines Coffee Board Arabica Coffee Guidebook.

[9] Shibu, J. Agroforestry for ecosystem services and environmental benefits: an overview. *Agro-forestry systems*. Volume 76, Issue 1, pp 1–10, May 2009.

[10] WB Group. Agriculture Global Practice Discussion Paper 02. Risk and Finance in the Coffee Sector, 2015.

together with post-harvest handling (PHH) practices, including sorting and wet processing (FFPr 2.1.2.1) according to Q standards (FFPr 2.1.1.1), are essential to improve quality and enable access to price premiums. **Activity 5** addresses this issue.

Collectively, these changes increase both process efficiency (FFPr 2.1.1) and product quality (FFPr 2.1.2), leading to increased value-added coffee products (FFPr 2.1). Academic reviews show the potential for producers to increase incomes through harvesting methods and controlled fermentation processes[11]. The shift towards specialty coffee is accompanied by supply chain restructuring, with more direct trade (FFPr 2.2.2) between producer organizations (POs) and roasters. Lastly, improving Philippine branding and recognition (FFPr 2.1.3, 2.2.1), together with direct trade, as part of ***Activity 8***, enhances market access for smallholders. ACDI/VOCA has helped facilitate this trend through specialty coffee programs in Colombia, Ethiopia, and Peru. Studies have linked the expansion of specialty coffee to improvements in coffee commodity markets as well as mainstreaming of direct trading practices[12].

Stronger POs (FFPr 2.3.2), supported under ***Activity 4***, are critical agents to facilitate increased value addition, market access, and improved transaction efficiency (FFPr 2.3) once they take on PHH and consolidation functions. ACDI/VOCA's 50+ years in strengthening cooperatives has illustrated the transformative impact of such associations on market access for smallholder farmers.

Foundational Results. Improved value chain governance under ***Activity 1*** remains critical for the sector. Improved capacity of coordinating bodies, such as the Philippine Coffee Council (PCC) and its members (FFPr 1.4.4, 2.4.4) can support government implementation of seedling distribution programs (FFPr 1.4.1, 2.4.1). Also, social media and ICT platforms enhance access to market information. A lack of coordination within the coffee sector was highlighted by the Duke University Center on Globalization, Governance and Competitiveness[13].

Activity 7 increases leverage of public and private resources (FFPr 1.4.5, 2.4.5) to fill the investment gap in the coffee value chain, particularly in increasing production areas and post-harvest infrastructure. This has cross-cutting impacts on multiple results (FFPr 2.1.2.2, 1.2.3, 2.2.3.1, 2.2).

All eight PhilCAFE activities collectively contribute to attaining both results streams and the foundational results as shown in the table below.

PhilCAFE Activity	FFPr Results Supported
1. Improve public-private coordination to promote the coffee industry	1.4.1, 1.4.2, 1.4.3, 1.4.4, 1.4.5, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5

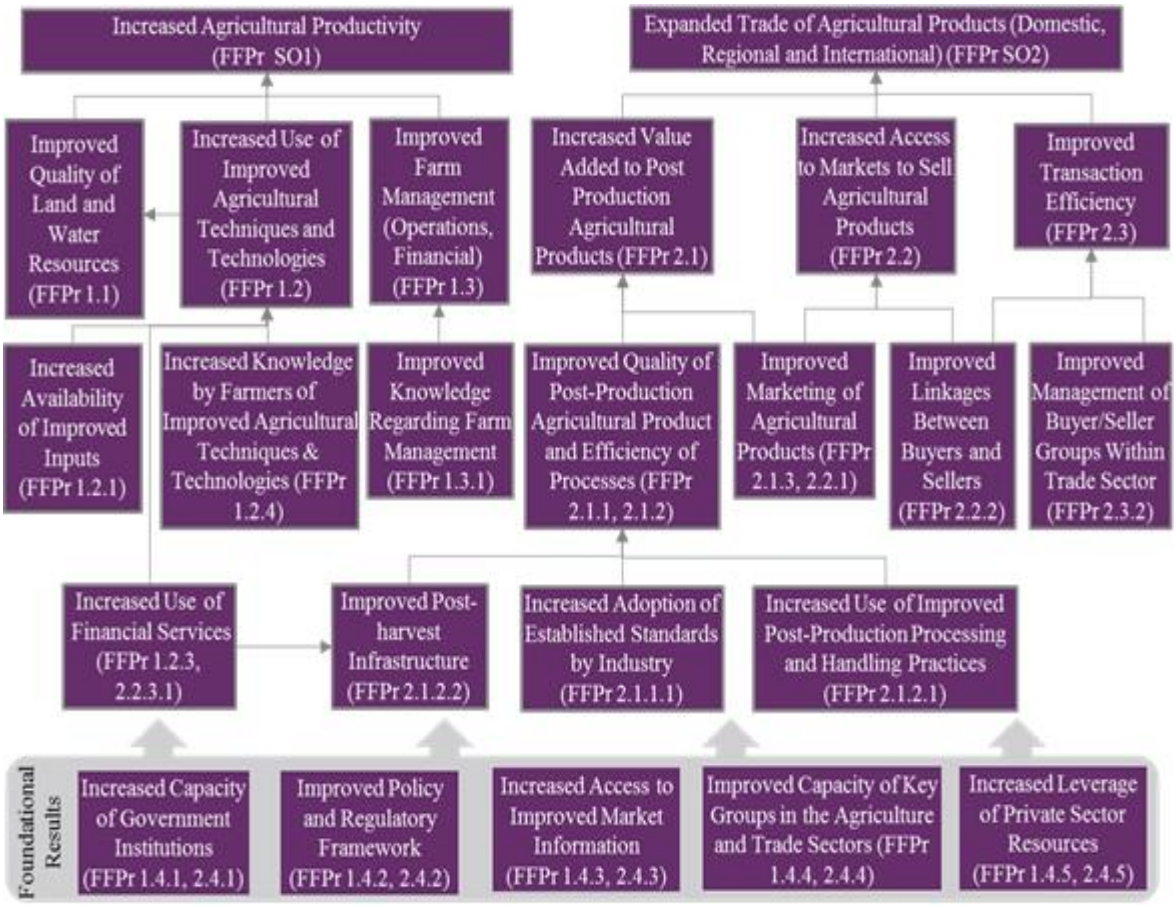
[11] Poltroniera, P. and FF Rossi. Challenges in Specialty Coffee Processing and Quality Assurance. *Challenges*. 2016.

[12] Ponte, S. The `Latte Revolution'? Regulation, Markets and Consumption in the Global Coffee Chain. World Development. Volume 30, Issue 7. 2002.

[13] Duke Center on Globalization, Governance and Competitiveness. Philippines in the Coffee Global Value Chain. 2017.

2. Expand extension services to increase adoption of good agricultural practices and improved technologies	1.2.4, 1.2, 1.3.1, 1.3
3. Support the establishment of nurseries and strengthen retail input agents	1.1, 1.2.1, 1.2
4. Increase the capacity of producer organizations as a critical link in value chain	2.3.2, 2.3, 2.1.1/2.1.2, 2.2.2, 2.1, 2.2
5. Improve PHH and processing to maintain quality characteristics	2.1.1.1,2.1.2.2, 2.1.1, 2.1.2, 2.1
6. Facilitate agricultural lending to close the financing gap across the value chain	1.2.3, 2.2.3.1, 1.2, 2.1.2.2
7. Leverage public and private investment scale and sustain results	1.4.4, 2.4.4, 1.4.5, 2.4.5, 2.1.2.2, 1.2.3, 2.2.3.1, 2.2
8. Facilitate linkages to specialty coffee buyers and market Filipino coffee origins	2.1.3, 2.2.2, 2.2, 2.3

Results Framework



Critical Assumptions

These are the assumptions that are critical for achieving the stated objectives but are outside of PhilCAFE's control.

Security issues remain the same or continue to decline. The extension of martial law in Mindanao, intermittent terrorist acts, and ongoing rebellion by Muslim and communist militias limit the mobility of traders. The agricultural sector has, however, remained largely resilient to these stressors. Project staff will follow U.S. Embassy security updates and implement their recommendations to ensure staff safety.

Political risks continue to have minimal impacts on economic growth. The controversial political tactics by the current administration threaten key checks and balances in government with potential to erode foreign investment. So far, these have had limited impact on economic growth. The project staff will monitor political developments and consult key stakeholders to remain informed and anticipate potential problems.

Interests of the status quo are amenable to change. There remains a strong constituency in the coffee sector that would like to keep coffee prices low. There are, however, strong market pressures (notably a decline in production) that are shifting these players' positions and demand for specialty coffee. Project activities will continue to promote transparent market approaches and information sharing to enable producers to receive market prices that reflect product quality.

Natural disasters do not have undue negative impact. The Philippines remains prone to natural disasters such as earthquakes, flooding, and typhoons. There are adaptation and mitigation strategies for these negative impacts such as resistant varietals, quality materials for re-planting, and insurance programs.

Other factors remain minimal. Specialty coffee markets are projected to continue to grow, domestically and internationally. Currency devaluation would have minimal impact. Government prioritization of agriculture remains strong. The project staff will monitor market developments and currency fluctuations.

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Section B: Evaluation Purpose and Scope

2.1. PURPOSE AND OBJECTIVES

This final evaluation focused on assessing aspects of PhilCAFE related to the design and delivery of interventions, with the primary respondents being program implementers. The timing of the evaluation helped to generate learnings on the sustainability and scalability of such a systems approach for the Government of the Philippines to inform its strategy to scale up similar approaches in other regions of the country. The specific objectives of this final evaluation are as follows:

- Assess project achievements by comparing project performance against baseline results and highlight the accomplishments and the sustainability of project components while evaluating them for relevance, effectiveness, and impact.
- Document project achievements, strengths, and sustainability, as well as present weaknesses (if any), lessons learned, and best practices for implementing future similar interventions, and inform replicability.
- Explore expected and unexpected changes that resulted from project activities.

2.2. EVALUATION SCOPE

The scope of this evaluation encompasses a comprehensive assessment of PhilCAFE, utilizing a detailed framework to ensure a thorough analysis. The evaluation methodology adheres to the OECD/Development Assistance Committee (DAC) evaluation criteria, evaluating the project's relevance, effectiveness, efficiency, impact, and sustainability. In addition, the evaluation incorporates the outcome harvest methodology to identify any unexpected or unintended changes, capturing a broader range of impacts beyond those identified through conventional mixed-method approaches. The outcome harvest results are included in a separate report.

The evaluation's programmatic scope conspans all phases of the PhilCAFE interventions, from their inception through the project's conclusion. It examines the period from October 2018 to June 2023, relying on existing documents, previous evaluation studies including the midterm, and information directly from PhilCAFE. Geographically, the evaluation covers activities in Mindanao, Luzon, and the Visayas, with sample selection reflecting the project's efforts distribution: 70% in Mindanao, 20% in Luzon, and 10% in the Visayas. Although the project primarily focuses on the coffee sector, the evaluation also considers impacts on inclusion and producer livelihoods, offering a holistic view of the project's effects across various sectors.

SECTION C: METHODOLOGY, SURVEY SAMPLING, AND DATA COLLECTION TECHNIQUES

Throughout the evaluation, the team deployed a mixed-methods approach for data collection comprised of quantitative and qualitative methods to derive findings. These include an initial literature review of available documents and relevant background materials to gain an understanding of the project, KIIs), and FGDs with members of stakeholder groups identified in the literature review to gain insights related to the evaluation questions and a survey of producers and MSAs to quantitatively assess how outcomes and impacts evolved during project implementation.

3.1. LITERATURE REVIEW

The evaluation started with a preliminary literature review and analysis of project-related documents to grasp the context and concept of PhilCAFE and its implementation by ACDI/VOCA and partners. This included examining progress reports, baseline and midterm evaluations, internal reports with COVID-19 mitigation plans, and background materials on project themes listed in the References section.

Stakeholder Groups

The initial literature review identified three broad stakeholder groups:

1. **Farmers (individual coffee farmers),** including both males and females, youth (15-29 years old), and indigenous groups.
2. **MSAs**, including owners and representative staff of mills, buyers, sellers, coffee influencers, representatives of private firms, and other similar organizations.
3. **Institutions**, including representatives of producer organizations, academic partners such as SUCs, regional coffee councils, financial service providers, national and provincial government agencies and units, NGOs, civil society organizations, and others.

3.2. QUALITATIVE METHODS

CBSG utilized qualitative methods, including KIIs and FGDs, to collect data from various stakeholders identified during the PhilCAFE evaluation. These methods were informed by initial interviews with staff and aimed at capturing detailed insights from specific groups:

- Farmers/producer organizations through FGDs
- MSAs/coffee influencers through KIIs
- Institutions through KIIs

KIIs were conducted with individuals or small groups (up to four participants) for in-depth discussions, while FGDs involved semi-structured conversations with groups of five to 10 people. These approaches allowed for the inclusion of diverse participant perspectives, including gender, youth, and indigenous minorities. Non-English speakers were provided with translators. KIIs and FGDs employed a semi-structured format using a data collection tool or discussion guide. The

qualitative phase included 21 FGDs, 66 KIIs across Luzon, Visayas, and Mindanao, and 10 KIIs with PhilCAFE staff, alongside a quantitative survey to ensure comprehensive data collection and insight into contextual perspectives. Table 2Table 2 shows the number of KII participants by stakeholder group.

Table 2: Number of KIIs by stakeholder groups.

KII Stakeholders Groups	No. of KIIs
PhilCAFE Staff	10
Producer Organizations & Cooperative Leaders	20
Financial Institution & Savings & Credit Cooperative	4
SUC Faculty & Extension Agents	5
Employees of Coffee Cupping &Soil Labs	5
Barista & Coffee Academy of Asia	3
Government Institution-DTI, DA, Bureau of Plant Industry	1
Input Providers/Fertilizer Companies	3
Roasters & Coffee Shop Owners	5
Coffee Social Influencers/Social Media	3
International Research Organization	3
Coffee Champions	2
Clients of Laboratories at the Universities	3
Coffee Farmers linked to Extension Agents of the Universities	3
Coffee Cuppers trained by PHILCAFE/Partners	3
Philippine Coffee Quality Competition (PCQC) Participants	3
Total	**76**

The final evaluation of PhilCAFE adopted a structured qualitative approach by conducting FGDs segmented by gender and age, ensuring a balanced demographic analysis. Men's discussions were categorized into youth and adult, with a pronounced focus on adult perspectives, while women's groups were divided equally between youth and adults, ensuring comprehensive insights from both age cohorts. Indigenous Peoples FGDs were gender-segregated with three male and two female groups. It was ensured that men, women, and indigenous people were engaged separately and in person. Each demographic was equally represented, affording them the chance to express their viewpoints and share their experiences with the project. The evaluation team observed enthusiastic participation from women, underscoring the project's success in promoting their involvement in coffee farming, yet pointed out challenges in engaging younger participants attributed to their underrepresentation within the cooperatives involved. The distribution of FGD respondents spanned Luzon, Visayas, and Mindanao, with 14 participant groups, four comparison groups, and three coffee council member groups, making up a total FGD sample of 21. The data collection team comprised at least 40 enumerators, six group leaders, four regional supervisors, six FGD moderators, and six note-takers.

The qualitative analysis, through KIIs and FGDs, aimed to understand the factors influencing quantitative survey results, specifically regarding producers' and market actors' changes in production, coffee quality, sales, incomes, and access to resources as a result of the project's interventions. The evaluation sought to determine the extent of these changes, their attribution to the project, and the factors most influencing profitability, such as specific practices, end-market access, geography, and group membership. CBSG also examined PhilCAFE's contribution to the resilience of coffee market actors in comparison to non-assisted counterparts.

3.3. OUTCOME HARVESTING

The PhilCAFE final evaluation also employed the outcome harvesting methodology, starting with an analysis of existing literature and project documents to shape the study design. A workshop with project staff was held to pinpoint key outcomes and relationships, setting the stage for in-depth research questions. Ten staff interviews were then conducted to further explore these questions, with the data analyzed using content and thematic analysis methods to create a stakeholder-outcome matrix. This matrix informed the development of survey questions for KIIs and FGDs. Data from these interviews and discussions were transcribed, translated into English, and coded, focusing on outcomes relevant to each stakeholder group. The outcome harvest report was assembled by triangulating this coded qualitative data with information from program documents and evaluation reports. Finally, the report underwent an iterative review process, incorporating feedback from PhilCAFE and ACDI/VOCA staff, with findings shared at learning events and through various outreach materials.

3.4. QUANTITATIVE SURVEYS AND SAMPLING

The evaluation team supplemented qualitative research with quantitative surveys among coffee producers, MSA representatives, and firms affected by PhilCAFE up to March 30, 2023. Utilizing multistage/clustering sampling, the team ensured external validity and representativeness across farm and firm levels. The nearest neighbor and radius matching were applied for optimal sample balance, using parameters like a 95% confidence level, 5% margin of error, and equal sample proportion of 0.5, surveying 1,794 respondents from Luzon, Visayas, and Mindanao. The surveys featured closed-ended questions, employing Likert scales for forced ranking, focusing on practice changes related to the project and factors affecting project activities, alongside basic demographic, household, and farm data. Surveys were conducted concurrently with qualitative methods (KIIs and FGDs) using CAPI software, SurveyToGo.

The farmers/producers survey calculated a sample size of 824, factoring in a 95% confidence level, 5% margin of error, design effect of 2, 10% non-response adjustment, and power of 0.8. Among these, 378 participants were women, and 446 participants were men.

Table 3: Quantitative Survey Reach

STAKEHOLDER GROUP	TOTAL SAMPLE
Farmers/Producers	1,170
Participant	824
Comparison	349
MSA Representatives	356
Institutions	264
TOTAL	**1,794**

The participant sample size was calculated from a total of 11,789 directly reached producers in 17 regions. The sample design for the final evaluation closely followed the methodologies employed in the baseline and midterm evaluations. Specifically, for the comparison group, Regions 4-A, 6, 11, and 12 were selected, consistent with their selection during the baseline phase. Moreover, randomization was ensured by CBSG through the ultimate sampling unit selection process. Sampling began with cluster selection through the probability proportional to size method, followed by random individual selection based on PhilCAFE priority regions, demographics (type of beneficiary, age group, and gender), and farm-related stratifications (total farm size, coffee species, and product type). The comparison group samples were taken from the baseline and midterm survey[14] which were coffee farming communities and identified through propensity score matching that factor in variables on regions comparable to participants' farm

[14] Referred also by PhilCAFE as 1st wave.

size, coffee farm size, number of years in coffee farming, gender, age of the farmer, coffee species, and age of the coffee plant.

For MSA representatives, 356 were surveyed using similar parameters, with sample distribution proportional across MSA types and clusters. The selection was random within stratifications of age, gender, and coffee product type.

The institutional/firm survey involved 264 respondents from various sectors, using similar sampling parameters as the producer survey. The selection was random, considering the characteristics of the institutional actors. The details of the sampling and sample distribution are presented in Annex 3.

3.5. DATA COLLECTION TOOLS AND TECHNIQUES

The quantitative survey utilized CAPI software, SurveyToGo, for efficient data collection, with traditional methods employed in areas with difficult internet connectivity. Qualitative data was gathered using pen, paper, and audio recording devices. A comprehensive guideline was provided to the data collection team, focusing on handling non-responses and maintaining data accuracy and confidentiality.

Training sessions for both survey types were conducted in Mindanao, with the majority attending in person and staff from Luzon and Visayas participating online. A total of 74 staff members, including 65 females, were trained for quantitative interviews from August 14–16, 2024. For the qualitative survey, 16 staff members, including 15 females, received training on September 26-27, 2024. PhilCAFE's Monitoring and Evaluation (M&E) Director and CBSG-RLR joined these sessions.

A pre-test was carried out involving 44 participant farmers, four comparison farmers, six institutional representatives, and seven respondents from the MSA group to ensure the clarity of question wording and survey flow. ACDI/VOCA reviewed and approved the pre-test findings before the start of data collection.

Ethical standards were rigorously upheld throughout the evaluation, following informed consent procedures, the 'do no harm' principle, and data protection policies to guarantee respondent anonymity while keeping track of participant and organization ID numbers for recordkeeping.

Section D: Data Management Analysis and Presentation

CBSG employed a comprehensive approach for data management, analysis, and presentation, integrating both qualitative and quantitative methodologies. This section outlines the techniques used for managing data, as well as the quality comparison measures implemented by the evaluation team to ensure the integrity and reliability of the data collected.

4.1. QUALITATIVE DATA

The final evaluation utilized Endnote software for the literature review and a combined thematic and content analysis approach for primary qualitative data (KII, In-Depth Interviews and FGDs), coding it for in-depth analysis. Data collection was done via paper-based surveys, translated into various local dialects, including Tagalog, Ilocano, Bicolano, Cebuano, and Ilonggo, with KII and FGD interviews translated into English. Interviews were recorded, transcribed, and translated to

English for coding. Two team members independently processed this data to ensure objectivity, generating codes and themes based on the research's outcomes and questions. The analysis began with the initial findings, moving on to develop themes around crucial variables and the study's scope, focusing on stakeholder perceptions regarding the project's adoption, scalability, and sustainability, as well as effectiveness and lessons that could be applied across different Philippine regions.

4.2. QUANTITATIVE DATA

To address the evaluation questions, the team implemented a rigorous quantitative analysis using Stata, incorporating techniques such as frequency tables and cross-tabulation of variables with corresponding significance tests and reflecting standard errors. Prior to analysis, the evaluation team applied appropriate survey weights to the data points to ensure their validity and comparability with midterm evaluation results. The evaluation team applied advanced statistical techniques such as Pearson correlation tests, regression analysis (probit models), DID analysis, and analysis of variance (ANOVA) tests to assess farming practices and outcomes precisely.

Post hoc tests are statistical analyses conducted after an initial hypothesis test (such as ANOVA or t-test) to determine which specific group differences are statistically significant. These tests help to identify significant differences among groups when conducting multiple comparisons. We utilized the power of ANOVA in the PhilCAFE final evaluation extensively to analyze regional effects on various agricultural practices, revealing significant differences in adoption rates of specific technologies and methods. It contributed to identifying which coffee production technologies, post-harvest processes, climate risk management practices, and farm management techniques are preferentially adopted in certain regions, influenced by region.

The Pearson correlation test examined a wide range of variables, including age, household size, gender, years of formal education, farmer cooperative membership, total farm size (hectares), yield (GCB), post-harvest losses, disease management, farm management practices, genetic improvement, pest management, soil-related fertility and conservation, harvest and postharvest-processing, farm diversification, climate risk reduction and natural resource management, operational management, production cost (per hectare), active marketing, enough capital, number of family labor, number of hired labor, number of hours sent in the farm (men), number of hours spent in the farm (male youth), number of hours spent in the farm (women), number of hours spent in the farm (female youth), and willingness to certification, to determine their interrelationships.

Conversely, DID analysis assessed the impact of interventions on adoption technologies, yield, annual cost, post-harvest losses, coffee sales, annual income, and employment. DID analysis compares changes in outcomes over time between a treatment group and a control group before and after the treatment is introduced. By examining the differential change in outcomes, it estimates the causal effect of the treatment. It cannot be applied to variables lacking baseline data, as there is no reference point for comparison before the treatment's implementation.

A Probit regression model was employed to examine the impact of various factors on a dependent variable. These factors include age, completed education (years of formal education), household size, annual income (in thousands of PHP), area devoted to coffee cultivation (hectares), annual cost per hectare of coffee farming, weekly hours of farm work for men, male youth, women, and female youth, membership status in a cooperative or farmer’s association, participant group (control or intervention), gender, marital status, external support for coffee capital, existing credit availability, access to external capacity building activities, intercropping of coffee with other crops, difficulty accessing inputs, willingness to certify the farm, active marketing of coffee, availability of

sufficient capital, and experience of post-harvest losses. These variables were analyzed to understand their influence on the outcome/dependent variable. The Probit regression model provides valuable insights into the factors influencing technology adoption in coffee farming, offering a nuanced understanding of how demographic, economic, agricultural, and social variables interplay in decision-making processes.

These statistical analysis approaches provided the scientific basis for understanding factors that affect farming efficiency and effectiveness, offering critical insights for developing policies and practices in the Philippines' coffee sector. The significance level of $p<0.05$ indicates that we can be confident, with a high degree of certainty, that the observed difference in income changes between the participant and comparison groups is not due to random chance but likely a result of PhilCAFE interventions. These findings emphasize the effectiveness of the interventions implemented by PhilCAFE.

4.3. DATA TRIANGULATION

Alongside employing advanced statistical and qualitative data analysis methods, triangulation was also done as a pivotal technique to obtain a comprehensive understanding of market trends and sales decline. This approach involved synthesizing information from various data sources and perspectives to validate findings and reduce biases. To further analyze the dynamics within the market, a detailed value chain map was developed. This map meticulously outlined the roles of different market actors and the marketing channels they utilize, enabling the team to pinpoint areas of inefficiency and opportunity within the market structure. Such insights allowed the evaluation team to propose actionable recommendations aimed at enhancing market performance. In the analysis, the team incorporated primary data from midterm evaluation reports, monitoring and evaluation data from the program itself, along with secondary data from reliable external sources such as government publications, news outlets, and reputable online platforms. This blend of internal and external data sources was instrumental in facilitating a thorough comparative analysis, enhancing the robustness of the evidence base, and reinforcing the credibility of the conclusions and recommendations.

4.4. DATA MANAGEMENT AND QUALITY ASSURANCE

During the fieldwork phase of data collection, group leaders and field supervisors were actively involved in ensuring the integrity and quality of the interviews conducted. They ensured that a minimum of 10% of each interviewer's total interviews were observed directly, with an additional 20% undergoing back-checking. This back-checking process was critical for assessing the quality and integrity of the interviews, involving either re-interviewing or re-tracing respondents. After the first week of fieldwork, an interim briefing was held to address any initial difficulties or concerns, ensuring any overlooked issues during the pre-fieldwork stage were corrected promptly. The evaluation team maintained a standard result-of-calls sheet for detailed reporting on data collection, and replacement samples were utilized only after the original samples were deemed eligible for replacement, with CBSG management leads and field managers overseeing this process.

In terms of data management, the field and quality control teams conducted daily checks on the data provided by the data processing team, identifying any issues for further review by the quality monitoring team. This included a rigorous back-checking process for validation. Early submission of interim data to PhilCAFE allowed for an initial review focusing on the completeness, accuracy, and logic of the data collected, with raw data progressively submitted weekly. Deviations or inconsistencies, particularly concerning farm sizes, coffee production, sales volumes, and

financial data, were addressed through re-interviews or validation according to guidelines from ACDI/VOCA.

Besides SurveyToGo, the CAPI infrastructure provided secure platforms for programming the questionnaires and collecting data. Our priorities were data security and integrity of the data collected from respondents, including assurance for respondents that their data would not be lost or mishandled. During data cleaning, the team examined the distribution of every variable in the data, checked for outliers, both plausible and implausible values, missing values—system missing versus user-defined—and checked for duplicates in unique IDs. As applicable, outliers were either eliminated, transformed, or kept and adjusted the type of tests run. In addition, the analyst identified skip patterns in the questionnaire and reviewed frequencies accordingly. In the end, four sets of data files passed through a rigorous data cleaning process and were finalized by (1) producing and adding weights—survey weights were calculated to account for the selection probabilities in different sampling stages and subsequently adjusted for nonresponse in different levels, e.g., farmers (participant and control), MSAs, and institutions; (2) documenting remaining inconsistencies; and (3) exporting finalized datasets to the Stata platform for analysis. The Shapiro-Wilk test was used to test for normality in the sample data sets. For variables found to have non-normality in their distribution, we assessed the extent of their deviation from normality. Given the PhilCAFE analysis context, the team concluded that the slight deviations from normality discovered were not likely to significantly affect its conclusions.

4.5. LIMITATIONS AND FIELD CHALLENGES

Availability of Respondents

One significant challenge faced during data collection was the availability of respondents across four groups, largely due to their busy schedules, including work, farming activities, Barangay elections, vacations, or being in another city or province with uncertain return dates. Specifically, farmer respondents were often only available at night after farming, on Sundays, or were out of town for various reasons, necessitating callbacks and additional time for travel. For institutions and MSA groups, initial contact attempts via phone to schedule interviews had a low success rate due to issues like unavailable or incorrect contact information and unreturned calls. Consequently, the team resorted to walk-in visits, which also faced challenges due to scheduling conflicts and unavailability, prolonging the data collection process beyond the completion of farmer group interviews. Respondents who could not provide a definite availability had to be replaced, further complicating the data collection effort.

Locating the Respondents

The data collection team encountered significant challenges in locating respondents, particularly due to their remote locations, which necessitated hours of travel, often without direct transportation options. This led to the team having to hire motorcycles or walk to reach respondents. Upon arrival, additional difficulties arose when some respondents could not be found at their expected locations—they had moved away, were not known at the provided address even after consulting local officials or were listed inaccurately as local farmers or residents when they were merely training attendees. These unlocatable respondents, after multiple attempts, were ultimately replaced to ensure the completion of data collection.

Ineligible Respondents

Some respondents were found ineligible for the main survey and subsequently replaced. This included farmer group members without a coffee farm, deceased farmers whose farms had ceased operations or transferred ownership, firm/institution respondents no longer employed at

the listed organizations, individuals with spouses already interviewed, and those previously interviewed in pre-tests or qualitative sessions. However, respondents claiming to lack coffee plants during the data collection were still accepted if they maintained ownership of a coffee farm.

Concerns on Safety

The field team also reported that some areas were not secure for fieldwork due to the presence of armed men. However, the team was able to complete a few interviews from these areas with coordination with the local officials, but some respondents had to be replaced.

Refusals

Across the four respondent groups, a few respondents refused to participate in the survey and had to be replaced. The institution group had the highest refusal rate at 6%.

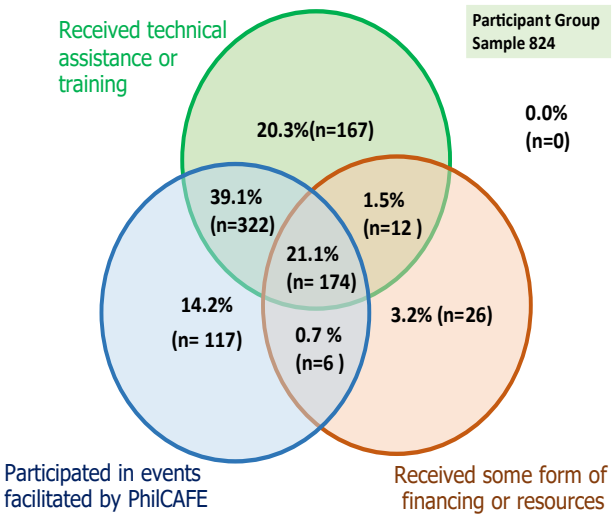


Figure 2: Number and percentage of farmer survey respondents who received (i) technical assistance or training, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE (n=824).

Section E: Results and Discussions

5.1. PRIMARY SOURCES OF INFORMATION

5.1.1. Farmers Survey

The farmers survey, designed to assess the impact of PhilCAFE interventions, systematically gathered data from two distinct groups: the participant group and the comparison group. The participant group consisted of 824 respondents, which included 446 or 54.13% men (51 youth and 395 adults) and 378 or 45.87% women (44 youth and 334 adults). Of the respondents, adults constitute 88.4%, while youth make up the remaining 11.5%. Geographically, the survey covered 10 regions for the participant group. This group benefited directly from PhilCAFE interventions, such as technical assistance, training, funding or financial assistance, and goods or resources, along with participating in events and training facilitated by PhilCAFE. Figure 2 shows that all surveyed participant farmers benefited from PhilCAFE's support, with 21.1% receiving a range of technical training, financing, and event participation About 39.1% of respondents benefited from technical assistance and event participation, while 0.7% participated in events and obtained financial resources, and 1.5% received both technical training and financial support. A portion of the respondents experienced just one form of assistance, with 20.3% getting technical assistance, 3.2% receiving financial support, and 14.2% experiencing event participation.

The evaluation also included a survey of 349 respondents from the comparison group across four regions. This group consisted of 194 or 55.59% men (22 youth and 172 adults) and 155 or 45.87% women (11 youth and 144 adults) who had not received any direct intervention from PhilCAFE. In terms of age category, 9.46% were youth, and 90.54% were adults. This group serves as a

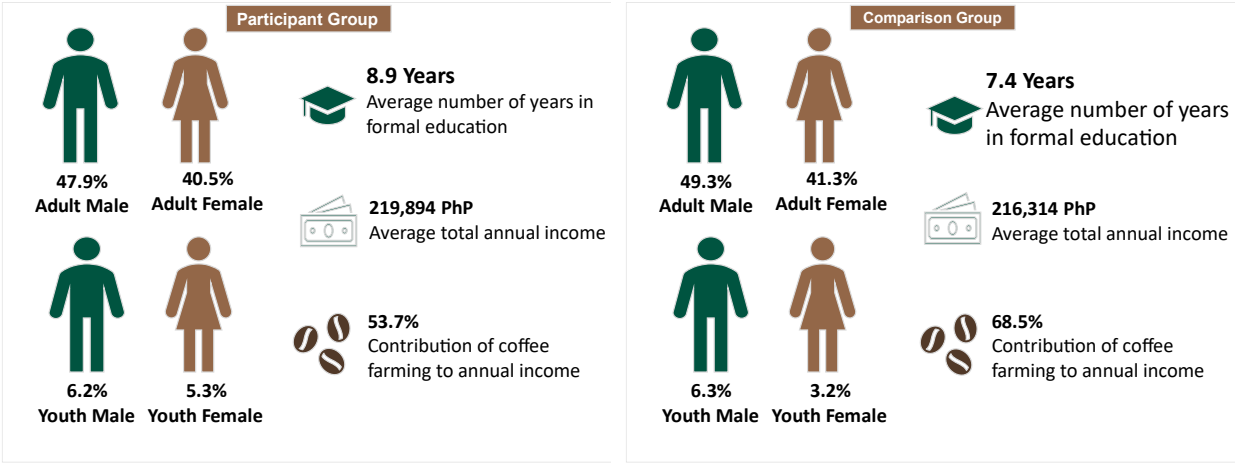
crucial baseline for understanding the organic developments within the community or sector that occurred independently of PhilCAFE's influence.

When investigating the age demographics within this cohort, the average ages of individuals in the participant and comparison groups were 47.1 years and 51.3 years, respectively, highlighting a subtle age disparity between the two groups.

Educationally, the respondents from the participant group exhibit a higher level of formal education compared to their counterparts in the comparison group, with an average duration of 8.9 years versus 7.4 years in formal education settings, respectively. This indicates a noticeable difference in educational attainment levels between the two groups, potentially impacting their farming practices and knowledge. Such educational disparities may influence the overall outcomes and experiences of these two distinct groups within the agricultural sector.

Regarding economic outcomes, the comparison group reports a slightly lower average total annual income per household, PHP 216,314, compared to PHP 219,894 for the participant group. This discrepancy extends to the sources of income; the comparison group had a larger share of their annual income coming from coffee farming at 68.5%, compared to 53.7% for the participant group. This financial overview underscores the varied economic strategies adopted by the two groups, reflecting their adaptability and resourcefulness in managing income sources (see Figure 3).

Figure 3: Farmer respondents' information (participant and comparison)



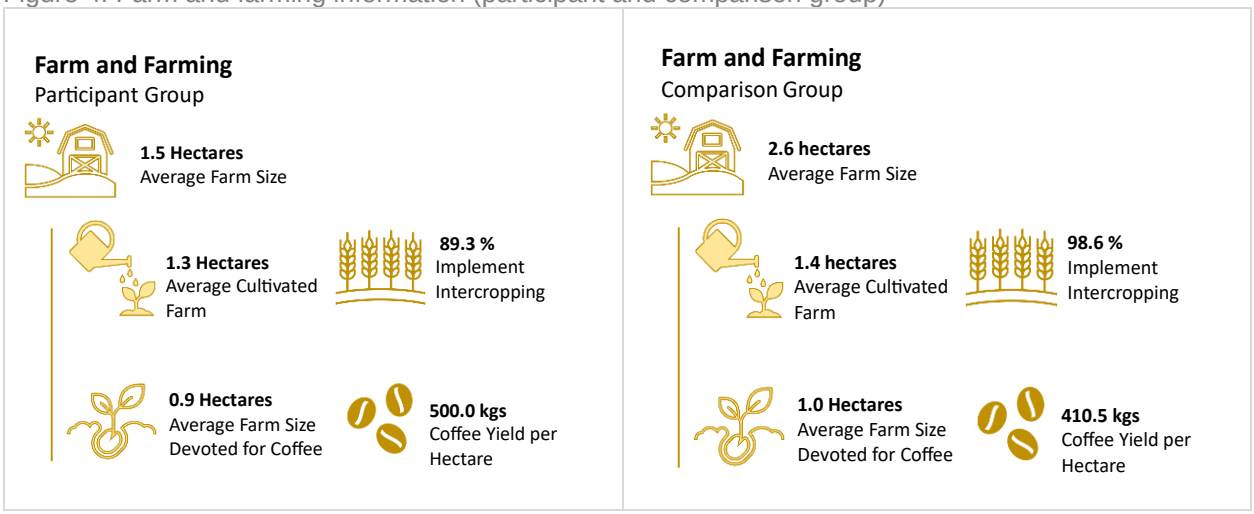
The analysis reveals a noteworthy disparity in coffee production efficiency between the participant and comparison groups despite slight variations in farm sizes. Specifically, the participant group farms, with an average size of 0.9 hectares dedicated to coffee cultivation, achieved a significantly higher coffee yield of 500. kg/ha (GCB) This contrasts with the comparison group, where farms have a slightly larger average coffee cultivation area of 1 hectare but yield coffee at 410.5 kg/ha (GCB).

Further examination of agricultural practices reveals differences in farm utilization, particularly in the adoption of intercropping strategies. The participant group's average cultivated farm size stands at 1.3 hectares, with a substantial 89.3% of this land being used for intercropping, indicating a strategic approach to maximize land use and potentially enhance biodiversity, which may contribute to their higher coffee yields. In comparison, the average farm size for the comparison group is slightly larger at 1.4 hectares, and it boasts a higher rate of intercropping utilization at 98.6%. This suggests that while both groups prioritized mixed cropping systems, the comparison group allocates a larger proportion of its slightly bigger cultivated area to this practice.

In the participant group, the predominant practice involved intercropping corn, banana, and coconut, alongside cultivating various types of vegetables and rubber. In contrast, the comparison group primarily focused on cultivating corn, banana, coconut, cacao, pepper, and ipil-ipil.[15]

Despite these differences in yield and land use strategies, an overarching comparison of the overall average farm sizes between the two groups illuminates another dimension of the agricultural context. The participant group operated on a notably smaller average farm size of 1.5 hectares compared to the comparison group's larger average of 2.6 hectares. This discrepancy highlights a broader scale of operation in the comparison group, yet when focusing specifically on the land dedicated to coffee cultivation and the overall cultivated area, the sizes are relatively comparable. The average farm size devoted to coffee for the participant group was 0.9 hectare, whereas the comparison group was 1 hectare. This observation underscores the complexity of agricultural productivity and land use efficiency, revealing that smaller farm sizes in the participant group do not necessarily equate to lower productivity, especially when innovative practices like intercropping are widely implemented (see Figure 4).

Figure 4: Farm and farming information (participant and comparison group)



The demographic profile and affiliations within PhilCAFE's participant group revealed meaningful insights into its structure and impact. The prevalence of male participants, at 61.4%, highlights gender dynamics that might affect both access to and utilization of resources and new farming practices. Furthermore, the age distribution indicates a younger demographic within the participant group, with an average age of 45.9 years, compared to 50 years in the comparison group. The participant group's younger participants suggest potentially greater openness to adopting innovative agricultural technologies and methods.

The cultural and linguistic makeup of both the participant and comparison groups was predominantly Cebuano/Bisaya, which could significantly influence the spread and acceptance of agricultural innovations. This cultural consistency may aid in the effective dissemination of information and practices within these communities, provided the interventions are well-adapted to local traditions and communication styles. Moreover, the expansion into coffee cultivation by more than a quarter of respondents in both groups indicates a notable change in agricultural intervention priority that is driven by market demands, economic opportunities, or the influence of agricultural support programs. This increasing interest and opportunities in coffee indicate a

[15] Leucaena leucocephala or commonly river tamarind.

broader movement within the community toward crop diversification (intercropping), potentially offering insights into changing agricultural landscapes and market responses.

5.1.2. MSA Representative Survey

The MSA representative survey methodically approached the evaluation of PhilCAFE's interventions by interviewing 356 MSA representatives, who were randomly selected from municipalities, cities, or agricultural sectors. This cohort comprised 165 men, including 64 youth and 101 adults, and 191 women, including 79 youth and 112 adults, all of whom benefited from at least one form of assistance from PhilCAFE. This assistance spanned a broad spectrum, including technical support, training sessions, financial aid, goods and resources provision, and participation in various events or training facilitated by PhilCAFE. The inclusion of both adults and youth in the sample contributed to the evaluation's comprehensive approach, aiming to capture the wide-ranging impacts of PhilCAFE's interventions across different demographics within the agricultural community. Figure 5 provides an analysis of PhilCAFE assistance within a farm survey that showed a comprehensive engagement, with 51.7% of respondents receiving a holistic package of assistance, including technical support, enterprise growth and improvement training, and event participation facilitated by PhilCAFE. A large majority of respondents (70%) benefited from technical assistance coupled with event participation, suggesting a high value placed on these components. A small percentage of MSAs received only a single type of assistance, with 15.2% obtaining technical support, a negligible 0.6% receiving enterprise growth training, and 10.1% engaging in events, presenting varied engagement levels and possibly different needs or opportunities among the farming community.

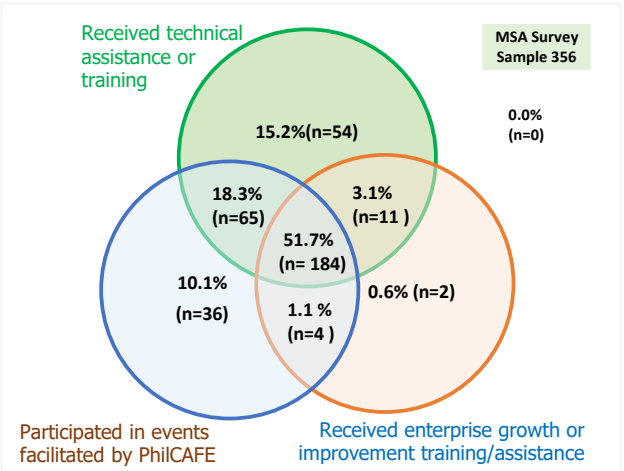
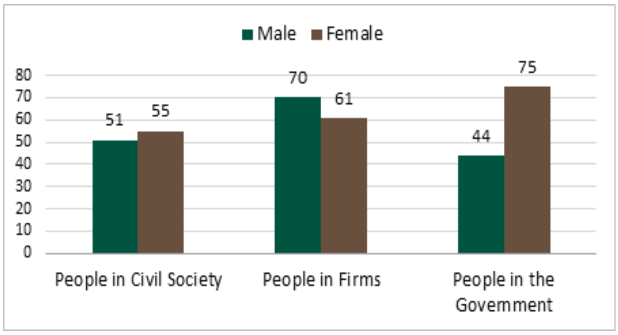
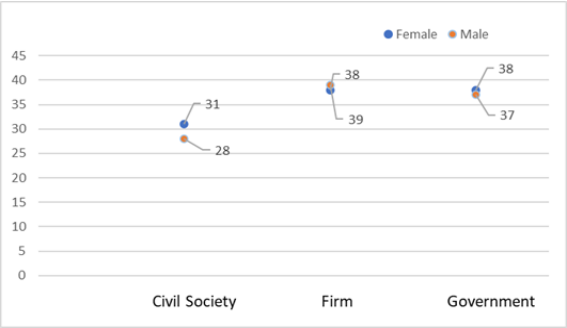


Figure 5: Number and percentage of MSA survey respondents who received (i) technical assistance or training, (ii) enterprise growth or improvement training/assistance, and/or (iii) participated in any event that is provided or supported by PhilCAFE (n=356)

The MSA representative survey was conducted across 11 regions in Luzon, Visayas, and Mindanao. The evaluation also analyzed the composition of representative respondents in the MSA group, which included civil society organizations, private firms, and government institutions (see Figure 6). The representation from MSAs leans strongly toward private firms, followed by government entities, cumulatively constituting 72.2% of the total stakeholder representation. The evaluation surveyed both women and men across all three participant groups. A minimal disparity was observed in the average age of respondents based on gender within each beneficiary group. The predominant ethnic affiliations among respondents were Bisaya (26.2%), Cebuano (19.2%), and Ilonggo (13.9%).

Figure 6: Distribution of MSA representative respondents by gender (left side) and average age (right side)





5.1.3. Firms Survey

A total of 264 firms that had participated in PhilCAFE interventions were randomly selected from municipalities, cities, or agricultural sectors. These interventions encompassed a broad array of supports such as technical assistance, training sessions, enterprise growth or improvement assistance, and participation in events or training facilitated by PhilCAFE.

The evaluation team analyzed the impact of PhilCAFE support among respondents of the survey and found that 69.7% of the firms benefited from a comprehensive suite of services, including technical support, enterprise growth, and improvement training, and event participation, with all respondent firms receiving at least one form of assistance (see Figure 7). Technical assistance, together with event participation, was received by 80.3% of the cohort, while 72% engaged in events and received enterprise growth training, reflecting a balanced distribution of services aimed at fostering agricultural development. A minority received only a singular type of support, with 5.3% obtaining technical assistance, 2.7% benefiting from enterprise growth training, and 2.7% participating in events presenting the diverse needs and engagement levels within the community.

The firm beneficiaries of at least one PhilCAFE intervention or participants in PhilCAFE-facilitated assistance offer a comprehensive insight into the demographic and operational landscape of these entities across 10 regions. Out of 264 firm representatives, there were 130 females and 134 males. According to age category, 252 were adults, while only 12 were youth (see Table 124).

Diving deeper into the composition of the institution respondents, over half (51.5%) were from producer organizations, highlighting the crucial role of these organizations in the agricultural sector's ecosystem (see Figure 8). The average age of firm representative respondents was 44 years, indicating mature leadership within these entities. Ethnic diversity is evident among the firms, with Cebuano being the predominant ethnicity among producer organization beneficiaries, followed by a

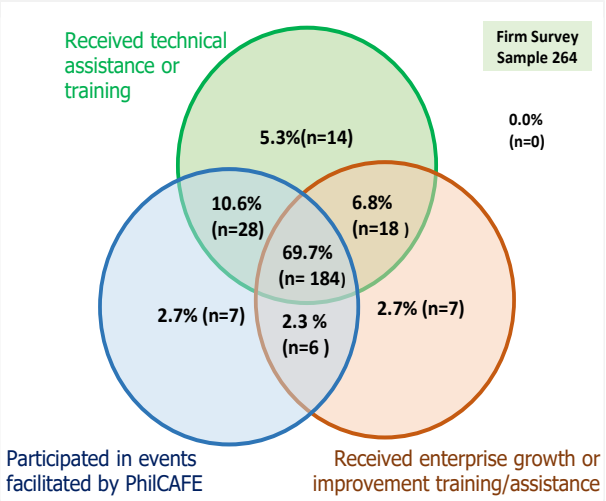
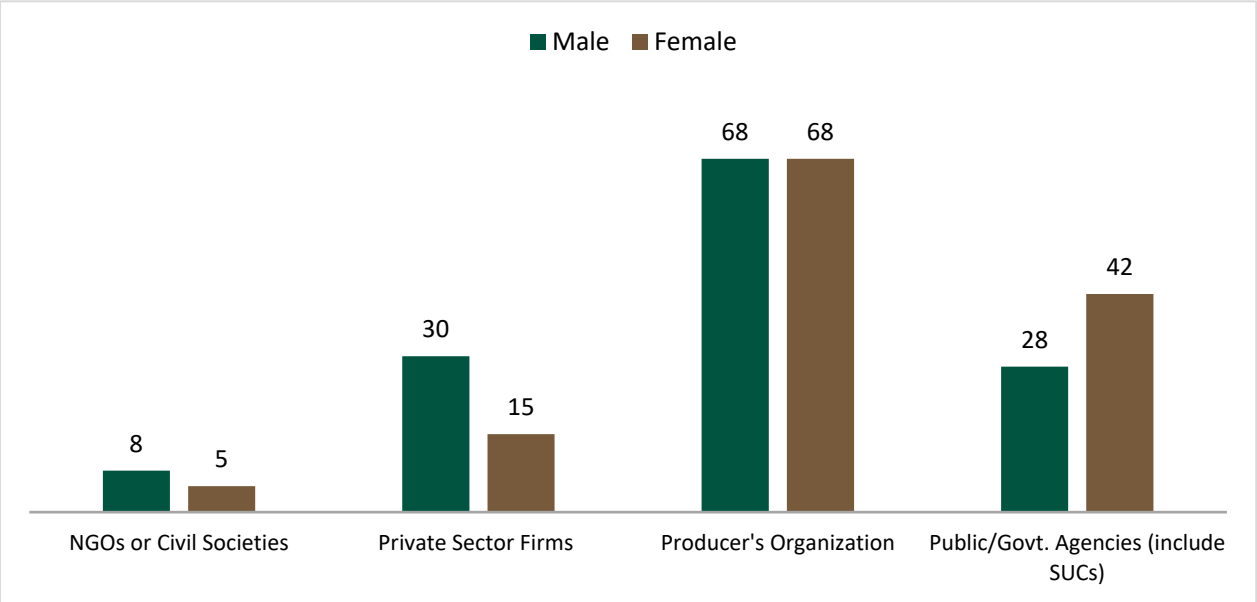


Figure 7:Number and percentage of firm survey respondents who received (i) technical assistance or training, (ii) enterprise growth or improvement training/assistance, and/or (iii) participated in any event that is provided or supported by PhilCAFE (n=264)

significant representation of Ilonggo (30.35%) and Bisaya ethnicities (see Table 128). This ethnic diversity, especially within firms, reflects the multicultural dimensions of people in the region. Furthermore, the inclusion of private sector firms and educational institutions as a substantial group of respondents underscores the broad spectrum of entities engaged in agricultural development and PhilCAFE's wide-reaching influence.

Figure 8: Number of firm representative respondents by firm type and gender (n=264)



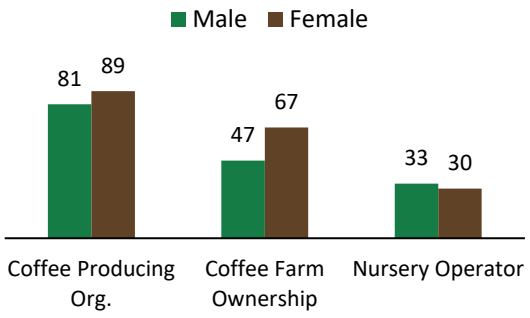


Figure 9: Number of firm representatives by gender who're involved in coffee production, farm ownership, and nursery usage. (n=264)

The study examined the involvement of surveyed representatives in coffee production, firm ownership, and nursery operations. The study found that firm representatives surveyed were either involved with coffee production or nursery usage. Among the total surveyed firm representatives, there were 170 coffee-producing organizations involved with coffee production. Additionally, about 114 firm representatives reported that they owned the firm. In terms of nursery usage, 63 firm representatives confirmed that they operated a nursery for quality coffee seedling production (see Figure 9).

5.2. TECHNOLOGY AND ADOPTION

PhilCAFE's final evaluation findings provide a comprehensive overview of the adoption rates of coffee production technologies and practices among farmers, firms, and MSA representatives, revealing critical insights into agricultural behavior, technological adaptation, and management strategies. The data comparison between participant (n=824) and comparison (n=349) groups for farmers across different technological and practice domains—ranging from coffee production technologies, post-harvest technologies, climate risk reduction techniques to farm management practices—highlights significant variances in adoption rates and effectiveness, reflecting the nuanced impact of the PhilCAFE interventions on the farming communities involved.

5.2.1. Production Technology

In coffee production technologies, there is a noticeable variance in adoption rates between the participant and comparison groups across various practices. The participant group's adoption rates of proper planting distance (30.83%,) digging holes (29.49%,) and proper pruning (22.69%,) indicate a focus on foundational agricultural practices. However, the comparison group shows a higher adoption rate for shading (39.83%) and a remarkable 62.18% for proper pruning, it suggests that the comparison group might be leveraging more advanced or specific cultivation techniques that potentially contribute to improved coffee yield and quality (see Table 93). The Pearson correlation test showed that the level of coffee production is positively correlated with the adoption of production technologies such as pest management ($p<.01$), genetic improvement ($p<.001$), disease management ($p<.001$), and soil-related fertility and conservation ($p<.001$) for the participant group (see Table 99).

The Probit model analyses showed an influence on the determinants of farmers' adoption rates for a variety of technologies and practices related to coffee production. Factors such as age, education level, household size, the area devoted to coffee cultivation, and involvement with cooperatives or farmers associations play critical roles in influencing these rates. Education level emerged as a consistent predictor across different technologies, suggesting that higher levels of education enhance the likelihood of adopting production technologies. Youth exhibit a higher probability of adopting proper planting distance (coef. of 0.02, $p<.05$), digging holes (coef. of .009, $p<.05$), and picking ripe (coef. of.02, $p<.05$) compared to adults.

The correlation analysis between the adoption of various coffee production technologies and coffee yield indicated a generally stronger and statistically significant positive relationship for those in the participant group. Production techniques like seedling selection, proper planting distance, mother plant selection, and the application of both organic and inorganic fertilizers show significant positive correlations with coffee yields among participants, suggesting these practices are effective at increasing yield. In contrast, the comparison group had fewer practices with statistically significant correlations, the most significant being digging holes and proper pruning, which are associated with higher yields. This indicated that participants who adopted specific advanced agricultural practices experienced better yield outcomes compared to those in the comparison group who may follow more traditional or less intensive practices. Negative or non-significant correlations in various practices for both groups indicate areas where these techniques may not influence yield or where additional factors might be at play.

The correlation analysis for institutions adopting various coffee production technologies revealed a predominantly positive and statistically significant impact on coffee yield. Techniques such as proper planting distance, seed selection, and the application of both organic and synthetic pesticides demonstrate robust positive correlations with yield improvements, with p-values below.01, indicating strong statistical significance. Practices like digging holes, application of basal fertilizer, and picking ripe, also show substantial positive effects on yield. While most

correlations are found to be significantly positive, a few practices like capping and leaf sampling showed weaker or non-significant correlations, suggesting they might have been less impactful or were influenced by other variables not captured in this evaluation study. Overall, the final evaluation data indicated that comprehensive adoption of these advanced agricultural practices at the institutional level correlated strongly with enhanced coffee production yields.

Institution respondents with coffee production areas also adopt agricultural techniques, with a significant majority implementing proper planting distance (42.64%), shading techniques (44.16%), and picking ripe (40.11%; see Table 148). In the MSA representative survey, respondents practice digging holes (35.9%), rejuvenation efforts (36.1%), proper pruning (30.39%), and planting distance (22.11%; see Table 223).

5.2.2. Post-Harvest Technology

Adoption of post-harvest technologies essential for preserving the quality of coffee after harvest also shows disparities between the groups. The participant group's highest adoption rate is in drying (37.38%) a critical step in coffee processing. In contrast, the comparison group exhibits a slightly higher rate of 38.68% for the same practice, indicating a common recognition of its importance. However, the broad range of adoption rates across different technologies within both groups suggests varying levels of access to, or knowledge of, these post-harvest practices. Within the participant group, the adoption rate for measuring sugar content is the lowest (4.93%). In contrast, the comparison group's lowest adoption rate is floatation (see Table 92). Higher levels of yield per hectare have a favorable impact on the adoption of harvest and post-harvest technologies (see Table 113).

The Probit model shows that the adoption of specific post-harvest technologies is significantly influenced by various socio-economic factors, including age, education, and the external support mechanisms available to farmers, such as access to capital and credit, indicating the nuanced relationship between external challenges and farmers' aspirations (Table 67).

The correlation analysis of how post-harvest coffee production technologies affect coffee yields revealed that participants who adopt these technologies see significant positive effects on yields, demonstrating their effectiveness when used correctly. Technologies such as size grading, cupping, and fermentation were particularly effective, showing strong positive correlations with increased yields. Conversely, the comparison group displayed negative or statistically insignificant correlations for certain technologies like washing, pulping, and use of elevated dryers, suggesting potential issues with implementation or lesser impact in these settings. This difference highlights a possible deficiency in training or resources among the comparison group. The consistently positive outcomes for participants underscore the critical role of these post-harvest processes in enhancing coffee production.

The correlation analysis of institutions using post-harvest coffee production technologies showed generally positive impacts on coffee yield, with varying levels of effectiveness. Strong positive correlations were particularly noted in size grading and storing, which significantly enhanced yields (p-values of 0.0), underscoring the importance of these practices in improving coffee quality and yield at the institutional level. Additional practices like roasting, using elevated dryers and sorting and defects classification also demonstrated significant positive effects on yield outcomes. Hulling, packaging, and cupping exhibited weaker or non-significant correlations, suggesting these technologies may not directly influence yield as much or could be dependent on other unanalyzed factors. This analysis indicates that the effectiveness of post-harvest technologies varies, with advantages seen in technologies that improve processing quality and storage conditions.

Among institution respondents, adopted post-harvest technologies include washing (28.88%), drying (40.38%), pulping (20.91%), and sorting (21.4%). Among MSA representatives, they adopted drying (58.17%), washing (55.28%), and roasting (59.30%), with the least adopted or practiced technology being measuring sugar content (19.45%) (see Table 150, Table 224).

5.2.3. Technology for Climate Risk Reduction

Climate risk reduction and natural resources management technologies represent an area where both groups show lower adoption rates compared to agricultural and post-harvest technologies. However, agroforestry in the participant group stands out with a 19.93% adoption rate, highlighting a significant investment in sustainable practices. This is contrasted by the lower adoption rates in the comparison group for similar practices, pointing to potential gaps in awareness or resources to implement these climate-resilient strategies—only 2.59% of comparison respondents adopted biodiversity conservation, and 3.32% adopted woodlot management (see Table 93). The low adoption rates could indicate a lack of awareness, perceived relevance, or resource constraints among farmers. Specifically, adoption rates in biodiversity conservation and woodlot management in climate risk management underscore the critical but under-emphasized role of environmental stewardship in coffee farming practices.

The Probit model shows that the adoption of specific climate risk management technologies is significantly influenced by various socio-economic factors, including education and the external support mechanisms available to farmers, such as access to capital and credit. Challenges like having experienced post-harvest loss and the desire to achieve farm certification and actively market coffee also motivate technology adoption (see Table 68).

The correlation analysis between the use of climate risk reduction technologies and coffee yield showed generally positive effects for participants, while the comparison group exhibited mixed results. Technologies like efficient nitrogen fertilizer use and the restoration of organic soils and degraded lands were significantly correlated with yield improvements for participants, highlighting their effectiveness. Conversely, the comparison group often displayed non-significant or negative correlations for these practices, suggesting differences in implementation effectiveness or other underlying factors. However, practices such as agroforestry and irrigation drip consistently showed positive and significant impacts in the comparison group, indicating their universal benefits irrespective of other variables. This analysis underscores that while certain climate risk reduction technologies can significantly enhance yields for those who implement them effectively, not all technologies produce positive outcomes across different groups, emphasizing the importance of tailored approaches that consider specific environmental and operational contexts.

The correlation analysis assessing the impact of climate risk reduction technologies on coffee yield at various institutions revealed a mixed pattern of results. Only certain practices, such as low- or no-till practices, efficient nitrogen fertilizer use, and use of drought and flood-resistant varieties, demonstrated strong positive correlations, indicating their effectiveness in mitigating climate-related risks at the institutional level. Meanwhile, woodlot management and the use of perennial varieties also showed positive but slightly weaker correlations. In contrast, practices like agroforestry, irrigation drip, and diversification either did not show significant correlations or had negative impacts, suggesting that these might not have positively influenced yields within the PhilCAFE contexts or might require specific conditions to be effective. Overall, this analysis indicates that while some climate risk technologies can enhance yields, their effectiveness varies, necessitating careful selection and implementation tailored to the specific needs and environmental conditions of each institution.

Among the institution respondents, the predominant adoption of climate risk management technologies includes agroforestry (25.60%), restoration of organic soils and degraded lands (16.40%), and practices that promote methane reduction (15.16%). The primary focus of adoption among the MSA respondents centers around the implementation of crucial climate risk management techniques.

5.2.4. Farm Management Practices and Other Technology

Adoption rates of farm management practices reveal a dichotomy in priorities and efficiencies between the groups. The participant group's higher rates in processing and human resources versus the comparison group's rates in recordkeeping and marketing/trading suggest differing strategic focuses or resource allocation priorities that could influence the overall business sustainability and growth of coffee farming operations.

The Probit model analysis showed an influence on the determinants of farmers' adoption rates for farm management practices. Factors such as age, education level, household size, the area devoted to coffee cultivation, and involvement with cooperatives or farmers associations play critical roles in influencing adoption.

The correlation analysis between farm management practices and coffee yield indicated varied impacts for participant and comparison groups. For participants, processing had the strongest positive correlation with yield, highlighting the importance of effective processing techniques in maximizing coffee production. Financial planning and recordkeeping also showed significant positive correlations, suggesting that systematic financial management and meticulous recordkeeping are crucial for boosting yield. Conversely, the comparison group exhibited a notable positive correlation only in the use of information and communication technology, suggesting that technological adoption may be particularly effective in settings with less optimized management practices. Meanwhile, practices such as marketing/trading, accounting, and human resources displayed negligible or negative correlations for both groups, indicating these areas might have less direct impact on yield or require specific conditions to yield benefits.

The correlation analysis examining the adoption of farm management technologies and their impact on coffee yield at the institutional level indicated generally low and statistically non-significant effects across various practices. None of the management practices analyzed, including processing, recordkeeping, financial planning, or the use of information and communication technology, demonstrated strong or significant correlations with improvements in coffee yield. Financial planning showed the highest correlation, yet it was only marginally significant. This suggests that while these management technologies are essential components of institutional operations, their direct impact on yield was minimal or masked by other variables not considered in this analysis. The findings imply that merely adopting farm management technologies does not assure significant yield improvements, highlighting the potential necessity for integrating these practices more comprehensively with other agricultural or operational enhancements to achieve noticeable productivity gains.

The evaluation extends into the adoption rates of nursery-related technologies by the firms that operated a nursery, showing adoption rates in all technologies from 32.88% to 5.48%. This is because only select organizations were supported in nursery establishment and a limited number of caretakers and staff were trained. For farmers, it is perceived as related to the relevance of establishing backyard nurseries or resource constraints among farmers.

The analysis of agricultural production technologies, post-harvest technologies, and management practices among MSA respondents (e.g., civil society, private sector, government agency) provides additional layers of insight on sharing, advocating, adopting mentoring, and coaching. It

reveals sector-specific trends and preferences in technology adoption, suggesting the influence of organizational context and support structures on farmers' decisions and capabilities.

The overall adoption rates summarized in a comparative table and figures further delineate the distinction between the participant and comparison groups across four categories: agricultural technologies, post-harvest related technologies, climate risk-related technologies, and firm management practices. The comparison group shows higher overall adoption rates in agricultural technologies and firm management practices, suggesting possible broader access to, or the effectiveness of, these practices and technologies outside the direct influence of PhilCAFE (see Table 39).

5.2.5. Region-wise Technology Adoption Coverage

The PhilCAFE evaluation findings reveal a detailed landscape of how different regions perceive the impact of coffee technologies on production quality among the participant group farmers. It appears that the BARMM region stands out, with an overwhelming 92.79% of respondents acknowledging an increase in coffee quality due to technology adoption. Figure 10 presents the percentage of respondents who acknowledged the impact of coffee technologies on the quality of coffee production. The majority of respondents perceived an improvement in coffee quality through the adoption of technologies, with only a small minority reporting a decrease in quality. Others indicated that there was no noticeable change in coffee quality. This variance suggests regional disparities in the effectiveness of technology implementation or possibly the types of technologies available. Regions such as 10, 12, and 13 also reported substantial increases in quality, indicating a positive reception and likely a better integration of beneficial coffee production technologies. Minimal quality decreases reported across the board show an overall positive or neutral perception of technology's role in coffee production quality enhancement.

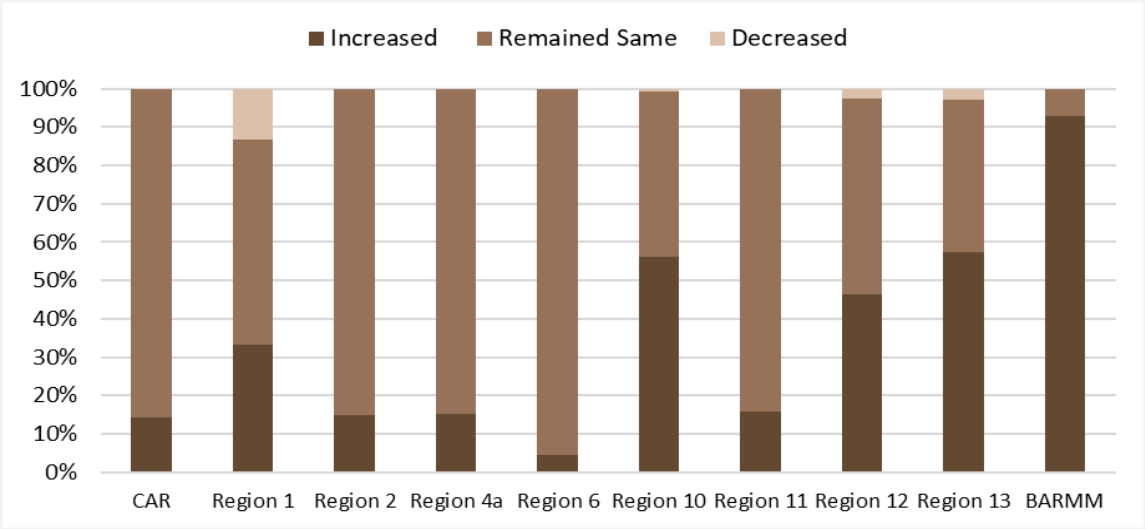


Figure 10: Percentage of respondents who perceived the influence of coffee technologies on the quality of coffee production, per region, participant (n=824)

The evaluation report presents a comprehensive analysis of the adoption of various coffee production technologies across different regions. Use of ANOVA, the analysis highlights regional variations in the adoption of coffee production technologies. Among the coffee production technologies evaluated, significant regional differences in adoption rates were observed for proper planting distance ($p<.01$), mother plant selection ($p<.01$), seed selection ($p<.01$), application of basal fertilizer ($p<.05$), application of organic fungicides ($p<.05$) and pick ripe ($p<.05$). These variations likely stem from diverse agroecological conditions, cultural practices,

and access to resources across regions (see Table 108). Among the post-harvest technologies assessed, washing (p<.01), pulping (p<.05), fermentation (p<.05), drying (p<.05), size grading (p<.05), grinding (p<.01), and measuring sugar content (p<.05) exhibit significant differences in adoption rates across regions. Among the climate risk reduction management technologies evaluated, adjustment of sowing/planting time (p<.05), practices that promote methane reduction (p<.05) and irrigation (drip) (p<.05) demonstrate significant differences in adoption rates across regions. Among the farm management practices analyzed, processing (p<.001), marketing/trading (p<.001), accounting (p<.01), and human resource (p<.01) exhibit significant differences in adoption rates across regions.

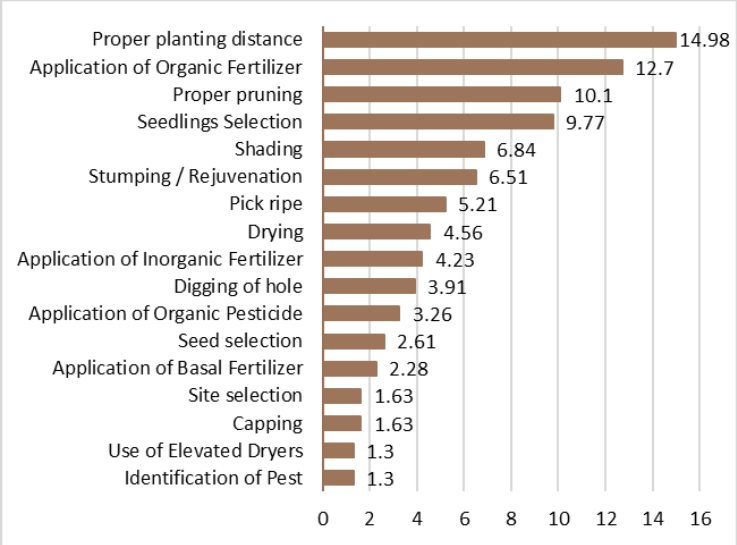


Figure 11: Technologies that farmers think most influenced the quality of coffee

The breakdown of specific technologies perceived to most influence coffee quality further reflects the areas where farmers see the greatest value. Proper planting distance, the application of organic fertilizer, and proper pruning were highlighted as significant contributors to quality improvement (see Figure 11). This suggests a recognition among farmers of the importance of agronomic practices that directly affect plant health and yield. The prioritization of organic fertilizer over inorganic options reflects a potential trend toward sustainable farming practices among participant farmers. Interestingly, technical interventions, such as pest identification and the use of synthetic pesticides, received less emphasis, possibly indicating a need for further education or accessibility improvements in these areas.

The regional response patterns and the identified key technologies form a narrative that emphasizes the importance of context-specific approaches in technology dissemination and training programs. Regions with higher perceptions of quality increase are benefiting from a synergy between the types of technologies introduced and the unique environmental or socio-economic conditions present. The increased adoption of technologies in BARMM can be directly attributed to PhilCAFE, as the organization facilitated access to coffee technologies. This support encouraged organizations to implement and practice these technologies, particularly in the expansion of coffee farms.This emphasizes the need for PhilCAFE and similar initiatives to tailor their interventions to the specific needs and contexts of different farming communities, ensuring the technologies provided match the local conditions, capabilities, and challenges.

The evaluation team put forward that these insights should inform strategic adjustments and future planning if there is a follow-on phase of PhilCAFE. Emphasizing the dissemination and training for technologies that have shown the highest perceived impact, such as proper planting techniques and organic fertilization, across all regions could amplify the positive effects on coffee quality. Nonetheless, understanding the regional discrepancies in technology adoption and its perceived impact on quality could guide targeted interventions that address local barriers to technology adoption, whether they be knowledge gaps, resource limitations, or cultural

preferences. This approach, informed by direct feedback from the farming communities, will enhance the efficacy and sustainability of coffee production improvements across the board.

The ANOVA results indicated significant regional influences on the adoption of specific coffee production technologies, particularly practices like proper planting distance, mother plant selection, and seed selection', exhibit strong regional variability in adoption, highlighted by their p-values (p=0.0048, 0.0013, and 0.008, respectively), suggesting these methods were more likely adopted in regions that may offer specific agronomic benefits or experience unique challenges that these practices address. Similarly, proper pruning and several soil and pest management techniques show significant regional effects, pointing to localized preferences or needs driving adoption. On the other hand, general farm management and less specialized practices such as seedling selection and field planting show high p-values, indicating a more uniform adoption across regions, likely due to their broad applicability (see Table 107).

The ANOVA results on the regional effect on the adoption of coffee post-harvest technologies revealed significant regional differences in the use of certain technologies on washing, pulping fermentation, drying, size grading, grinding and measuring sugar content, suggesting that specific practices are preferred or more relevant in particular regions. Technologies such as washing, pulping, fermentation, drying, size grading, grinding, and measuring sugar content show statistically significant regional variations (p= 0.0014, 0.0284, 0.0299, 0.0356, 0.028, 0.0047, and 0.0351, respectively), indicating their adoption was influenced by regional characteristics which could include climate, infrastructure, local expertise, and market demands. On the other hand, practices like the use of elevated dryers, sorting, defects classification, storing, hulling, roasting, and cupping exhibit high p-values, suggesting a more uniform adoption across regions or a lesser impact of regional factors on their adoption. This analysis exhibited the importance of tailoring post-harvest technology promotion and training to regional conditions to enhance their adoption and effectiveness in improving coffee quality and yield (see Table 108).

The ANOVA results analyzing regional effects on the adoption of climate risk reduction management technologies yielded mixed findings. Most practices showed no significant regional variations in adoption. However, key practices like efficient nitrogen fertilizer use and agroforestry recorded p-values of <.001, indicating significant differences in adoption rates across different regions, likely reflecting variations in soil characteristics, climate conditions, or farming practices that make these technologies more relevant or necessary in certain areas. On the other hand, technologies such as restoration of organic soils and degraded lands, use of drought and flood-resistant varieties, and adjustment of sowing/planting time exhibited high p-values, suggesting that their adoption was less influenced by regional factors and might be more uniformly distributed across areas. The findings demonstrated that while some climate risk reduction practices are essential and region-specific, others were universally applicable and did not show significant regional disparities in adoption (see Table 109).

The ANOVA results examining the regional effects on the adoption of farm management practices highlighted significant regional disparities in several key practices. Specifically, marketing/trading and recordkeeping showed pronounced regional differences (p-values of <.001), suggesting that these practices are heavily influenced by factors such as market access, economic conditions, and local business cultures. Additionally, processing and use of information/communication technology demonstrated very significant regional effects (p-values of 0.0006 and 0.0002, respectively), indicating substantial variations in technological and processing capabilities across regions, likely due to differences in infrastructure and technological penetration. Accounting and human resources also displayed notable regional variations (p-values of 0.0041 and 0.0011, respectively), reflecting disparities in management skills and workforce development across different regions (see Table 110).

DID Analysis on Adopted Technologies

The team conducted a DID analysis of the adopted technologies for farmers across three pivotal survey points—baseline, midterm, and end-term. The analysis attempted to discern the impact of interventions by comparing changes in technology adoption between the participant group, which received specific interventions, and a comparison group that did not. The outcome of this analysis revealed a positive trajectory in the participant group's data, indicating an increase in the adoption of appropriate technologies on cupping, fermentation, floatation, grinding, hulling, measuring sugar content, packaging, pulping, polishing, roasting, sorting, size grading, using elevated dryers, washing, processing, recordkeeping, financial planning, use of information communication, endline marketing, accounting, and human resource (see Table 4). This result suggests that the interventions targeted at the participant group may have contributed to more effective adoption of production, post-harvest, processing, and farm management practices technologies than the comparison group, which has limited or no access to coffee technologies.

Table 4: Adoption rate of common technologies, baseline versus midterm survey, participant (n=824) and comparison (n=349)

Technologies	Baseline (2019)		Midterm (2021)		Endline (2023)		Difference-in-Difference	SE****
	Participant A	Comparison b	Participant c	Comparison d	Participant e	Comparison f		
Production Technologies								
Pick Ripe	69.8	88.3	27.8	7.8	20.98	12.61	.054***	.060
Stumping/Rejuvenation	63.7	63.6	12.2	3.6	19.04	5.44	.130***	.041
Post-Harvest and Processing Technologies								
Cupping	0.0	0.0	1.0	0.0	8.68	0.00	.049***	.007
Drying	80.5	32.1	28.7	27.4	37.60	38.68	.023***	.025
Fermentation	4.5	0.2	4.7	0.0	9.11	1.15	-.010***	.083
Floatation	0.0	0.0	15.5	0.9	18.28	2.58	.075***	.032
Grinding	0.0	0.0	0.4	0.0	11.36	6.30	.030***	.038
Hulling	15.7	5.3	4.6	1.8	7.11	2.87	.013***	.033
Measuring sugar content	0.0	0.0	0.4	0.0	5.27	0.00	.008***	.003
Packaging	0.0	0.0	0.6	0.0	5.97	0.00	.016***	.005
Polishing	1.6	0.0	0.4	0.0	7.27	0.57	.020***	.015
Pulping	16.5	2.6	7.7	0.0	11.22	3.44	.053***	.032
Roasting	0.0	0.0	0.8	0.0	6.52	0.00	.020***	.005
Size grading	0.0	0.0	1.2	0.0	8.71	0.29	.045***	.008
Sorting and Defects Classification	5.8	0.5	4.4	0.0	10.16	5.73	.032***	.034
Storing	8.6	0.0	1.8	0.0	9.70	4.58	043***	.036
Use of Elevated Dryers	0.0	0.0	7.3	0.0	11.25	1.43	.042***	.025
Washing	6.2	0.2	9.5	0.0	19.16	5.44	.031***	.046
Processing	0.0	0.0	15.7	0.0	46.61	42.98	.065***	.084
Farm Management Practices								
Record keeping	8.9	0.6	21.4	8.2	13.90	31.81	-.090***	.067
Financial planning	3.7	0.5	13.3	0.5	17.63	8.60	.102***	.050
Use of information communication	0.0	0.0	2.6	0.0	11.21	8.88	.008***	.046
Marketing /Trading	1.3	0.3	13.7	10.0	17.66	32.66	-.087***	.081
Accounting	0.0	0.0	1.4	0.0	3.27	0.86	.032***	.015
Human Resources	1.0	0.2	4.0	0.5	26.96	13.18	-.009***	.065

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level, ****standard error (SE)

5.3. PRODUCTION

Coffee Production Cost

The final evaluation analyzed the coffee production costs per hectare per year across various regions, revealing the financial intricacies of coffee farming. Among eight identified types of production inputs (see Table 46), the interest on loans emerges as the highest expense, followed by the combined costs of fertilizers and pesticides, and then transportation. This breakdown points to the substantial financial burden that borrowing imposes on farmers, alongside the considerable costs associated with maintaining crop health and transporting produce. The average cost of coffee production is quantified at PHP 3,495.8 per hectare per year. The farmers from Regions 2, 6, 12, and BARMM report lower production costs compared to their counterparts in other participant areas, indicating regional disparities in the cost efficiency of coffee production (see Figure 12).

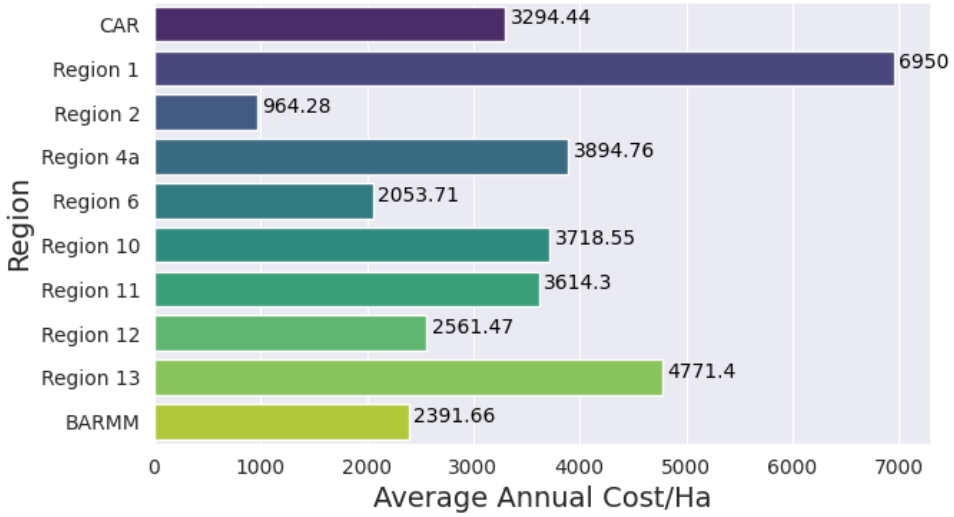


Figure 12: Average annual cost of coffee production per hectare in PHP

Between 2019 and 2023, the variation in production cost changes per hectare annually differed significantly across regions. The farmers survey within the participant group revealed that 28.58% experienced an increase in production costs in contrast to 47.28% in the comparison group. Conversely, a majority (67.63%) of participant area respondents reported no change in their production costs, compared to 45.56% in the comparison group. This suggests relative stability in production costs for most participant group farmers, confirming the effectiveness of interventions or adaptations made in these areas. Regions BARMM, 10, and 13 observed a relatively modest increase in production costs, whereas Regions 1, 12, and 13 experienced more significant decreases, reflecting regional variations in cost dynamics and the impact of different factors on production expenses (see Figure 13).

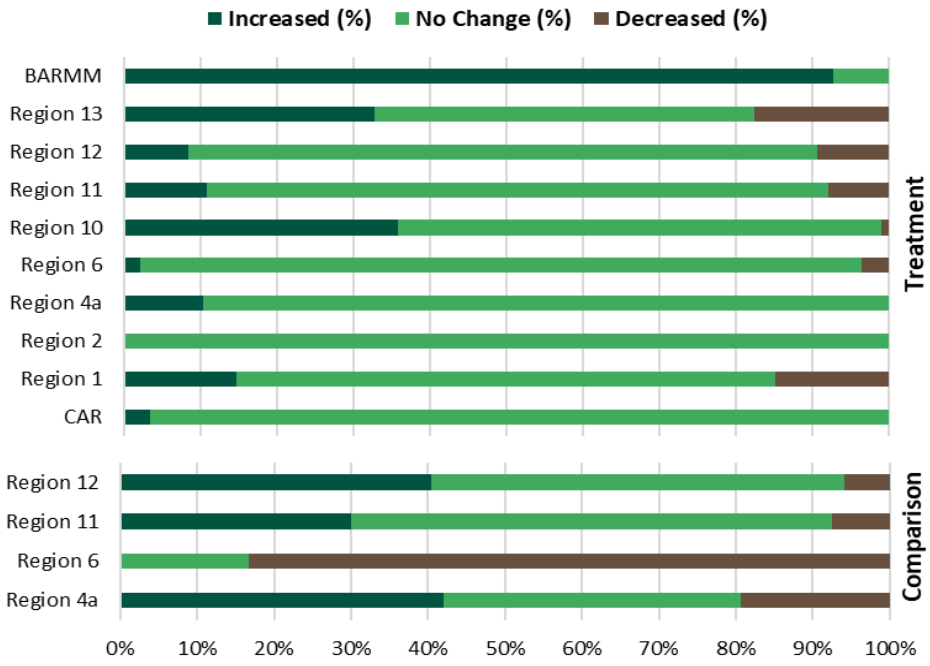


Figure 13: Change in production costs since 2019

The evaluation observed that the institution respondents, similar to farmer respondents, consider eight types of production inputs when calculating coffee production costs. Interest on loans ranks as the highest cost, and paid labor the second highest, differing from farmer respondents where fertilizers and pesticides held that position. This discrepancy indicates variations in operational scales or practices between farmers and institutions.

The analysis of coffee production costs produced by institutions revealed significant insights into the financial burdens faced by different stakeholders in the industry, particularly the complex scenario between farmers and institutions (see Table 216). Both groups acknowledge the weight of various production inputs in their cost calculations, with interest on loans universally recognized as the highest cost factor. However, disparities emerge in the prioritization of these costs—farmers emphasize the burden of fertilizers and pesticides, and institutions report paid labor as their second most substantial expense. This discrepancy suggests fundamental differences in the operational scales or practices between the two groups, potentially indicating that institutions are more labor-intensive or operate on a larger scale than individual farmers. Nonetheless, the significant expenditure on transportation by institutions, second only to paid labor, underlines the critical role of logistics in coffee production, impacting the overall cost structure and efficiency of the supply chain (see Table 216).

DID Analysis on Production Cost

The DID analysis of annual production costs per hectare for coffee farmers, detailed in Figure 14 and Table 5, offers a comprehensive examination of the financial implications of interventions on coffee production over three critical survey points—baseline, midterm, and end-term. This analysis contrasts the participant group, which benefited from targeted interventions, with a comparison group that did not receive such interventions.

At the baseline, both groups started with similar production costs. Over time, the participant group experienced a notable reduction in production costs per hectare, evidencing a positive trajectory influenced by interventions such as PhilCAFE's support for quality seedlings, the plant now pay later services, opening and improvement in farm to market roads, and the use of biocontrol and organic fertilizers. These all have contributed to the reduction of production costs. Nevertheless, the cost management strategies that are undertaken by farmers are also key factors for reducing the production cost.

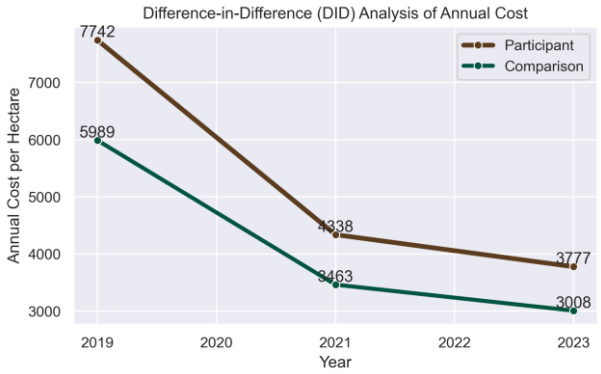


Figure 14: DID analysis on coffee production cost

By the end-term survey, the DID estimator showed a statistically significant reduction in production costs at the 5% level, affirming the interventions' effectiveness. The comparison group, in contrast, displayed a lesser decrease in costs, emphasizing the added value of the interventions received by the participant group.

These findings validate the hypothesis that well-designed interventions, particularly those that are regionally adapted to meet the specific needs and challenges of farmers, can substantially decrease production costs. The regional factors, such as local climate conditions, soil fertility, and access to agricultural inputs, likely influenced the effectiveness of these interventions. This analysis not only supports the effectiveness of current strategies but also underscores the need for ongoing investment in agricultural practices that leverage sustainable technologies and practices to reduce costs and enhance economic viability. The evidence from this DID analysis serves as a robust foundation for future policy and programmatic decisions aimed at improving agricultural productivity and sustainability across varied regions.

Table 5: DID estimation results of annual cost per hectare, participant (n=349) and comparison (n=349)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Annual Cost per Hectare (in PHP)	7,742	5,989	4,338	3,463	3,777	3,008	768.77**	3077,

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

5.4. COFFEE YIELD

For farmer respondents, it is noted that the participant group exhibited an average yield conversion into GCB of 500.02 kg/ha. In comparison, the comparison group showed an average yield of 410 kg/ha. The region-wise analysis of coffee yield per hectare presents notable insights into productivity levels and potential areas for improvement across different regions. Region 1 stands out with the highest mean yield per hectare at 553.70, indicating favorable conditions or advanced agricultural practices contributing to exceptional coffee productivity. Conversely,

BARMM exhibits a comparatively lower mean yield per hectare at 300.39, signaling opportunities for enhancement in farming methods or environmental management (see Table 34).

The regression analysis reveals several significant factors influencing coffee yield. Notably, being male (coef. 45.239, p = 0.0292), years of formal education (coef. 16.887, p = 0.0010), marital status (coef. 186.609, p = 0.0340), total farm size (coef. 232.964, p = 0.0000), and various agricultural practices such as adoption of post-harvest technologies, disease management, and genetic improvement significantly contribute to higher coffee yields. Conversely, post-harvest losses (coef. -302.281, p<0.001) and production costs per hectare (coef. -0.006, p = 0.0220) have significant negative impacts. Additionally, having enough capital (coef. 237.186, p<0.001),, willingness to certification (coef. 193.992, p = 0.0020), and active marketing (coef. 164.155, p = 0.0030)also positively influence coffee yield. However, variables such as age, household size, and certain agricultural practices show non-significant effects. Overall, the model explains 34.5% of the variability in coffee yield (see Table 113).

The institution's total volume of production stands at 6011.62kg, , converted to GCB. On average, each tree yields 0.53 kg of GCB. Regionally, CAR boasts the highest average production at 7725.394kg, GCB, closely followed by Region 12 at 7414.111kg, and Region 4-A at 7383.815kg, . Conversely, Region 1, Region 2, Region 6, Region 10, Region 13, and BARMM exhibit relatively lower mean volumes, ranging from 2,792.889 to 5,687.162 kg/ GCB (see Table 252).

DID Analysis of Farmer Coffee Yields

The DID analysis on coffee yield per hectare, specifically focusing on GCB yield, reveals the impact of interventions facilitated by PhilCAFE among its farmer beneficiaries. This analysis, presented in Table 6 and visualized in Figure 15, contrasts the yield changes over three key periods—2019 (baseline), 2021 (midterm), and 2023 (end-term) between the participant group, which received specific agricultural interventions, and a comparison group which did not.

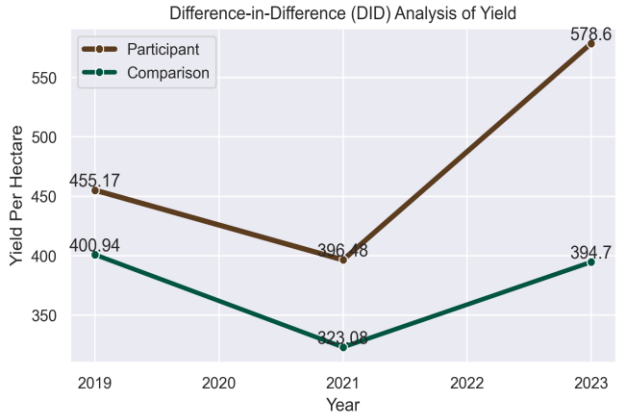


Figure 15: DID Analysis on Coffee Yield

Initially, in 2019, the participant group reported a yield of 455.17 kg/ha, slightly higher than the comparison group's 400.94 kg/ha. By the 2021 midterm evaluation, the participant group's yield slightly decreased to 396.48 kg/ha, while the comparison group experienced a more substantial drop to 323.08 kg/ha. The midterm showed a decline in yield due to the impact of COVID restrictions. Farmers were unable to travel to their coffee farms outside their local areas to harvest the crop. Additionally, unfavorable weather conditions, such as a typhoon, damaged the coffee flowers, further contributing to the reduced yield. By the 2023 endline, the participant group's yield had significantly increased to 578.6 kg/ha, indicating a robust recovery and growth likely due to the interventions. Conversely, the comparison group's yield increased to 394.7 kg/ha, which, while an improvement from 2021, remained below their baseline level.

The DID estimator for the yield per hectare, calculated at 183.9 kg/ha with a standard error (SE) of 270.13, emerged as statistically significant (denoted by **), suggesting that the interventions had a definitive positive impact on the participant group's yield relative to the comparison group. This indicates not only an observable improvement but also that the magnitude of this

improvement is distinct and significant when compared to the natural fluctuations experienced by the comparison group.

Given that coffee is a long-gestating crop, the significant increase observed from the fifth year after planting is in line with agricultural expectations for such interventions. The timing of the final evaluation coincides with many participant farmers beginning to expand their farms or rejuvenating senior trees, contributing to the observed yield improvements. The increase in yield in the fifth year, as shown in Table 107, was attributed to the adoption of technologies such as fertilizer application, proper pruning, and the restoration or rejuvenation of old coffee trees. Additionally, practices like picking ripe coffee cherries and the expansion of coffee farming during the later years of MinPACT and the early years of PhilCAFE contributed, as these trees had already reached the productive stage.

This analysis underscores the effectiveness of targeted interventions in enhancing coffee yield per hectare, especially when considering regional differences in cultivation practices, environmental conditions, and crop maturity stages. The results highlight the importance of sustained and region-specific agricultural support to ensure that farmers not only recover from initial setbacks but also achieve substantial growth in production over time.

Table 6: DID estimation results of GCB yield per hectare, participant (n=349) and comparison (n=349)**

Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Yield per hectare (converted GCB Kg/Ha)	455.17	400.94	396.48	323.08	578.6	394.7	183.9**	270.13

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

5.5. POST-HARVEST LOSSES

Post-harvest losses represent a significant challenge in the agricultural sector, impacting both the participant and comparison groups across ten regions. Approximately 18.1% of the participant group and 43.55% of the comparison group reported experiencing post-harvest losses (see Table 49), which they identified as a key factor hindering their ability to meet volume and sales targets. Region 6, in particular, faces the most significant challenges in this regard, highlighting a need for targeted interventions to mitigate these losses by supporting their access and availability of post-harvest facilities and equipment. The most significant factor contributing to losses is the exposure to rain, accounting for 50% of the losses. This is followed by strip harvesting of coffee, leading to a loss percentage of 44.44. Disease attacks also pose a considerable threat, responsible for 27.78% of losses. Other significant contributors include inappropriate pulping and hulling processes (11.11%), prolonged drying (11.11%), and poor transportation (3.33%). Post-harvest losses not only reduce the volume of saleable produce but also affect the farmers' overall

economic well-being, underscoring the necessity for improved post-harvest handling and infrastructure improvements (see Table 50). This farmers survey data reveals a widespread issue within the coffee sector that affects productivity and profitability, underscoring the need for targeted interventions to mitigate these losses and improve overall outcomes for farmers.

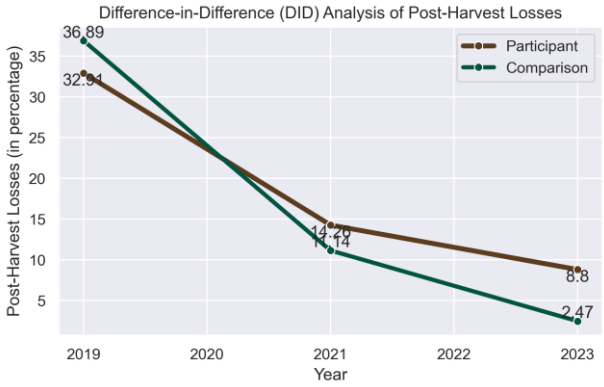


Figure 16 : DID Analysis of Post-Harvest Losses

Post-harvest losses extend to institutions, with 21.56% of producing firms reporting losses. The private sector appears to be disproportionately affected, with 30.24% of its respondents experiencing post-harvest losses, compared to only 5.6% of NGO/civil society organizations (CSOs) respondents. The primary cause of these losses was exposure to rain, which can cause mold, damaging coffee quality and resulting in "all-in" sales or at a very low price, as reported by 15.53% of firm respondents among 10 considered factors. Additionally, disease attacks (58.82%), prolonged drying (17.58%), and strip harvesting (10.48%) were also identified as causes of these losses. Interestingly, no respondents reported antiquated or old tools as causes of post-harvest losses. This reflects the critical role of environmental factors in post-harvest losses, particularly for the private sector and producer organizations, and emphasizes the need for strategies focused on improving post-harvest handling and storage practices to safeguard against weather-related damage.

The DID analysis, as shown in Table 7 and visualized in Figure 16, assesses the impact of interventions on post-harvest losses among coffee farmers in 10 regions, comparing participant and comparison groups from 2019 to 2023. The participant group, which received specific interventions, reported a decrease in post-harvest losses from 32.91% in 2019 to 8.80% in 2023. Conversely, the comparison group, without interventions, saw a reduction but had significantly lower losses by 2023, ending at 2.47%. Nonetheless, the awareness raised by PhilCAFE to the participants group in recognizing factors that contribute to losses and skills in accounting for those losses. The DID estimator, indicating the effect of the interventions relative to natural trends, was 6.32 with a SE of 4.58, signifying a statistically significant reduction ($p<0.01$) attributed to the interventions.

Table 7: DID estimation results of post-harvest losses, participant (n=349) and comparison (n=349)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Post-Harvest Losses (in percentage)	32.91	36.89	14.26	11.14	8.80	2.47	6.32***	4.58

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Regional analysis highlights significant disparities. For instance, Region 6 experienced the most severe post-harvest challenges, (Table 49) underscoring the need for region-specific interventions to mitigate these losses effectively. The predominant factor contributing to regional

losses is exposure to rain, affecting 50% of the losses, leading to mold and degrading coffee quality. Other critical post-harvest losses include strip harvesting (44.44%), disease attacks (27.78%), and operational inefficiencies, such as inappropriate pulping and hulling processes (11.11%) and prolonged drying periods (11.11%). These factors underscore the regional variations in how environmental conditions and farming practices impact post-harvest outcomes.

This comprehensive understanding calls for a targeted approach to post-harvest management, emphasizing the development and deployment of region-specific strategies and technologies to improve handling and storage practices. Such strategies are crucial for reducing losses, enhancing the quality of the coffee produced, and ultimately improving the economic well-being of the farmers. The analysis supports the continuation and scaling of interventions that address these specific regional challenges to ensure sustainable improvements in post-harvest management across the coffee sector.

5.6. SALES, PRICING, AND END-MARKET REACH

The dynamics of sales, pricing, and end-market reach are pivotal for understanding the success and challenges faced by producers. The data from respondent farmers across 10 regions highlight significant disparities in target volume achievements and sales between those in the participant group and their counterparts in the comparison group. The highest success rate within the participant group was recorded in CAR, with a striking 79.2% of respondents claiming to have met their objectives, contrasting starkly with Region 1, where no respondents reported such success (see Table 90). This variance underscores the regional disparities in agricultural productivity and market success, possibly influenced by factors such as access to resources, market connectivity, and the efficacy of post-harvest practices.

DID Analysis on Coffee Sales

The DID analysis, detailed in Table 8Table 8: DID estimation results of coffee sales (converted GCB), participant (n=349) and comparison (n=349), assesses the impact of interventions on coffee sales by comparing changes from 2019 (baseline) through 2021 (midterm) to 2023 (endline) for both participant and comparison groups. This analysis uses PHP sales for coffee sold as GCB. Initially, the comparison group had higher sales figures, starting with PHP 61,970, compared to the participant group's PHP 40,835. By the midterm evaluation, both groups experienced a decrease in sales, with the comparison group recording PHP 50,540 and the participant group PHP 32,444 (see Figure 17).

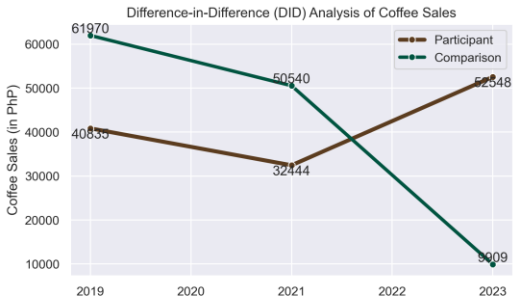


Figure 17: DID Analysis of Coffee Sales

However, by the endline, the participant group's sales significantly rebounded to PHP 52,548, while the comparison group's sales dramatically dropped to PHP 9,909. This shift resulted in a DID estimator value of PHP 42,639 with a standard error of PHP 8,693, marked by triple asterisks (***), indicating statistical significance at the 1% level. This positive DID coefficient suggests that the interventions may have contributed to an upward trend in sales for the participant group relative to the comparison group despite both groups experiencing a production decrease over the same period.

The contextual analysis reveals that while initial sales were lower for the participant group, the interventions possibly enabled them to recover and eventually surpass the comparison group's sales figures by the end of the study period. This change reflects not only the effectiveness of the

interventions but also how regional factors, such as market access, local demand, and economic conditions, may have played crucial roles. The significant improvement in sales performance for the participant group by 2023, contrasted with the stark decrease in the comparison group, underscores the potential impact of targeted interventions tailored to regional market dynamics and challenges in the coffee sector. This comprehensive view highlights the need for continued investment in strategies that enhance market engagement and sales capabilities in coffee farming, particularly in regions facing market or production adversities.

Table 8: DID estimation results of coffee sales (converted GCB), participant (n=349) and comparison (n=349)

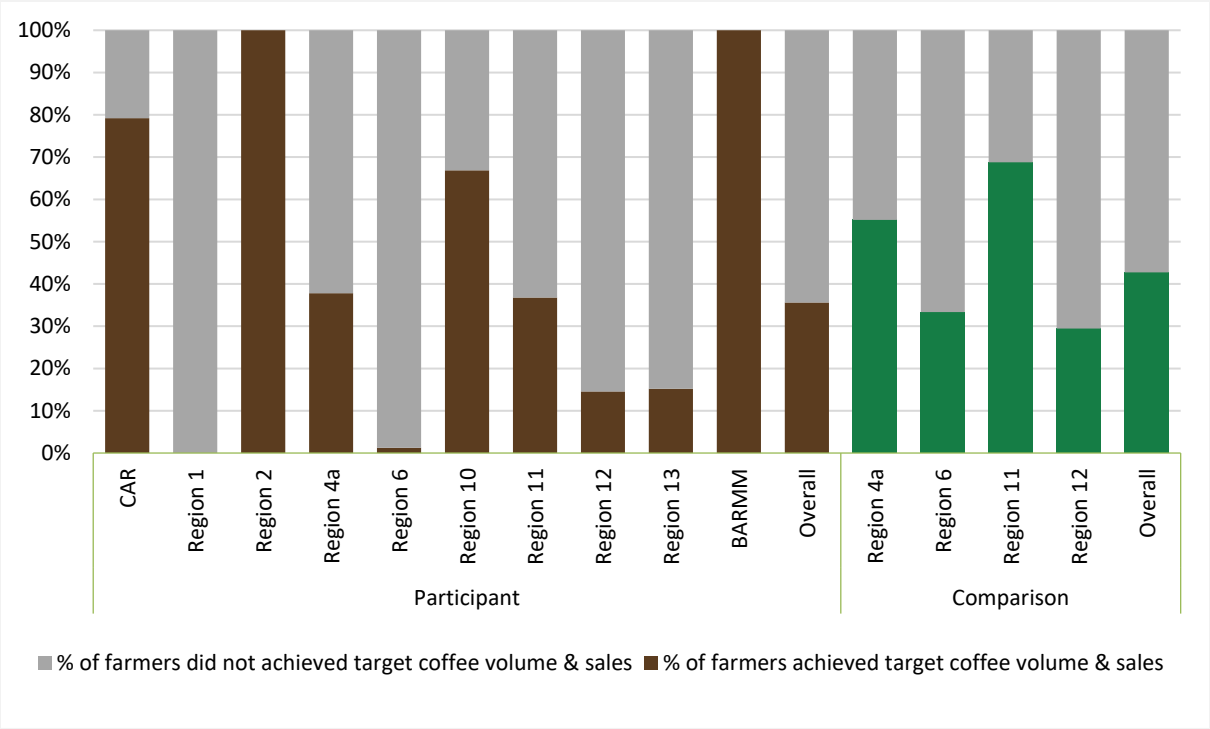
Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Coffee Sales (in PHP)	40,835	61,970	32,444	50,540	52,548	9,909	42,639***	8,693

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

On the pricing front, comparing average selling prices between the participant and the comparison group of farmers, the farmer participant group commanded higher prices across several cherry products. Fresh cherries fetched an average price of PHP 70 per kilogram in the participant group, compared to PHP 49.4 in the comparison group. Similarly, dried cherries sold for PHP 115.5 per kilogram in the participant group, while the comparison group received PHP 106.3. The price disparity extended to other cherry-derived products, with the participant group obtaining PHP 180.13 for GCB and PHP 159.6 for parchment, in contrast to PHP 142.5 and PHP 123, respectively, in the comparison group (see Table 36). A substantial majority of the participant group's respondents expressed satisfaction with the average price received for their coffee between October 2022 and June 2023, indicating a positive market response or effective negotiation strategies. This satisfaction rate outperforms that of the comparison group, where a slightly lower percentage reported satisfaction with their pricing. This disparity suggests that factors such as quality of produce, market access, and the effectiveness of sales strategies could be differentially impacting these groups, potentially influenced by the interventions received by the participant group (see Figure 18).

Institutions play a crucial role in the coffee supply chain, influencing both the buying and selling dynamics of coffee products. The period from October 2022 to June 2023 saw varying levels of sales activity among different groups of institutions, with producer organizations leading in terms of the percentage of respondents engaged in selling coffee. The average selling price of fresh cherries was PHP 138.79, green coffee beans was PHP 197.26, dried cherries PHP 176, and roasted coffee PHP 390.35. The sales and buying data reveal interesting trends, such as fresh cherries achieving the highest average sales volume because they contain moisture/water, approximately five times more than parchment. These figures reflect the intricate dynamics of coffee trading, underscoring the importance of product type, quality, and market positioning in determining economic outcomes for producers and institutions alike.

Figure 18: Percentage of farmers who achieved target coffee volume and sales by region, participant (n=824) and comparison (349)



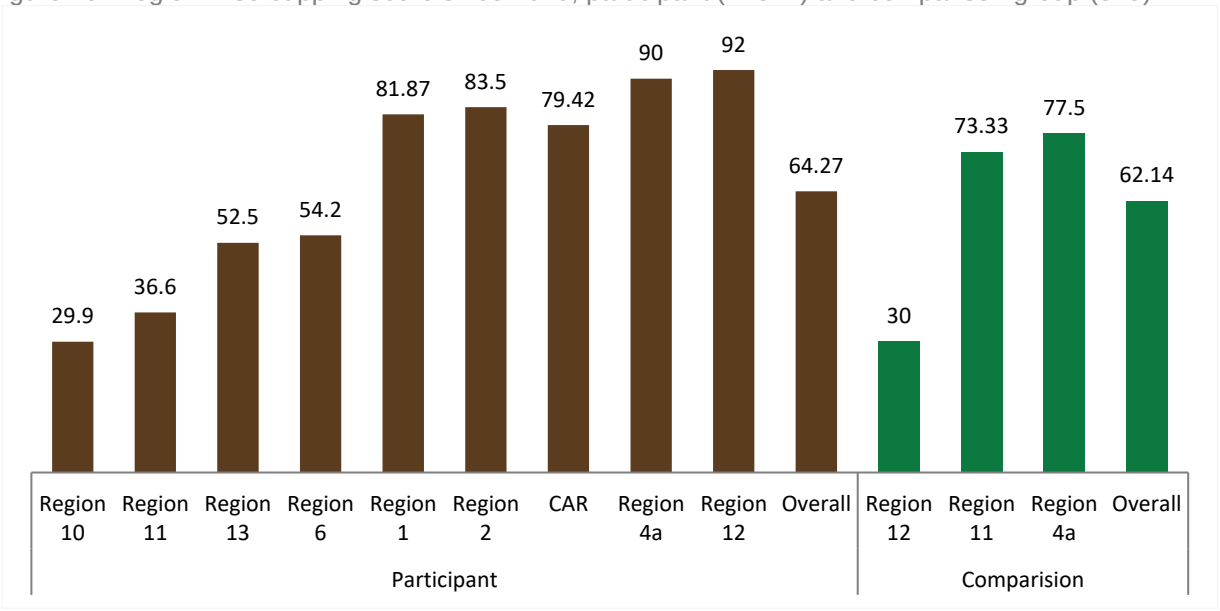
Coffee Cupping

The participation rates among coffee farmers in cupping sessions vary significantly across regions, ranging from a mere 1.93% in Region 13 to a staggering 92.79% in BARMM. Likewise, cupping scores exhibit wide-ranging differences, with Region 4-A achieving the highest score of 90. Conversely, regions like Region 10 and Region 11, with lower participation rates, demonstrate higher cupping scores compared to others, indicating a complex interplay of influencing factors (see

Table 54).

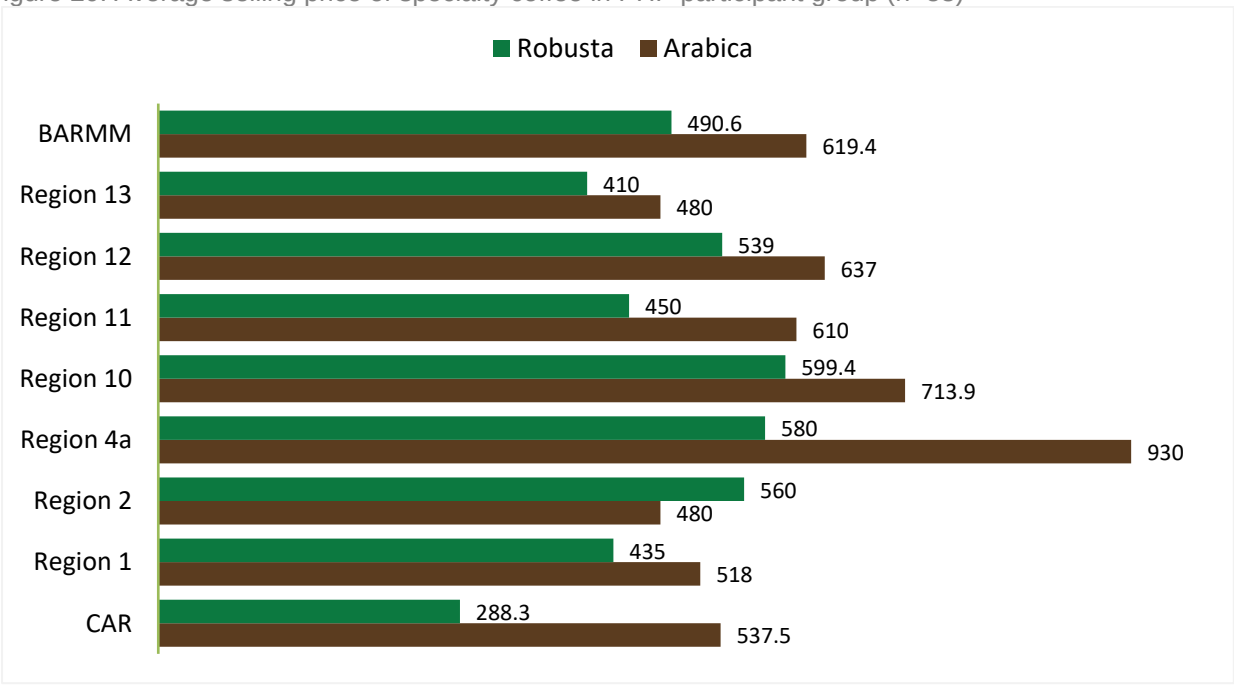
In Region 10, a substantial 69.72% of farmers consider cupping grades important, closely followed by Regions 12 and 13, each with over 68% agreement. Overall, a slim majority of 56.21% of farmers across all regions acknowledge the significance of coffee cupping grades on sales. Region 2 stands out with the highest proportion of farmers involved in specialty coffee sales at 44.57%, followed closely by Region 1 with 33.33% and BARMM with 32.64%. In contrast, Regions 6, 13, and 4-A show significantly lower involvement, with percentages below 3%. Notably, CAR exhibits a moderate engagement rate of 7.30%, while the overall average across all surveyed regions stands at 6.32% (see Figure 19).

Figure 19: Region-wise cupping score since 2019, participant (n=824) and comparison group (349)



Specialty coffee prices vary across regions, with Arabica prices ranging from PHP 480 in Region 13 to PHP 930 in Region 4-A. Robusta prices vary from PHP 288.3 in CAR to PHP 599.4 PHP in Region 10 (see Figure 20). These figures provide valuable insights into regional pricing disparities, serving as crucial data for stakeholders in the coffee industry for market analysis, pricing strategies, and decision-making processes.

Figure 20: Average selling price of specialty coffee in PHP participant group (n=58)



5.7. CREDIT AND FINANCING

The financial behaviors and access to credit facilities among farmer respondents in the participant and comparison groups across 10 regions reveal significant insights into the agricultural finance landscape. The evaluation observed that about 32.02% of farmers in the participant group reported having savings or share capital with their respective organizations, compared to 22.35% in the comparison group, suggesting a higher level of financial inclusion or engagement within the participant group. However, only a small fraction of respondents, 6.48% from the participant group and 2.87% from the comparison group have existing credit or loans from micro-finance institutions or banks. This relatively low uptake of formal financial services highlights potential barriers to accessing finance. Region 4-A showed the highest percentage of respondents in the participant group with such financial engagements, indicating regional disparities in financial access. Nonetheless, difficulties in accessing credit were reported by 14.29% of the participant group, markedly lower than the 37.25% in the comparison group, suggesting that interventions may have somewhat eased these access challenges for the participant group.

A t-test suggests that there is a statistically significant variation in credit accessibility based on gender ($p<.05$) and age ($p<.05$) within the surveyed population. Men tend to have better access to credit compared to women. This finding underscores a potential gender disparity in financial inclusion within the context of the coffee production industry (see Table 95). Employing the DID estimator, there is a notable effect ($p=0.0641$) for individuals who have existing credit/loans from a microfinance institution or bank, suggesting a potential impact of this variable on the participant group compared to the comparison group. The DID estimator value of .4170 for the savings/share capital variable and .0641 for the credit/loan variable signifies the adjusted difference in means between participant and comparison groups (see Table 97).

Alternative credit sources, such as advances from input suppliers or traders, exhibit a different pattern of utilization between the two groups. A mere 0.48% of participant group respondents acknowledged having such credits, substantially lower than the 4.01% in the comparison group. This discrepancy is accompanied by a significant difference in the conditions of these advances, where the average amount of credit and the interest rates (5.9%) were notably more favorable in the participant group. Such findings indicate the varying degrees of reliance on informal credit sources and the potentially burdensome conditions attached to them, especially within the comparison group. Besides, the future borrowing needs for both groups, primarily aimed at coffee production and related activities, further underscore the critical role of financial access in agricultural development, with a significant proportion of both groups expressing the need for additional funds.

The evaluation analyzed the purposes for borrowing among both groups, with a pronounced focus on coffee production, highlighting the sector's financial demands. The participant group's inclination toward borrowing for coffee production, post-harvest facilities, and land purchase for coffee expansion indicates a proactive approach toward enhancing their agricultural practices and infrastructure. Interestingly, the average borrowing need is slightly lower in the participant group (19.55%) compared to the comparison group (34.67%), but with more favorable interest rates of 3.7% and 3.97% respectively. This suggests that interventions might have not only influenced the financial behavior toward more strategic investments but also improved terms of access to necessary capital for these investments, underscoring the nuanced impact of assistance programs on agricultural finance dynamics.

On the institutional side, the engagement of institutions in providing financial support showcases the broader ecosystem of agricultural financing influenced by PhilCAFE assistance. A small percentage (5.51%) of institutions reported providing in-kind loans to farmers or other

stakeholders (see Table 173), while an even smaller fraction (3.61%) received increased investment or financing from external sources due to PhilCAFE's facilitation (see Table 200). These figures, although modest, indicate the ripple effect of agricultural assistance programs on enhancing the financial support structure for the agricultural sector. The reported correlations between 28 variables and access to credit (see Table 70) further elaborate the complex interplay between various factors and financial accessibility, showing the multifaceted nature of financial inclusion efforts within the agricultural domain.

5.8. INCOME OF SMALLHOLDER FARMERS

The DID analysis, detailed in

Table 9, assesses the impact of PhilCAFE interventions on the annual income of smallholder farmers from 2019 to 2023. This analysis compares changes in income between two groups: participants who received interventions and a comparison group who did not. In 2019, the participant group started with an average annual income of PHP 187,561, lower than the comparison group's PHP 220,244.

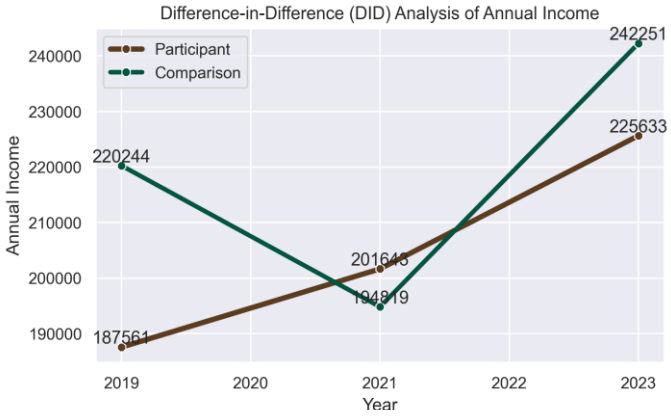


Figure 21: DID Analysis of Annual Income

Table 9: DID estimation results of total annual income in PHP

Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Total Annual Income (in PHP)	187,561	220,244	201,643	194,819	225,633	242,251	-16,617***	45,711

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

By the 2021 midterm, the participant group's income increased to PHP 201,643, while the comparison group saw a slight decrease to PHP 194,819. By the 2023 endline, the participant group's income had significantly increased to PHP 225,633, which is an 11.9% increase than the midterm, contrasting with the comparison group, which experienced a decrease to PHP 185,673.which is a 4.6% decrease.

The DID estimator calculated the net effect of the intervention as PHP 38,694, with a significance level indicated by double asterisks (**) for $p<0.05$. This positive DID coefficient suggests that the interventions contributed to a statistically significant increase in the annual income of the

participant group relative to the comparison group. The interventions, likely tailored to regional economic conditions and specific agricultural challenges, helped enhance the economic well-being of the participant farmers.

This outcome illustrates the effectiveness of targeted interventions that consider regional differences in agriculture and economic landscapes. The analysis shows not only the direct benefits of the interventions but also highlights the necessity of continued support and adaptation of strategies that address regional disparities, ensuring that smallholder farmers can improve their income and economic stability over time.

The evaluation team further looked at the data by conducting a Pearson correlation analysis (see Table 71 that provided further insights into the factors influencing smallholder farmers' income. Farmers' incomes were positively correlated ($p<0.01$) with farm size, coffee sales, and the adoption of technologies, underscoring the importance of scalable farming operations, effective market engagement, and technological advancements in enhancing economic outcomes. However, the positive correlation of farmers' income with production costs suggests that higher incomes were also associated with increased investment in farm operations, indicating a balance between cost management and income generation. This intricate relationship between income, farm size, sales, technology adoption, and production costs highlights the complex dynamics at play in realizing economic benefits from agricultural interventions.

The regional differences in income outcomes among the participant group indicate the potential for region-specific strategies that cater to the unique challenges and opportunities present in different areas. The high average income in Region 1, for example, suggests that factors specific to this region, such as market access, PCQC winners' coffee prices, coffee quality, crop diversity, or particularly effective adoption of PhilCAFE's interventions, contributed to better economic performance. Understanding these regional factors is crucial for replicating success and addressing shortcomings in future agricultural development initiatives. Overall, PhilCAFE's impact on smallholder farmers' incomes illustrates the critical role of comprehensive, contextually informed interventions in achieving sustainable economic improvements in the agricultural sector considering the project focus on Arabica and Robusta species.

Figure 22 presents a comparative average annual household income across various regions of on-farm income, off-farm income, and non-farm income. Among the participant groups, Region

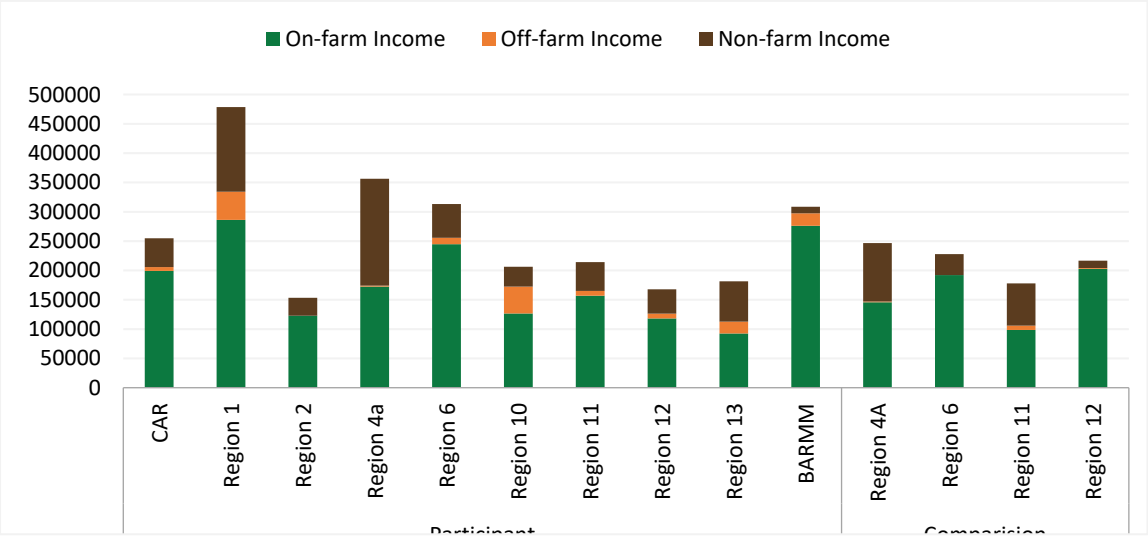
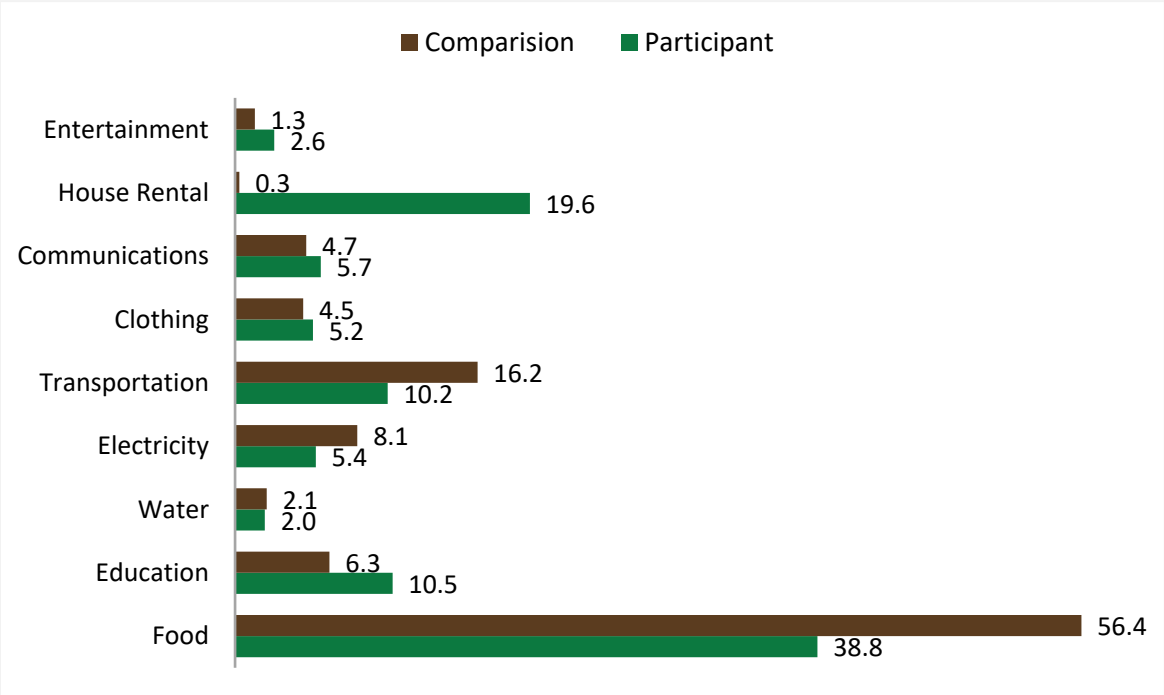


Figure 22: Average annual household income by region, participant (n=824) and comparison (n=349)

1 has the highest annual household income (PHP 478,610). On the contrary, Region 2 showed a comparatively lower average annual household income of PHP 153,299 yet emphasizes the significance of on-farm income within its non-farm income. Among the comparison group, respondents of Region 4-A have an impressive total annual income of PHP 246,698, highlighting the role of non-farm sources in bolstering economic prosperity compared to other regions (see Table 23).

Figure 23 reveals a clear difference in household expenditure among typical coffee farming households between participant and comparison areas. Household expenditures refer to the expenses made by household members for their personal/household consumption, as well as payment for house rent, health, entertainment, and other expenses. PhilCAFE participants allocate a significantly lower proportion of their budget toward food (38.8%) compared to 56.4% of the comparison group.

Figure 23: Average monthly household expenditures in percentage, participant (n=824) and comparison(n=349)



5.9. MARKET SYSTEMS APPROACH

5.9.1. Access to Facilities and Inputs

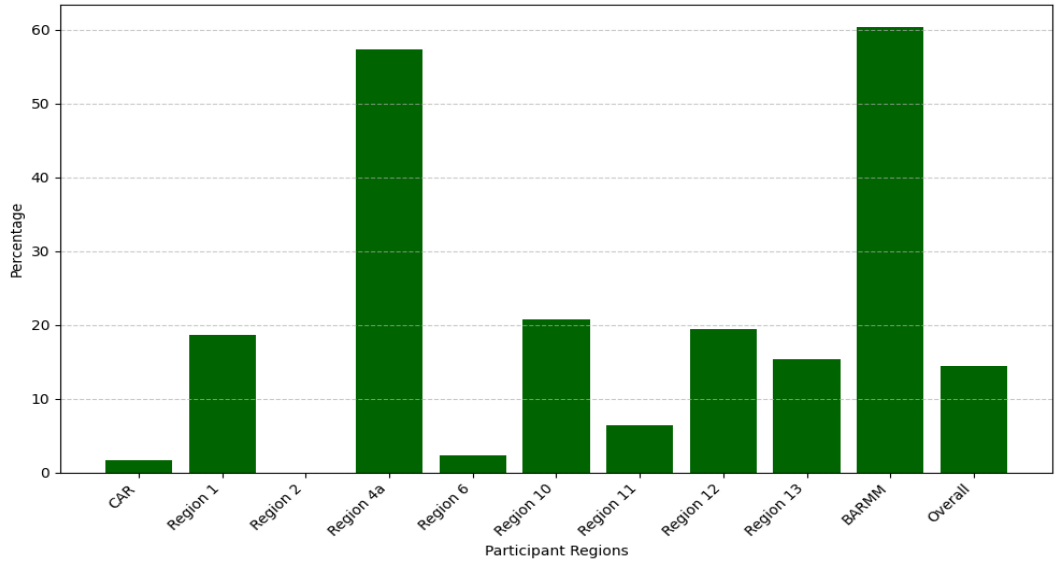
The accessibility of agricultural facilities and inputs is critical for optimizing production processes and ensuring the quality of agricultural products. Respondents from the participant group in seven regions reported varying levels of access to essential facilities and inputs for coffee production. Specifically, 12.47% of these respondents had access to dry storage facilities, with an average capacity of 40.4 cubic meters. This indicates a significant but limited penetration of infrastructure improvements among these farmers, highlighting the necessity for expanded access to storage solutions that can enhance post-harvest management and reduce loss (see Table 41).

A minimal 1.53% of participant group respondents across 10 regions reported acquiring coffee-specific equipment or facilities. This underscores a significant gap in the adoption of advanced or

additional coffee production technologies among many of these farmers, potentially hindering efficiency improvements or quality enhancements in their production processes. Nonetheless, 9.9% of participant group respondents faced challenges in accessing specific coffee inputs or technology during the last production year (Table 41)—slightly lower than the 12.3% reported by the comparison group. While showing a slight improvement in input access within the participant group, it is not statistically significant.

Interestingly, 14.47% of participant group respondents attributed their access to dry storage facilities specifically to PhilCAFE interventions within the same production year. This highlights the impact of targeted support programs in facilitating access to critical infrastructure, albeit for a limited segment of the respondent population. The data presents a nuanced view of the access landscape, where improvements are evident in certain areas, such as storage facility access due to specific interventions, yet broader challenges remain in technology and input access. Addressing these gaps through targeted interventions and support mechanisms can significantly enhance production efficiency, quality, and overall competitiveness in the coffee sector. Figure 24 represents access to inputs/technology for coffee farmers, especially for PhilCAFE interventions. It shows that Region 4-A and BARMM have comparatively high access to inputs and technology facilities among the participant group.

Figure 24: Percentage of farmers with access to inputs/technology for coffee farms due to PhilCAFE (n=138)



5.9.2. Marketing and Access to Market Information

Marketing and access to market information play crucial roles in enabling farmers to make informed decisions, potentially leading to improved profitability and market positioning. An analysis of farm respondents reveals that 29.16% have access to external sources of agricultural market or price information (see Table 183). This access is particularly prevalent among NGO/CSO groups, indicating a disparity in information accessibility among different categories of farms and organizations. The frequency of accessing this information varies, with the majority consulting these sources on a daily, weekly, or monthly basis, while a minimal 6.23% accessing the information annually. This distribution underscores the importance of timely and regular market information for effective farm management, better product pricing, and decision-making. DID results show the positive coefficients associated with organizations like PhilCAFE, local government/national government, and cooperatives, suggesting that farmers who accessed support from these entities experienced significant improvements in marketing knowledge and

access to market information, eventually opening up opportunities to sell crops at a higher price. Conversely, negative coefficients associated with reliance solely on personal efforts or support from NGOs might indicate a lack of effective information dissemination or inadequate support structures (see Table 98).

The analysis gives insights into the diverse sources through which farmers access capacity-building activities and market information. Notably, a significant number of farmers (78.36%) rely on PhilCAFE for accessing capacity-building activities and market information. This preference is largely due to PhilCAFE's role as a non-buyer, ensuring market neutrality, which instills confidence among farmers regarding the reliability of the provided market information. Moreover, the reliance on fellow coffee farmers (23.05%) and governmental institutions (23.19%) underscores the importance of peer learning and public sector support. It reveals that a small percentage (3.18%) of farmers rely solely on their own efforts, suggesting accessing information from external resources. The negative coefficient for support from NGOs (-.039) might indicate challenges or inefficiencies in their assistance programs. Overall, the findings highlight the multiplicity of platforms utilized by farmers for accessing agricultural market information and the varying degrees of effectiveness associated with each source. Among the marketing platforms, attendance at exhibits and fairs stands out as the most used platform, with 30.52% engagement in the participant group compared to 7.51% in the comparison group. Participation in trade missions also demonstrates potential, with 17.53% engagement in the participant group versus 8.09% in the comparison group. Social media and radio stations show moderate effectiveness, with 12.34% and 5.84% engagement, respectively, in the participant group. Additionally, TV is promising, with 3.25% engagement in the participant group (see Table 115).

Table 115

For market price information, the participant group's primary sources include reliance on one's own cooperative/association (41.26%) and utilizing information shared by fellow coffee farmers (28.52%). Additionally, obtaining information directly from traders/buyers is 10.92%. Conversely,

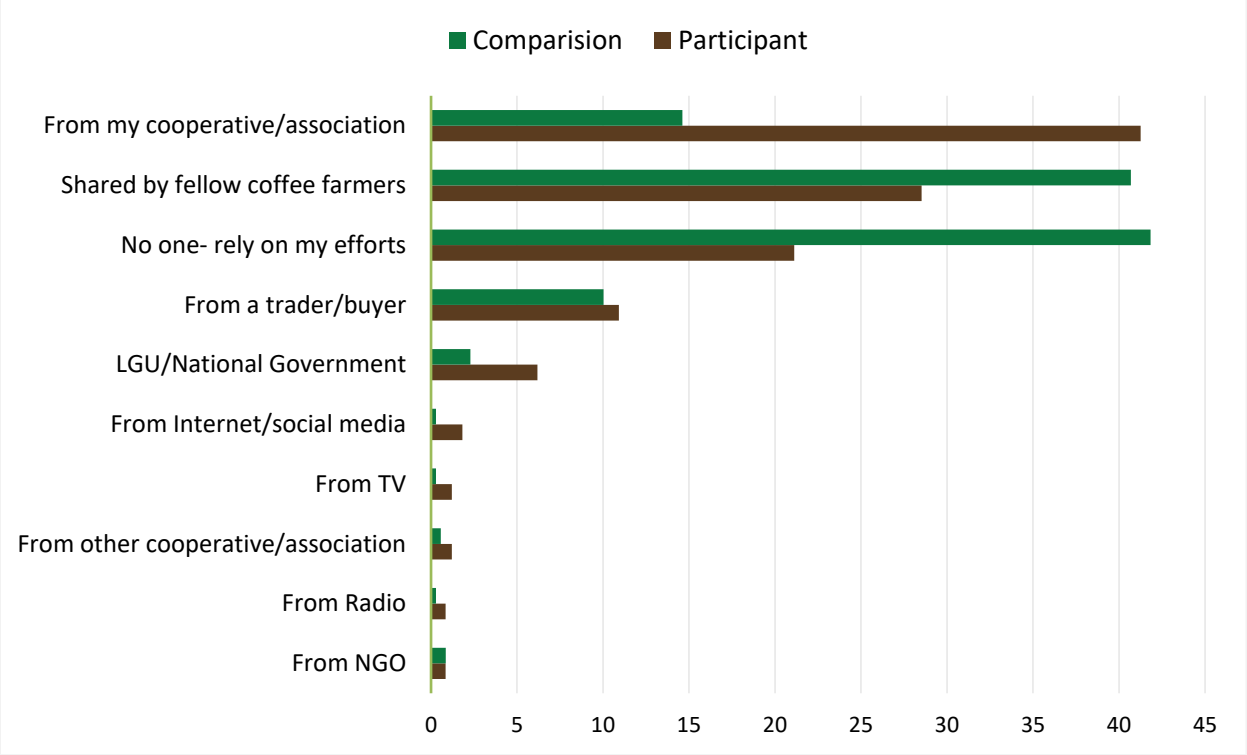


Figure 25: Source of agricultural market information, participant (n=824) and comparison (n=349)

reliance on NGOs stands out as the least utilized source (0.85%). In the comparison group, reliance on personal efforts emerges as the predominant source (41.83%). This is followed by information shared by fellow coffee farmers at 40.69%. Furthermore, information obtained from traders/buyers is notable, representing 10.03%. Conversely, the least utilized sources within the comparison group include information obtained from local/national government (2.29%) and from TV (1.21%) (see Figure 25). There is a predominant preference for accessing agricultural market/price information monthly and quarterly. This trend suggests that while farmers are keen on obtaining market insights, the majority opt for a less frequent consultation of this information, potentially due to the seasonal nature of agricultural production or the perceived stability of market prices within short time frames. The reliance on monthly and quarterly updates may reflect the operational realities and strategic planning cycles of these farmers, aligning with their crop production schedules and market engagement strategies.

This analysis highlights the critical role of market information in the agricultural sector, showcasing variations in access and utilization patterns among different farmer groups and organizations. The findings point to the need for enhancing the accessibility and dissemination of market information, especially to underserved groups like private sector farms and producer organizations.

5.9.3. Coffee Farm Certification

The survey data through Pearson correlation analysis revealed a clear linkage ($p<.05$) between the pursuit of quality management certification through PhilCAFE's assistance and the adoption of innovative technologies promoted by PhilCAFE among coffee organization. Among the certifications assisted by PhilCAFE include planting material certification, Q grading and Q processing certifications.

The effectiveness of institutions in obtaining quality management certifications through PhilCAFE is considered a targeted approach toward enhancing the standards and credibility of coffee farms and organizations. Over the project period, producer groups were particularly successful, with 22.27% obtaining quality management certification (Table 209). This suggests a keen interest or a strategic move toward bolstering their market competitiveness and product quality through certification. Nonetheless, the inclination toward obtaining certifications and embracing new technologies reflects a strategic approach by institutions and producer groups to elevate their standards and competitiveness in the coffee market. These findings emphasize the critical role of quality certifications as a catalyst for technological advancement and quality improvement in the agricultural sector, fostering a culture of continuous improvement and excellence among coffee producers and other stakeholders.

5.9.4. Farm Labor and Employment

The final evaluation recognized the dynamics of farm labor and employment within the context of coffee farming present intriguing insights, particularly when comparing the participant and comparison groups across 10 regions. A substantial majority, 82.76%, of the participant group's farmer respondents rely on family labor for coffee farming activities, slightly lower than the 89.4% reported by the comparison group. Conversely, the employment of hired labor is more prevalent in the comparison group, with 55.3% of respondents utilizing external labor, compared to 40.25% in the participant group (see Table 62). This discrepancy suggests differences in labor sourcing strategies between the two groups, potentially reflecting variations in farm size, resource availability, or labor efficiency practices and adopting farming as a family business. Nonetheless, both groups experienced fluctuations in labor numbers, with the participant group noting a modest increase and decrease of 2.37% and 3.97%, respectively. The comparison group, however, reported more significant changes, with an 8.02% increase and an 8.88% decrease in labor

numbers, indicating greater volatility in labor utilization among these respondents (Table 62). In the participant group, the average number of family laborers engaged in coffee farming is 2.29, with adult males contributing 0.75, youth males 0.71, adult females 1.07, and young females 0.25 on average. Conversely, in the comparison group, the average family labor involvement is slightly lower at 1.95, with adult males contributing 0.39, youth males 1.04, adult females 0.07, and youth females 0.45, on average. Across both groups, there is a notable variation in the distribution of labor among different family members. For instance, adult males tend to be more involved in the participant group compared to the comparison group, while youth males are more engaged in the comparison group.

Focusing on the firm respondents within the participant group, NGOs and CSOs emerged as having a higher number of on-farm workers compared to other entities such as private sector firms, producer organizations, and public/government agencies. Notably, the distribution of adult male and female workers within these organizations is equal, highlighting an equitable gender representation in labor employment among NGOs and CSOs involved in coffee farming. This parity in labor employment among different genders within the participant group's NGO and civil sectors could reflect these organizations' commitments to gender equality and social inclusiveness in agricultural labor practices.

Institution respondents also reported changes in labor dynamics, with a net increase of 6.53% in coffee farm labor and a decrease of 2.72%, showcasing a general trend toward labor expansion in the sector. These figures indicate a dynamic labor market within the coffee farming industry, with variations in labor use and sourcing across different groups and sectors. The labor changes observed among institutions, alongside the labor sourcing strategies of farmer respondents, paint a complex picture of the agricultural labor market in coffee farming, suggesting ongoing adjustments to labor needs and availability influenced by factors such as market demand, production practices, and socio-economic conditions.

DID Analysis on Farm Employment

The DID analysis on farm employment within the context of PhilCAFE interventions provides an insightful perspective on labor dynamics influenced by such initiatives (see Figure 26). The DID estimator, while not reaching conventional statistical significance at the 5% level, is significant at the 10% level, indicating a discernible positive impact of the participant on employment outcomes. This suggests that, despite an overall decline in employment figures for both the participant and comparison groups between 2019 (baseline), 2021 (midterm), and endline (2023), the decrease was less pronounced among the participant group. The less steep downward trajectory observed in the participant group, as compared to the comparison group, implies that the interventions may have played a role in mitigating the extent of employment reduction over the project period.

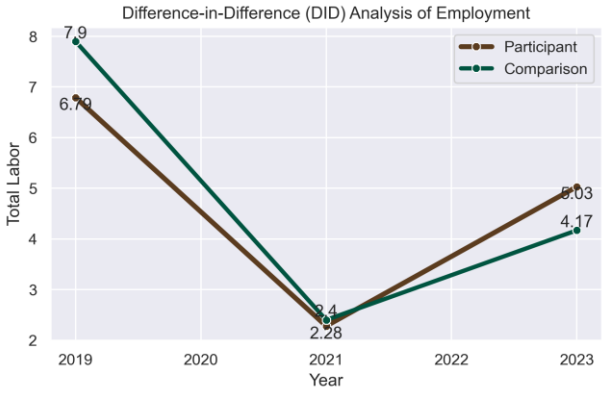


Figure 26: DID Analysis of Farm Employment

This outcome reveals clear effects of agricultural interventions on employment. Although total employment has declined in both groups, the interventions appear to have provided some buffer against these impacts for the participant group. It indicates that the targeted support or resources provided to the participant group, possibly including training, access to better resources, or more

efficient farming practices, may have contributed to a relatively more stable employment scenario within this cohort.

The significance of the DID estimator at the 10% level, albeit not at the more stringent 5% threshold, still underscores the importance of continued analysis and refinement of intervention strategies to enhance their effectiveness in supporting employment within agricultural sectors. It suggests that while the interventions are moving in the right direction in terms of cushioning employment declines, there is room for improvement in terms of achieving more robust outcomes. Future initiatives could benefit from integrating these insights to more effectively target factors contributing to employment fluctuations, with the goal of not only stabilizing but potentially increasing employment opportunities because of agricultural development efforts.

Table 10: DID estimation results of employment, participant (n=824) and comparison (n=349)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		2023 (Endline)		DID estimator*	SE
	Participant	Comparison	Participant	Comparison	Participant	Comparison		
Employment (Total Labor)	6.79	7.90	2.28	2.40	5.03	4.17	0.86***	.42

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

5.10. CAPACITY BUILDING ACTIVITIES

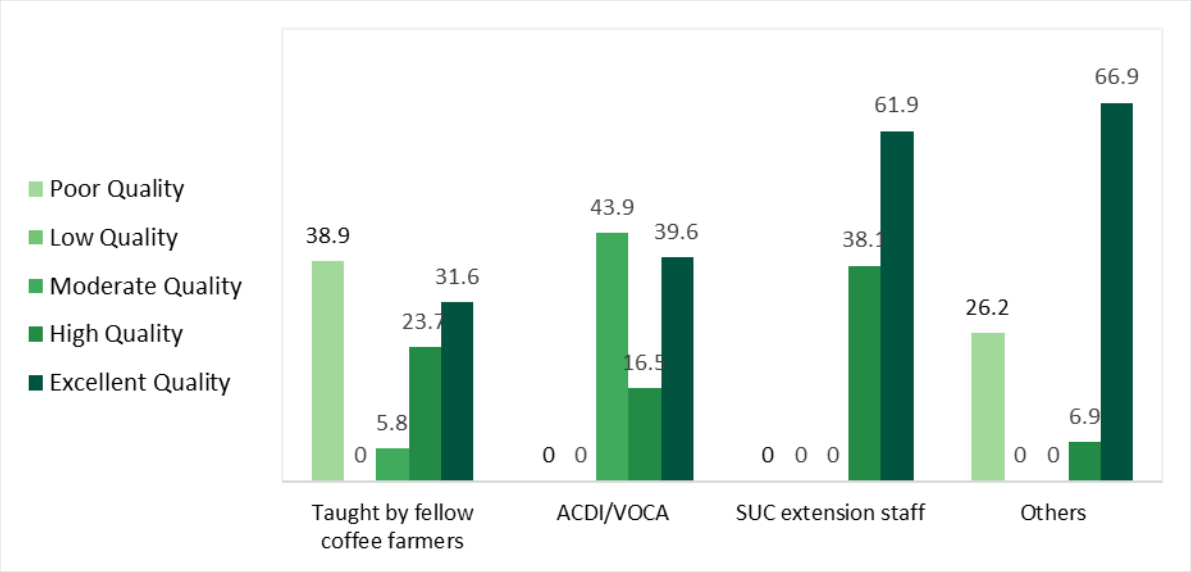
5.10.1. Access to Training and Capacity Building

The capacity-building initiatives of PhilCAFE (ACDI/VOCA) toward farmers in the participant group highlight a multifaceted approach to enhancing agricultural skills and knowledge through a variety of external sources. These sources include traders, cooperatives, NGOs, local and national government bodies, SUC extension staff, PhilCAFE, peer learning among coffee farmers, and self-reliance. A notable 78.36% of respondents benefitted from capacity-building support provided by PhilCAFE, showcasing its significant role in these initiatives. The SUC extension staff and other capacity-building organizations, as partners of PhilCAFE in delivering support to the coffee farming communities and stakeholders within its circle, notably got recognized by the respondents. This indicates a heavy reliance on government, non-governmental, and private sector support for capacity building in the agriculture sector, with PhilCAFE emerging as a key player in bolstering local partners to deliver such services to the coffee farming community.

The perceived relevance and effectiveness of these capacity-building activities vary, reflecting the diverse quality of training and support provided. PhilCAFE's programs were generally well received, with ratings spanning from moderate to excellent quality. Specifically, 39.58% of ACDI/VOCA's capacity-building recipients deemed their services of excellent quality, while 16.71% and 43.90% rated them as high and moderate quality, respectively. The capacity-building services provided by SUC extension staff were rated significantly higher, with 61.88% of respondents considering their support to be of excellent quality and the remaining 38.1% rating it as high quality. This satisfaction level underscores the impact of the provider's approach and methodology on the perceived value and effectiveness of capacity-building efforts (see Table 65).

The evaluation of these capacity-building activities contributed to quality training and support in enhancing the productivity and sustainability of agricultural practices among coffee farmers. The overwhelmingly positive reception of SUC extension staff efforts, despite their less frequent engagement, suggests that the quality and relevance of support can significantly influence farmers' appreciation and application of learned practices. Moreover, the prominence of PhilCAFE in providing capacity building underscores the importance of partnerships between farmers and external organizations in driving agricultural development. These insights underscore the necessity for continuous improvement and adaptation of capacity-building programs to meet the evolving needs of the agricultural community, ensuring that such interventions remain effective, relevant, and accessible to all farmers (see Figure 27).

Figure 27: Percentage of the effectiveness of external capacity building services, participant (n=824)



5.11. GENDER, YOUTH, AND SOCIAL INCLUSION

PhilCAFE made significant strides in promoting gender equity and youth engagement within the Philippine coffee sector, reflecting a concerted effort to foster greater inclusion of those who have been historically marginalized in the sector. Key initiatives included the implementation of targeted training programs on gender and development for SUC faculty and producer organization leaders, as well as leadership and professional skill development programs aimed at equipping women and young farmers with the knowledge and skills necessary to thrive in the coffee industry. The project's approach was multifaceted, addressing both the need for capacity building and the creation of platforms for women and youth to voice their concerns and share their experiences. Data from the project revealed an increase in the participation of women and youth, with several training sessions specifically designed to enhance their roles in coffee production and processing. This was complemented by the establishment of mentorship programs that provided ongoing support and guidance, facilitating the professional growth of these groups within the coffee sector.

In evaluating the impact of gender on various aspects of coffee production and sales, several key variables were examined. Notably, significant differences were observed in technology adoption, total labor, total household income, total coffee sales, and post-harvest losses between genders.

The t-test value for technology adoption was 2.7204, with a corresponding p-value of 0.0066, suggesting a statistically significant difference in technology adoption between genders, with men showing higher adoption rates. Women exhibit higher probabilities of adopting post-harvest technologies like drying (coef. of 0.088, p<0.001), washing (coef. of 0.01, p<0.001), pulping (coef. of 0.18, p<0.001), sorting (coef. of 0.07, p<0.001), and storing (coef. of 0.071, p<0.001) compared to men. Also, women have a higher adoption rate for picking ripe (coef. of 0.133, p<0.001), applying organic fertilizer (coef. of 0.04, p<0.001), recordkeeping (coef. of 0.11, p<0.001), using information and communication (coef. of 0.05, p<.001), and marketing (coef. of 0.09, p<0.001) compared to men. Similarly, the total labor and total household income also exhibited significant differences, with t-test values of 2.2531 and 1.5364, respectively, both yielding p-values below 0.05. This indicates potential disparities in labor contribution and household income, with implications for gender dynamics within coffee farming households. This suggests that women in coffee farming households are more likely to adopt various post-harvest technologies and agricultural practices compared to men, indicating a potentially higher labor input from women. Moreover, in terms of post-harvest losses, a t-test value of -0.1612 with a p-value of 0.0215 indicates that women seem to experience slightly lower losses compared to men. This indicates a notable difference as well. However, when considering production cost, total yield, total coffee sales, total labor, total household income, and average coffee price, the differences between men and women are not statistically significant, as indicated by the p-values exceeding conventional thresholds (0.05) (see Table 95).

One of the standout achievements of PhilCAFE in gender inclusion was the empowerment of women through enhanced post-harvest processing roles. Women were particularly recognized for their contributions to selecting ripe cherries, a critical task that directly impacts coffee quality and, consequently, market value. This recognition not only demonstrated the valuable skills women bring to the coffee industry but also emphasized the economic benefits of gender-inclusive practices. The project actively worked to engage women in leadership roles within producer organizations, breaking traditional gender barriers and fostering a culture of equality within the coffee community. Feedback from beneficiaries indicated that these efforts not only improved the quality of coffee production but also contributed to higher household incomes, showcasing the tangible benefits of integrating gender perspectives into agricultural development initiatives.

Youth engagement posed a unique set of challenges and opportunities for PhilCAFE, given the sector's traditional image and the evolving aspirations of the younger generation. By introducing innovative agricultural technologies and sustainable farming practices alongside educational scholarships and experiential learning opportunities, the project successfully attracted young individuals to the coffee industry. These initiatives were aimed at bridging the gap between traditional coffee farming and the interests of the youth, making the sector more appealing and relevant to their aspirations. The inclusion of youth in coffee production not only promises the transfer of knowledge and skills to future generations but also injects new energy and ideas into the sector, enhancing its sustainability and resilience. PhilCAFE’s efforts to foster youth engagement underscore the importance of adapting agricultural practices and business models to the changing demographics and expectations of the farming community.

The t-test results indicate varying degrees of significance when comparing different variables across age categories, specifically youth and adults. Among the variables tested, significant differences between age groups were observed in terms of technology adoption, total yield, total household income, and average coffee price. Notably, youth tended to exhibit higher rates of technology adoption and total yield compared to adults, which could suggest a greater openness to adopting new technologies and potentially higher productivity among the younger demographic. Moreover, the average coffee price also showed a significant difference, with youth potentially benefiting from higher prices compared to adults. However, it's crucial to note that production

cost, post-harvest losses, total coffee sales, and total labor didn't show significant differences between the two age groups (see Table 96).

PhilCAFE's comprehensive approach to gender equality and youth inclusion has set a precedent for future agricultural development initiatives in the Philippines. These contributed to the positive impact of inclusive practices on coffee quality, household income, and industry sustainability; the project has laid the groundwork for a more equitable and dynamic coffee sector. These efforts align with broader goals of sustainable development, which emphasize the importance of leveraging the full potential of all community members to drive economic growth and innovation. As the coffee industry in the Philippines continues to evolve, the lessons learned, and strategies implemented by PhilCAFE will remain crucial in guiding efforts to ensure that gender equality and youth engagement are at the forefront of agricultural development.

5.12. KEY OBSERVATIONS USING EVALUATION CRITERIA

5.12.1. Relevance of the Project

PhilCAFE was strategically aligned with the coffee-related initiatives of DA, DTI, the overarching strategies of the Philippine government, and USDA. This alignment indicates a synergistic approach toward enhancing the coffee sector within the Philippines. Specifically, PhilCAFE can be seen as an extension of MinPACT, emphasizing its role in sustaining the momentum of USDA's coffee interventions in the country. The project's alignment with USDA's objectives was consistently documented through monthly highlights, biannual progress reports, and a comprehensive midterm evaluation. These documents highlight the project's emphasis on results-oriented interventions that bolstered the linkage between coffee buyers and sellers, increased market access, and facilitated the leveraging of both public and private sector resources. The coordination between PhilCAFE's efforts and local government, regional coffee councils, local coffee alliances, academe, and municipal agriculture offices was meticulously orchestrated, ensuring that the project's support was not only relevant but also harmoniously integrated within the Philippine coffee industry's ecosystem which was not thriving when PhilCAFE started, and it wasn’t serving many of its key stakeholders, particularly producers.

Moreover, PhilCAFE expanded its support to include MinPACT regions and the broader needs of the Philippine coffee industry, thereby addressing the evolving requirements of coffee farmers and market system actors. The project's role in transferring the knowledge and skills of the existing international standards and practices throughout the country and the Philippine coffee sector indicates a strategic approach to elevate the global competitiveness of local coffee products. PhilCAFE facilitated the creation of new opportunities for micro, small, and medium enterprises by enhancing the quality and profitability of coffee products and ensuring their compatibility in international markets. The project's resilience in overcoming disruptions caused by COVID-19 is noteworthy, as it adapted to deliver participant-responsive training and capacity-building activities through partnerships with state universities, colleges, and local training providers. Feedback from beneficiaries and stakeholders, particularly through FGDs, underscored the relevance and impact of the training programs on improving agricultural practices, product quality, and market prices, further substantiating the project's success in meeting the needs and expectations of the Philippine coffee industry.

5.12.2. Efficiency of the Project

PhilCAFE largely met its endline targets (see Table 15), demonstrating effective performance across most indicators, with minor exceptions in certain output-level metrics. Specifically, there were slight under-achievements in the number of farmers able to cite at least three farm management practices and in the number of farmers and firms reporting access to at least one

source of current agricultural market information. These minor deviations from achieving the project targets can be attributed to disruptions caused by COVID-19 early to mid-implementation, which, however, did not significantly impede the achievement of major project outcomes. One notable area where the project fell short was in the total value of coffee exported from the Philippines, a shortfall attributed to higher domestic demand and prices that outperformed international markets, difficulty in meeting some export requirements (including volumes) and processes, and pandemic-related interruptions, underscoring the broader economic challenges faced during the project's implementation. Nonetheless, with the increase interest in coffee evident by the establishment of coffee shops/café in the country, the volume produced cannot still meet the domestic demand thus, advocacy for expansion and adoption of appropriate modern technologies is deemed necessary. But with the increase in coffee quality, local businesses are now sourcing more coffee locally than importing from neighboring coffee producing countries. Thus, there is a leap in market opportunities for Philippine coffee when compared before PhilCAFE.

Throughout the pandemic, PhilCAFE successfully adapted its operational and training modalities to meet the needs of the micro, small, and medium enterprises and service providers within the coffee sector. This adaptation included innovative training approaches and adjustments to internal office and project arrangements, which were critical in overcoming the initial pandemic-induced disruptions. As a result, PhilCAFE was able to resume its activities effectively after a period of adjustment, benefiting from eased COVID-19 restrictions and the reintroduction of face-to-face meetings and large gatherings from June 2022 onward. This phase of the project saw the successful execution of major coffee events at both regional and national levels, demonstrating the project's resilience and its capacity to adjust to new norms while continuing to engage with and support the coffee industry stakeholders.

Internationally, the project made significant strides in promoting Philippine coffee, as evidenced by the participation in the Specialty Coffee Expos in Boston and Portland. These expos showcased Philippine Arabica and Robusta coffees, culminating in PCQC 2022 and 2023 auctions. The auctions highlighted the premium value of Philippine coffee, with winning lots fetching significant prices and demonstrating the high regard for Philippine coffee in the international market. This exposure not only showcased the quality of Philippine coffee but also opened up avenues for increased international market access, benefiting local coffee producers and contributing to the industry's growth.

At the domestic level, PhilCAFE's engagement with SUCs and its orchestration of the Philippine Coffee Expo 2022 in Davao City and in 2023 in Manila facilitated significant industry-wide collaborations and learning opportunities. These activities, including GAP trainings and the National Coffee Mentor Summit, played a crucial role in enhancing the skills and knowledge of coffee farmers and industry stakeholders. Moreover, the expos generated substantial sales and showcased the depth of the Philippine coffee industry with a variety of presentations, competitions, and exhibitions that brought together a diverse group of participants from across the industry spectrum.

The project also focused on inclusivity and sustainability through its collaboration with financial institutions; gender, equity, and social inclusion initiatives; and environmental conservation efforts. Activities such as gender and youth awareness training, support for young coffee farmers, and partnerships for watershed conservation illustrate PhilCAFE's comprehensive approach to supporting the coffee sector. These efforts not only aimed to improve coffee production and quality but also to ensure the sustainability and resilience of the coffee industry in the Philippines, integrating social and environmental considerations into the broader objectives of enhancing the coffee market system. These are some examples of how PhilCAFE made necessary adjustments to maintain proper efficiency, leading to the intended effectiveness of the project.

5.12.3. Effectiveness of the Project

PhilCAFE, despite facing the unprecedented challenges posed by COVID-19, demonstrated significant positive impacts across various aspects of the coffee sector in the Philippines. This effectiveness was evidenced through an outcome harvesting exercise, revealing marked improvements in the capacity of key groups within the agricultural trade sector, including government institutions and buyer/seller groups. Notably, the project contributed to enhanced management practices, increased quality and availability of extension services, and bolstered research skills within the Philippine coffee sector. Advancements were observed in the availability and accessibility of improved inputs and technologies, better access to market information, adoption of advanced agricultural techniques, and enhanced marketing of agricultural products. The project also facilitated improvements in post-harvest infrastructure, processing, and handling practices, alongside leveraging resources from both the public and private sectors. Significantly, the participation of women and youth in the coffee industry was expanded, contributing to a more inclusive and sustainable development of the sector.

Incorporating training on gender and development, as well as youth leadership, PhilCAFE actively engaged women and youth in agriculture, reflecting a commitment to inclusivity. The project's efforts to bolster both horizontal and vertical market linkages became evident through the diversity of coffee MSAs benefiting from the intervention. Despite the dynamic and evolving nature of the coffee sectors within the project's scope, which presented challenges in targeting specific MSA services, PhilCAFE's adjusted strategies aimed to enhance these linkages, showcasing adaptability in its approach. This responsiveness to the needs of a diverse and changing beneficiary base underscores the project's capacity to navigate complexities in the sector, striving to facilitate growth and development despite fluid service provider landscapes.

At the outset, PhilCAFE promptly reevaluated its training delivery mechanisms to address the limitations imposed by pandemic-related restrictions. The project's innovative strategies for training dissemination received positive feedback, highlighting PhilCAFE’ s dedication and resilience during challenging times. Despite the adjustments, feedback from beneficiaries indicated a strong preference for traditional face-to-face training methods, emphasizing the value of direct interaction and engagement. In addition, the use of photographs in learning materials, the incorporation of local dialects alongside English for broader accessibility, and references to practical experiences in training sessions were highlighted as beneficial aspects of the project's educational initiatives. This feedback reflects a nuanced understanding of the learning preferences among coffee MSAs, guiding PhilCAFE’ s efforts to enhance educational outcomes and sectoral development amidst the pandemic's challenges.

5.12.4. Impact of the Project

The final evaluation of PhilCAFE revealed a significant increase in coffee yield for the participant group (28%), while for the comparison group, yield declined by 14%. The midterm evaluation also flagged that the participant group displayed better resilience to COVID-19 compared to the comparison group, suggesting that the interventions provided by PhilCAFE played a crucial role in mitigating the adverse effects of the pandemic. This resilience can be attributed to the project's persistent efforts to support its beneficiaries throughout the pandemic, fostering a positive attitude and outlook among them. The ability of PhilCAFE to inspire and maintain morale among coffee farmers and stakeholders likely contributed to the observed resilience, indicating the project's effective engagement and support mechanisms in times of crisis.

The outcome harvesting report highlights the positive impacts of PhilCAFE’ s interventions, notably the increase in coffee pricing attributed to the rise in quality and specialty coffee production in the Philippines. Moreover, the project contributed to an increase in household income and profits for farmers from PHP 187,561 to 219,895, This means income increased

17.2%. Additionally, it enhanced the coffee value chain, improved access to market systems, improved agricultural productivity, and expanded domestic and international trade of coffee products. These outcomes not only demonstrate the project's success in enhancing the economic well-being of its beneficiaries but also its contribution to the broader development of the Philippine coffee sector. The report's findings underscore the significance of PhilCAFE's interventions in promoting sustainable agricultural practices and enhancing the competitiveness of Philippine coffee in the global market.

5.12.5. Sustainability of the Project

PhilCAFE has played a pivotal role in enhancing the sustainability of the Philippine coffee industry through a multifaceted approach that includes the establishment and strengthening of regional coffee councils, fostering public-private partnerships, and providing support to key governmental departments such as the DA and DTI. Additionally, PhilCAFE's contributions to the development of coffee-related learning materials and policies have facilitated a comprehensive governance framework that addresses various aspects of the coffee value chain. These interventions serve as critical gateways to reinforcing the initiatives introduced by the USDA through PhilCAFE, aiming at long-term sustainability and resilience of the coffee sector in the Philippines.

A significant challenge faced by coffee farmers and producers is securing a stable and guaranteed income, which is crucial for their livelihood and economic stability. PhilCAFE addresses this challenge by advocating for a robust coffee market system that not only ensures the prosperity of the coffee industry but also encourages farmers to diversify their agricultural practices through multi-cropping or exploring alternative sources of income. This strategic approach aims to mitigate the financial vulnerabilities of coffee farmers by broadening their economic base and enhancing their resilience to market fluctuations, thereby contributing to a more sustainable and economically viable coffee industry in the Philippines.

Linkages between Buyers and Sellers: PhilCAFE's success in exceeding its target by establishing 184 buyers and sellers agreements, achieving 204% of its project goal, demonstrates a remarkable increase in stakeholder participation and hints at the sustainable future of these commercial linkages. This achievement is further bolstered by the strong embrace of collaboration and knowledge-sharing among producer organizations and stakeholders, fueled by insights gained from PhilCAFE. Their collective efforts have significantly boosted capacity building within the industry, contributing to a broader, more resilient sector. Moreover, the recognition of government support in policy, infrastructure, and research as pivotal to these strategies highlights a comprehensive approach to sustainable development. This synergy between internal cooperation among industry players and external support from governmental bodies underscores the critical importance of collective action in ensuring the coffee industry's enduring success and resilience.

Enhanced Capacities of the Agricultural Trade Sector, Buyers/Sellers Groups, and Government Institutions: PhilCAFE's capacity-building efforts have significantly influenced stakeholders to integrate embedded services for farmers, such as incorporating coffee mentors into their technical teams for direct assistance. The impact timeline of these initiatives varies by the nature of the support provided. Immediate benefits are seen in quality inputs like fertilizers and seeds, enhancing coffee yield, and sales upon reaching the productive stage. In contrast, obtaining certifications and securing capital for technological advancements involves a longer timeframe to see benefits, necessitating enduring trust in commercial relationships.

Access to Improved Inputs and Technologies: PhilCAFE's endeavor to establish nurseries and train farmers in producing organic fertilizers addresses immediate seedling availability and quality issues while ensuring the program's long-term sustainability and self-sufficiency. This approach not only solves current challenges but also promotes a sustainable agricultural

ecosystem by enabling farmers to produce their own seeds, seedlings, and fertilizers. The effort has led to the continuous production of quality coffee seedlings and the establishment of 129 enterprises to supply improved inputs to farmers, extending the project's impact beyond its conclusion. Additionally, the integration of coffee mentors offers tailored advice to enhance farm productivity, supported by improved access to financing and technology. Ensuring seamless connections with financial service providers and simplifying the loan application process are crucial for sustaining these advancements and supporting farmers in applying optimal inputs and technologies to their crops.

Use of Improved Agricultural Techniques and Technologies: The provision of coffee manuals, presentations, brochures, and recordings detailing the application of promoted technologies ensures a lasting resource for coffee stakeholders beyond the project's tenure. PhilCAFE's combination of training with practical activities, alongside the designation of coffee point persons or technicians and the integration of coffee mentors into organizational frameworks, underlines the project's sustainable impact. The establishment of coffee mentors, who have shown their effectiveness in spreading technology, providing technical support, and coaching, highlights their crucial role in ensuring the enduring adoption and application of these technologies within the coffee sector.

Use of Financial Services: PhilCAFE's engagement has significantly influenced the development of financial procedures and systems for coffee loans, including the training of loan applicants, with expected long-term tangible outcomes. The modification of financial institutions' policies, the introduction of financial manuals, and the growing connections with banks, savings and credit cooperatives, and producer organizations highlight the initiative's sustainable potential. Furthermore, the farmer training programs have strengthened this potential, contributing to the financial stability and accessibility of the coffee sector over time.

Improved Quality of Land and Water Resources: PhilCAFE champions sustainable agriculture by endorsing inputs that enhance soil fertility and microbiology, ensuring the longevity of beneficial farming practices as coffee cultivation persists. Feedback from farmers and stakeholders confirms the enduring impact of the knowledge and practices acquired. Insights from KIIs with international research institutes suggest that access to novel genetic materials and the implementation of farm-specific, climate-adapted practices will boost future yields, with fruit production expected after two to three years of tree maturation. Additionally, PhilCAFE's efforts have led to the creation of 31 community-based risk management plans, further solidifying its commitment to sustainable and resilient coffee farming practices.

Expanded Trade of Coffee Products: Participants of PhilCAFE have acknowledged its significant contributions to enhancing demand, production quality, and the trade of coffee in the Philippines, although domestic coffee production still does not meet local demand, leading sellers to import from countries like Vietnam and Brazil. The project's influence has sparked an increase in coffee quality and market prices, highlighting the essential role of continuous improvement and adherence to GAP for the sustainability and scalability of the coffee industry. This shift toward higher quality and better practices suggests a promising direction for the local coffee sector, albeit with ongoing challenges in self-sufficiency.

The impact of PhilCAFE on national standards for coffee, as noted by government officials, is set to shape the future of coffee production in the Philippines. Updates to the Philippine National Standards for coffee by the Bureau of Agriculture and Fisheries Standards, prompted by initiatives like PhilCAFE, underscore the project's lasting influence on the industry's regulatory framework. This evolution of standards is indicative of a broader commitment to enhancing the quality and sustainability of coffee production, which is expected to have positive repercussions for the sector's growth and development.

The project has seen a ripple effect in engaging the private sector and fostering a culture of innovation and quality among coffee producers. Initiatives such as coffee congresses for youth and local coffee support, along with the adoption of PhilCAFE's PCQC model for organizing cupping competitions, demonstrate the project's wider influence beyond its direct interventions. The interest from Philippine coffee exporters in meeting international standards, as shown by requests for technical assistance to comply with Food and Drug Administration requirements, further validates PhilCAFE's success in elevating the local coffee industry to a global platform, thereby enhancing the international competitiveness of Philippine coffee.

5.13. RESPONSE TO LEARNING QUESTIONS

5.13.1. Response based on a quantitative survey

To respond to the learning and evaluation questions specified in the request for proposal (RFP), the evaluation team examined data gathered from quantitative surveys administered to both comparison and participant groups. In addition, influential factors and reasoning/variables behind quantitative differences were explored through qualitative investigations.

Learning Question: To what extent have farmers', and market actors' production, coffee quality, sales, incomes, access to services, marketing skills, finances, or other production resources changed compared to the non-beneficiaries? To what extent are these changes attributable to the project's interventions? What factors have most influenced the profitability of these actors?

The evaluation findings of PhilCAFE revealed its significant impact on enhancing the resilience and outcomes of assisted coffee market actors when compared to non-assisted counterparts. The adoption rates of production technologies and practices were substantially higher among participant groups, indicating the positive influence of PhilCAFE interventions on bolstering production efficiency and quality. This effect was influenced by factors such as age, education level, and cooperative involvement, emphasizing the importance of tailored interventions. In addition, the adoption of specific technologies correlated positively with increased coffee production levels and improved quality, leading to heightened profitability among treated farmers. PhilCAFE facilitated access to financial services and credit facilities, fostering higher levels of financial inclusion and engagement within the participant group despite challenges in accessing formal financial services. These findings collectively highlight the multifaceted approach of PhilCAFE, integrating technology adoption, financial support, and capacity building to significantly bolster the resilience and prosperity of assisted coffee market actors.

Learning Question: Has PhilCAFE contributed to the resilience of assisted coffee market actors compared to non-assisted actors? How and to what extent?

The critical success factors of PhilCAFE revolve around sustainable approaches to coffee sector development. The project prioritizes the dissemination and adoption of best practices across various stages of coffee farming, alongside enhancing market linkages to fortify the interconnected value chain and enhance sustainability. Collaboration with stakeholders and the development of private-public partnerships play a crucial role, enabling PhilCAFE to leverage successful government initiatives, standardize coffee quality and prices, and implement capacity-building interventions targeting diverse groups. PhilCAFE's adaptability to regional contexts and needs, alongside its emphasis on addressing challenges such as climatic changes and communication limitations, further contributes to its success within the dynamic and challenging coffee sector landscape.

PhilCAFE made substantial contributions to enhancing the resilience of assisted coffee market actors compared to non-assisted actors in the Philippine coffee industry. PhilCAFE interventions

targeted thousands of farmers and engaged various value chain actors, focused on productivity, sustainability, and global market competitiveness. The projects' technical training, financial assistance, and fostering of inclusive economic opportunities boosted coffee production and exports, benefiting a significant number of indirect beneficiaries. Additionally, strategic improvements such as public-private coordination, extension of services, and reduction of post-harvest losses were emphasized, along with efforts to bridge financial gaps and promote youth involvement, gender equality, and climate resilience. These interventions led to notable improvements in technology adoption, production cost reduction, increased sales rates, improved financial inclusion, gender equity, and enhanced agricultural skills among coffee farmers, thereby enhancing their resilience and competitiveness in the market.

PhilCAFE's efforts aligned with key agricultural initiatives and demonstrated resilience during COVID-19 despite challenges in strengthening market linkages and technology adoption. The project significantly improved the quality of land and water resources, contributing to sustainable development in the coffee sector. To sustain the growth and competitiveness of the Philippine coffee industry, recommendations include enhancing access to financial services, subsidizing key inputs, improving market information access, investing in advanced storage technologies, diversifying agricultural practices, and promoting international marketing efforts. Overall, PhilCAFE's multifaceted approach contributed to improving the resilience of assisted coffee market actors compared to non-assisted actors by addressing various challenges and promoting sustainable growth within the industry.

5.13.2. Response based on the qualitative outcome harvest investigation

The evaluation team responded to several learning questions through the results of the qualitative outcome harvest methodology.

Learning Question: What are the notable positive and negative outcomes of PhilCAFE?

PhilCAFE demonstrated a profound positive outcome on the Philippines' economy by bolstering the local coffee industry. Through comprehensive support, including training, resources, and assistance, coffee farmers have experienced increased productivity and income. The project's emphasis on sustainable farming practices has led to the adoption of organic methods and environmental conservation techniques, resulting in improved soil health and biodiversity conservation. PhilCAFE's initiatives to enhance the quality of Philippine coffee through post-harvest processing, quality control, and certification have yielded higher-quality coffee beans, fetching better prices in the market. By establishing partnerships with buyers, exporters, and retailers, PhilCAFE has expanded market access for coffee farmers, creating opportunities for fairer prices and increased income.

PhilCAFE faced several challenges that may hinder its effectiveness and long-term sustainability. The project's limited reach to all coffee-producing regions in the Philippines poses a significant obstacle, as some areas may not benefit from its initiatives due to logistical constraints or resource scarcity. The resource constraints, including funding, infrastructure, and personnel, may impede PhilCAFE's ability to reach its goals and support a larger number of coffee farmers adequately. Despite efforts to improve market access, coffee farmers remain vulnerable to market volatility and fluctuations in prices, which could adversely affect their income and livelihoods. Therefore, ensuring the long-term sustainability of the coffee industry in the Philippines requires continuous support and investment in research, infrastructure, and policy development, areas that may need to be addressed post-PhilCAFE to maximize its outcomes and ensure the sector's lasting development.

Learning Question: How sustainable is/are PhilCAFE's major outcomes as defined by the outcome harvest?

The evaluation team analyzed the outcome harvest system change map and scoring and found that PhilCAFE's major outcomes demonstrate a high level of sustainability and impact. The project effectively increased the utilization of financial resources through strategic collaborations with financial institutions and savings and credit organizations, strengthening farmers' access to loans and enhancing their capacity to adopt improved agricultural technologies. The project's contribution to achieving Outcome 9 by providing Q-grading certification training, along with its successful attainment of increased agricultural productivity, improved agricultural techniques and technologies adoption, and value addition to post-production agricultural products, reflect a comprehensive approach toward sustainable agricultural development. By utilizing connections with buyers at various levels and facilitating support to exporters and processors, PhilCAFE not only improved product quality but also influenced policy and regulatory frameworks in the sector, indicating a holistic approach toward enhancing the entire coffee value chain. Additionally, the project's emphasis on gender equity and social inclusion throughout various stages of the coffee value chain demonstrated a commitment to inclusive participation, enhancing female and youth involvement in the coffee industry.

In addition, PhilCAFE made significant strides in promoting sustainability across various facets of the Philippine coffee industry. Its efforts have led to tangible outcomes such as economic growth, sustainable farming practices, quality improvement, and enhanced market access for coffee farmers. It has provided training, resources, and assistance to the farmers, which contributed to boosting productivity and income in the short to medium term, laying the groundwork for continued economic growth. Moreover, the project's promotion of sustainable farming practices, including organic methods and environmental conservation techniques, demonstrates a commitment to long-term resilience and biodiversity conservation within coffee farming ecosystems. Similarly, PhilCAFE's focus on quality improvement through training and post-harvest processing signifies a sustainable approach to enhancing competitiveness and ensuring better prices for farmers in the market.

PhilCAFE's efforts to facilitate partnerships and improve market access have created opportunities for fair pricing and increased income, supporting the long-term sustainability of coffee farming livelihoods. However, sustaining these outcomes requires ongoing support, investment, and collaboration from PhilCAFE, farmers, and other stakeholders. Continued education and infrastructure development are necessary to maintain sustainable farming practices and quality standards. The evaluation team concludes that PhilCAFE's commitment to sustainability across its major outcomes is evident, but ongoing efforts are vital to secure the long-term viability of the Philippine coffee industry.

Learning Question: To what extent has the project developed local ownership?

The evaluation team measured the extent to which the project has developed local ownership in terms of the project's efforts to empower local stakeholders, foster their active participation, and ensure their sustained engagement in project activities. PhilCAFE's approach to local ownership is evident in its collaborative partnerships with local institutions, such as producer organizations and government agencies, and its emphasis on capacity-building initiatives aimed at enhancing the skills and capabilities of community members. The project's inclusive decision-making processes and the integration of local perspectives and knowledge further contribute to the development of local ownership. Through the involvement of local stakeholders in project design, implementation, and decision-making, PhilCAFE has effectively cultivated a sense of ownership and agency among community members, thereby promoting sustainable development outcomes in the coffee sector.

Learning Question: In what key ways has the project contributed to women and youth empowerment and social inclusion in the coffee sector?

PhilCAFE has made significant contributions to women and youth empowerment and social inclusion in the coffee sector through several key strategies. Firstly, it integrated gender, youth, and social inclusion considerations across all its activities, ensuring equal participation and engagement of both men and women. This was achieved through targeted training programs on post-harvest handling and processing, gender-responsive equipment design, and the identification of gender and age-based constraints through a formative gender and social inclusion analysis. Additionally, capacity-building activities focused on supporting producer organizations to promote inclusion within their structures, raising awareness on the business case for more inclusive leadership models, and addressing barriers to women and youth's participation and leadership.

In addition, PhilCAFE's efforts, such as the 'Young Farmer Contest/Challenge' and partnerships with the government, have significantly enhanced the roles of young farmers and women in various aspects of the coffee industry, including production, nursery management, processing, and barista work. These efforts not only reflect increased awareness but also mark positive strides toward gender inclusivity and youth involvement in agriculture. Furthermore, PhilCAFE's interventions in seedling and marketing training have enabled women to pursue off-farm employment opportunities, generating more income for themselves and their families while also increasing household incomes overall. Despite these successes, challenges remain, such as limited engagement in loan applications by women and youth due to banking policies that may favor senior male members, emphasizing the need for continued efforts to address systemic barriers to inclusion in the coffee sector. Overall, PhilCAFE's multifaceted approach has led to tangible improvements in women and youth empowerment and social inclusion within the coffee industry.

Learning Question: What is the depth/scale of PhilCAFE's major outcomes as defined by the outcome harvest?

The depth and scale of PhilCAFE's major outcomes, as defined by the outcome harvest, illustrate a multifaceted and impactful intervention in the coffee sector. The project's successful alignment of outcomes with its original objectives, particularly in increasing coffee production, underscores its effectiveness in addressing key challenges and driving positive change. PhilCAFE's holistic approach, encompassing financial access, technological adoption, value addition, market expansion, and gender inclusion, indicates a broad and sustainable impact on the coffee value chain. By promoting inclusive participation and facilitating collaborations across various stakeholders, PhilCAFE has enhanced the productivity and quality of coffee and also contributed to broader socio-economic development goals in the Philippines.

Learning Question: What factors were most effective in incentivizing adopters of PhilCAFE-targeted technologies and practices?

PhilCAFE interventions have led to significant changes in various aspects for coffee farmers and market actors compared to non-beneficiaries. Participant farmers experienced improvements in production, coffee quality, sales, incomes, access to services, and marketing skills. These changes are attributable to the project's targeted interventions, including technical training, financial assistance, and fostering inclusive economic opportunities. By targeting specific areas such as productivity, sustainability, and global market competitiveness, PhilCAFE facilitated increased productivity and sales rates, reduced production costs, improved financial inclusion, and enhanced agricultural skills among coffee farmers. The project's emphasis on public-private coordination, extension of services, and reduction of post-harvest losses also played a crucial role in improving the resilience and profitability of project participants.

Factors influencing the profitability of these actors include the adoption of specific technologies and practices that enhance quality, access to end markets, marketing strategies, geographical

location, and group membership. PhilCAFE interventions influenced technology adoption, production practices, and marketing skills, leading to improvements in coffee quality and market access. Additionally, the project's focus on promoting gender equality, youth inclusion, and climate resilience contributed to creating a more inclusive and sustainable coffee industry. The geographical context and group (e.g., associations, cooperatives) membership also played roles in determining profitability, with certain regions experiencing varying degrees of impact and collective action within producer organizations, facilitating market access and sales dynamics. Overall, PhilCAFE's multifaceted approach and tailored interventions have positively influenced the profitability and resilience of farmers and market actors within the Philippine coffee industry.

The most effective factors in incentivizing adopters of PhilCAFE-targeted technologies and practices revolved around increased availability of and access to improved inputs and technologies. PhilCAFE's initiatives, such as assisting producer organizations in obtaining Bureau of Plant Industry accreditation for coffee nurseries, mobilizing stakeholders to contribute to demonstration farms, conducting joint training sessions, facilitating input supply at expos, and distributing seedlings through cooperative programs, significantly addressed prevalent issues like poor-quality seedlings, input shortages, and high input costs. Collaborations with agro-dealers and input suppliers, training sessions, establishment of nurseries, and financial assistance for inputs further enhanced accessibility and adoption of improved technologies and practices.

5.14. LESSONS LEARNED

PhilCAFE illuminated the importance of establishing robust buyer-seller linkages beyond mere trust and commercial contracts. Key lessons include the critical role of information flow in these linkages, enhancing market understanding, and fostering relationship-building platforms. This, combined with efforts in branding and raising awareness of Philippine coffee quality, enables stakeholders to align more closely with mutual needs.

Capacity building emerges as a deliberate, inclusive process built on trust and collaborative endeavors. It highlights the necessity of sharing resources, including funds, technologies, and knowledge, for optimal benefit. Clear action plans detailing responsibilities and timelines, alongside the dissemination of tailored information and technologies by extension workers and researchers, are pivotal for maintaining stakeholder engagement and enhancing the agricultural sector's overall capacity.

The project underscored the significance of accessible inputs and technology, with personalized mentorship aiding farmers in refining agricultural practices. Such localized guidance is crucial for adapting to varying climates and ensuring agricultural sustainability. Moreover, lessons from financial service utilization suggest that integrating digital literacy and exploring innovative financing schemes could revolutionize farmers' access to technologies and credit, thereby reducing barriers to financial services. Addressing post-harvest losses through comprehensive strategies and promoting climate-smart farming practices further highlights the project's multifaceted approach to improving the coffee sector. Looking forward, the emphasis on marketing strategies and direct market linkages between cooperatives and coffee shops points to sustainable growth paths for the Philippine coffee industry, championing the PhilCAFE model for future initiatives.

The insights and strategies developed by PhilCAFE provide a solid foundation upon which future endeavors in the Philippine coffee industry can build, fostering continued growth and sustainability within the sector. The emphasis on direct market linkages has proven successful in increasing income for coffee producers by establishing more efficient pathways between cooperatives or farmer associations and coffee shops, thus bypassing traditional intermediaries. This model

enhances economic outcomes for coffee producers and establishes a precedent for the power of innovative market strategies in agriculture.

Moreover, the project's focus on land and water resource quality through regenerative farming practices marks a significant shift toward environmental sustainability. By advocating for the reduction in agrochemical use, promoting organic inputs, and encouraging practices such as intercropping and shade planting, PhilCAFE has laid the groundwork for a coffee industry that is productive and also ecologically responsible. These practices, coupled with the strategic use of meteorological data for planting decisions, underscore a holistic approach to sustainable agriculture that benefits both the environment and the farmers.

Looking ahead, the need for continuous improvement in marketing strategies, including effective labeling, advertising, and strategy development, remains crucial. Such efforts are key to generating demand and enhancing the visibility of Philippine coffee products domestically and internationally. The success of PhilCAFE thus offers valuable lessons and a blueprint for future programs aiming to sustain and expand the Philippine coffee industry. By building on the strategies and outcomes of PhilCAFE, stakeholders can continue to advance the sector, ensuring the longevity of the positive changes initiated and further solidifying the Philippines' position in the global coffee market.

SECTION F: CONCLUSIONS

PhilCAFE has significantly contributed to the advancement and resilience of the Philippine coffee industry, addressing critical challenges and leveraging opportunities for growth and improvement. Despite COVID-19 disruptions, the project demonstrated remarkable adaptability, innovatively continuing its support for the coffee value chain. PhilCAFE's alignment with key governmental and industry strategies ensured relevance and maximized impact, driving substantial progress in coffee production, quality, and market engagement. Through targeted interventions, the project enhanced the capacity of coffee MSAs, increased the income of smallholder farmers, improved agricultural productivity, and expanded domestic and international trade. Its emphasis on sustainability, inclusivity, and climate resilience has established a robust foundation for the future growth of the sector, promising a brighter outlook for Philippine coffee on the global stage.

PhilCAFE's success in fostering strong market linkages, improving access to finance and quality inputs, and promoting advanced agricultural practices has significantly uplifted the economic well-being of coffee farming communities, marking a pivotal step toward achieving a more competitive and sustainable coffee industry in the Philippines. The evaluation team offers the following suggestions for further advancement of project goals.

Firstly, farmers need more strategic financial management skills and access to lower-interest financing options. Given that loan interest rates significantly contribute to production costs, providing farmers with financial literacy training and facilitating access to affordable credit can alleviate their financial burden. This approach helps farmers manage existing debts and make better-informed decisions regarding future investments and expenses.

Secondly, the adoption of advanced agricultural technologies and practices should be promoted to enhance coffee yield and quality. The positive improvement in coffee yields suggests opportunities for further enhancement through the adoption of innovative farming techniques and technologies. Encouraging research and development in coffee cultivation and processing, coupled with extensive training programs for farmers, can lead to more significant increases in coffee production efficiency and product quality.

Thirdly, targeted interventions to improve post-harvest handling and infrastructure are crucial. The reported post-harvest losses due to factors like exposure to rain underline the importance of

investing in better storage facilities and training farmers in effective post-harvest management practices. Such measures can significantly reduce losses, thereby increasing the volume of coffee available for sale and potentially improving farmers' incomes.

Fourthly, enhancing market access and the availability of market information for coffee farmers is essential. The findings point to disparities in market information access and the effectiveness of marketing strategies which can affect sales performance. Implementing initiatives to bridge this information gap and improve farmers' marketing skills can lead to better sales outcomes and more stable incomes for coffee producers.

Lastly, continuous support for capacity building and the implementation of quality management certifications can further propel the coffee sector's growth. The evidence of a higher probability of technology adoption among farmers intending to apply for farm and coffee quality certification suggests that promoting quality standards can encourage the adoption of best practices in coffee production. Such initiatives not only improve the quality of coffee produced but also enhance the competitiveness of Philippine coffee in the global market.

Section G: Recommendations

Based on the comprehensive findings from the PhilCAFE final evaluation, the evaluators offer the following specific recommendations for donors, implementors, and stakeholders, including farmers.

- **Enhance Financial Literacy and Access:** The evaluation found that only 6.48% of participants and 2.87% of the comparison group have loans from microfinance institutions or banks, highlighting barriers to financial access. Nonetheless, high loan interest is the largest production cost, indicating a need for improved financial literacy and better access to affordable credit for farmers including more flexible collateral requirements.

- **Subsidize Critical Inputs:** The evaluation indicated that the average cost of coffee production included significant input expenses such as fertilizers and pesticides, as well as transportation costs. These costs contribute to the overall financial burden on coffee farmers, justifying the recommendation for subsidies or lower-cost provision of these critical inputs to reduce production costs. Hence, subsidies for tools and materials for producing organic fertilizers and pesticides, and to connect producer organizations with the Department of Agriculture to access post-harvest hauling trucks. Additionally, scale up the coffee loan program, including a "plant now, pay later" scheme for production inputs and materials.

- **Expand Access to Market and Price Information:** The evaluation found that only 29.16% of farmers have access to external sources of agricultural market or price information. This limited access hinders farmers' ability to make informed decisions regarding crop management and sales strategies, emphasizing the need for improved access to market and price information through digital platforms or apps.

- **Promote Certification and Quality Improvement Programs:** The evaluation noted that only a small percentage of firms obtained quality management certifications through project assistance. Promoting and facilitating access to these certifications can enhance market competitiveness and product quality, highlighting the value of supporting farmers in obtaining such certifications.

- **Invest in Post-Harvest Technologies and Facilities:** Post-harvest losses were identified as a significant issue, with approximately 11.4% of the participant group and 11.7% of the comparison group reporting such losses. Investing in infrastructure and technology for post-harvest handling and storage, including modern drying techniques, can help maintain coffee quality and reduce losses.
- **Foster Diversified Agricultural Practices:** Promote crop diversification to reduce farmers' dependence on coffee as their primary income source, as the evaluation shows heavy reliance on coffee farming. Diversified agricultural practices can create alternative revenue streams and lower financial risks tied to fluctuations in coffee production.
- **Strengthen Labor Efficiency and Employment Practices:** The evaluation reported fluctuations in labor numbers, suggesting variations in labor efficiency and employment practices within the coffee sector. Developing programs to improve labor efficiency and promoting fair employment practices can enhance productivity and sustainability in coffee farming.
- **Support Research and Development:** The need for research and development, particularly in developing new coffee varieties resilient to climate change, is implied by the evaluation's focus on sustainability and environmental considerations within the coffee sector.
- **Enhance Capacity Building and Training Programs:** The evaluation's positive feedback on capacity building and training initiatives provided by PhilCAFE underscores the importance of continuing investment in these areas to support sustainable farming practices, financial management, and technological advancements among coffee farmers.
- **Invest in further cooperative strengthening:** We recommend continuing the institutional strengthening of farmer cooperatives, focusing on their management and marketing functions, membership expansion, and information dissemination. Additionally, scaling up the provision of their products and services will help increase their income. This can be achieved by implementing ACDI/VOCA 's Sell More For More (SMFM) program. SMFM empowers farmer cooperatives and aggregators to develop marketing plans and meet buyer specifications. SMFM develops the capacity of these groups to sell more product for more income. See more at https://www.acdivoca.org/what-we-do/tools/sell-more-for-more/
- **Promote Gender Equity and Youth Engagement:** The evaluation highlighted initiatives (and successes) aimed at increasing the participation of women and youth in the coffee industry, reflecting the project's commitment to inclusivity. Targeted initiatives to further promote gender equity and creating pathways for youth are essential for fostering a dynamic and diverse coffee sector.
- **Sustainability of Educational Intervention:** The project's engagement with SUCs and its focus on integrating coffee farming technologies into curricula and the results of these efforts indicate the importance and benefits of sustained educational intervention to maintain progress in the coffee sector.
- **Enhance International Marketing and Trade Efforts:** The project's successful participation in Specialty Coffee Expos and the emphasis on promoting Philippine coffee on the international stage reflect the importance of expanding the global market presence through strategic marketing and partnerships.

- **Enhance Domestic Marketing of Quality Coffee:** Increased Demand for Quality Philippine Coffee: This includes focusing on consumer education with a unified industry voice to raise awareness about the value of quality Philippine coffee; gather data at the ground level through collaboration with producer organizations, local government units, and academic institutions; utilize mass media to drive information and communication efforts that promote quality coffee; expand cupping competitions to include provincial and regional levels to increase visibility and recognition of quality coffee; intensify promotional campaigns that highlight the unique flavors of Philippine coffee and superiority of specialty coffee over instant varieties and promote local coffee shops; establish a national-level Philippine Coffee Council to promote high-quality coffee, focusing on consistent volume and quality, instituting quality control at the grassroots level, and forming linkages with medium and large hotels to feature Philippine coffee in their outlets; promote agri-tourism and eco-tourism that includes visits to coffee farms to enhance consumer engagement and appreciation.

- **Policies**: Institutionalize and legislate policies that address quality and pricing within the coffee sector. Allocate a regular budget specifically for the coffee sector to support its continuous development.

Tailored intervention strategies to local needs and conditions: The study pointed out significant regional difference in the application of technologies and other indicators, which may be due to infrastructure, local support, and economic factors. Future initiatives should ensure that technology dissemination, training programs and support are well-suited to the unique challenges and opportunities of different farming communities. These recommendations address the key opportunities and challenges identified in the PhilCAFE evaluation, supporting the sustainable development of the coffee sector and enhancing the livelihoods of coffee farmers in the Philippines.

ANNEX 1: REFERENCES

PROJECT DOCUMENTS

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1. *"Philippine Coffee Advancement and Farm Enterprise Semiannual Progress Report: October 1, 2018 – March 31, 2019,"* ACDI/VOCA for USDA, April 30, 2019.
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2. Himmelstein, Jennifer, "*Outcome Harvesting Report – Resilience and Economic Growth in the Arid Lands – Accelerated Growth (Regal-AG,)"* ACDI/VOCA for USAID, September 2018.
3. LeGrand, Tatiana, and Jennifer Himmelstein, *"Outcome Harvesting Report – Transforming Kyrgyz Agriculture Through Private Sector Partnerships to Create Sustainable Market Opportunities for Farmers and Other Rural Households (Agro Horizon Project),"* ACDI/VOCA for USAID, September 2019.
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5. *"The Philippine Coffee Industry Roadmap (2021-2025),"* Department of Agriculture - Bureau of Agricultural Research in collaboration with the Philippine Council for Agriculture and Fisheries, 2022.
6. *"Qualitative Data Analysis for Decision Making and Adaptive Management,"* PowerPoint by ACDI/VOCA, June 2022.

Annex 2: Sample Size Calculation

Sample Size Calculation: confidence level of 95%, margin of error of 5%, equal sample proportion of 0.5, a response rate of 90%, and design effect of 2.

$N_0=Z^2 * p\ (1-p)/e^2$

$N_0=1.96^2$ X 0.5 (1-0.5)/0.05^2

$n_0=384$

Farmers Survey*:* 11,398 farmers trained on GAP (LOP)

Adjusting the sample size to the finite population correction (N)

$n'=(n_o*N)/n_0+(N-1)$

n'=384*11398/(384+(11398-1))

n'=371

Adjust the sample size in anticipation of potential non-respondents (e.g., cannot be located)

n''=n'/R, Note: In the Philippines, a 90% response rate is assumed, especially in areas that are not highly urbanized.

n''=371/0.90

n''= 412; This means that a sample of 412 individuals is needed to achieve an actual sample of 371, considering that about 10% will not respond.

Adjust the sample size with the design effect of 2.

n=n''*deff

n=412*2

n=824

Comparison Group = 349. This is the total population of comparison farmers surveyed during baseline 349

MSA Representative Survey: 1,953 MSAs trained on GAP (LOP)

Adjusting the sample size to the finite population correction (N)

$n'=(n_o*N)/n_0+(N-1)$

n'=384*1953/(384+(1953-1))

n'=321

Adjust the sample size in anticipation of potential non-respondents (e.g., cannot be located)

n''=n'/R, Note: In the Philippines, a 90% response rate is assumed, especially in areas that are not highly urbanized.

n''=321/0.90

n''= 356. This means that a sample of 356 individuals is needed to achieve an actual sample of 321, considering that about 10% will not respond.

Firm Survey: 620 firms received firm improvement/enterprise/economic development activities

Adjusting the sample size to the finite population correction (N)

$n'=(n_o*N)/n_0+(N-1)$

n'=384*620/(384+(620-1))

n'=237

Adjust the sample size in anticipation of potential non-respondents (e.g., cannot be located)

n''=n'/R, Note: In the Philippines, a 90% response rate is assumed, especially in areas that are not highly urbanized.

n''=238/0.90

n''= 264. This means that a sample of 264 firms is needed to achieve an actual sample of 238, considering that about 10% will not respond.

ANNEX 3: DETAIL SAMPLE

Qualitative:

Table 11: Detail Sample of FGD respondents

Regions	Sub-Regions	Province Name	FGD Type						
			Total Sample in a sub-region	Men		Women		IP	
				Youth	Adult	Youth	Adult	Male	Female
Luzon	CAR	Mountain Province	2					1	
		Beguet							1
	Region I	Ilocos Sur	1		1				
	Region 4-A	Laguna	1			1			
Visayas	Region 6	Negros Occidental	1				1		
Mindanao	Region 10	Misamis Occidental	2		1				
		Bukidnon					1		
	Region 11	Davao del Norte	2						1
		Davao de Oro					1		
	Region 12	Sultan Kudarat	3			1			
		Sultan Kudarat					1		
		South Cotabato		1					
	Region 13	Surigao del Sur	1	1					
	BARMM	Lanao del Sur	1					1	
Total participant FGD			**14**	**2**	**2**	**2**	**4**	**2**	**2**
Luzon	Region 4-A	Cavite	1				1		
Visayas	Region 11	Negros Occidental	1		1				
Mindanao	Region 11	Davao City	1					1	
	Region 12	Sultan Kudarat	1			1			
Total Comparison FGD			**4**		**1**	**1**	**1**	**1**	
Total Coffee Council Member Sample			3		2		1		
Total FGD			21						

Table 12: Detail Sample of KII respondents.

Region	Sub-Region	Producer Org.& Cooperative Leaders	Financial Inst. & Savings & Credit Cooperative	SUC Faculty& Extension Agents	Employees of Coffee Cupping &Soil Labs.	Barista & Coffee Academy of Asia	Govt. Inst.-DTI, DA, Bureau of plant Industry	Input Providers/ Fertilizer Companies	Roasters& Coffee Shop Owners	Coffee Social Influencers/ social media	International Research Organization	Coffee Champions	Clients of Laboratories at the Universities	Coffee farmers linked to extension agents of the	Coffee cuppers trained by PHILCAFE/ Partners	PCQC Participants
Luzon	CAR	3		1	1	1		1						1		
	NCR		1									1				
	Region I															1
	Region 2															
	Region 4-A	2		1	1										1	1
Visayas	Region 6			1					1							
Mindanao	Region 10	4	1	1	1								1	1	1	1
	Region 11	5	1	1	1	2	1	2	4	3		1	1			
	Region 12	4	1		1								1	1	1	
	Region 13	2														
	BARMM															
Total	**66**	**20**	**4**	**5**	**5**	**3**	**1**	**3**	**5**	**3**	**3**	**2**	**3**	**3**	**3**	**3**
CBSG also conducted 10 KIIs with PhilCAFE Staff																

NB: KII with International Research Organization was conducted with World Coffee Research, Indonesian Coffee and Cocoa Research Institute, and Coffee Quality Institute.

Quantitative: Farmers/Producers Survey

Table A3.3: Detailed distribution of sample size for direct/participant farmers/producers

Regions	Sub-Regions	Total Sample	Female		Male		Coffee Product type					Farm type		
			Adult	Youth	Adult	Youth	Fresh	Dried	GCB	Mixed	TBD	Small holder (<=5 ha)	Non-Smallholder (>5 ha)	
Luzon	CAR	78	33	6	33	6	5	5	8	4	57	38	3	38
	Region 1	6	2	0	2	0	0	0	1	0	4	3	0	3
	Region 2	7	3	1	3	1	0	0	1	0	5	3	0	3
	Region 4-A	52	22	4	22	4	3	3	5	3	38	25	2	25
Visayas	Region 6	35	15	3	15	3	2	2	3	2	25	17	1	17
Mindanao	Region 10	187	79	15	79	15	11	11	19	9	136	90	7	90
	Region 11	198	83	16	83	16	12	12	20	10	144	95	8	95
	Region 12	148	62	12	62	12	9	9	15	7	108	71	6	71
	Region 13	101	42	8	42	8	6	6	10	5	74	49	4	49
	BARMM	12	5	1	5	1	1	1	1	1	9	6	0	6
Total Sample		824	346	66	346	66	49	49	82	41	602	396	33	396

Note: TBD: To be defined (no prior information on farm size and type of coffee produced by the beneficiary)

Table A3.4: Detailed distribution of sample size for comparison farmers/producers

Regions		Female	Male	Farm Type

	Sub-Regions						
		Adult	Youth	Adult	Youth	Smallholder (<=5 ha)	Non-Smallholder (>5 ha)
Region 4-A	87	44	0	43	0	76	11
Region 6	30	15	0	15	0	28	2
Region 11	80	32	2	35	11	65	14
Region 12	149	48	9	80	12	120	30
Total	**346**	**139**	**11**	**173**	**23**	**289**	**57**

Note: The average farm size of the above farmers is 3.9 ha, and the average cultivated area is 1.5 ha.

Table A3.5. Detailed distribution of sample size for MSA representatives

Regions	Sub-Regions	Total Sample	Gender		Age-Category	
			Female	Male	Youth	Adult
People in the Civil Society						
Luzon	CAR	12	6	6	6	6
	NCR	2	1	1	1	1
	Region I	1	1	1	1	1
	Region 2	3	2	2	2	2
	Region 4-A	4	2	2	2	2
Visayas	Region 6	5	3	3	3	3
Mindanao	Region 10	13	6	6	6	6
	Region 11	36	18	18	18	18
	Region 12	17	9	9	9	9
	Region 13	11	6	6	6	6
	BARMM	2	1	1	1	1
Total		107	53	54	36	53
People in the Firm						
Luzon	CAR	21	10	10	10	10
	NCR	4	2	2	2	2
	Region I	2	1	1	1	1
	Region 2	5	3	3	3	3
	Region 4-A	6	3	3	3	3

Regions	Sub-Regions	Total Sample	Gender		Age-Category	
			Female	Male	Youth	Adult
Visayas	Region 6	8	4	4	4	4
Mindanao	Region 10	22	11	11	11	11
	Region 11	61	30	30	30	30
	Region 12	29	15	15	15	15
	Region 13	19	9	9	9	9
	BARMM	3	2	2	2	2
Total		178	89	89	89	89
People in the Government						
Luzon	CAR	8	4	4	4	4
	NCR	2	1	1	1	1
	Region I	1	0	0	0	0
	Region 2	2	1	1	1	1
	Region 4-A	2	1	1	1	1
Visayas	Region 6	3	2	2	2	2
Mindanao	Region 10	9	4	4	4	4
	Region 11	24	12	12	12	12
	Region 12	12	6	6	6	6
	Region 13	7	4	3	3	4
	BARMM	1	1	1	1	1
Total		71	36	35	35	36

Table A3.6. Detailed Distribution of Sample size for Institutions/Firms

Regions	Sub-Regions	Total Sample	Gender		Age Category		Size of Firm				Type of ownership					
			Female	Male	15-29 age	30 and up	Large enterprise	Medium enterprise	Micro enterprise	Small Enterprise	Association	Cooperative	Corporation	Partnership	Public/govt. owned & controlled corporations	Sole proprietary
Non-Government Organizations or Civil Societies																
Luzon	CAR	1	1			1			1		1					
	Region I	0														
	Region 2	0														
	Region 4-A	0														
Visayas	Region 6	1		1		1			1		1					
Mindanao	Region 10	4		4	1	3			4		4					
	Region 11	3	1	2	2	1			3		1	2				
	Region 12	3	2	1		3			3		2	1				
	Region 13	1	1		1				1		1					
	BARMM	0														
Total		13	5	8	4	9	0	0	13	0	10	3	0	0	0	0
Private Sector Firms (including private universities and colleges)																
Luzon	CAR	1		1		1			1					1		
	Region I	2		2		1			2							2
	Region 2	2	2		1	2			2							2
	Region 4-A	3		3		1			3				1	1		1

Regions	Sub-Regions	Total Sample	Gender		Age Category		Size of Firm				Type of ownership					
			Female	Male	15-29 age	30 and up	Large enterprise	Medium enterprise	Micro enterprise	Small Enterprise	Association	Cooperative	Corporation	Partnership	Public/govt. owned & controlled corporations	Sole proprietary
Visayas	Region 6	7	2	5	1	3			6	1				2		5
Mindanao	Region 10	9	5	4	1	6			4	5			4			5
	Region 11	16	3	13	4	8	1		12	3			4	1		11
	Region 12	12	2	10	3	12	2		8	2			3	1		8
	Region 13	1		1		9				1			1			
	BARMM	1		1		1			1							1
Total		54	14	40	10	44	3		39	12	0	0	13	6	0	35
Public/Government Agencies (including SUCs)																
Luzon	CAR	8	6	2		8	2	1	1	4					8	
	Region I	2	2			2		1		1					2	
	Region 2	2	2		1	1		1		1					2	
	Region 4-A	3	2	1		3		1		2					3	
Visayas	Region 6	4	2	2	1	3				4					4	
Mindanao	Region 10	17	8	9	5	12		7	2	8					17	
	Region 11	20	126	8	3	17	1	12		7					20	
	Region 12	9		3		9	1	4		4					9	

Regions	Sub-Regions	Total Sample	Gender		Age Category		Size of Firm				Type of ownership					
			Female	Male	15-29 age	30 and up	Large enterprise	Medium enterprise	Micro enterprise	Small Enterprise	Association	Cooperative	Corporation	Partnership	Public/govt. owned & controlled corporations	Sole proprietary
	Region 13	1		1	1					1					1	
	BARMM	0														
Total		66	40	26	11	55	4	27	3	32	0	0	0	0	66	0
Producer Organization																
Luzon	CAR	3	8	1	2	11			12	1	8	5				
	Region I	13	1	5		1			1			1				
	Region 2	1	1	1	1	1		1	1			1	1			
	Region 4-A	2	4	2	2	4			4	2	4	2				
Visayas	Region 6	6	9	5		14			13	1	21	1	1			
Mindanao	Region 10	14	13	12	2	23		1	19	5	16	8	1			
	Region 11	25	9	15	4	20			19	5	18	6				
	Region 12	24	13	17	2	28			25	5	24	6				
	Region 13	30	5	7	1	12			12	1	1	3				
	BARMM	13	2	1		3			2	1		3				
Total		131	65	66	14	117		2	108	21	92	36	3			

ANNEX 4: TEAM COMPOSITION

CBSG deployed a six-person evaluation team to implement this final evaluation of PhilCAFE (See below). Between May and March 2024, the team undertook background research and fieldwork, as well as data analysis and reporting.

Name	Role	Responsibility
Joyanta Roy	Team Leader and Evaluation Expert	The Team Leader and evaluation expert will ensure the final evaluation's overall quality and compliance, including input to all qualitative and quantitative activities. The project manager serves as the point of contact for communication and coordination with ACDI/VOCA. He submits all deliverables and maintains contract compliance.
Joel Flores	Survey Specialist and In-Country Project Manager	He acts as a survey specialist and In-country project manager. He leads the implementation of the project field activities, provides technical assistance to the field team, reviews data collection tools, and ensures data quality. He also provides and facilitates logistical support to CBSG team members while visiting the Philippines.
Mamta Mehar	Women and Gender Specialist	The data analysis and gender expert provides technical guidance to the RLR team on data quality. She also provides expert support to tool design and acts as in-charge for data analysis, including quasi-experimental analysis support for the team leader.
Abigail Quijano	Field Manager	Under the direct guidance of the survey specialist, she implements data collection activities, including training data collection staff. She provides the required support to the team leader to implement the outcome harvest process. She acts as the day-to-day coordinator with the project team and reviews data collection tools and CAPI scripting of the survey questionnaire.
Aminur Rahman	Qualitative Data Analyst	Mr. Rahman performs qualitative data analysis and contributes to qualitative data coding, analysis, and outcome harvest reporting.
Shafia Tahmida	Data Analyst	She is a Statistician by training and the Bangladesh lead. She provides data quality assurance services at national and international levels and coordinates with data analysis specialists. She attends training programs and observes data collection and quality. She also conducts inferential statistical tests and DID analysis.

ANNEX 5: PHILCAFE PARTICIPANTS/BENEFICIARIES

Table 13: Project reach of individual participant groups by region based on PhilCAFE routine monitoring data.

Region	Type of Individual Participant Group					
	Civil Society	Govt. Agency	Laborer	Private Sector	Farmer/ Producer	Total
BARMM	2	25	6	9	128	**170**
CAR	121	51	25	75	822	**1,094**
NCR (National Capital Region)	16	10	14	46		**86**
Region I	3	9	1	12	426	**451**
Region 2	3	35		17	98	**153**
Region 3				4	4	**8**
Region 4-A	63	9	1	62	489	**624**
Region 4-B				1		**1**
Region 6	16	46	6	16	470	**554**
Region 7		1	4	13	2	**20**
Region 8				1		**1**
Region 9	1	3	1	9	1	**15**
Region 10	112	155	32	486	2,568	**3,353**
Region 11	270	244	173	776	2,866	**4,329**
Region 12	70	78	10	191	1,700	**2,049**
Region 13	3	36	1	161	1,528	**1,729**
Total	**680**	**702**	**274**	**1,879**	**11,102**	**14,637**

Table 14: Project reach of firm and organization by region based on PhilCAFE routine monitoring data.

Region	Firm/Organization Type				
	NGOs/Civil Societies	Private Sector (includes Universities and Colleges)	Producer Organizations	Public/Government Agencies (including SUCs)	Total
BARMM	1	2	11	3	17
CAR	3	5	30	17	55
NCR	2	19	1	4	26
Region 1		1	1	3	5
Region 2		3	2	6	11
Region 3			1		1
Region 4-A	1	5	10	6	22
Region 4-B		1			1
Region 6	2	10	32	11	55
Region 7		6		1	7
Region 9		2			2
Region 10	8	12	49	32	101
Region 11	4	38	49	34	125
Region 12	7	13	50	24	94
Region 13	2	3	34	6	45
Total	30	120	270	147	567

ANNEX 6: ANALYSIS TABLES

Table 15: PhilCAFE project indicators final evaluation values.

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
4	FFPr Standard Indicator 18	Outcome	FFPr SO1 and SO2	Value of annual sales of farms and firms receiving USDA assistance (USD)	Value of Sales (US$)	**$6,661,451**	**$ 19,728,000**	**$ 21,058,640**
				Cherries		$ 1,245,213	$ 3,687,721	**$ 9,097,867**
				Smallholder Producers		$1,102,888	$ 3,266,223	**$ 4,935,219**
				Male		$ 667,960	$ 1,978,176	**$ 2,721,626**
				Female		$ 434,929	$ 1,288,050	**$ 2,213,593**
				Mixed		0	0	
				15-29		$ 75,563	$ 223,781	**$ 528,192**
				30+		$ 1,027,325	$ 3,042,441	**$ 4,407,026**
				Mixed Age		0	0	
				Non-Smallholder Producers		$ 4,592	$ 13,600	**$ 157,846**
				Male		0.00	$ 8,160	**$ 18,417**
				Female		$ 4,592	$ 5,440	**$ 139,429**
				Mixed		0	0	
				15-29		0	0	
				30+		$ 4,592	$ 13,600	**$ 157,846**
				Mixed Age		0	0	

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Microenterprise		$ 27,107	$ 80,276	**$ 1,638,123**
				Male		0	0	**$ 89,722**
				Female		0	0	**$ 67,332**
				Mixed		$ 27,107	$ 80,276	**$ 1,481,070**
				15-29		0	0	
				30+		0	0	**$ 157,053**
				Mixed Age		$ 27,107	$ 80,276	**$ 1,481,070**
				Small and Medium Enterprise		$ 110,626	$ 290,744	**$ 2,137,560**
				Male		0	0	
				Female		0	0	**$ 12,835**
				Mixed		$ 110,626	$ 290,744	**$ 2,124,725**
				15-29		0	0	
				30+		0	0	**$ 12,377**
				Mixed Age		$ 110,626	$ 290,744	**$ 2,124,725**
				Large Enterprise or Corporation		0	$ 36,877	**$ 229,120**
				Male		0	0	
				Female		0	0	
				Mixed		0	$ 36,877	**$ 229,120**
				15-29		0	0	
				30+		0	0	

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Mixed Age		0	$ 36,877	**$ 229,120**
				Green Coffee Beans		$ 5,416,237	$ 16,040,279	**$ 11,946,198**
				Smallholder Producers		$ 4,136,222	$ 12,249,493	**$ 2,393,031**
				Male		$ 2,422,488	$ 7,174,241	**$ 1,281,767**
				Female		$ 1,713,734	$ 5,075,251	**$ 1,111,264**
				Mixed		0	0	
				15-29		$ 534,532	$ 1,592,960	**$ 458,191**
				30+		$ 3,601,690	$ 10,733,394	**$ 1,934,840**
				Mixed Age		0	0	
				Non-Smallholder Producers		$ 737,780	$ 2,184,948	**$ 18,404**
				Male		$ 565,995	$ 1,676,204	**$ 9,039**
				Female		$ 171,785	$ 508,744	**$ 9,365**
				Mixed		0	0	
				15-29		$ 8,460	$ 25,054	
				30+		$ 729,320	$ 2,159,894	**$ 18,404**
				Mixed Age		0	0	
				Microenterprise		$ 311,473	$ 922,433	**$ 9,147,622**
				Male		0	0	**$ 743,009**
				Female		0	0	**$ 78,086**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Mixed		$ 311,473	$ 922,433	**$ 8,326,527**
				15-29		0	0	**$ 20,092**
				30+		0	0	**$ 801,004**
				Mixed Age		$ 311,473	$ 922,433	**$ 8,326,527**
				Small and Medium Enterprise		$ 230,762	$ 523,003	**$ 26,412**
				Male		0	0	**$ 22,751**
				Female		0	0	**$ 56,358**
				Mixed		$ 230,762	$ 523,003	**$ 671,336**
				15-29		0	0	
				30+		0	0	**$ 79,109**
				Mixed Age		$ 230,762	$ 523,003	**$ 671,336**
				Large Enterprise or Corporation		0	$ 160,403	**$ 360,729**
				Male		0	0	
				Female		0	0	
				Mixed		0	$ 160,403	**$ 360,729**
				15-29		0	0	**$ -**
				30+		0	0	
				Mixed Age		0	$ 160,403	**$ 360,729**
				Other Products				**$ 14,575**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
5	FFPr Standard Indicator 19	Outcome	FFPr SO1 and SO2	Volume of commodities sold by farms and firms receiving USDA assistance (in MT)	Volume (metric tons)	**10,539**	**9,864**	**11,045**
				Cherries		5,929	4,932	**9,091**
				Green Coffee Beans		4,610	4,932	**5,067**
				Other Products				**1,163**
6	FFPr Standard Indicator 20	Outcome	FFPr SO1 and SO2	Number of Jobs attributed to USDA assistance	Number of Jobs	0	**8,500**	**36,939**
				Full-time Employment		0	935	**22,569**
				Male		0	682	**17,615**
				Female		0	253	**4,725**
				Other Gender				**229**
				Part-time Employment		0	7,565	**14,370**
				Male		0	6,886	**11,042**
				Female		0	679	**3,268**
				Other Gender				**60**
7	Custom Indicator	Outcome	FFPr SO1 and SO2	Value of coffee exported from the Philippines (in USD)	Value of Sales (US$)	**0**	**$ 362,060**	**$ 259,837**
8	FFPr Standard	Outcome	FFPr 1 Increased Agricultural	Yield of targeted agricultural commodities among program	MT/hectare	**0.45**	**0.9**	**0.50**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
	Indicator 1		Productivity	participants with USDA assistance (in MT-GCB)				
				Smallholder			1.0	**0.50**
				Male			0.9	**0.50**
				Female			1.0	**0.50**
				15-29			0.9	**0.50**
				30+			1.0	**0.50**
				Non-smallholder			0.4	**0.47**
				Male			0.4	**0.48**
				Female			0.4	**0.45**
				15-29			0.4	
				30+			0.4	**0.47**
9	FFPr Standard Indicator 2	Outcome	FFPr 1.1 Improved Quality of Land and Water Resources	Number of hectares under improved management practices or technologies that promote improved climate risk reduction and/or natural resources management with USDA assistance	Hectares	**2,330**	**4,453**	**5,686**
10	FFPr Standard	Outcome	FFPr 1.2 increased Use of Improved	Number of hectares under improved management practices or technologies with USDA assistance	Hectares	**13,504**	**8,905**	**7,935**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
	Indicator 3		Agricultural Techniques and Technologies/ FFPOr 1.3 Improved Farm Management	Crop Land		9,435	6,222	**4,953**
				Conservation/Protected Area		2,638	1,739	**2,982**
				Farm Diversification		3,134	2,067	**4,315**
				Crop genetics		9,287	6,124	**4,083**
				Pest management		9,715	6,406	**3,838**
				Disease Management		4,309	2,842	**3,895**
				Soil-related Fertility and Conservation		2,377	1,567	**3,848**
				Harvesting & PHH		13,028	8,591	**5,291**
11	FFPr Standard Indicator 4	Outcome	FFPr 1.2 increased Used of Improved Agricultural Techniques and Technologies/ FFPOr 1.3 Improved Farm Management	Number of individuals in the agriculture system who have applied improved management practices or technologies with USDA assistance	Number of individuals	**11,426**	**8,905**	**9,292**
				Smallholder Producers		11,203	8,120	**8,312**
				Farm Diversification		3,802	2,755	**5,737**
				Crop genetics		6,716	4,868	**3,849**
				Pest management		3,278	2,376	**3,047**
				Disease Management		3,385	2,454	**2,804**
				Soil-related Fertility and Conservation		3,197	2,317	**3,262**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Harvesting & Post-harvest Handling		11,203	8,120	**4,249**
				Male		6,316	4,578	**4,578**
				Female		4,887	3,542	**3,734**
				15-29		1,481	1,073	**1,059**
				30+		9,722	7,047	**7,254**
				Non-Smallholder Producers		223	161	**300**
				Farm Diversification		76	55	**229**
				Crop genetics		134	97	**186**
				Pest management		65	47	**229**
				Disease Management		67	49	**157**
				Soil-related Fertility and Conservation		64	46	**300**
				Harvesting & PHH		223	161	**229**
				Male		144	104	**200**
				Female		79	55	**100**
				15-29		13	9	**29**
				30+		210	152	**272**
				People in government		0	267	**135**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Farm Diversification		0	91	**93**
				Crop genetics		0	144	**83**
				Pest management		0	78	**62**
				Disease Management		0	81	**57**
				Soil-related Fertility and Conservation		0	76	**62**
				Harvesting & PHH		0	267	**47**
				Male		0	173	**73**
				Female		0	91	**62**
				15-29		0	16	**52**
				30+		0	251	**83**
				People in firms		0	178	**218**
				Farm Diversification		0	60	**124**
				Crop genetics		0	87	**135**
				Pest management		0	42	**88**
				Disease Management		0	44	**98**
				Soil-related Fertility and Conservation		0	41	**67**
				Harvesting & Post-harvest Handling		0	145	**124**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
				Male		0	94	**109**
				Female		0	49	**109**
				15-29		0	9	**62**
				30+		0	137	**155**
				People in civil society		0	145	**327**
				Farm Diversification		0	54	**249**
				Crop genetics		0	82	**212**
				Pest management		0	43	**176**
				Disease Management		0	44	**171**
				Soil-related Fertility and Conservation		0	54	**78**
				Harvesting & PHH		0	139	**223**
				Male		0	89	**176**
				Female		0	44	**150**
				15-29		0	24	**181**
				30+		0	136	**145**
18	Custom Indicator	Output	FFPr 1.2.4 Increased knowledge regarding	Number of farmers able to mention at least three farm management practices	Number of farmers	**5,324**	**6,850**	**4,507**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
			farm Management					
22	Custom Indicator	Outcome	FFPr 2.1 Increase Value Added to Post-Production Agricultural Products	Number of farmers and firms adding value to post-production agricultural products	Number of farmers and firms	**0**	**420**	**4,765**
25	Custom Indicator	Output	FFPr 2.1.2 Increased efficiency of Post-Production Processes	Number of Supported POs and Enterprises Reporting Increased Efficiency in their Post-Production Processes	Number of organizations	**0**	**220**	**294**
26	Custom Indicator	Output	FFPr 2.1.2.1 Increased Use of Improved Post-Production, Processing, and Handling Practices	Number of POs and enterprises who are using at least three improved practices like dehulling, fermentation, pulping, drying, proper storage, etc., for coffee	Number of Firms	**0**	**75**	**188**
28	Custom Indicator	Output	FFPr 2.1.2.2 Improved Post-Harvest Infrastructure	Number of enterprises that invest in improved post-harvest infrastructure (including grant support).	Number of enterprises	**0**	**60**	**100**

Indicator No.	Indicator Type	Indicator Level	Result #	PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	Baseline Values	LOP Target (Total)	Final Eval Data
29	Custom Indicator	Output	FFPr 2.2.1 Improved Marketing of Agricultural Products	Number of enterprises using improved media in marketing products	Number of enterprises	**0**	**200**	**223**
35	Custom Indicator	Output	FFPr 1.4.3 & 2.4.3: Increased Access to Market Information	Number of agricultural producers reporting access to at least one source of current agricultural market information.	Number of producers	**0**	**10,960**	**9,028**
36	Custom Indicator	Outcome	FFPr 1.4.4 & 2.4.4: Improved Capacity of Key Groups in the Agriculture Production Sector	Number of private enterprises, producer organizations, water user associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied improved techniques and technologies as a result of USDA assistance (FTF).	Number of organizations	**0**	**200**	**240**
				Producer organizations		0	45	**181**
				Private enterprise		0	155	**59**

Farmers Survey Tables

Table 16: Percentage of farmers who confirmed their participation or received assistance due to PhilCAFE, per type of intervention.

Region	Technical Assistance or Training		Some Form of Financing or Resources		Participated in any event	
	Yes	%	Yes	%	Yes	%
CAR	36	43.05	3	3.25	55	71.64
Region 1	6	100	1	14.73	3	48.06
Region 2	0	0	0	0	7	100
Region 4-A	51	99.43	28	57.19	48	95.01
Region 6	33	98.35	8	47.54	25	96.04
Region 10	179	95.51	63	33.44	162	87.01
Region 11	115	56.42	71	36.99	141	72.31
Region 12	147	99.45	5	3.93	108	74.27
Region 13	96	95	39	37.68	61	55
BARMM	12	100	0	0	9	92.79
Overall	675	82.45	218	29.22	619	77.22

Table 17: Distribution of survey respondents by gender and by region, Participant (n=824) and Comparison (n=349)

Type	Region		Adult			Youth			Overall	
			Total	Female	Male	Total	Female	Male	f	%
Participant	CAR		70	36	34	8	7	1	78	8.61
	Region 1		6	3	3	-	-	-	6	0.56
	Region 2		6	3	3	1	1	0	7	0.18
	Region 4-A		46	25	21	6	3	3	52	3.49
	Region 6		31	15	16	4	2	2	35	10.79
	Region 10		158	79	79	29	14	15	187	22.31
	Region 11		171	108	63	27	14	13	198	24.21
	Region 12		135	83	52	13	6	7	148	16.16
	Region 13		95	37	58	6	4	2	101	12.44
	BARMM		11	6	5	1	0	1	12	1.26
	Overall	f	729	395	334	95	51	44	824	100
		%	78.49	51.52	48.48	21.51	58.29	41.71	-	-
Comparison	Region 4-A		88	48	40	-	8	1	88	25.21
	Region 6		30	15	15	-	5	1	30	8.6

	Region 11		67	32	35	13	2	11	80	22.92
	Region 12		131	49	82	20	9	11	151	43.27
	Overall	f	316	144	172	33	11	22	349	100
		%	90.54	45.57	54.43	9.46	33.33	66.67	-	-

Table 18: Average age of survey respondents by region, Participant (n=824) and Comparison (n=349)

Region	Mean	SD	SE(Mean)	Region	Mean	SD	SE(Mean)
Participant	47.14	12.15	0.42	Comparison	51.12	13.58	0.73
CAR	49.32	9.60	1.09	Region 4-A	65.34	9.79	1.04
Region 1	58.50	10.63	4.34	Region 6	63.13	8.87	1.62
Region 2	47.71	8.88	3.36	Region 11	46.55	11.10	1.24
Region 4-A	47.77	13.33	1.85	Region 12	42.87	8.04	0.65
Region 6	47.77	14.84	2.51	-	-	-	-
Region 10	45.81	10.51	0.77	-	-	-	-
Region 11	46.55	11.53	0.82	-	-	-	-
Region 12	45.26	14.35	1.18	-	-	-	-
Region 13	50.73	12.45	1.24	-	-	-	-
BARMM	46.08	8.95	2.58	-	-	-	-

Table 19: Distribution of respondents by marital status and by region, Participant (n=824) and Comparison (n=349)

Marital Status	Region										Overall	
	CAR	Region 1	Region 2	Region 4-A	Region 6	Region 10	Region 11	Region 12	Region 13	BARMM	f	%
Participant	78	6	7	52	35	187	198	148	101	12	824	100
Single	4	0	0	10	4	16	19	7	6	0	66	10.01
Currently married	71	4	7	38	19	147	160	114	87	12	659	78.35
Living with a partner	1	0	0	0	10	10	11	5	2	0	39	4.47
Separated	0	0	0	2	2	4	2	5	0	0	15	1.88
Widowed	2	2	0	2	0	9	6	17	6	0	44	5.2
No answer	0	0	0	0	0	1	0	0	0	0	1	0.09
Comparison	-	-	-	88	30	-	80	151	-	-	349	100
Single	-	-	-	0	0	-	8	4	-	-	12	3.44
Currently married	-	-	-	70	13	-	58	144	-	-	285	81.66

Marital Status	Region										Overall	
	CAR	Region 1	Region 2	Region 4-A	Region 6	Region 10	Region 11	Region 12	Region 13	BARMM	f	%
Living with a partner	-	-	-	0	13	-	8	0	-	-	21	6.02
Separated	-	-	-	0	0	-	1	0	-	-	1	0.29
Widowed	-	-	-	18	3	-	5	3	-	-	29	8.31
No answer	-	-	-	0	1	-	0	0	-	-	1	0.29

Table 20: Distribution of respondents by ethnicity and by region, Participant (n=824)

Ethnic Group	Region, *f*										Overall	
	CAR	Region 1	Region 2	Region 4-A	Region 6	Region 10	Region 11	Region 12	Region 13	BARMM	*f*	%
Bisaya	0	0	0	1	0	53	96	4	25	5	184	25.45
Boholano	0	0	0	0	0	4	3	0	16	0	23	2.02
Bol-Anon	0	0	0	0	0	1	1	0	7	1	10	0.95
Cebuano	0	0	0	0	0	22	21	5	20	0	68	8.46
Dabawenyo	0	0	0	0	0	0	14	0	1	0	15	1.59
Higaonon	0	0	0	0	0	64	2	0	0	0	66	7.96
Ilocano	19	6	0	0	0	1	1	0	0	0	27	3.23
Ilonggo	0	0	0	0	33	6	0	16	15	2	72	15.74
Kapampangan	0	0	0	0	0	0	0	0	1	0	1	0.15
Manobo	0	0	0	0	0	2	44	5	11	0	62	6.72
Tagalog	0	0	0	51	0	0	0	0	0	0	51	3.39
Tausug	0	0	0	0	0	7	0	0	0	1	8	0.9
Others	58	0	5	0	2	27	15	117	5	3	232	23.14
Don't know	1	0	0	0	0	0	1	1	0	0	3	0.21
Refused	0	0	2	0	0	0	0	0	0	0	2	0.09

Table 21: Distribution of respondents by ethnicity and by region, Comparison (n=349)

Ethnic group	Region, f				Overall	
	Region 4-A	Region 6	Region 11	Region 12	*f*	%
Bicolano	1	0	0	0	1	0.29
Bisaya	1	0	24	0	25	7.16
Cebuano	0	3	7	10	20	5.73
Dabawenyo	0	0	7	0	7	2.01
Ilocano	1	0	0	0	1	0.29
Ilonggo	1	26	0	11	38	10.89
Kapampangan	0	1	0	0	1	0.29
Manobo	0	0	36	83	119	34.1
Tagalog	84	0	0	0	84	24.07
Others	0	0	6	45	51	14.61
Refused	0	0	0	2	2	0.57

Table 22: Average household annual income (PHP) and share of coffee to total income (%), Participant (n=824)

Income Sources	Region										Overall		
	CAR	1	2	4-A	6	10	11	12	13	BARMM	Mean	SD	SE (Mean)
On-farm Income (Annual)													
Products from crop farming/production and/or processing	14,875.7	21,945.8	3,189.6	9,092.4	15,791.2	7,912.3	10,471.4	8,852.1	7,138.7	16,205.6	9,852.3	8,989.2	313.2
Livestock and poultry raising	1,717.5	1,908.3	7,033.6	5,278.2	4,596.4	2,643.6	2,591.8	990.3	564.6	6,808.0	2,333.5	6,256.5	218.0
Average Annual On-farm Income	199,118.5	286,250.0	122,678.6	172,447.0	244,650.5	126,670.8	156,758.1	118,108.1	92,438.9	276,162.6	146,229.8	136,984.5	4,772.1
Off-farm Income (Annual)													
Farm labor for other farms doing land preparation, input application, weeding, harvesting, hauling, and others	551.9487	4007.5	0	125.5096	916	3825.096	696.2525	688.5473	1682.13	1774.75	1519.334	9125.433	317.8995
Average Annual Off-farm Income	6623.385	48090	0	1506.115	10992	45901.15	8355.03	8262.567	20185.56	21297	18232.01	109505.2	3814.794
Non-Farm Income (Annual)													
Business activity	0	1335.833	0	1871.635	1766.571	710.8797	260.2273	0	226.7327	667.9167	464.253	2770.822	96.52615

Carpenter, mason, mechanic	264.2308	0	2551.714	0	196.2857	263.2888	2229.28	742.7027	2290	0	1064.544	3177.432	110.6911
Household help, store helper	58.71795	2862.5	0	110.0962	719.7143	328.8048	72.86364	263.0405	124.703	0	218.5783	1314.331	45.78688
Motorcycles, jeeps, buses	0	0	0	308.2692	98.14286	266.3503	828.101	750.9807	793.5643	0	515.2083	1893.326	65.95713
Government or private	1570.705	1145	0	2312.019	294.4286	716.3904	231.3131	762.0439	642.7871	0	749.2524	4150.447	144.5877
Professional services (as doctor, teacher, lawyer, accountant, etc.)	1761.538	0	0	4535.961	0	0	0	324.9324	748.2178	0	603.0704	6783.83	236.3259
Remittances	146.7949	6679.167	0	110.0962	0	140.8289	0	0	90.69307	0	112.5546	1284.055	44.73218
Pension, relief (assistance from government such as 4Ps)	0	0	0	88.07692	1661.886	0	57.82828	266.9088	232.401	257.625	170.2215	1822.855	63.50217
Other sources not mentioned	293.5898	0	0	5874.731	65.42857	388.8102	404.798	350.4628	587.2376	0	721.7391	3430.782	84.4937
Average Annual Non-farm Income	49146.92	144270	30620.57	182530.6	57629.48	33784.23	49012.94	41532.86	68836.04	11106.5	55433.06	119124.5	4149.9
Total Annual Income	254888.8	478610	153299.1	356483.8	313272	206356.1	214126	167903.5	181460.5	308566.1	219894.8	196527.1	6846.346

Table 23: Average household annual income (PHP) and share of coffee to total income (%), Comparison (n=349).

Income Sources	Region				Overall		
	4-A	6	11	12	Mean	SD	SE (Mean)
On-farm Income (Annual)							
Products from crop farming/production and/or processing	10543.75	13346.67	6999.3	15472.67	12104.78	9470.631	506.9512
Livestock and poultry raising	1592.5	2656.5	1207.938	1415.066	1519.04	3130.475	167.5705
Average Annual On-farm Income	145635	192038	98486.85	202652.8	163485.8	120829.9	6467.876
Off-farm Income (Annual)							
Farm labor for other farms doing land preparation, input application, weeding, harvesting, hauling, and others	113.75	0	614.075	127.4834	224.6017	990.1382	53.00088
Average Annual Off-farm Income	1365	0	7368.9	1529.801	2695.221	11881.66	636.0106
Non-farm Income (Annual)							
Business activity	411.25	1309	798.875	0	399.341	2091.341	111.9469
carpenter, mason, mechanic	910	333.6667	2713.288	214.1722	972.7593	2689.441	143.9625
household help, store helper	0	308	867.6937	0	225.3739	1071.408	57.35117
motorcycles, jeeps, buses	323.75	243.8333	481.25	601.7219	473.2521	1801.047	96.40781
government or private	5241.25	256.6667	650.65	50.99338	1514.848	4865.653	260.4524
Professional services (e.g., doctor, teacher, lawyer, accountant, etc.)	603.75	0	0	0	152.235	1598.283	85.55415
Remittances	367.5	89.83334	0	0	100.3868	1231.611	65.92665
Pension, relief (assistance from government such as 4Ps)	188.125	446.6	356.125	0	167.4585	907.6321	48.58443
Other sources not mentioned	262.5	0	134.75	173.3775	172.0917	1120.23	59.96456
Average Annual Non-farm Income	99697.5	35851.2	72031.58	12483.18	50132.96	75709.62	4052.643

Total Annual Income	246697.5	227889.2	177887.3	216665.8	216314	136786.6	7322.02

Table 24: Average monthly expenditure (in PHP) of household, by region, participant (n=824)

Monthly Expenditures	Region										Overall		
	CAR	1	2	4-A	6	10	11	12	13	BARMM	Mean	SD	se (mean)
Food	3,972	6,167	1,743	7,037	4,794	3,228	3,374	4,246	3,456	4,000	3,871	2621.314	3691.934
Education	1,056	2,500	500	1,899	1,386	1,323	483	1,203	543	3,250	1,047	2244.816	893.8412
Water	650	83	357	443	251	362	137	220	129	1,042	198	425.8575	169.1885
Electricity	743	850	900	1,427	849	521	468	170	354	1,479	537	589.1567	496.2844
Transportation	517	1,167	357	2,110	1,706	1,067	596	1,203	850	2,958	1,015	1657.433	901.6904
Clothing	225	767	357	112	837	841	477	358	291	2,708	518	828.2535	460.8769
Communications (including mobile phone and internet)	253	650	29	1,296	734	1,147	169	212	216	4,292	570	1349.911	477.568
House Rental/Amortization	-	1500	-	-	1800	1500	-	11000	-	2500	1960	53.9397	0.9839795
Leisure/Entertainment	240	183	-	1,337	3,186	134	148	74	140	-	260	3711.059	6.493377
Other expenses, specify	6,864	12,417	4,307	15,779	14,687	8,652	5,822	7,523	5,949	19,754	8,127	8095.757	7573.522

Table 25:Average monthly expenditure and savings (in PHP) of household, by region, Comparison (n=349)

Monthly Expenditures	Region				Overall		
	4-A	6	11	12	Mean	Sd	SE (Mean)
Food	5306	4567	4934	5130	5,081	3745.734	5480.735
Education	208	1700	459	608	567	1476.959	724.3019
Water	430	118	134	93	190	220.1713	212.5544
Electricity	1394	828	349	534	734	667.3801	804.6969
Transportation	1191	1327	888	1938	1,456	1178.571	1583.396

Monthly Expenditures	Region				Overall		
	4-A	6	11	12	Mean	Sd	SE (Mean)
Clothing	934	606	234	159	409	745.6577	487.18
Communications (including mobile phone and internet)	1182	550	182	91	427	689.3982	499.9883
House Rental/Amortization	23	133	0	20	26	232.23	50.38155
Leisure/Entertainment	248	520	13	20	119	382.0278	159.2962
Other expenses, specify	10940	11662	7243	8672	9,173	6080.341	9826.882

Table 26: Average total farm size, cultivated farm, and area planted devoted to coffee, by region, Participant (n=824) and Comparison (n=349)

Region	Total Farm Size (in ha)			Size of Cultivated Farm (in ha)			Farm Size Devoted to Coffee (in ha)		
	Mean	SD	SE(Mean)	Mean	SD	SE (Mean)	Mean	SD	SE (Mean)
Participant	1.539	1.077	1.466	1.300	0.894	1.239	0.900	0.695	0.853
CAR	0.540	0.823	0.011	0.453	0.638	0.008	0.310	0.474	0.006
Region 1	1.292	1.382	0.230	0.612	0.202	0.034	0.518	0.257	0.043
Region 2	0.137	0.112	0.016	0.069	0.022	0.003	0.054	0.012	0.002
Region 4-A	1.910	1.110	0.021	1.582	1.028	0.020	1.039	0.659	0.013
Region 6	2.011	1.290	0.037	1.603	0.993	0.028	1.080	0.764	0.022
Region 10	1.757	1.206	0.006	1.480	0.928	0.005	1.276	0.887	0.005
Region 11	1.451	0.689	0.003	1.218	0.617	0.003	0.669	0.390	0.002
Region 12	1.583	1.043	0.007	1.420	0.919	0.006	1.053	0.572	0.004
Region 13	1.731	1.104	0.011	1.423	0.907	0.009	0.774	0.529	0.005
BARMM	1.917	0.669	0.056	1.833	0.718	0.060	1.417	0.669	0.056
Comparison	2.607	1.853	0.09917	1.443	1.133	0.06062	1.003	0.785	0.0420
Region 4-A	2.209	1.4	0.016	0.968	0.804	0.009	0.779	0.77	0.009
Region 6	1.717	1.146	0.038	1.475	1.171	0.039	1.033	0.827	0.028
Region 11	2.162	1.719	0.021	1.436	1.125	0.014	0.501	0.294	0.004
Region 12	3.252	2.06	0.014	1.718	1.209	0.008	1.393	0.77	0.005

Table 27: Average number of Coffee Hills per coffee species, by region, Participant (n=824) and Comparison (n=349)

Region	Arabica	Robusta	Liberica	Excelsa	Overall		
					mean	sd	se(mean)
Participant	402.41	724.20	300.00	412.28	682.04	609.55	**21.23**
CAR	208.54	265.14	-	-	236.96	413.24	46.79
Region 1	80	395	-	-	408.33	335.82	137.09
Region 2	-	64.85	-	-	64.86	17.94	6.78
Region 4-A	381.30	884.86	300.00	457.56	803.71	693.07	96.11
Region 6	297.50	905.06	-	-	939.05	739.69	125.03
Region 10	539.44	877.84	-	50.00	952.45	721.46	52.75
Region 11	219.30	568.96	-	50.00	556.88	397.92	28.27
Region 12	419.47	1010.35	-	-	632.5	573.99	47.18
Region 13	50.00	691.11	-	-	684.76	504.74	50.224
BARMM	-	1239.5	-	-	1239.5	638.19	184.23
Comparison	228.7	582.6	385.3	317.3	630.5	588.9	31.5
Region 4-A	203.49	254.15	385.33	317.29	493.38	556.58	59.33
Region 6	650.00	494.97	-	-	585.67	586.04	107.00
Region 11	200.00	-	-	-	282.26	230.65	25.79
Region 12	500.00	-	-	-	903.81	615.81	50.11

Table 28: Average planting distance (in square meters) per coffee species, by region, Participant (n=824) and Comparison (n=349)

Region	Arabica (sq.m.)	Robusta (sq.m.)	Liberica (sq.m.)	Excelsa (sq.m.)	Overall (in sq.m.)		
					Mean	SD	SE(Mean)
Participant	5.71	5.97	4.00	3.95	6.56	1.93	0.002
CAR	6.00	6.00	-	-	6.00	2.48	0.009
Region 1	6.01	5.90	-	-	6.00	0.00	0.413
Region 2	-	6.00	-	-	6.35	1.94	0.000
Region 4-A	5.82	5.96	-	-	5.97	0.14	0.043
Region 6	5.85	5.95	-	-	6.03	0.09	0.054
Region 10	5.54	5.97	4.00	3.95	6.97	2.21	0.015
Region 11	6.01	5.97	-	-	6.64	1.90	0.006
Region 12	5.64	5.97	-	4.00	7.49	2.86	0.013
Region 13	6.01	5.96	-	4.00	6.24	1.23	0.001
BARMM	-	6.02	-	-	6.08	0.70	0.007
Comparison	11.86	8.91	16.00	12.27	12.08	7.89	0.02
Region 4-A	12.40	11.59	16.00	12.27	14.45	7.71	0.09
Region 6	4.75	5.72	-	-	5.85	4.18	0.139
Region 11	6.00	8.95	-	-	9.03	0.76	0.010
Region 12	9.00	8.30	-	-	8.30	1.83	0.012

Table 29: Average age of coffee plants (in years) per species, by region, Participant (n=824) and Comparison (n=349)

Region	Arabica (in years)	Robusta (years)	Liberica (years)	Excelsa (years)
Participant	5.46	9.18	20.00	15.69
CAR	5.52	4.32	-	-
Region 1	8.00	22.50	-	-
Region 2	-	4.43	-	-
Region 4-A	5.95	10.24	20.00	16.21
Region 6	11.50	17.14	-	-
Region 10	4.65	4.14	-	13.00
Region 11	6.85	12.07	-	10.00
Region 12	5.57	8.61	-	-
Region 13	5.50	9.61	-	-
BARMM	-	3.79	-	-
Comparison	27.11	17.91	33.33	24.22
Region 4-A	28.1	27.2	33.3	24.2
Region 6	23.50	32.31	-	-
Region 11	10.00	21.25	-	-
Region 12	10.00	9.12	-	-

Table 30: Distribution of respondents who practice intercropping system, by region, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	88	736	86.15
CAR	9	69	89.24
Region 1	4	2	33.33
Region 2	2	5	97.83
Region 4-A	6	46	88.29
Region 6	3	32	59.93
Region 10	52	135	72.58
Region 11	2	196	99.16
Region 12	3	145	97.54
Region 13	7	94	90.89
BARMM	0	12	100
Comparison	5	344	98.57
Region 4-A	1	87	98.86
Region 6	0	30	100
Region 11	2	78	97.5
Region 12	2	149	98.68

Table 31: Distribution of respondents who practice intercropping system, by region, Participant (n=824) and Comparison (n=349)

Region		Increased (%)	Decreased (%)	No Change (%)
Participant	CAR	3.33	0.0	96.67
	Region 1	14.73	14.73	70.55
	Region 2	0.0	0.0	100
	Region 4-A	10.4	0.0	89.6
	Region 6	2.09	3.44	94.47
	Region 10	35.77	0.89	63.34
	Region 11	10.75	7.85	81.4
	Region 12	8.41	9.36	82.23
	Region 13	32.78	17.55	49.67
	BARMM	92.79	0.0	7.21
	Overall	18.14	6.25	75.61
Comparison	Region 4-A	42.05	19.32	38.64
	Region 6	0.00	83.33	16.67
	Region 11	30.00	7.50	62.50
	Region 12	40.40	5.96	53.64
	Overall	34.96	16.33	48.71

Table 32: Average volume of production, yield per tree and hectare, per species, Participant (n=605)

Coffee production	Region										Overall		
	CAR	1	2	4-A	6	10	11	12	13	BARMM	mean	sd	se (mean)
As fresh cherries													
Total area harvested, in ha	.21	.29	.27	.48	.66	.62	.42	.59	.38	.75	.47	.369	.015
Number of trees harvested	187.6	216	152	388.5	631.1	526.2	318.7	441.5	355.3	605	394.58	384.5	15.68
Total volume of production, in kgs	348.3	432.5	670.28	634.3	1137.5	881.6	475.9	788.04	511.6	1011.5	638.59	717.7	29.27
Yield per tree, in kgs	1.7	1.93	1.27	1.65	1.93	1.66	1.57	1.77	1.50	1.71	1.63	.515	.02
Yield per ha, in kgs	2244.7	2854.1	2446.9	1249.3	1332	1264.24	1354.06	1433.20	1348.79	1454.66	1423.68	1336.246	54.50
As dried cherries													
Total area harvested, in ha	.5	.12	0	.42	.58	.59	.34	.609	.30	.83	.45	.48	.02
Number of trees harvested	445	176.6	0	668.7	763.8	723.7	272.7	923.9	343.2	642	524.7	469.6	34.1
Total volume of production, in kgs	239.5	115.3	0	640.6	362.3	500.6	148.7	295.0	165.6	216.6	299.4	359.4	26.1
Yield per tree, in kgs	.55	.683	0	.937	.559	.771	.598	.397	.478	.338	.606	.441	.032
Yield per ha, in kgs	30	30153.33	0	985.41	188.44	4202.6	2233.03	3233.03	5406.4	2407.4	8669.4	6591.356	483.30
As green coffee bean													

Coffee production	Region										Overall		
	CAR	1	2	4-A	6	10	11	12	13	BARMM	mean	sd	se (mean)
Total area harvested, in ha	.33	.125	.05	.095	.305	.560	.014	.225	.03	.722	.244	.451	.024
Number of trees harvested	402.7	285	65	333.3	583	690.9	175	633	535	637.5	611.1	480.1	46.19
Total volume of production, in kgs	158.7	335	32	268.6	381.6	347.1	75	196.6	240	150	302	305.5	29.3
Yield per tree, in kgs	.546	1.1	.49	.738	.638	.526	.415	.316	.771	.260	.534	.291	.028
Yield per ha, in kgs	447.5	260	640	199.16	280.13	362.10	150	93.33	66.33	216.66	329.41	282.985	27.23
As parchment													
Total area harvested, in ha	.182	-	.05	.210	.034	.168	.012	-	.017	.222	.084	.246	.013
Number of trees harvested	485	-	65	298.9	1100	798.4	165	-	356	500	538.46	463.2	66.1
Total volume of production, in kgs	244.37	-	5	200	962	365.2	72.5	-	499	150	281.7	250.7	35.82
Yield per tree, in kgs	.5	-	.07	.754	.875	.495	.915	-	.714	.291	.587	.392	.055
Yield per ha, in kgs	568.75	-	100	470.13	962	450	450	-	50	150	458.44	311.405	44.48

Table 33: Average volume of production, yield per tree and hectare, per species, from October 2022 to June 2023, Comparison (n=309)

Coffee production	Region				Overall		
	4-A	6	11	12	mean	sd	Se (mean)
As fresh cherries							
Total area harvested, in ha	.47	.60	.26	1.40	.70	0.6	.05
Number of trees harvested	358.9	230.3	135.8	627.27	356.45	1,185.9	30.12
Total volume of production, in kgs	647.04	236.83	86.84	673.3	457.64	476.8	25.77
Yield per tree, in kgs	2.16	1.1	.95	1.34	1.49	1.9	.02
Yield per ha, in kgs	3926.17	524.08	631.22	556.87	1712.8	972.6	54.50
As dried cherries							
Total area harvested, in ha	.53	.61	.28	1.33	.96	1.9	.02
Number of trees harvested	364.7	181.17	98.80	972.6	667.74	3,133.7	116.5
Total volume of production, in kgs	557.54	81	86.9	392.64	376.58	324.2	12.0
Yield per tree, in kgs	1.7	.63	1.06	.61	.9	0.9	0.0
Yield per ha, in kgs	3129.90	253.66	407.59	442.836	1088.8	1,024.4	171.58
As green coffee bean							
Total area harvested, in ha	.88	.63	.06	1.41	.87	.81	0.1
Number of trees harvested	250	173.88	45.83	776.17	391.11	705.49	70.4
Total volume of production, in kgs	187.5	116.66	36	166.82	131.15	117.11	21.8
Yield per tree, in kgs	0.8	.87	.84	.63	.77	0.4	0.0
Yield per ha, in kgs	330.83	202.96	920.47	130.35	282.56	464.85	50.4
As parchment							
Total area harvested, in ha	.57	-	.15	-	.451	.541	0.0
Number of trees harvested	285.42	-	85.33	-	225.4	188.56	30.4
Total volume of production, in kgs	166.8	-	75.4	-	139.38	118.51	8.4
Yield per tree, in kgs	0.6	-	.92	-	.705	.316	0.0
Yield per ha, in kgs	678.44	-	815.96	-	719.69	838.64	86.9

Table 34: Average volume of production and yield per hectare, converted to GCB, Participant (n=605) and Comparison (n=309)

Region	Volume of Production			Mean Firm Size	Yield Per Ha		
	Mean	SD	SE (mean)	Devoted to Coffee (Ha)	Mean	SD	SE (mean)
Participant	247.02	443.6	18.03	.70	500.03.88	222.0	19.2
CAR	187.32	357.5	55.16	.47	445.46	223.1	34.43
Region 1	299.58	332.4	135.71	.54	553.70	340.9	139.19
Region 2	16.68	15.34	5.80	.04	395.92	67.0	25.35
Region 4-A	563.51	379.13	68.09	.88	639.77	339.0	60.90
Region 6	688.4	507.7	88.19	1.4	491.42	541.3	94.24
Region 10	737.84	736.95	62.06	1.38	534.05	201.3	16.96
Region 11	151.36	89.0	6.46	.57	302.72	131.3	9.53
Region 12	296.03	230.8	35.21	.92	321.73	161.4	24.61
Region 13	242.12	170.5	17.06	.58	417.44	153.6	15.37
BARMM	624.83	297.51	85.89	2.08	300.39	67.1	19.38
Comparison	204.9	244.5	13.9	1.13	410.5	776.9	44.1
Region 4-A	306.9	337.3	35.9	.81	951.5	1232.9	131.4
Region 6	129.8	93.7	17.1	1.2	134.4	104.2	19.0
Region 11	70.8	85.8	13.4	.37	298.5	439.1	68.5
Region 12	196.7	202	16.5	1.5	178.9	246.1	20.1

[Note: Conversion: 1 kg dried cherries = 0.5 GCB; 6kgs fresh cherries = 1 GCB; 1 kg parchment = 0.8 kg GCB]

Table 35: Volume sold per type of buyer/market (domestic), in kgs, Participant (n=487) and Comparison (n=309)

Buyers/Market (Domestic)	Fresh Cherries	SE	Dried Cherries	SE	Green Coffee Bean	SE	Parchment	SE
Participant								
My Coop/Association	197.1	19.36	150.9	19.22	100.7	5.7	43.4	8.09
Other Coop/Association	246.6	152.23	892.9	810.73	50.5	32.77	63.3	41.70
Local Trader	165.98	15.41	135.84	25.9	20.19	6.03	0.07	.07
Coffee Shops/Stores/Cafe	226.86	90.41	57.33	20.14	25.00	10	14.29	-
Roasters	200	.02	150	50	-		-	
Processors	123	-	200	-	-		-	
Neighbors	279.25	73.30	100	89.49	118	61.06	187.56	94.80
Exporters or International Market	242.0		80.5		119.8		130.5	
Walk-in Clients	104.45	46.11	18.18	9.29	31.09	18.55	9.90	9.02
Comparison								
My Coop/Association	396.21	71.34	391.72	26.9	-		389.40	39.23
Local Trader	104.25	13.4	230.31	63.33	8.14	2.13	5.96	0.34
Coffee Shops/Stores/Cafe	150	19.23	150	47.35	-		-	
Roasters	25	2.45	-		-		-	
Neighbors	20	1.87	17.5	5.33	-		5	
Exporters or International Market	56	3.43	-		-		-	
Walk-in Clients	100.08	57.29	10.37	6.32	28.42	11.03	7.04	1.59

Table 36: Average selling price (in PHP) for farmers by coffee product by region, participant (n=605)

Coffee production	Region										Overall		
	CAR	1	2	4-A	6	10	11	12	13	BARMM	mean	sd	se (mean)
Fresh Cherries	70.2	65	65	75.214	63.032	71.17	68.868	74.07	69.51	67.417	69.862	16.292	1.13
Dried Cherries	125	108.333	-	121.375	96.467	124.288	116.733	102	110.682	125.556	115.508	17.401	2.28
Green Coffee Beans	191.5	227.5	135	161.667	162.917	173.615	160	156.667	167.5	262.5	180.139	39.798	8.10
Parchment	158.75	-	175	159.6	155	159.158	162.5	-	150	165	159.653	10.822	2.63

Table 37: Average selling price (in PHP) for farmers by coffee product by region, comparison (n=304)

Coffee production	Region				Overall		
	4-A	6	11	12	mean	sd	Se (mean)
Fresh Cherries	59.5	30.5	46.35	52.485	49.048	12.108	1.08
Dried Cherries	109.804	83.941	100.905	109.111	106.369	14.142	.98
Green Coffee Beans	145	147.444	145.667	134.667	142.512	15.85	2.41
Parchment	115.229	.	141.133	.	123	27.832	3.9

Table 38: Adoption rate of technologies related to farm management practices, participant (n=824), and comparison (n=349)

Farm Management Practices	**Participant** Adoption Rate (%)	**Comparison Adoption Rate (%)**	Difference	SE
Processing	38.11	18.62	-.1948215***	.0268421
Recording	9.71	31.81	.2209642***	.0269789
Financial Planning	15.29	8.60	-.0669527***	.0195532
Use of Information/ Communication Technology	9.83	8.88	-.0094758^{NS}	.0184249
Marketing/Trading	15.66	32.66	.1700942***	.0281154

Accounting	3.28	0.86	-.024171*	.0079298
Human Resources	25.49	13.18	-.1230492***	.0236295

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 39: Farm Management Practices copied/applied by other farmers, Participant (n=824)

Region		Farm Management Practices, f							
		Processing	Recording	Financial Planning	Use of ICT	Marketing/Trading	Accounting	Human Resources	Others
CAR		57	19	16	5	8	4	4	14
Region 1		3	0	0	1	1	1	1	0
Region 2		7	0	0	0	0	0	0	0
Region 4-A		-	10	16	33	11	0	14	7
Region 6		15	10	9	10	21	4	17	1
Region 10		130	7	36	2	17	0	33	1
Region 11		40	13	18	2	35	13	84	19
Region 12		11	9	10	21	4	3	38	89
Region 13		33	12	19	7	32	2	16	22
BARMM		9	0	2	0	0	0	3	0
Overall	f	314	80	126	81	129	27	210	153
	%	42.01	13.59	17.34	10.90	17.37	2.93	26.70	18.20
Difference	-.194***		.220***	-.0669***	-.009 NS	.170***	-.024*	-.123***	-.088***
SE	.0268421		.0269789	.0195532	.0184249	.0281154	.0079298	.0236295	.0208674

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 40: Percentage of respondents who know any farmer that is newly farming coffee from October 2022 to June 2023 because they have observed your coffee farm or you shared technologies, Participant (n=824)

Region	Know any farmer that is newly farming coffee	
	f	%
Participant	94	10.55
CAR	1	0.45
Region 1	0	0.00
Region 2	0	0.00
Region 4-A	25	48.24
Region 6	8	5.70
Region 10	17	9.47
Region 11	5	3.24
Region 12	27	19.78
Region 13	11	15.03
BARMM	0	0.00

Table 41: Percentage of farmers with access to warehouse/storage space, participant (n=824)

Region	Accessed dry storage facility		Size of dry storage facility accessed (in cubic meters)
	Yes (f)	Yes (%)	
CAR	0	0.00	-
1	0	0.00	-
6	3	5.89	63.3
10	4	29.38	22.5
11	0	0.00	100.0
12	1	47.21	100.0
BARMM	1	32.58	20.0
Overall	9	12.47	40.4

Table 42: Percentage of farmers who did purchase/access additional coffee equipment/facility, participant (n=824)

Region	Purchased or have access to additional coffee equipment or facility	
	f	%
CAR	0	-
Region 1	0	-
Region 2	0	-
Region 4-A	0	-
Region 6	0	-
Region 10	7	3.63
Region 11	0	-
Region 12	2	1.39
Region 13	1	0.82
BARMM	3	26.76
Participant (Overall)	13	1.53

Table 43: Average number (units) of coffee equipment/facility due to PhilCAFE facilitation, Participant (n=824)

Region	**Elevated Dryer**	**Mechanical Dryer**	**Fermentary**	**Pulpers**	**Dehullers**	**Warehouse / Storage**	**Others**
Region 10	3.85	2.14	3.28	2.14	-	2.5	-
Region 12	2.5	1.92	1.5	.7	-	-	1
Region 13	2	1.8	2.4	-	-	3.1	1
BARMM	1	.33	-	-	-	.33	-
Mean	2.7	1.65	2.15	2.07	-	2.97	1

Table 44: Percentage of farmers with difficulty accessing specific coffee inputs or technology in the past production year (October 2022 to June 2023), Participant (n=824) and Comparison (n=349)

Region	Accessed dry storage facility	
	f	%
Participant	64	9.90
CAR	3	1.74
Region 1	1	18.61
Region 2	0	0.00
Region 4-A	1	1.55
Region 6	3	4.89
Region 10	3	1.30
Region 11	15	6.52
Region 12	18	23.31
Region 13	20	27.57
BARMM	0	0.00
Comparison	42	12.03
Region 4-A	0	0.00
Region 6	8	26.67
Region 11	2	2.50
Region 12	32	21.19

Table 45: Percentage of farmers with access to inputs or technology for coffee farms due to PhilCAFE in the past production year (October 2022 to June 2023), Participant (n=138)

Region	Accessed dry storage facility	
	f	%
CAR	2	1.63
Region 1	1	18.61
Region 2	0	0.00
Region 4-A	28	57.34
Region 6	4	2.38
Region 10	37	20.76
Region 11	14	6.34
Region 12	33	19.42
Region 13	12	15.29
BARMM	7	60.36
Participant (Overall)	**138**	**14.47**

Table 46: Average cost of coffee production per hectare per year, in PHP, Participant (n=824)

Region		Average Monthly Expenditures								
		Planting materials	Paid labor	Fertilizers & Pesticides	Tools & Equip	Transport of materials and produce (kg)	Interest on loans (%).	Taxes (annual)	Others	Annual Cost/Ha.
CAR		757.14	5319.4	3235.55	11840	5040	2500	500	205	3294.44
Region 1		1500	4125	3000	-	-	15000	350	5000	6950
Region 2		-	-	964.28	-	-	-	-	-	964.28
Region 4-A		1500	2460	6004.33	2800	500	-	2500	1468.7	3894.76
Region 6		582.85	1063.6	4310	656	2075	266.66	-	200	2053.71
Region 10		1337.56	3230.3	2844	2114	1770	4000	-	1728.57	3718.55
Region 11		1291.94	3253.1	3375.33	12000	2244.8	4765	-	127.18	3614.30
Region 12		972.65	3350.6	3141.3	1350	1737.5	-	-	98.09	2561.47
Region 13		833.33	3516.5	4796.37	15000	176.66	-	13000	197	4771.4
BARMM		925	4250	1650	-	-	-	-	-	2391.66
Overall	Mean	1143.29	3112.9	3433.9	3420.4	1870.95	4503.7	3340	519.2	3495.8
	SD	1165.73	2623.6	3267.6	4848.96	2553.2	4338.4	5476.58	1522.5	4337.88
	SE (Mean)	107.31	150.72	160.40	989.79	834.92	834.92	2449.20	181.98	151.11

Table 47: Average cost of coffee production per hectare per year, for October 2022 to June 2023, Comparison (n=219)

Monthly Expenditures	Region				Overall		
	4-A	6	11	12	mean	sd	se
Planting materials	-	1200	602	2111	1205	1411	25
Paid labor	10138.18	2218	10448	165	5020	14823	0
Fertilizers/Petasites	7020.732		1335	1017	3555	4314	787.5
Other Cost	704.5568	782	1114	21	509	2526	367.5
Annual Cost/Ha.	13006.93	3000	7008	579	5395	14036	420

Table 48: Change in production cost since 2019 (% of the farmer respondents), Participant (n=824) and Comparison (n=349)

Region	Increased (%)	Decreased (%)	Remained the same (%)
Participant	28.54	3.83	67.63
CAR	3.05	4.8	92.15
Region 1	48.06	18.61	33.33
Region 2	0.00	0.00	100
Region 4-A	12.21	1.55	86.25
Region 6	40.26	2.68	57.06
Region 10	38.39	2.45	59.16
Region 11	14.11	2.55	83.34
Region 12	20.46	9.42	70.12
Region 13	54.54	2.26	43.21
BARMM	92.79	0.00	7.21
Comparison	47.28	7.16	45.56
Region 4-A	87.50	1.14	11.36
Region 6	0.00	56.67	43.33
Region 11	28.75	5.00	66.25
Region 12	43.05	1.99	54.97

Table 49: Percentage of farmers who have experienced post-harvest losses (%), Participant (n=824) and Comparison (n=349)

Region	Farmers experienced post-harvest losses		Average estimated post-harvest losses (%)
	f	%	
Participant	100	18.10	42.62
CAR	4	3.92	28.8
1	6	100.00	53.8
2	1	44.57	40.0
4-A	0	0.00	-
6	18	53.38	63.3
10	6	3.08	27.3
11	28	13.13	41.2
12	7	14.86	18.9
13	30	41.03	39.8
BARMM	0	0.00	-
Comparison	152	43.55	28.29
4-A	11	12.5	22.36
6	24	80	70.83
11	12	15	58.3
12	105	69.54	15.75

Difference	.3141709 ****
Strd. Error	.0288761

Table 50: Typical reasons/causes of losses, in percentage, by type and region, Participant (n=100)

Cause of loss	Region, %								Overall
	CAR	1	2	6	10	11	12	13	%
Strip harvesting of coffee (ripe and unripe cherries are harvested from the branches)	0	0	0	1.45	0	.76	0	8.24	10.46
Disease attack	1.24	1.02	0	26.85	2.61	6.80	.33	19.95	58.82
Inappropriate pulping and hulling process	0	.57	0	.17	0	.76	0	.59	2.10
Prolonged drying	.47	0	0	.21	0	5.7	8.64	2.55	17.58
Exposure to rain	1.71	2.05	.45	28.07	0	10.25	44.04	18.66	65.27
Antiquated/old tools (i.e., mortar and pestle for De-pulping)	0	0	0	0	0	.99	0	0	.99
Inadequate storage/containers	0	.57	0	0	0	0	.48	.56	1.62
Poor carrying containers	0	0	0	0	0	.38	.48	.56	1.43
Poor transportation	0	0	0	2.6	0	1.89	0	0	4.51
Others (specify)	.13	1.48	0	3.78	1.16	.76	.97	2.47	10.78

Table 51: Typical reasons/causes of losses, in percentage, by type and region, comparison (n=152)

Cause of loss	Region, %				Overall
	1	2	3	4	%
Strip harvesting of coffee (ripe and unripe cherries are harvested from the branches)	5.68	36.67	1.25	5.96	7.45
Disease attack	1.14	26.67	7.5	19.21	12.61
Inappropriate pulping and hulling process	0	0	0	1.32	0.57
Prolonged drying	3.41	10	6.25	15.23	9.74
Exposure to rain	2.27	60	3.75	45.03	26.07
Antiquated/old tools (i.e., mortar and pestle for De-pulping)	0	3.33	0	0	0.29
Inadequate storage/containers	1.14	0	1.25	0	0.57
Poor carrying containers	0	0	0	1.14	0.29
Poor transportation	0	0	1.25	7.28	3.44
Others (specify)	2.27	23.33	2.5	3.31	4.58

Table 52: Reason for market outlet selection, market development due to PhilCAFE assistance, Participant (n=824)

Reason for market selection	Fresh Cherries	Dried Cherries	Green Coffee Bean	Parchment	Roasted Coffee
Participant					
It is the closest market	75.4	11.82	0.79	-	40.23
It had the best prices	19.82	86.44	4.09	-	49.42
Payment for cash advances	1.24	1.1	95.11	-	4.43
Others	3.55	0.63	-	100	5.92

Table 53: Percentage of farmers satisfied with their end-market for coffee, Participant (n=824) and Comparison (n=349)

Region	Satisfied with the end markets that you are accessing/selling to	
	Yes	No
Participant	90.82	9.18
CAR	100	0
1	66.67	33.33
2	100	0
4-A	74.21	25.79
6	96.68	3.32
10	95.33	4.67
11	77.98	22.02
12	94.33	5.67
13	94.86	5.14
BARMM	100	0
Comparison	75.48	24.52
4-A	93.02	6.98
6	63.33	36.67
11	80	20
12	66.44	33.56

Table 54: Percentage of farmers who participated in coffee cupping since 2019, participant (n=824) and comparison (n=349)

Region	Percentage of farmers who participated in coffee cupping since 2019	Cupping Score		
		Mean	SD	SE (Mean)
Participant	20.04	64.27	2.8	32.41
CAR	6.98	79.42	13.32	5.03
Region 1	33.33	81.87	2.6	1.87
Region 2	44.57	83.5	-	-
Region 4-A	2.89	90	-	-
Region 6	42.52	54.2	41.7	18.6
Region 10	49.49	29.90	29.2	3.04
Region 11	2.26	36.6	32.7	14.64
Region 12	9.17	92	45.3	15.18
Region 13	1.93	52.5	.70	.5
BARMM	92.79	49.44	3.97	1.32
Comparison	2.01	62.14	25.7	9.7

Region 4-A	2.27	77.5	3.5	2.5
Region 6	0	-	-	-
Region 11	3.75	73.33	11.5	6.7
Region 12	1.32	30	28.3	20

Table 55: Number of farmers who perceived that coffee cupping grade influence coffee sales, Participant (n=386)

Region	**Number of farmers who perceived that coffee cupping grade influence coffee sales**		
Region	Yes	No	%
CAR	7	12	36.84
Region 1	3	2	60
Region 2	1	0	100
Region 4-A	3	16	15.78
Region 6	8	14	36.36
Region 10	73	36	69.72
Region 11	67	56	54.71
Region 12	7	15	68.18
Region 13	39	18	68.42
BARMM	9	0	100
Overall	217	169	56.21

Table 56: Number of farmers who perceived that coffee cupping of a Q grade is the basis to classify the coffee sold as specialty or fine, Participant (n=824)

Region	**Number of farmers who perceived that coffee cupping of a Q grade is the basis to classify the coffee sold as specialty or fine**		
	No	**Yes**	**Yes (%)**
CAR	67	11	12.03
Region 1	3	3	51.94
Region 2	6	1	44.57
Region 4-A	19	33	72.28
Region 6	19	16	49.61
Region 10	89	98	52.86
Region 11	98	100	48.20
Region 12	109	39	32.82
Region 13	56	45	60.07
BARMM	3	9	92.79
Overall	469	355	46.69

Table 57: Number of farmers who sold specialty coffee. Participant (n=362)

Region	Percentage of farmers who sold specialty coffee		
	No	Yes	Yes (%)
CAR	10	6	7.30
Region 1	2	2	33.33
Region 2	0	1	44.57
Region 4-A	16	1	2.89
Region 6	24	1	0.36
Region 10	71	32	17.32
Region 11	111	4	2.09
Region 12	17	2	2.26
Region 13	54	1	1.11
BARMM	4	3	32.64
Overall	309	53	6.32

Table 58: Average volume sold of specialty coffee in kg Participant (n=53)

Region	Arabica		Robusta	
	Mean	SE	Mean	SE
CAR	95.0	5.0	35.0	5.0
Region 1	16.5	11.5	97.0	17.0
Region 2	55.0	.	8.0	.
Region 4-A	40.0	.	50.0	.
Region 10	65.1	17.8	129.6	22.0
Region 11	34.7	13.5	146.7	117.6
Region 12	20.0	0.0	14.5	2.5
Region 13	30.0	.	10.0	.
BARMM	26.8	10.7	141.6	77.7

Table 59: Average selling price of specialty coffee in PHP Participant (n=58)

Region	Arabica		Robusta	
	Mean	SE	Mean	SE
CAR	537.5	55.4	288.3	182.4
Region 1	518.0	68.0	435.0	35.0
Region 2	480.0	45.4	560.0	55.7
Region 4-A	930.0	97.4	580.0	39.3
Region 10	713.9	42.6	599.4	43.2
Region 11	610.0	95.4	450.0	65.1
Region 12	637.0	61.0	539.0	11.0
Region 13	480.0	480.0	410.0	50.0
BARMM	619.4	96.2	490.6	38.8

Table 60: Causes for not attaining volume and sales target (% of respondents), Participant (n=824) & Comparison (n= 349)

Items	Region										Overall
	CAR	1	2	4-A	6	*10*	*11*	*12*	*13*	*BARMM*	
Participant											
Poor/limited markets (limited buyers/low market demand)	1	1	18.6	0	1.8	42.9	1.36	9.5	1.1	12.5	9.2
Poor farm-to-market access (i.e., connecting the production site to main roads)	0	0	0	0	86.6	2.5	3.29	3.7	0.9	0	11.4
Post-harvest losses	0	14.7	0	0.6	47.1	0.9	9.8	0.9	27.9	0	11.4
Absence/insufficient post-harvest facilities	3.1	18.6	0	1.8	47.2	1.1	8.7	1.9	0.4	0	8.2
Difficulty accessing inputs or services to get desired yields	0	18.6	0	5.4	2.4	0	1.9	2.9	16.1	0	3.4
Problems with accessing labor	0	0	0	6.3	0.1	1.7	0.3	0	0.4	0	0.7
Climate/weather issues	5.6	70.5	0	4.8	89.4	9.6	21.8	15.9	47.2	0	26.6
Others, specify	0	14.7	0	7.6	0	4.3	0.7	0	8.9	0	2.6
Comparison											
Poor/limited markets (limited buyers/low market demand)	-	-	-	17.1	60.0	-	10.0	24.5	-	-	22.3
Poor farm-to-market access (i.e., connecting the production site to main roads)	-	-	-	0.00	6.7	-	2.5	27.8	-	-	13.1
Post-harvest losses	-	-	-	6.8	60.0	-	1.3	10.6	-	-	11.7
Absence/insufficient post-harvest facilities	-	-	-	10.2	26.7	-	5.0	5.9	-	-	8.6
Difficulty accessing inputs or services to get desired yields	-	-	-	10.2	20.0	-	1.3	3.3	-	-	6.02
Problems with accessing labor	-	-	-	15.9	3.3	-	0.0	1.3	-	-	4.9
Climate/weather issues	-	-	-	14.7	66.6		7.5	35.1	-	-	26.4
Others, specify	-	-	-	0.0	0.0		0.0	0.6	-	-	0.29

Table 61: Percentage of farmers who are satisfied with the average price received for their coffee in October 2022 to June 2023. Participant (n=824) comparison (n=349).

Region	Number and percentage of farmers who are satisfied with the average price received	
	f	%
Participant	263	74.08
CAR	16	92.86
Region 1	3	60.91
Region 2	1	100.00
Region 4-A	15	73.58
Region 6	15	46.23
Region 10	87	94.59
Region 11	68	77.09
Region 12	11	63.66
Region 13	38	71.08
BARMM	9	100.00
Comparison	204	66.7
Region 4-A	73	84.8
Region 6	11	36.6
Region 11	37	88.1
Region 12	83	56.1

Table 62: Percentage with family labor and hired labor in coffee farming, by region, Participant (n=824) and Comparison (n=349)

Region	With Family Labor			With Hired Labor		
	No	Yes	% Yes	No	Yes	% Yes
Participant	151	673	82.76	560	264	40.25
CAR	22	56	73.20	71	7	7.58
Region 1	2	4	66.67	1	5	81.39
Region 2	0	7	100.00	7	0	0.00
Region 4-A	28	24	42.21	23	29	61.39
Region 6	1	34	99.64	14	21	94.48
Region 10	26	161	86.00	116	71	39.48
Region 11	32	166	81.33	131	67	40.23
Region 12	18	130	81.71	121	27	19.49
Region 13	18	83	87.67	71	30	33.91
BARMM	4	8	55.98	5	7	70.78
Comparison	37	312	89.4	156	193	55.3
Region 4-A	6	82	93.2	28	60	68.18
Region 6	0	30	100.0	2	28	93.3
Region 11	8	72	90.0	48	32	40.0
Region 12	23	128	84.8	78	73	48.3

Table 63: Change in labor/did the number of hours and/or the number of persons working on your coffee farm change in this fiscal year (Oct 2022 to June 2023), compared to the previous year (Oct 2021 to Sept 2022), Participant (n=824) and Comparison (n=349).

Region	Decreased	Increased	Remained the same	Percentage increase in labor	Percentage decrease in labor
Participant	2	0	76	2.37	3.97
CAR	0	0	6	1.45	0
Region 1	0	0	7	0	0
Region 2	0	0	52	0	0
Region 4-A	1	6	28	0	0
Region 6	10	4	173	0.5	2.2
Region 10	2	3	193	5.42	2.35
Region 11	3	21	124	0.58	1.96
Region 12	5	5	91	1.68	12.69
Region 13	0	0	12	4.58	5.51
BARMM	23	39	762	0	0
Comparison	31	28	290	8.02	8.88
Region 4-A	5	1	82	1.14	5.7
Region 6	17	0	13	0.0	56.7
Region 11	4	14	62	17.5	5.0
Region 12	5	13	133	8.6	3.3

Table 64: External sources of capacity-building activities of farmers (training, exposure trips, industry-wide gatherings), Participant (n=63)

External sources of capacity-building activities of farmers	Percentage	DID Estimator	SE
No one (Rely on my own efforts)	3.18	.0027***	.0019
Taught by fellow coffee farmers	23.05	.015***	.023
ACDI/VOCA	78.36	.060***	.008
SUC extension staff (research, development & extension)	3.68	-.004***	.029
LGU/national government	23.19	.019***	.005
Support from NGO	-	-.039***	.039
Support from a cooperative	20.81	.017**	.004

Table 65: Relevance and effectiveness of external capacity-building activities, Participant (n=63)

External Capacity Building Provider	Effectiveness				
	Poor Quality	Low Quality	Moderate Quality	High Quality	Excellent Quality
Taught by fellow coffee farmers	38.94	-	5.72	23.69	31.04
ACDI/VOCA	-	-	43.90	16.51	39.58
SUC extension staff	-	-	-	38.11	61.88
Others	26.10	-	-	6.90	66.99

Table 66: Probit model average marginal effects of farmers' adoption rate to coffee production technologies Participants (n=824)

Variables	Proper pruning	Proper planting distance	Digging hole	Pick ripe	Apply inorganic fertilizer	Apply organic fertilizer	Field planting
Age (Adult=1)	.005	-.002**	-.009**	.02***	.003	.005	.012*
Completed Education (in years)	.038***	.035***	.019	.042***	.033**	.007	.008
Household Size	.101***	.017	-.001	.024	-.072	.008	.143***
Annual Income (in '000 PHP)	0	0	0	0	0	0	0
Area Devoted to Coffee (in ha)	.109	.268	.274***	.019	.174*	-.006	.091
Annual Cost per hectare (in '000 PHP)	0	0	0***	0***	0*	0***	0
Weekly Hours Farm Work Men	0	0	.001	.001	.001	0	-.001
Weekly Hours Farm Work Male Youth	-.001	-.001	-.002	-.001	.001	.001	-.005*
Weekly Hours Farm Work Women	-.001	.001*	0	-.001	0	.001	.002
Weekly Hours Farm Work Female Youth	-.015	-.01	-.009	-.001	.01**	.003	.003
Coop/Farmer's Association	-.034	-.345**	-.846***	.227	.203	.13	-.191
Participant	0	0	0	0	0	0	0
Gender (Male=1)	.16	.008	.292***	-.133***	.103	-.041**	.075
Marital Status (Married=1)	-.067	.1	-.152	-.455**	.55*	.331	-.146
Have External Support of Coffee Capital	-.224**	-.109	-.268**	-.022	-.073	.084	-.083
Have Existing Credit	-.323	.678***	.691***	-.028	.538**	-.098	-.619
Have Accessed to External Capacity-Building Activities	-.062	.239	.122	-.321	.037	-.065	.315
Intercropping	-.256	.132	.409**	.154	.281	.077	.45
Difficulty Accessing Inputs	-.213	.178	.249	.491**	.241	.054	-.021
Want to Certify Farm	.089	.297**	-.107	-.404**	.366**	.496***	.36**
Actively Marketing Coffee	.586***	.094	.2	.681***	.114	.102	.514***

Have Enough Capital	-.112	.111	.084	.356**	-.219	.01	.113
Have Difficulty Accessing Credit	.313**	.221	.293**	.42***	.44**	.548***	.75***
Have Experienced Post-Harvest Loss	-.063	.033	.185	-.547***	-.082	.02	.015
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.088	0.072	0.124	0.225	0.141	0.138	0.156

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 67: Probit model average marginal effects farmers adoption rate to coffee post-harvest technologies. Participants (n=824)

Variables	Drying	Floatation	Washing	Pulping	Use of elevated dryers	Fermentation	Hulling	Sorting and defects classification	Storing	Size grading
Age (in years)	.015*	.008	.007	.015***	.02***	.016**	.013*	.016**	.002	.014
Completed Education (in years)	.062**	.06***	.065***	.047***	.029*	.074***	.068***	.041**	.023	.054**
Household Size	.068	-.02	.041	.104**	.002	.042	.029	.104**	-.009	-.047
Annual Income (in '000 PHP)	0	0	0	0*	0	0*	0**	0	0***	0
Area Devoted to Coffee (in ha)	.115	-.027	-.033	-.083	-.046	-.02	.07	-.117	.049	.196*
Annual Cost per hectare (in '000 PHP)	0	0**	0**	0	0	0	0	0***	0**	0
Weekly Hours Farm Work Men	.001	.001	0	-.002**	0	.001	.001**	.001	0	.001
Weekly Hours Farm Work Male Youth	-.002	-.001	0	.002**	-.002	-.001	-.004**	0	0	-.001

Variables	Drying	Floatation	Washing	Pulping	Use of elevated dryers	Fermentation	Hulling	Sorting and defects classification	Storing	Size grading
Weekly Hours Farm Work Women	0	0	-.001	.001	-.001	-.002	-.001	0	-.001	-.002
Weekly Hours Farm Work Female Youth	-.003	0	0	-.013	-.008	-.001	.002	-.002	-.007	.001
Coop/Farmer's Association	.181	.298**	.046	.1	.623***	.433**	.569**	.382**	.361**	.696***
Participant	.889**	1.032***	.454***	.643***	1.124***	.915***	.461*	.445**	.474**	1.322***
Gender (Male=1)	-.088***	-.07	-.01**	-.186***	-.208**	-.284	.091	-.071***	-.019**	-.157
Marital Status (Married =1)	-.173	-.135	-.139	-.241	.069	.122	-.094	-.39	.047	.155
Have External Support of Coffee Capital	.179	.065	-.012	.076	.054	-.207	-.071	.33**	.316*	.421*
Have Existing Credit	0	-.945***	-.091	0	-.576	-.464	.438	-.906*	.57**	.065
Have Accessed to External Capacity - Building Activities	-.134	-.03	-.229	.053	.325	-.225	-.08	-.294	-.31	-.429
Do Intercrop Coffee	.442	.087	.161	.733**	-.329	.244	-.067	-.121	.24	-.063
Difficulty Accessing Inputs	.094	-.011	-.19	.179	.341	.415	.42	.067	.614**	.439

Variables	Drying	Floatation	Washing	Pulping	Use of elevated dryers	Fermentation	Hulling	Sorting and defects classification	Storing	Size grading
Want to Certify Farm	.658**	.332**	.32**	.125	.612***	.448**	.629**	.388**	.523***	.596***
Actively Marketing Coffee	.498**	.201	.46**	.407**	.586***	.415**	.401*	.64***	.5***	.549**
Have Enough Capital	.447	.427***	.199	.02	.265	.529**	.136	.312*	.507**	.488*
Have Difficulty Accessing Credit	.472**	.515***	.359**	.175	.388*	.128	.834***	.339*	.575***	.399
Have Experienced Post-Harvest Loss	-.02	.35**	-.157	-.286	.019	-.139	-.475*	.471***	-.522**	-.154
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.256	0.169	0.109	0.144	0.280	0.274	0.276	0.239	0.263	0.358

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 68: Probit model average marginal effects farmers adoption rate to climate risk reduction management technologies. Participants (n=824)

Variables	Biodiversity conservation	Agroforestry	Restoration of organic soil	Efficient nitrogen fertilizer
Age (in years)	.004	-.006	.004	.004
Completed Education (in years)	.063***	-.01	.043**	-.003
Household Size	.067	-.031	.023	.114**
Annual Income (in '000 PHP)	0*	0	0	0***
Area Devoted to Coffee (in ha)	.198	-.031	.137	-.01
Annual Cost per hectare (in '000 PHP)	0	0***	0	0
Weekly Hours Farm Work Men	-.001	0	.002**	.002***
Weekly Hours Farm Work Male Youth	-.012	0	-.005*	0
Weekly Hours Farm Work Women	0	0	-.003	-.004***
Weekly Hours Farm Work Female Youth	-.003	-.002	-.007	.001
Coop/Farmer's Association	-.022	-.511***	-.139	-.467***

Participant	.453	.795***	.604***	-.677***
Gender (Male=1)	.343*	.002	.09	.027
Marital Status (Married=1)	-.196	-.43**	-.031	.283
Have External Support of Coffee Capital	.129	.281**	.069	.031
Have Existing Credit	.776***	.226	-.534	.129
Have Accessed to External Capacity-Building Activities	-.357	-.159	-.222	.026
Intercropping	.226	.485**	.545	.185
Difficulty Accessing Inputs	.058	-.233	-.375	.222
Want to Certify Farm	.401	.451***	.506***	.704***
Actively Marketing Coffee	.122	.443***	.431**	.604***
Have Enough Capital	-.291	.02	.079	-.027
Have Difficulty Accessing Credit	.524**	.568***	.176	-.26*
Have Experienced Post-Harvest Loss	-.218	.059	.456**	.179
Prob>chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.205	0.142	0.141	0.202

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 69: Probit model average marginal effects farmers adoption rate to farm management practices. Participants (n=824)

Variables	Processing	Record	Financial planning	Use of information communication	Marketing trading	Accounting	Human resources
Age (in years)	-.003	-.013***	0	.016***	.023***	.028***	.002
Completed Education (in years)	.041***	.033***	.02*	.065***	.017	.035	.004
Household Size	.043	.055	.02	.128***	.011	.144**	-.018
Annual Income (in '000 PHP)	0	0	0	0**	0	0	0*
Area Devoted to Coffee (in ha)	-.215***	.211***	.003	-.003	-.193***	-.318*	-.062
Annual Cost per hectare (in '000 PHP)	0	0	0***	0	0***	0***	0
Weekly Hours Farm Work Men	0	-.001*	-.001	-.002**	.001**	-.005**	.001**

Weekly Hours Farm Work Male Youth	.001	-.001	-.001	-.002	-.002**	.001	-.001
Weekly Hours Farm Work Women	0	.001	.001	.001	-.002**	.002	-.001
Weekly Hours Farm Work Female Youth	.002	-.002	-.006	-.017	-.002	-.006	-.002
Coop/Farmer's Association	.254**	.653***	.119	.443***	.043	.086	-.372***
Participant	.325***	-.474***	.368***	.292*	-.405***	1.098***	.607***
Gender (Male=1)	-.144*	.113**	.035	-.058**	-.098***	-.121	-.097
Marital Status (Married=1)	.535***	-.014	-.158	-.436**	-.283	.024	-.281
Have External Support of Coffee Capital	.696***	-.298***	.163	-.084	.056	-.218	-.45***
Have Existing Credit	-.545***	-.552*	-.302	.241	-.264	.155	.187
Have Accessed to External Capacity-Building Activities	.081	.242	.196	.698***	.012	.476*	-.154
Do Intercrop Coffee	-.382**	-.071	-.297*	.222	-.142	.328	.585***
Difficulty Accessing Inputs	-.414**	.325*	.149	-.353	-.198	.005	-.103
Want to Certify Farm	.842***	-.132	.16	-.31*	.104	.029	.001
Actively Marketing Coffee	-.045	-.31**	.019	-.124	.303***	.387	-.189
Have Enough Capital	.185*	.1	-.114	-.048	-.484***	.197	.19*
Have Difficulty Accessing Credit	.12	.384***	.392***	.386***	-.151	.563***	.25**
Have Experienced Post-Harvest Loss	-.409***	.204	-.114	-.497***	-.365***	.373	.112
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Pseudo R2	0.206	0.207	0.070	0.187	0.144	0.223	0.084

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 70: Correlation analysis on credit access, 2022-2023. Participants (n=824)

Variables	rpb	P-Value
Age	0.1756***	0.0000
Household Size	-0.1152***	0.0001
Sex	0.0030	0.9176
Years of formal education	-0.0211	0.4713
Membership to farmers' cooperative	-0.2777***	0.0000
Total Farm Size (Ha)	0.0635**	0.0296
Yield (GCB)	0.3515***	0.0000
Post-harvest losses	0.1715***	0.0000
Adopt Disease Management	0.0040	0.8800
Adopt Farm Management Practices	0.0250	0.3960
Adopt Genetic Improvement	0.0250	0.3960
Adopt Pest Management	0.478***	0.0000
Adopt Soil Related Fertility and Conservation	0.369***	0.0000
Adopt Harvest and Post-harvest	0.0360	0.2200
Adopt Processing	0.104***	0.0000
Adopt Farm Diversification	0.165***	0.0000
Adopt Climate Risk Reduction and NRM	0.0240	0.4040
Adopt Operational Management	0.080***	0.0060
Production Cost (Per Hectare)	-0.0170	0.5640
Active Marketing	0.0470	0.1100
Enough Capital	0.105***	0.0000
Number of family labor	0.127***	0.0000
Number of hired labor	0.0430	0.1450
Number of Hours Spend in the Farm (Men)	0.101***	0.0010
Number of Hours Spend in the Farm (Men Youth)	0.474***	0.0000
Number of Hours Spend in the Farm (Women)	0.343***	0.0000
Number of Hours Spend in the Farm (Women Youth)	-0.0080	0.7740
Willingness to Certification	0.062**	0.0330

Note: Values in the table are the Pearson correlation coefficient (r) and the corresponding p-value, * signifies significant correlation at 10% level of significance, ** significant at 5% level, *** significant at 1% level

Table 71: Correlation analysis on Household Income, 2023, participant group (n=824)

Variables	rpb	P-Value
Age	0.009	0.759
Household Size	0.176***	0.000
Sex	-0.115***	0.000
Years of formal education	0.003	0.918
Membership in farmers' cooperative	-0.021	0.471
Total Farm Size (Ha)	-0.278***	0.000
Coffee Sales	0.064**	0.030
Yield/Ha (Fresh Cherries)	0.225***	0.000
Yield/Ha (GCB and Dried Beans)	0.793***	0.000
Yield/Ha (GCB All)	0.142***	0.000
Post-harvest losses	0.718***	0.000
Adopt Disease Management	0.171***	0.000
Adopt Farm Management Practices	0.004	0.880
Adopt Genetic Improvement	0.025	0.396
Adopt Pest Management	0.025	0.396
Adopt Soil Related Fertility and Conservation	0.478***	0.000
Adopt Harvest and Post-harvest	0.369***	0.000
Adopt Processing	0.036	0.220
Adopt Farm Diversification	0.104***	0.000
Adopt Climate Risk Reduction and NRM	0.165***	0.000
Adopt Operational Management	0.024	0.404
Production Cost (Per Hectare)	0.080***	0.006
Active Marketing	-0.017	0.564
Coffee Cupping	0.047	0.110
With access to credit	0.089***	0.002
Enough Capital	0.142***	0.000
Number of family labor	0.127***	0.000
Number of hired labor	0.043	0.145
Number of Hours Spend in the Farm (Men)	0.101***	0.001
Number of Hours Spend in the Farm (Men Youth)	0.474***	0.000
Number of Hours Spend in the Farm (Women)	0.343***	0.000
Number of Hours Spend in the Farm (Women Youth)	-0.008	0.774

Note: Values in the table are the Pearson correlation coefficient (r) and the corresponding p-value, * signifies significant correlation at 10% level of significance, ** significant at 5% level, *** significant at 1% level

Table 72: Correlation of technology adoption to yield and farm coffee production sales of the firm, participant group (n=824)

Items	Yield/ Ha		Farm Coffee Sales	
	rpb	P-Value	rpb	P-Value
Pest Management	0.081*	0.005	0.081*	0.005
Genetic Improvement	0.478*	0.000	0.478*	0.000
Farm Management Practices	0.025	0.396	0.025	0.396
Farm Diversification	0.024	0.404	0.024	0.404
Disease Management	0.175*	0.000	0.175*	0.000
Soil-related fertility and conservation	0.338*	0.000	0.338*	0.000
Harvest and Post-harvest	0.036*	0.020	0.036	0.220

Processing	0.104*	0.000	0.104*	0.000
Nursery related technologies	0.104*	0.000	0.104*	0.000
Operational Management	0.080*	0.006	0.080*	0.006
Total farm size	0.024	0.416	-0.024	0.416
Arabica Farm Size	0.080*	0.006	0.080*	0.006
Robusta Farm Size	0.242*	0.000	-0.242*	0.000
Liberica Farm Size	0.058*	0.048	-0.058*	0.048
Excelsa Farm Size	0.594*	0.000	0.594*	0.000
Cost per hectare	0.148*	0.000	0.148*	0.000

Note: Values in the table are the point biserial correlation coefficient (rpb), and the corresponding p-value, * signifies a significant correlation at 5% level of significance

Table 73: Percentage of farmers who actively market their coffee products, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	212	154	24.3
CAR	5	13	14.92
1	0	5	85.27
2	0	1	44.57
4-A	14	5	4.6
6	15	12	42.6
10	63	46	25.84
11	79	24	11.3
12	5	15	19.22
13	26	29	45.36
BARMM	5	4	37.4
Comparison	153	173	49.57
4-A	71	17	19.32
6	16	14	46.67
11	28	30	37.5
12	38	112	74.17

Table 74: Accessing agricultural market/price information (percentage), Participant (n=824) and Comparison (n=349)

Region	Daily	Weekly	Monthly	Quarterly	Biannual	Annual
Participant	2.49	10.25	36.35	29.44	10.3	11.16
CAR	11.68	5.66	32.68	31.37	-	18.6
1	-	-	18.61	48.06	-	33.33
2	-	-	-	-	-	100
4-A	5.91	1.55	25.24	10.22	41.66	15.41
6	2.88	5.99	1.64	43.41	0.4	45.67
10	0.42	7.98	24.72	36.06	26.49	4.34
11	1.31	8.79	51.98	24.95	7.82	5.15
12	3.46	13.77	55.61	25.77	-	1.4
13	-	23.25	40.4	17.43	8.37	10.56
BARMM	-	2.53	16.05	81.41	-	-
Comparison	0.57	4.01	37.25	37.54	9.46	11.17
4-A	-	-	38.64	20.45	13.64	27.27

6	-	16.67	56.67	13.33	3.33	10
11	2.5	8.75	68.75	17.5	1.25	1.25
12	-	1.32	15.89	62.91	12.58	7.28

Table 75: Percentage of farmers who are optimistic about coffee, Participant (n=824) and Comparison (n=349)

Items	Optimistic about coffee in the next 3-5 years?	Pessimistic about coffee in the next 3-5 years?	No comment
Participant	72.86	58.95	67.78
Comparison	27.14	41.05	32.22

Table 76: Percentage who has accessed to external support for coffee production capital, Participant (n=824) and Comparison (n=349)

Region	No (relied on last year's profit)	Yes	% Yes
Participant	393	431	55.16
CAR	16	62	80.58
1	2	4	62.78
2	0	7	100
4-A	13	39	85.86
6	23	12	51.33
10	64	123	65.25
11	106	92	53.12
12	134	14	16
13	31	70	66.45
BARMM	4	8	81.41
Comparison	249	100	28.65
4-A	42	46	52.27
6	28	2	6.67
11	43	37	46.25
12	136	15	9.93

Table 77: Percentage of farmers who perceived that their production capital is enough for their current operations, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	313	511	66.19
CAR	29	49	64.56
1	4	2	29.45
2	0	7	100
4-A	16	36	69.78
6	6	29	98.66
10	39	148	78.81
11	64	134	69.48
12	72	76	54.46

13	81	20	23.01
BARMM	2	10	93.74
Comparison	228	121	34.67
4-A	84	4	4.55
6	23	7	23.33
11	56	24	30
12	65	86	56.95

Table 78: Percentage of farmers who have existing savings/share capital with the organization that they are a member of, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	579	245	32.02
CAR	33	45	54.68
1	2	4	66.67
2	0	7	100
4-A	37	15	20.25
6	27	8	52.24
10	111	76	40.95
11	154	44	23.85
12	127	21	16.26
13	88	13	13.42
BARMM	0	12	100
Comparison	271	78	22.35
4-A	39	49	55.68
6	18	12	40
11	66	14	17.5
12	148	3	1.99

Table 79: Percentage of farmers who have an existing credit/loan from a microfinance institution or bank, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	764	60	6.48
CAR	74	4	4.19
1	4	2	29.45
2	7	0	0
4-A	40	12	26.5
6	34	1	0.24
10	187	0	0
11	180	18	10.32
12	129	19	11.23
13	97	4	5.42
BARMM	12	0	0
Comparison	339	10	2.87
4-A	87	1	1.14
6	30	0	0
11	71	9	11.25
12	151	0	0

Table 80: Percentage of farmers who have difficulty in accessing credit, Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	693	131	14.69
CAR	63	15	19.41
1	6	0	0
2	7	0	0
4-A	52	0	0
6	27	8	7.58
10	185	2	0.88
11	151	47	22.22
12	106	42	24.82
13	84	17	20.73
BARMM	12	0	0
Comparison	219	130	37.25
4-A	68	20	22.73
6	28	2	6.67
11	46	34	42.5
12	77	74	49.01

Table 81: Number of farmers who faced common challenges in the community to accessing credit, participant group (n=131) and comparison (130).

Region	No	Yes	% Yes
Participant	6	125	95.58
CAR	2	13	90.3
6	0	8	100
10	0	2	100
11	1	46	97.94
12	3	39	90.76
13	0	17	100
Comparison	3	127	97.69
4-A	2	18	90
6	0	2	100
11	0	34	100
12	1	73	98.65

Table 82: Percentage of farmers who have additional/future need to borrow money, Participant (n=824) and Comparison (n=349)

Region	**No**	**Yes**	**% Yes**
Participant	720	104	19.55
CAR	60	18	22.1
1	5	1	14.73
2	7	0	0
4-A	50	2	6.14
6	22	13	44.76
10	181	6	3.31
11	183	15	8.34
12	130	18	21.79
13	70	31	50.18

BARMM	12	0	0
Comparison	228	121	34.67
4-A	84	4	4.55
6	23	7	23.33
11	56	24	30
12	65	86	56.95

Table 83: Purpose of additional needed borrowing in percentage, Participant (n=824) and Comparison (n=349)

Region	Land purchase for coffee expansion	Coffee production	Post-Harvest facilities	Marketing	Others
Participant	8.5	52.88	18.86	13.58	6.19
CAR	0	0	36.42	56.32	7.26
1	0	100	0	0	0
2	0	47.09	0	0	52.91
4-A	0	88.43	8.64	2.93	0
6	12.58	73.2	14.22	0	0
10	0	15.59	19.68	64.73	0
11	43.79	17.78	32.56	0	5.86
12	0	70.95	14.68	2.33	12.05
13	8.5	52.88	18.86	13.58	6.19
BARMM	0	0	36.42	56.32	7.26
Comparison	21.49	44.63	27.27	4.96	1.65
4-A	0	75	0	0	25
6	0	14.29	71.43	14.29	0
11	4.17	12.5	79.17	4.17	0
12	29.07	54.65	10.47	4.65	1.16

Table 84: Amount needed for borrowing, and maximum rate of interest willing to pay, Participant (n=104) and Comparison (n=121)

Region	Average needed borrowing (PHP)	Percentage who are willing to pay interest			Ave. maximum interest rate (%)
		No	Yes	% Yes	
Participant	75,067	3	101	99.33	3.70
CAR	38,889	0	18	100	4.25
1	10,000	0	1	100	1
2	-	-		-	-
4-A	115,000	1	1	52.91	2
6	86,154	2	11	99.36	3.54
10	40,000	0	6	100	7.5
11	35,667	0	15	100	4.2
12	211,111	0	18	100	2.8
13	28,710	0	31	100	3.09

BARMM	-	-	-	-	-
Comparison	77,397	2	119	98.35	3.97
4-A	45,000	1	3	75	2.66
6	71,429	0	7	100	2
11	16,875	0	24	100	6.43
12	96,279	1	85	98.84	3.49

Table 85: Percentage of farmers who have an existing credit/cash advance from input suppliers or traders, Participant (n=824) and Comparison (n=349)

Region	Farmers who have an existing credit/cash advance from input suppliers or traders			Average amount of Credit from traders (in PHP)	Average interest rate of Credit from traders
	No	Yes	% Yes		
Participant	6	818	0.48	13667	5.9
CAR	1	77	1.19	25000	2.4
1	-	6	-	-	-
2	-	7	-	-	-
4-A	-	52	-	-	-
6	-	35	-	-	-
10	1	186	0.42	2000	5
11	2	196	0.68	7500	10
12	2	146	0.74	20000	4
13	0	101	-	-	-
BARMM	0	12	-	-	-
Comparison	14	335	4.01	12000	19.6
4-A	1	87	1.14	-	-
6	-	30	-	-	-
11	7	73	8.75	12333	22.56
12	6	145	3.97	11667	16.66

Table 86: Percentage of farmers who have access to external capacity-building activities (training, exposure trips, industry-wide gatherings), Participant (n=824) and Comparison (n=349)

Region	No	Yes	% Yes
Participant	761	63	6.51
CAR	66	12	11.55
1	4	2	33.33
2	7	0	0
4-A	39	13	27.46
6	31	4	2.76
10	174	13	6.86

Region	No	Yes	% Yes
Participant	761	63	6.51
11	191	7	3.9
12	142	6	4.34
13	98	3	3.94
BARMM	9	3	32.64
Comparison	302	47	13.47
4-A	48	40	45.45
6	29	1	3.33
11	74	6	7.5
12	151	0	0

Table 87: Distribution of Respondents by Organizational Affiliation of Household Head, by Region, Participant (n=824) and Comparison (n=349)

Region	Cooperative /Farmer Association		Women's Group		Political Group		Religious Group		Youth Group		Cultural Association		Indigenous People Group		Others	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Participant	385	63.74	17	2.72	-	-	6	0.89	1	0.15	21	3.83	83	18.91	58	9.76
CAR	21	42.78	0	0	-	-	0	0	1	2.16	2	4.72	22	50.34	0	0
1	5	100	0	0	-	-	0	0	0	0	0	0	0	0	0	0
2	2	48.86	0	0	-	-	0	0	0	0	0	0	5	51.14	0	0
4-A	41	96.24	0	0	-	-	0	0	0	0	0	0	0	0	2	3.76
6	29	52.39	0	0	-	-	0	0	0	0	0	0	1	44.69	3	2.92
10	90	55.49	15	8.49	-	-	4	2.01	0	0	18	12.15	23	13.36	13	8.5
11	96	83.6	0	0	-	-	1	1.21	0	0	0	0	3	2.6	17	12.6
12	74	62.38	1	0.7	-	-	1	0.48	0	0	0	0	26	22.38	15	14.06
13	20	64.73	0	0	-	-	0	0	0	0	0	0	0	0	8	35.27
BARMM	7	76.66	1	11.37	-	-	0	0	0	0	1	4.76	3	7.21	0	0
Comparison	91	63.64	-	-	2	1.4	2	1.4	-	-	3	2.1	30	20.98	15	10.49

4-A	64	81.01	-	-	0	0	0	0	-	-	0	0	0	0	15	18.99
6	4	100	-	-	0	0	0	0	-	-	0	0	0	0	0	0
11	6	13.95	-	-	2	4.65	2	4.65	-	-	3	6.98	30	69.77	0	0
12	17	100	-	-	0	0	0	0	-	-	0	0	0	0	0	0

Table 88: Average Household (HH) size, distribution of members per age and sex, Participant (n=824) and Comparison (n=349)

Region	Mean HH Size	0 - 14 years old		15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Participant	3.27	0	100	3.54	96.46	6.8	93.2	12.16	87.84	14	86
CAR	3.24	-	-	0	100	0	100	23.28	76.72	0	100
1	3.66	-	-	-	-	-	100	-	100	-	100
2	1.71	-	-	0	100	-	-	94.65	5.35	-	-
4-A	3.32	-	-	0	100	0	100	17.28	82.72	10.82	89.18
6	3.05	-	-	0	100	0	100	4.96	95.04	1.65	98.35
10	2.82	-	-	0	100	11.29	88.71	11.02	88.98	20.58	79.42
11	3.24	-	-	7.5	92.5	3.34	96.66	12.56	87.44	20.96	79.04
12	4.01	-	-	0	100	17.27	82.73	6.44	93.56	6.77	93.23
13	3.18	0	100	12.91	87.09	10.24	89.76	7.95	92.05	14.09	85.91
BARMM	3.5	-	-	-	-	-	100	-	100	-	100
Comparison	3.71	5.44	94.56	-	-	-	-	-	-	-	-
4-A	3.53	-	-	2.27	97.73	-	-	-	-	-	-
6	3.1	-	-	6.67	93.33	-	-	-	-	-	-
11	4.18	-	-	-	-	6.25	93.75	-	-	-	-
12	3.68	-	-	-	-	-	-	6.62	93.38	-	-

Table 89: Percentage of farmers who responded on changes in coffee production since 2019, participant (n=605) and comparison (n=309)

Region		Increased (%)	Decreased (%)	No Change (%)
Participant	CAR	3.33	0.0	96.67
	Region 1	14.73	14.73	70.55

Region		Increased (%)	Decreased (%)	No Change (%)
	Region 2	0.0	0.0	100
	Region 4-A	10.4	0.0	89.6
	Region 6	2.09	3.44	94.47
	Region 10	35.77	0.89	63.34
	Region 11	10.75	7.85	81.4
	Region 12	8.41	9.36	82.23
	Region 13	32.78	17.55	49.67
	BARMM	92.79	0.0	7.21
	Overall	18.14	6.25	75.61
Comparison	Region 4-A	42.05	19.32	38.64
	Region 6	0.00	83.33	16.67
	Region 11	30.00	7.50	62.50
	Region 12	40.40	5.96	53.64
	Overall	34.96	16.33	48.71

Table 90: Percentage of farmers who achieved target sales of their coffee by region, participant (n=605) and comparison (n=309)

Region		% of farmers achieved target coffee volume & sales	% of farmers did not achieve target coffee volume & sales
Participant	CAR	79.2	20.8
	Region 1	0	100
	Region 2	100	0
	Region 4-A	37.8	62.2
	Region 6	1.24	98.76
	Region 10	66.88	33.12
	Region 11	36.78	63.22
	Region 12	14.57	85.43
	Region 13	15.21	84.79
	BARMM	100	0
	Overall	35.63	64.37
Comparison	Region 4-A	55.13	44.87
	Region 6	33.33	66.67
	Region 11	68.75	31.25
	Region 12	29.45	70.55
	Overall	42.72	57.28

Table 91: Adoption rate of coffee production technologies, participant (n=824) & comparison (n=349)

Technology/Technique/Practice	Participant				Comparison			
	Adoption rate %	Number of Coffee plants			Adoption rate %	Number of Coffee plants		
		Mean	SD	SE (Mean)		Mean	SD	SE (Mean)
Proper planting distance	30.83	2548.07	1204.955	42.08	20.06	621.37	638.85	5.06
Digging of hole	29.49	415.58	611.21	21.33	26.07	693.07	1023.68	8.07
Proper pruning	22.69	1589.34	1027.668	35.85	62.18	748.69	808.73	9.82
Shading	20.15	500.39	719.555	25.08	39.83	878.29	822.99	9.02
Stumping / Rejuvenation	16.02	564.73	910.695	31.76	5.44	269.74	183.44	0.99
Application of Organic Fertilizer	16.02	560.93	746.347	26.05	10.6	257.46	332.04	1.78
Pick ripe	15.29	1512.143	929.502	32.40	12.61	454.89	519.64	3.17
Capping	11.89	481.64	848.801	29.61	9.74	195.00	135.88	0.96
Seedlings Selection	11.65	503.19	780.577	27.22	9.74	634.71	573.41	3.46
Seed selection	10.19	1947.92	10995.6	383.28	7.16	672.00	617.47	3.18
Application of Inorganic Fertilizer	9.22	576	664.005	23.14	6.02	369.29	582.08	2.21
Field planting	8.37	780.27	610.074	21.29	9.17	641.25	566.11	3.36
Site selection	6.43	1226.60	679.208	23.62	7.74	691.11	641.52	3.41
Application of Basal Fertilizer	6.07	538.14	734.433	25.60	6.02	369.29	582.08	2.21
Application of Organic Pesticide	5.34	805.95	1341.92	46.78	2.58	403.33	294.92	1.05
Soil Analysis	4.98	737.87	1116.93	38.97	6.3	319.46	437.63	1.78
Leaf sampling	4.61	679.54	864.85	30.14	3.15	80.46	97.69	0.29
Identification of Pest	4.49	806.64	1300.08	45.33	2.29	305.63	201.45	0.72
Mother plant selection	4.37	559.77	781.544	27.25	5.44	428.95	201.60	1.44
Application of Synthetic Pesticide	4.25	739.171	1185.533	41.33	6.3	412.96	332.60	1.73
Soil Sampling	3.88	767.72	1387.982	48.38	3.44	465.00	376.43	1.45
Farm Planning	3.76	778.48	1285.983	44.86	1.15	725.00	573.73	1.26
Application of Organic Fungicides	3.64	684.133	755.562	26.34	2.29	525.00	483.29	1.40
Seed germination	3.28	4867.25	19163.933	668.19	0.86	180.33	2.89	0.02
Identification of Disease	3.28	548.481	868.149	30.30	1.15	165.00	145.72	0.30
Application of Synthetic Fungicides	2.55	793.476	1017.005	35.50	0.29	400.00	325.6	0.29
Use of Bio control Agents	1.46	896.75	1085.553	37.88	2.87	117.50	107.63	0.35

Table 92: Adoption rate of coffee post-harvest technologies and other processing and value addition technologies, participant (n=824) and Comparison (n=349)

Technology/Technique/Practice	Adoption rate%	Number of coffee plants		
		mean	sd	se
Participant				
Drying	37.38	526.041	1671.547	58.15
Washing	18.88	741.519	2529.756	88.19
Floatation	17.99	721.027	2579.753	89.67
Grinding	11.05	999.244	3240.129	113.04
Use of Elevated Dryers	10.94	888.44	3091.502	107.62
Pulping	10.91	834.213	2817.633	97.84
Sorting and Defects Classification	9.84	1051.116	3343.136	116.20
Storing	9.38	1153.837	3306.95	115.30
Fermentation	8.78	1254.784	3568.401	124.76
Size grading	8.38	1377.111	3591.506	124.97
Cupping	8.36	1327.108	3547.715	123.66
Polishing	6.94	1778.957	4466.557	155.32
Hulling	6.78	1419.074	4164.576	144.90
Roasting	6.18	1955.529	5218.669	181.97
Packaging	5.63	2243	5737.418	199.50
Measuring sugar content	4.93	1125	1528.316	132.3
Comparison				
Washing	5.44	207.632	165.23	7.89
Floatation	2.58	416.667	447.21	23.95
Pulping	3.44	200.167	296.58	14.16
Drying	38.68	478	574.68	27.42
Sorting and Defects Classification	5.73	181.75	278.85	13.30
Storing	4.67	152.938	238.74	11.39
Hulling	6.38	350.5	652.88	31.20
Grinding	11.05	272.955	500.91	23.96

Table 93: Adoption rate of technologies related to promoting improved climate risk reduction and/or natural resources management Participant (n=824)

Technology/Technique/Practice	Adoption rate%	Number of coffee plants		
		mean	sd	se
Participant				
Agroforestry	19.93	1281.705	9203.448	320.80
Restoration of organic soils and degraded lands	7.83	689.538	1210.417	42.11

Technology/Technique/Practice	Adoption rate%	Number of coffee plants		
		mean	sd	se
Adjustment of sowing/planting time	7.40	267.971	475.068	16.52
Low- or no-till practices	6.74	381	649.841	22.54
Irrigation (drip)	6.57	4639.44	2058.314	405.50
Use of short duration varieties	6.46	819.048	1095.632	38.12
Use of drought and flood-resistant varieties	6.39	317.765	525.814	18.27
Diversification	6.15	5244.182	21581.914	751.48
Introduction/expansion of perennials	5.04	338.556	466.125	16.20
Woodlot management	3.67	408.879	583.018	20.30
Efficient nitrogen fertilizer use	3.21	3429.029	17124.228	596.37
Biodiversity conservation	2.03	4458.72	2028.703	506.87
Practices that promote methane reduction	2.01	708.053	777.356	27.02
Use of perennial varieties	1.01	616.923	868.694	30.18
Stream bank management, restoration, re/afforestation	0.98	737	1003.864	34.95
Comparison				
Efficient nitrogen fertilizer use	7.50	445.396	540.089	28.89
Restoration of organic soils and degraded lands	4.01	337.5	334.611	17.919
Woodlot management	3.32	237.5	199.192	10.654
Low- or no-till practices	2.56	245.833	378.238	20.25
Biodiversity conservation	2.39	150	86.603	4.629
Use of drought and flood resistant varieties	2.39	239.091	178.07	9.522

Table 94: Technologies adoption rate (%) among participant and comparison farmers, participant (n=824) and comparison (n=349).

Technologies and Practice	Adoption rate%	
	Participant	Comparison
Agricultural technologies	75.66	87.39
Post-harvest related technologies	46.64	44.70
Climate risk related technologies	34.74	23.78
Firm management Practice	78.58	90.26

Table 95: Gender-Based comparative Analysis of Key Variables with T-test Results

Variables	Difference	t-test value	P-value
Technology adoption	.0234316	2.7204	0.0066
Production Cost	149.5567	0.2997	0.7644

Total Yield	-10.97227	-0.2371	0.8126
Post-harvest losses	-.5578704	-0.1612	0.0215
Total Coffee Sales	36.84488	1.1008	0.0212
Total labor	.3832845	2.2531	0.0244
Total HH income	16034.27	1.5364	0.0247
Average Coffee Price	6.361251	0.9456	0.3446
Access to Credit	-.0295585	-1.2116	0.0259

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 96: Comparative analysis of key variables with T-test Results based on age category.

Variables	Difference	t-test value	P-value
Technology adoption	.0014279	0.1035	0.0176
Production Cost	-1036.54	-1.3018	0.1933
Total Yield	73.71387	0.9981	0.0385
Post-harvest losses	-5.236757	-0.8817	0.3788
Total Coffee Sales	-29.7106	-0.5556	0.5786
Total labor	-.1744468	-0.6409	0.5217
Total HH income	-32637.23	-1.9595	0.0503
Average Coffee Price	8.182035	0.7615	0.0465
Access to Credit	-.0831414	-2.1369	0.0328

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

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Table 97: Credit and financing analysis

Variables	T-test	P-value	DID Estimator	SE
Have existing savings/share capital with the organization	0.7863	0.4319(NS)	.4170 ***	.063
Have an existing credit/loan from a microfinance institution or bank	1.2963	0.1951 (NS)	.0641***	.0338
Difficult to access Credit	8.2615	.21351 ***	.0122***	.0738

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 98: Marketing and Access to Market Information

External sources of capacity-building activities of farmers	Percentage	DID Estimator	SE
No one (Rely on my own efforts)	3.18	.0027***	.0019
Taught by fellow coffee farmers	23.05	.015***	.023

ACDI/VOCA (PhilCAFE	78.36	.060***	.008
SUC extension staff (research, development & extension)	3.68	-.004***	.029
LGU/national government	23.19	.019***	.005
Support from NGO	-	-.039***	.039
Support from a cooperative	20.81	.017**	.004

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

Table 99: Correlation analysis of coffee production technology adoption with coffee yield. (participant and comparison)

Technology/Technique /Practice	Participant		Comparison	
	rpb	p value	rpb	p value
Site selection	0.0770	0.0583	0.0493	0.3881
Seedlings Selection	0.1634	0.0001	0.0481	0.3994
Proper planting distance	0.1871	0.0000	0.1475	0.0094
Digging of hole	-0.0085	0.8356	0.2274	0.0001
Field planting	0.0470	0.2484	0.0787	0.1678
Shading	0.0980	0.0159	0.0262	0.6462
Farm Planning (Sketch Map, SWOT, Action Plan)	0.1447	0.0004	-0.0314	0.5821
Mother plant selection	0.1783	0.0000	0.1126	0.0479
Seed selection	0.1802	0.0000	-0.0131	0.8180
Seed germination	0.0977	0.0162	-0.0364	0.5233
Proper pruning	0.0777	0.0562	0.2002	0.0004
Capping	0.0553	0.1742	-0.1038	0.0684
Stumping / Rejuvenation	-0.0015	0.9702	-0.0521	0.3611
Leaf sampling	0.0643	0.1140	-0.0858	0.1325
Soil Sampling	0.0997	0.0141	0.1287	0.0237
Soil Analysis	0.1393	0.0006	0.0761	0.1824
Application of Organic Fertilizer	0.1647	0.0000	0.0251	0.6602
Application of Inorganic Fertilizer	0.2803	0.0000	0.0928	0.1034
Application of Basal Fertilizer	0.1416	0.0005	-0.0230	0.6877
Identification of Pest	0.1128	0.0055	-0.0107	0.8521
Application of Organic Pesticide	0.1913	0.0000	0.0031	0.9564
Application of Synthetic Pesticide	0.1580	0.0001	0.1006	0.0775
Use of Biocontrol Agents	0.1390	0.0006	-0.0482	0.3989
Identification of Disease	0.1143	0.0049	-0.0053	0.9263
Application of Organic Fungicides	0.2071	0.0000	-0.0041	0.9433
Application of Synthetic Fungicides	0.1317	0.0012	0.0982	0.0849
Pick ripe	0.0365	0.3701	-0.0738	0.1958

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 100: Correlation analysis of post-harvest technology adoption with coffee yield (participant and comparison)

Technology/Technique/Practice	Participant		Comparison	
	rpb	p value	rpb	p value
Washing	0.1798	0.0000	-0.0535	0.3485
Floatation	0.2499	0.0000	0.0719	0.2074
Pulping	0.2266	0.0000	-0.0540	0.3441
Fermentation	0.2981	0.0000	-0.0326	0.5675
Use of Elevated Dryers	0.1836	0.0000	-0.0732	0.1994
Drying	0.0351	0.3881	0.0415	0.4668
Polishing	0.2423	0.0000	-0.0272	0.6333
Sorting and Defects Classification	0.1877	0.0000	-0.0913	0.1091
Size grading	0.4091	0.0000	-0.0362	0.5266
Storing	0.3353	0.0000	-0.0886	0.1200
Hulling	0.3138	0.0000	-0.0133	0.8160
Grinding	0.1649	0.0000	-0.0156	0.7846
Roasting	0.1698	0.0000	-	-
Packaging	0.1982	0.0000	-	-
Cupping	0.4066	0.0000	-	-
Measuring sugar content	0.0688	0.0909	-	-

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 101: Correlation analysis of climate risk technologies adoption with coffee yield. (participant and comparison)

	Participant		Comparison	
Climate Risk Reduction Practices and Technologies	Rpb	p value	rpb	p value
Biodiversity conservation	0.1070	0.0084	-0.0227	0.6915
Woodlot management	0.0594	0.1447	-0.0403	0.4807
Restoration of organic soils and degraded lands	0.1498	0.0002	0.1412	0.0130
Use of drought and flood resistant varieties	0.1190	0.0034	-0.0657	0.2495
Low- or no-till practices	0.0376	0.3553	-0.0691	0.2255
Efficient nitrogen fertilizer use	0.2310	0.0000	-0.1235	0.0300
Adjustment of sowing/planting time	0.1644	0.0000	-	-
Use of perennial varieties	0.0614	0.1314	-0.0362	0.5266
Practices that promote methane reduction	0.1958	0.0000	-	-
Introduction/expansion of perennials	0.1356	0.0008	-	-

Stream bank management, restoration, re/afforestation	0.1351	0.0009	-0.0606	0.2887
Agroforestry	-0.0552	0.1750	0.1506	0.0080
Irrigation (drip)	0.0887	0.0291	0.1164	0.0409
Use of short-duration varieties	0.1371	0.0007	-0.0773	0.1752
Diversification	0.1031	0.0111	-0.0318	0.5780

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 102: Correlation analysis of farm management with coffee yield. (participant and comparison)

Firm Management	Participant		Comparison	
	rpb	p value	rpb	p value
Processing	0.2408	0.0000	0.0955	0.0937
Recordkeeping	0.1041	0.0104	0.0152	0.7908
Financial Planning	0.1314	0.0012	0.0503	0.3783
Use of Information/Communication technology	0.0851	0.0364	0.1215	0.0328
Marketing/Trading	0.0307	0.4511	0.0237	0.6780
Accounting	-0.0107	0.7926	0.0700	0.2198
Human Resources	-0.0876	0.0311	-0.1020	0.0734
Farm Management Practices	0.0878	0.0307	0.0060	0.9166

Table 103: Correlation analysis of Coffee production Technology adoption with coffee yield (Institution)

Technology/Technique / Practice	rpb	p value
Site selection	0.2609*	<0.01
Seedlings Selection	0.2609*	<0.01
Proper planting distance	0.3904*	<0.01
Digging of hole	0.315*	<0.01
Shading	0.1744	0.004
Farm Planning (Sketch Map, SWOT, Action Plan)	0.2616	<0.01
Mother plant selection	0.2233	0.0003
Seed selection	0.3763	<0.01
Seed germination	0.2141	0.0005
Proper pruning	0.2512	<0.01
Capping	0.0859	0.1640
Stumping / Rejuvenation	0.2400	0.0001
Leaf sampling	0.1115	0.0706
Soil Sampling	0.1892	0.0020
Soil Analysis	0.1570	0.010
Application of Organic Fertilizer	0.1914	0.001
Application of Inorganic Fertilizer	0.2172	0.0004
Application of Basal Fertilizer	0.2756	0.0000
Identification of Pest	0.1800	0.0033
Application of Organic Pesticide	0.3089	<0.01
Application of Synthetic Pesticide	0.2455	0.0001
Use of Bio control Agents	0.1925	0.0017
Identification of Disease	0.1541	0.0122
Application of Organic Fungicides	0.1237	0.0447
Application of Synthetic Fungicides	0.2065	0.0007
Pick ripe	0.2676	<0.01

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at 5% level of significance.

Table 104: Correlation analysis of Post Harvest Technology adoption with coffee yield.(Institution)

Technology/Technique/Practice	rpb	p value
Washing	0.1656	0.0070
Floatation	0.1457	0.017
Pulping	0.1211	0.0494

Technology/Technique/Practice	rpb	p value
Fermentation	0.1212	0.0491
Use of Elevated Dryers	0.1978	0.0012
Drying	0.1233	0.0453
Polishing	0.1385	0.0244
Sorting and Defects Classification	0.1579	0.0102
Size grading	0.2533	0.0000
Storing	0.2651	0.000
Hulling	0.0537	0.3852
Grinding	0.1626	0.0081
Roasting	0.2311	0.0002
Packaging	0.0821	0.1835
Cupping	0.0581	0.3472
Measuring sugar content	0.1329	0.0309

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 105: Correlation analysis of climate risk Technology adoption with coffee yield.(Institution)

Climate Risk Reduction Practices and Technologies	rpb	p value
Biodiversity conservation	0.1091	0.0767
Woodlot management	0.1564	0.0109
Restoration of organic soils and degraded lands	0.0849	0.1690
Use of drought and flood resistant varieties	0.1545	0.0119
Low- or no-till practices	0.1962	0.0014
Efficient nitrogen fertilizer use	0.1824	0.0029
Adjustment of sowing/planting time	0.0515	0.4043
Use of perennial varieties	0.1761	0.0041
Practices that promote methane reduction	0.0705	0.2539
Introduction/expansion of perennials	0.0834	0.1767
Stream bank management, restoration, re/afforestation	0.0560	0.3648
Agroforestry	-0.0278	0.6532
Irrigation (drip)	-0.0166	0.7884
Use of short duration varieties	0.0803	0.1934
Diversification	0.0397	0.5206

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 106: Correlation analysis of farm management Technology adoption with coffee yield .(Institution)

Firm Management	rpb	p value
Processing	0.0646	0.2954
Recordkeeping	0.0774	0.2099
Financial Planning	0.1177	0.0560
Use of Information/Communication technology	0.0436	0.4805
Marketing/Trading	0.0424	0.4927
Accounting	0.0615	0.3194
Human Resources	0.0307	0.6195
Farm Management Practices	0.0279	0.6520

Note: Values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value, * signifies a significant correlation at a 5% level of significance.

Table 107: ANOVA result for regional effect on adoption of coffee production technology, Participant (n=824)

Variables	Partial SS	F-Value	Prob>F
Site selection	6.560573	10.93	0.2669
Seedlings Selection	0.712953	1.23	0.7143
Proper planting distance	42.44453***	0.13	0.0048
Digging of hole	7.034854	7.98	0.2503
Field planting	1.501027	1.32	0.5953
Shading	133.1603	0.28	P<0.001
Farm Planning (Sketch Map, SWOT, Action Plan)	13.74523	25.04	0.1082
Mother plant selection	55.11156***	2.58	0.0013
Seed selection	37.51903***	10.36	0.008
Seed germination	12.94627	7.05	0.119
Proper pruning	777.5045***	2.43	P<0.001
Capping	2.111474	146.2	0.5288
Stumping / Rejuvenation	386.7119***	0.4	P<0.001
Leaf sampling	15.53393	72.71	0.0877
Soil Sampling	12.90926	2.92	0.1195
Soil Analysis	2.995362	2.43	0.4531
Application of Organic Fertilizer	10.55743	0.56	0.1591
Application of Inorganic Fertilizer	0.539898	1.99	0.7501

Variables	Partial SS	F-Value	Prob>F
Application of Basal Fertilizer	28.46493**	0.1	0.0209
Identification of Pest	4.907767	5.35	0.3369
Application of Organic Pesticide	8.160035	0.92	0.2157
Application of Synthetic Pesticide	0.754879	1.53	0.7064
Use of Biocontrol Agents	28.31156**	0.14	0.0212
Identification of Disease	5.977615	5.32	0.2893
Application of Organic Fungicides	34.25534	1.12	0.0113
Application of Synthetic Fungicides	0.544242	6.44	0.7491
Pick ripe	28.29121**	0.1	0.0213
R-Square	0.2049		
Adjusted R-Square	0.1861		
Model	1568.9239	10.93	0.0000

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level
,“Partial SS" stands for "Partial Sum of Squares" - the variation attributed to specific factors. “F-Value" (F-statistic) is a ratio of two variances, comparing group means. "Prob>F" or "p-value" associated with the F-Value shows the chance of these differences occurring by randomness.

Table 108: ANOVA result for regional effect on adoption of coffee post-harvest technologies and other processing and value addition technologies. Participant (n=824)

Variables	Partial SS	F-Value	Prob>F
Washing	16.58365***	2.42	0.0014
Floatation	30.87117	2.59	0.108
Pulping	30.28446*	4.82	0.0284
Fermentation	8.320018*	4.72	0.0299
Use of Elevated Dryers	28.36697	1.3	0.2548
Drying	20.88923*	4.43	0.0356
Polishing	2.228237	3.26	0.0713
Sorting and Defects Classification	31.00943	0.35	0.5556
Size grading	1.409679*	4.84	0.028
Storing	2.126114	0.22	0.6392
Hulling	51.47293	0.33	0.5648
Grinding	12.67123***	8.03	0.0047
Roasting	0.010068	1.98	0.16
Packaging	0.16133	0	0.9684
Cupping	28.54092	0.03	0.874

Measuring sugar content	1.618011*	4.45	0.0351
R-Square	0.0324		
Adjusted R-Square	0.0190		
Model	248.20155	11.42	0.0000

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level
“Partial SS" stands for "Partial Sum of Squares" - the variation attributed to specific factors. “F-Value" (F-statistic) is a ratio of two variances, comparing group means. "Prob>F" or "p-value" associated with the F-Value shows the chance of these differences occurring by randomness.

Table 109: ANOVA result for regional effect on adoption of climate risk reduction management, Participant (n=824)

Variables	Partial SS	F-Value	Prob>F
Biodiversity conservation	3.509376	7.05	0.447
Woodlot manage	16.72021	0.58	0.0971
Restoration of organic soils and degraded lands	0.215851	2.76	0.8504
Use of drought and flood resistant varieties	3.992412	0.04	0.4173
Low- or no-till practices	7.405316	0.66	0.2694
Efficient nitrogen fertilizer use	227.8173***	1.22	P<0.001
Adjustment of sowing/planting time	1.767334	37.57	0.5894
Use of perennial varieties	0.013559	0.29	0.9623
Practices that promote methane reduction	30.03323	0	0.0262
Introduction/expansion of perennials	0.592231	4.95	0.7547
Stream bank management, restoration, re/afforestation	2.895341	0.1	0.4897
Agroforestry	262.4651***	0.48	P<0.001
Irrigation (drip)	1.682255	43.28	0.0498
Use of short-duration varieties	2.501156	0.28	0.5209
Diversification	1.483801	0.41	0.6209
R-Square	0.0838		
Adjusted R-Square	0.0719		
Model	641.5849	5.73	0.0000

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level
, “Partial SS" stands for "Partial Sum of Squares" - the variation attributed to specific factors. “F-Value" (F-statistic) is a ratio of two variances, comparing group means. "Prob>F" or "p-value" associated with the F-Value shows the chance of these differences occurring by randomness.

Table 110: ANOVA result for regional effect on adoption of farm management practices. Participant (n=824)

Variables	Partial SS	F-Value	Prob>F
Processing	68.45352	21.76	0.0006
Record	227.1023	11.77	0
Financial Planning	16.08357	39.06	0.0965
Use of Information/Communication technology	83.73882	2.77	0.0002
Marketing/Trading	376.9265	14.4	0
Accounting	48.04025	64.83	0.0041
Human Resources	61.83453	8.26	0.0011
R-Square	0.1156		
Adjusted R-Square	0.1103		
Model	885.3	7.94	0.0000

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level
“Partial SS" stands for "Partial Sum of Squares" - the variation attributed to specific factors. “F-Value" (F-statistic) is a ratio of two variances, comparing group means. "Prob>F" or "p-value" associated with the F-Value shows the chance of these differences occurring by randomness.

Table 111: Average number of family laborers involved in coffee farming by category, Participant (n=824) and Comparison (n=349)

Region	Average number of family laborers	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Participant	2.29	0.75	0.71	1.07	0.25
CAR	2.05	0.08	0.41	0.09	0.29
1	1.33	0.33	0.83	0.00	0.17
2	1.00	0.00	0.43	0.14	0.43
4-A	1.77	0.10	1.38	0.00	0.29
6	1.94	0.26	0.91	0.14	0.57
10	2.43	0.64	1.19	0.14	0.47
11	1.60	0.28	0.99	0.02	0.30
12	2.15	0.61	0.98	0.22	0.34
13	1.48	0.12	1.03	0.03	0.30
BARMM	1.75	0.25	1.25	0.08	0.17
Comparison	1.95	0.39	1.04	0.07	0.45
1	2.23	0.16	1.49	0.09	0.48
2	1.73	0.03	1.17	0.00	0.53
3	1.49	0.24	1.04	0.00	0.21
4	2.08	0.68	0.75	0.10	0.55

Table 112: Average number of hired laborers involved in coffee farming by category, Participant (n=824) and Comparison (n=349)

Region	Average number of hired labor	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Participant	1.79	0.21	0.47	0.92	0.09
CAR	0.20	0.04	0.13	0.01	0.03
1	1.17	0.11	0.58	0.11	0.36
2	0.00	0.00	0.00	0.00	0.00
4-A	0.34	0.03	0.31	0.00	0.00
6	1.77	0.26	1.06	0.00	0.43
10	1.67	0.42	0.90	0.94	0.27
11	0.67	0.27	0.37	0.00	0.03
12	0.99	0.20	0.71	0.03	0.06
13	0.94	0.45	0.46	0.01	0.03
BARMM	2.75	0.92	1.25	0.08	0.50
Comparison	1.46	0.27	1.11	0.01	0.07
1	1.27	0.10	1.15	0.01	0.01
2	2.10	1.33	0.67	0.00	0.10
3	0.70	0.18	0.43	0.01	0.09
4	1.83	0.21	1.54	0.00	0.08

Table 113: Regression analysis on coffee yield (converted to GCB), Participants (n=824)

Variables	**Coef.**	**P-Value**
Age	-2.155NS	0.2360
Household Size	-3.321 NS	0.8250
Sex	45.239 **	0.0292
Years of formal education	16.887 ***	0.0010
Marital Status	186.609**	0.0340
Total Farm Size (Ha)	232.964***	0.0000
Post-harvest losses	-302.281***	0.0000
Intercropping	267.119***	0.0010
Adopt Disease Management	56.372 **	0.0180
Adopt Farm Management Practices	122.747 NS	0.4050
Adopt Genetic Improvement	155.57**	0.0210
Adopt Pest Management	262.765 NS	0.1150
Adopt Soil Related Fertility and Conservation	1.162**	0.0010
Adopt Harvest and Post-harvest	0.015 **	0.0015
Adopt Processing	49.459 NS	0.3170

Adopt Farm Diversification	19.107 NS	0.8930
Adopt Climate Risk Reduction and NRM	0.000 NS	.
Adopt Operational Management	-334.17***	0.0000
Production Cost (Per Hectare)	-.006**	0.0220
Active Marketing	164.155***	0.0030
Enough Capital	237.186***	0.0000
Number of Hours Spend in the Farm (Men)	.239***	0.0150
Number of Hours Spend in the Farm (Men Youth)	0.579 NS	0.1460
Number of Hours Spend in the Farm (Women)	-0.010 NS	0.9750
Number of Hours Spend in the Farm (Women Youth)	-1.062 NS	0.2140
Willingness to Certification	193.992***	0.0020
Constant	- 1190.171***	0.0000
Prob > F	0.0000	
R-squared	0.345	

Note: Values in the table are the estimated coefficient of the log-linear yield model (all produce converted to GCB) and the corresponding P-value coefficients with * are significant at 10% level, ** 5%, *** at 1% level and are not significant.

Table 114: Correlation analysis of adoption post-harvest practices/technologies, 2022-2023

Variables	rpb	P-Value
Household Size	-0.023	0.441
Years of formal education	-0.278*	0.000
Membership to farmers' cooperative	0.064*	0.030
Total Farm Size (Ha)	0.448*	0.000
Yield (GCB)	0.287*	0.000
Adopt Disease Management	0.004	0.880
Adopt Farm Management Practices	0.025	0.396
Adopt Genetic Improvement	0.058*	0.048
Adopt Pest Management	0.276*	0.000
Adopt Soil Related Fertility and Conservation	0.369*	0.000
Adopt Harvest and Post-harvest	0.151*	0.000
Adopt Processing	0.098*	0.001
Adopt Farm Diversification	0.024	0.404
Adopt Climate Risk Reduction and NRM	0.080*	0.006
Adopt Operational Management	-0.017	0.564
Post-harvest losses	-0.554*	0.001
Production Cost (Per Hectare)	0.012	0.674
Active Marketing	0.089*	0.002
Enough Capital	0.080*	0.006

Variables	rpb	P-Value
Number of Hours Spend in the Farm (Men)	0.043	0.145
Number of Hours Spend in the Farm (Men Youth)	0.101*	0.001
Number of Hours Spend in the Farm (Women)	0.474*	0.000
Number of Hours Spend in the Farm (Women Youth)	0.343*	0.000
Arabica area (ha)	-0.008	0.774
Robusta area (ha)	-0.019	0.522
Excelsa area (ha)	-0.242*	0.000

Note: The values in the table are the point biserial correlation coefficient (rpb) and the corresponding p-value.* signifies a significant correlation at the 5% level of significance.

Table 115: Source of agricultural market price/information, participant (n=824) and comparison (n=349)

Source of market price/information	Participant		Comparison	
	f	%	f	%
No one- rely on my efforts	174	21.12	146	41.83
Shared by fellow coffee farmers	235	28.52	142	40.69
LGU/national government	51	6.19	8	2.29
From NGO	7	0.85	3	0.86
From my cooperative/association	340	41.26	51	14.61
from other cooperative/association	10	1.21	2	0.57
From a trader/buyer	90	10.92	35	10.03
From TV	10	1.21	1	0.29
From Radio	7	0.85	1	0.29
From Internet/social media	15	1.82	1	0.29
Others (specify)	20	2.43	1	0.29

Table 116: Correlation analysis on coffee sales, 2022-2023, participant (n=824)

Variables	rpb	P-Value
Age	0.106*	0.000
Household Size	-0.042	0.149
Sex	-0.115*	0.000
Years of formal education	0.003	0.918
Membership to farmers' cooperative	-0.021	0.471
Total Farm Size (Ha)	0.278*	0.000
Yield/Ha (Fresh Cherries)	0.064*	0.030
Yield/Ha (GCB and Dried Beans)	0.125*	0.000
Yield/Ha (GCB All)	0.142*	0.000
Post-harvest losses	-0.979*	0.000

Variables	rpb	P-Value
Adopt Disease Management	0.287*	0.000
Adopt Farm Management Practices	0.004	0.88
Adopt Genetic Improvement	0.025	0.396
Adopt Pest Management	0.058*	0.048
Adopt Soil Related Fertility and Conservation	0.276*	0.000
Adopt Harvest and Post-harvest	0.369*	0.000
Adopt Processing	0.036	0.22
Adopt Farm Diversification	0.117*	0.000
Adopt Climate Risk Reduction and NRM	0.098*	0.001
Adopt Operational Management	0.024	0.404
Production Cost (Per Hectare)	0.080*	0.006
Coffee Cupping	-0.017	0.564
Active Marketing	0.012	0.674
Enough Capital	0.089*	0.002
Number of family labor	0.080*	0.006
Number of hired labor	0.043	0.145
Number of Hours Spend in the Farm (Men)	0.101*	0.001
Number of Hours Spend in the Farm (Men Youth)	0.474*	0.000
Number of Hours Spend in the Farm (Women)	0.343*	0.000
Number of Hours Spend in the Farm (Women Youth)	-0.008	0.774

Note: The values in the table are the Pearson correlation coefficient (r) and the corresponding p-value.* signifies a significant correlation at the 5% level of significance.

Table 117: Average of the count of household members involved with on-farm work, by age and sex, participant (n=824) and comparison (n=349)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment								
CAR	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
4-A	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
11	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1
13	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1

BARMM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Comparison								
1	0.1	0.1	-	-	-	-	-	-
2	0.1	0.1	-	-	-	-	-	-
3	0.1	0.1	-	-	-	-	-	-
4	0.1	0.1	-	-	-	-	-	-

Note: 0.1 means about 1 for every 10HH; 0.2 means about 2 for every 10HH

Table 118: Average of the count of household members involved with off-farm work, by age and sex, Participant (n=824) and Comparison (n=349)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment								
CAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
10	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0
11	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
12	0.0	0.0	0	0.1	0.1	0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
BARMM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Comparison								
1	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-

Note: 0.1 means about 1 for every 10HH; 0.2 means about 2 for every 10HH

Table 119: Average of the count of household members involved with non-farm work, by age and sex, Participant (n=824) and Comparison (n=349)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment								
CAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
10	0.1	0.1	0.1	0	0.1	0.1	0.0	0.0
11	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
12	0.0	0.0	0.0	0.1	0.1	0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
BARMM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Comparison								
1	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-

Note: 0.1 means about 1 for every 10HH; 0.2 means about 2 for every 10HH

Table 120: Average number of family laborers involved in coffee farming by category, Participant (n=824) and Comparison (n=349)

Region	Average Number of family laborers	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Treatment	**1.29**	**.257**	**.705**	**.067**	**.248**
CAR	1.05	.08	.41	.09	.29
1	1.3	.33	.83	0.0	.17
2	1.00	0.00	0.43	0.14	0.43
4-A	1.77	0.10	1.38	0.00	0.29
6	1.94	0.26	0.91	0.14	0.57
10	2.43	0.64	1.19	0.14	0.47
11	1.60	0.28	0.99	0.02	0.30
12	2.15	0.61	0.98	0.22	0.34
13	1.48	0.12	1.03	0.03	0.30
BARMM	1.75	0.25	1.25	0.08	0.17
Comparison	**1.95**	**0.39**	**1.04**	**0.07**	**0.45**

1	2.23	0.16	1.49	0.09	0.48
2	1.73	0.03	1.17	0.00	0.53
3	1.49	0.24	1.04	0.00	0.21
4	2.08	0.68	0.75	0.10	0.55

Table 121: Average number of hired laborers involved in coffee farming by category, Participant (n=824) and Comparison (n=349)

Region	Average Number of Hired laborers	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Treatment	**0.79**	**0.21**	**0.47**	**0.02**	**0.09**
CAR	0.42	0.08	0.27	0.01	0.06
1	7.00	0.67	3.50	0.67	2.17
2	0.00	0.00	0.00	0.00	0.00
4-A	1.33	0.12	1.19	0.00	0.02
6	1.77	0.26	1.06	0.00	0.43
10	1.67	0.42	0.90	0.08	0.27
11	0.67	0.27	0.37	0.00	0.03
12	0.99	0.20	0.71	0.03	0.06
13	0.94	0.45	0.46	0.01	0.03
BARMM	2.75	0.92	1.25	0.08	0.50
Comparison	**1.46**	**0.27**	**1.11**	**0.01**	**0.07**
1	1.27	0.10	1.15	0.01	0.01
2	2.10	1.33	0.67	0.00	0.10
3	0.70	0.18	0.43	0.01	0.09
4	1.83	0.21	1.54	0.00	0.08

Table 122: Details of family labor/participation in coffee farming, adult male and female, Participant (n=824) and Comparison (n=349)

Region	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% With pay
Treatment	87.67	89.1	33.6	57.3	50.04	70.06	15.6	79.44
CAR	62.31	93.5	31.5	72.7	52.74	90.24	26.0	79.04
1	85.27	100.0	9.8	66.67	29.45	29.45	1.3	85.27
2	93.43	100.0	0.4	6.57	5.28	100	98.6	94.72
4-A	98.21	90.6	9.4	60.76	56.72	47.72	0.3	90.54
6	93.43	97.7	19.9	93.3	49.46	92.37	6.4	90.95

10	85.36	90.6	72.8	60.07	45.16	67.77	40.9	79.29
11	93.05	86.9	26.9	50.3	66.88	52.79	4.0	77.63
12	88.66	85.5	7.1	55.7	48.59	71.68	3.1	74.14
13	88.9	83.7	39.9	21.96	27.98	78.51	10.2	74.87
BARMM	95.24	95.2	0.9	92.79	33.38	83.87	0.2	100.00
Comparison	87.11	83.09	26.4	37.0	52.44	45.27	7.5	70.77
1	94.32	81.82	164.1	18.2	37.5	35.23	45.1	69.32
2	90.0	56.67	31.7	70.0	33.33	26.67	6.5	73.33
3	90.0	78.75	96.0	35.0	55	38.75	15.1	93.75
4	80.79	91.39	52.5	42.4	63.58	58.28	22.5	58.94

Table 123: Percentage of Farmers who achieved target of coffee volume and sales by Region, Participant (n=824) and Comparison (n=349)

Region		% of farmers achieved target coffee volume & sales	% of farmers did not achieved target coffee volume & sales
Participant	CAR	79.2	20.8
	Region 1	0	100
	Region 2	100	0
	Region 4-A	37.8	62.2
	Region 6	1.24	98.76
	Region 10	66.88	33.12
	Region 11	36.78	63.22
	Region 12	14.57	85.43
	Region 13	15.21	84.79
	BARMM	100	0
	Overall	35.63	64.37
Comparison	Region 4-A	55.13	44.87
	Region 6	33.33	66.67
	Region 11	68.75	31.25
	Region 12	29.45	70.55
	Overall	42.72	57.28

Firm Survey Tables

Table 124: Distribution of firm representatives by gender and by region, (n=264)

Region	Female		Male		Total
	Youth	Adult	Youth	Adult	
BARMM	0	1	0	3	4
CAR	1	13	1	8	23
Region 1	0	3	0	2	5
Region 2	2	3	0	1	6
Region 4-A	0	6	0	6	12
Region 6	0	15	0	11	26
Region 10	1	28	2	24	55
Region 11	2	25	1	35	63
Region 12	0	24	2	28	54
Region 13	0	6	0	10	16
Total	6	124	6	128	264

Table 125: Number of Firm Respondents who received PhilCAFE Assistance, (n=264)

Firm Type	Received training or technical assistance		Received some form of enterprise growth or improvement training		Participated in an event facilitated by PhilCAFE	
	Female	Male	Female	Male	Female	Male
Non-Government Organizations or Civil Societies	4	8	5	7	5	7
Private Sector Firms (including private Universities and Colleges)	14	28	13	22	12	25
Producer Organizations (Associations)	64	63	57	52	60	54
Public/Government Agencies (including SUCs)	37	26	32	21	38	24

Table 126: Average age of the firm representative, (n=264)

Firm Type	Mean Age
Non-Government Organizations or Civil Societies	41.6
Private Sector Firms (including private Universities and Colleges)	43.3
Producer Organizations (Associations)	47.9
Public/Government Agencies (including SUCs)	44.7

Table 127: Distribution of firm representative respondents based on gender, per firm type (in %, (n=264)

Firm Type	Male	Female
Non-Government Organizations or Civil Societies	69.50	30.50
Private Sector Firms (including private Universities and Colleges)	42.21	57.79
Producer's Organization (Associations)	42.12	57.88
Public/Government Agencies (including SUCs)	75.12	24.88

Table 128: Distribution of ethnicity of firm representatives, per firm type (%) (n=264).

Ethnicity	Non-Government Organizations or Civil Societies	Private Sector Firms (Including private Universities and Colleges)	Producer Organizations (Associations)	Public/Government Agencies (including SUCs)	Overall	
					f	%
Aplai	1	0	0	0	1	0.21
Bisaya	1	19	25	23	68	22.03
Boholano	0	1	0	1	2	1.11
Cebuano	4	5	36	13	58	17.78
Dabawenyo	0	1	0	0	1	1.28
Higaonon	2	1	3	0	6	3.87
Ilocano	1	7	6	7	21	4.77
Ilonggo	1	7	27	11	46	21.65
Kapampangan	0	1	1	0	2	0.09
Manobo	1	0	5	0	6	0.44
Tagalog	0	3	8	3	14	0.85
Tausug	0	0	2	2	4	1.37
Others: specify	2	0	23	9	34	24.76

Table 129: Percentage of firms that are involved in any form of cultivation (n=264).

Firms Beneficiary Types	Involved in any form of cultivation (with own/communal farm) (%)
Non-Government Organizations or Civil Societies	26.61
Private Sector Firms (including private Universities and Colleges)	66.7
Producer Organizations (Associations)	71.93
Public/Government Agencies (including SUCs)	21.9
Overall	61.51

Table 130: Average total farm size, size of cultivated farm, and area devoted to coffee(n=133).

Firms Beneficiary Types	Mean Total Farm Size	Mean Size of Cultivated Farm	Mean Area devoted to Coffee
Non-Government Organizations or Civil Societies	9.25	7.63	6.75
Private Sector Firms (including private Universities and Colleges)	7.76	6.05	5.55
Producer Organizations (Associations)	12.99	10.18	8.14
Public/Government Agencies (including SUCs)	23.52	18.26	15.86

Table 131: Average area devoted to coffee per species (n=133).

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Overall Mean
Non-Government Organizations or Civil Societies	2.8	2.8	-	-	1.29
Private Sector Firms (including private Universities and Colleges)	2.7	3.19	3.1	2.3	1.57
Producer Organizations (Associations)	4.6	5.79	6.5	1.6	4.11
Public/Government Agencies (including SUCs)	10.3	9.46	6.4	5.1	5.54
Overall	5.8	6.0	6.1	2.9	3.91

Table 132: Coffee species wise average number of coffee trees per hectare(n=133).

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Total Coffee Hills per hectare (Mean)
Non-Government Organizations or Civil Societies	896.22	901.57	-	-	820.39
Private Sector Firms (including private Universities and Colleges)	1157.53	832.53	634.44	539.16	912.82
Producer Organizations (Associations)	1187.0	845.74	671.07	616.47	903.46
Public/Government Agencies (including SUCs)	1124.87	943.79	596.16	669.27	904.01

Table 133: Average planting distance per species, in sq m. (n=133).

Firms Beneficiary Types		Arabica	Robusta	Liberica	Excelsa
Non-Government Organizations or Civil Societies		7	7.5	-	-
Private Sector Firms (including private Universities and Colleges)		6.07	7.63	10.5	12.5
Producer Organizations (Associations)		7.35	9.8	11.6	9.9
Public/Government Agencies (including SUCs)		8.0	10.3	9.75	11.3
Overall (sq.m.)	Mean	7.3	9.5	10.7	10.9
	SD	2.9	3.6	4.6	3.7
	SE (mean)	1.1	1.2	0 .9	1.6

Table 134: Average age of coffee trees per specie, in years (n=133).

Firms Beneficiary Types		Arabica	Robusta	Liberica	Excelsa
Non-Government Organizations or Civil Societies		6	7	-	-
Private Sector Firms (including private Universities and Colleges)		8.28	9.20	10.5	7.66
Producer Organizations (Associations)		5.96	10.89	7.36	13.33
Public/Government Agencies (including SUCs)		7.5	9.61	6.62	5.5
Overall	Mean	6.72	10.31	7.38	9.61
	SD	7.33	9.57	3.84	10.36
	SE (Mean)	2.83	4.16	2.34	2.44

Table 135: Percentage of firms that grow other crops in their farm(n=133).

Firms Beneficiary Types	Banana		Cacao		Coconut		Fruit Trees		Others	
	f	%	f	%	f	%	f	%	f	%
Non-Government Organizations or Civil Societies	1	2.2	0	0	1	2.2	2	6.59	1	2.2
Private Sector Firms (including private Universities and Colleges)	2	19.91	1	0.07	4	1.04	4	26.84	5	9.75
Producer Organizations (Associations)	11	7.73	16	13.37	18	10.54	27	19.17	18	14.04
Public/Government Agencies (including SUCs)	7	4.51	5	2.68	5	4.88	10	8.09	12	8.34
Overall	21	9.48	22	7.07	28	6.62	43	17.54	36	11.21

Table 136: Percentage of firm representatives who are practicing an intercropping system, with crops practiced (n=91)

Firms Beneficiary Types	NO	YES	YES(%)	Banana		Cacao		Coconut		Fruit Trees		Others	
				f	%	f	%	f	%	f	%	f	%
Non-Government Organizations or Civil Societies	1	2	66.67	1	33.33	0	0	1	33.33	1	33.33	0	0
Private Sector Firms (including private Universities and Colleges)	5	8	61.54	3	65.36	0	0	4	64.9	3	68.25	2	45.5
Producer Organizations (Associations)	9	46	83.64	11	39.58	16	56.73	16	44.27	24	58.12	8	34.93
Public/Government Agencies (including SUCs)	5	15	75	6	43.03	3	23.93	4	29.13	7	57.49	2	13
Overall	20	71	78.02	21	48.38	19	45.5	25	48.72	35	60.57	12	34.47

Table 137: Average quantity of inputs, and annual coffee production cost per year, in PHP (n=170)

Coffee Production Cost Items	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall mean
Planting materials	50000	22341.667	20851.818	117083.33	54339.63
Paid labor	35000	809466.25	20817.16	131548.2	186258.69
Fertilizers and pesticides	9000	24337.5	15196.708	30351.667	20470.457
Tools and equipment	50000	97916.667	9530.833	11033.333	32722.8
Transport of materials and produce	600	136000	5779.357	24900	35440.44
Interest on loans	.	.	5000000.5	.	5000000.5
Taxes	.	150000	3571.571	2650	18030.1
Rentals	.	15000	.	.	15000

Table 138: Average quantity of inputs (n=170)

Coffee Production Cost Items	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall
					mean
Paid labor	7.5	5.25	16.438	38.556	20.839
warehousing	-	1	-	1	1
Storage tools and equipment	-	3	110.5	12.8	29.4
Transport	1	554.2	64.167	64.2	204.588
Interest on loans	.	3.5	1	-	2.25
Taxes	6.5	4	1.25	1	3.182
Rentals	-	1	1	1	1

Table 139: Average volume of production and yield per hectare by end-product (n=170)

Coffee Production Cost Items	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall (ha)		
					mean	sd	se (mean)
Fresh Cherries							
Total Area Harvested (Hectares)	5.34	4.54	8.32	15.25	9.01	9.01	.977
Number of trees harvested	4640.5	4701.8	7965.05	15494.7	9363.1	7824.98	848.73
Total volume of production, in kilo	9567	10319	17811.4	35135	21016.22	18825	2041.93
Average yield per tree, in kilo	2.18	2.15	2.17	2.2	2.19	.34	0.03
Dried Cherries							
Total Area Harvested (Hectares)	3.97	6.52	9.16	18.48	10.7	9.40	1.30
Number of trees harvested	2937	4699.16	7872.44	16289	9191.96	7980	1106.6
Total volume of production, in kilo	3906	5410.33	9076.55	18043.27	10450	9032	1252.55
Average yield per tree, in kilo	1.33	1.8	1.14	1.15	1.15	1.69	.023
Green coffee beans							
Total Area Harvested (Hectares)	5	5.42	9.50	17.11	10.44	8.76	1.42
Number of trees harvested	4290	4339.25	7764.04	13624.67	8431	7552	1225
Total volume of production, in kilo	2326.87	4193.95	7407.77	1222.2	4562	4444.57	721

Average yield per tree, in kilo	.43	0.52	0.542	.614	0.53	0.083	0.013
Parchment							
Total Area Harvested (Hectares)	7.5	3.75	6.2	0	5.66	2.12	.707
Number of trees harvested	8220	3520	5680	0	5482.22	2237.90	745.96
Total volume of production, in kilo	7562	4436	4825.66	0	5043.11	2184.84	728.28
Average yield per tree, in kilo	.92	1.16	.8466	0	0.92	0.27	.090

Table 140: Average domestic price selling per kg (n=170)

Coffee Products	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall		
					mean	sd	se (mean)
Fresh Cherries	160.0	236.0	188.6	122.6	153.1	154.1	20.2
Dried Cherries	160.0	294.0	187.4	220.6	201.7	219.2	26.4
Green coffee beans	420.0	418.5	969.4	157.1	652.3	2778.6	389.1
Parchment	.	141.7	181.7	145.0	164.1	91.1	27.5
specialty	460.3	362.5	570.0	690.0	549.0	150.3	47.5
Ground coffee	510.5	513.0	514.7	720.0	551.5	442.1	77.0
Roasted	150.0	672.5	542.5	662.0	609.7	432.3	74.1

Table 141: Average % post-harvest losses from the last cropping season of firms (among those with coffee farms) (n=121)

Firms Beneficiary Types	NO	YES	%YES	Average Post-harvest loss in percentage		
				Mean	sd	se (mean)
Non-Government Organizations or Civil Societies	5	0	0.00	20.00	.	.
Private Sector Firms (including private Universities and Colleges)	12	8	40	35.00	23.30	8.24
Producer Organizations	43	33	43.42	28.89	22.61	3.72
Public/Government Agencies (including SUCs)	11	9	45	23.09	20.96	6.32
Overall	71	50	41.32	28.47	22.09	2.93

Table 142: Reasons why firms think they experienced post-harvest losses in percentage. (n=50)

Reasons for Experienced Post-Harvest Losses	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall
Strip harvesting of coffee (ripe and unripe cherries are harvested from the branches)	0	22.41	4.59	81.39	37.20
Disease attack	0	32.06	27.05	14.43	22.14
Inappropriate pulping and hulling process	0	0	0	0	0
Prolonged drying	0	2.66	20.54	83.41	44.72
Exposure to rain	0	53.81	69.90	91.42	77.10
Antiquated/old tools (i.e., mortar and pestle for De-pulping)	0	0	0	0	0
Inadequate storage/containers	0	0	9.31	0	4.77
Poor carrying containers	0	0	10.93	0	5.60
Poor transportation	0	0	9.47	0	4.85
Others	3.02	17.64	9.81	0	6.87

Table 143: Average estimated cost per ton per year for coffee acquisition of firms. (n=170)

Coffee Products	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall Mean
Paid labor	560	327	17373	6350	10889
Warehousing	.	2000	3945	5000	3500
Storage tools and equipment	26030	7500	48000	53600	50045
Transport	120	210804	4429	936	63847
Interest on loans	.	10075	2600	3200	5050
Taxes	1750	38538	3800	2000	15895
Rentals	.	17500	17600	3350	13169

Table 144: Percentage of firms that applied technologies, per firm type (n=264).

Firms Beneficiary Types	Coffee Production Technologies			Coffee Post-Harvest Technologies			Climate Risk Reduction		
	No	Yes	%Yes	No	Yes	%Yes	No	Yes	%Yes
Non-Government Organizations or Civil Societies	11	2	17.95	5	8	78.89	13	0	0
Private Sector Firms (including private Universities and Colleges)	31	14	32.36	23	22	78.13	38	7	14.91

Producer Organizations	82	54	27.52	75	61	47.17	103	33	18.97
Public/Government Agencies (including SUCs)	54	16	13.06	45	25	25.49	56	14	12.33
Overall	178	86	24.38	148	116	48.88	210	54	15.77

Table 145: Percentage % of firms that are involved with nursery-related activities (n=264)

Firms Beneficiary Types	Nursery-Related Activities		
	No	Yes	%Yes
Non-Government Organizations or Civil Societies	8	5	24.79
Private Sector Firms (including private Universities and Colleges)	38	7	7.69
Producer Organizations	108	28	17.09
Public/Government Agencies (including SUCs)	54	16	11.23
Overall	208	56	13.49

Note: Response about nursery-related activities that the firm representative is involved with.

Table 146: Adoption rate in terms of nursery-related technologies (n=264)

Nursery Related Technologies	% of Adoption Rate	Number of coffee plants		
		mean	sd	se (mean)
Proper planting distance	32.88	4757.08	7452.82	1521.30
Seedlings Selection	31.51	11210.48	30702.36	6401.88
Digging of hole	27.40	9620.90	20482.06	4579.93
Site selection	24.66	4655.17	7477.82	1762.54
Proper bag size	24.66	12377.78	34626.36	8161.51
Proper pruning	24.66	10091.33	21571.67	5084.49
Seed selection	21.92	12037.00	36472.13	9118.03
Stumping / Rejuvenation	21.92	9246.69	11671.19	2917.80
Shading	20.55	5689.60	12684.42	3275.10
Application of Organic Fertilizer	20.55	10052.93	22869.78	5904.95
Pick ripe	20.55	5142.73	6318.19	1631.35
Capping	19.18	9328.00	23565.59	6298.17
Application of Organic Pesticide	19.18	3188.79	4060.33	1085.17
Seed germination	17.81	9249.23	14761.41	4094.08
Identification of Disease	17.81	5084.23	8786.85	2437.03
Soil Analysis	16.44	2091.17	4284.39	1236.80
Application of Inorganic Fertilizer	16.44	7178.67	9588.14	2767.86

Field planting	15.07	24535.46	59350.65	17894.89
Mother plant selection	15.07	6824.46	10382.32	3130.39
Soil Sampling	13.70	6624.50	9402.98	2973.48
Application of Basal Fertilizer	13.70	8500.00	15052.76	4760.10
Identification of Pest	13.70	3286.40	4747.41	1501.26
Farm Planning (Sketch Map, SWOT, Action Plan)	12.33	3243.33	4657.10	1552.37
Propagation Chamber	10.96	10817.75	18148.35	6416.41
Grafting	10.96	13518.00	18376.09	6496.93
Leaf sampling	10.96	7068.25	9264.98	3275.66
Application of Synthetic Pesticide	10.96	5180.00	4619.21	1633.14
Soil sterilization	9.59	6020.43	10862.29	4105.56
Mother plant garden	8.22	3790.67	5729.22	2338.95
Media mixture	6.85	33368.60	64361.53	28783.35
Use of Biocontrol Agents	6.85	9968.40	12717.25	5687.33
Application of Organic Fungicides	5.48	4960.50	6960.19	3480.10
Application of Synthetic Fungicides	5.48	4260.75	7163.07	3581.54

Table 147: Adoption rate of firms in terms of climate risk reduction and/or natural resource management (n=264)

Climate Risk Reduction and Natural Resource Management	% of Adoption Rate	Number of coffee plants		
		mean	sd	se (mean)
Biodiversity conservation	10.29	326858.46	1052529.9	317349.7
Woodlot management	7.63	396494.44	1163918.1	387972.7
Restoration of organic soils and degraded lands	16.40	211622.77	847498.93	205548.7
Use of drought and flood resistant varieties	10.60	327157.09	1052428.6	317319.2
Low- or no-till practices	8.23	707352	2211059.6	699198.4
Efficient nitrogen fertilizer use	10.19	7769.417	14180.178	4093.465
Adjustment of sowing/planting time	10.05	6357.6	15224.504	4814.411
Use of perennial varieties	8.41	11594.3	16533.457	5228.338
Practices that promote methane reduction	15.16	504716.86	1869515.5	499649
Introduction/expansion of perennials	7.90	1012677.6	2640226.3	997911.7
Stream bank management, restoration, re/afforestation	6.80	877688	2473788.3	874616.2
Agroforestry	25.60	231374.66	1235737.4	218449.6
Irrigation (drip)	10.04	644686.09	2107879.4	635549.6

Use of short duration varieties	9.74	10471.556	17346.843	5782.281
Diversification	8.83	806649.67	2323422.2	774474.1

Table 148: Adoption rate of firms in terms of coffee production technologies (n=264)

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants		
		mean	sd	se (mean)
Site selection	20.11	10968.10	37104.48	6664.16
Seedlings Selection	29.61	14468.55	44996.70	7114.60
Proper planting distance	42.64	7985.78	30782.66	4353.33
Digging of hole	38.28	8418.62	32163.20	4962.89
Field planting	0.00	.	.	.
Shading	44.16	7154.39	29768.62	4252.66
Farm Planning (Sketch Map, SWOT, Action Plan)	17.87	15501.57	44683.92	9750.83
Mother plant selection	24.13	20205.53	51313.08	12445.25
Mother plant selection	24.13	196006.71	1134275.90	184003.90
Seed germination	21.04	10820.46	30894.00	6058.81
Proper Pruning	38.90	6032.73	16705.31	2518.42
Capping	21.95	13962.28	40827.74	7581.52
Stumping / Rejuvenation	22.33	12121.25	38926.18	7356.356
Leaf sampling	11.22	5533.20	15945.33	4117.07
Soil Sampling	13.80	13969.35	45946.98	10274.06
Soil Analysis	19.25	12440.61	42896.32	8944.50
Application of Organic Fertilizer	22.12	218951.52	1217459.90	211932.60
Application of Inorganic Fertilizer	20.18	11185.11	39573.56	7615.94
Application of Basal Fertilizer	16.62	14164.04	42831.10	8930.90
Identification of Pest	20.51	255032.79	1297883.00	241010.80
Application of Organic Pesticide	17.77	322188.82	1491527.00	317994.60
Application of Synthetic Pesticide	20.32	5485.08	13629.80	2782.17
Use of Biocontrol Agents	10.36	444624.44	1748177.70	437044.40
Identification of Disease	16.41	291784.88	1398147.70	279629.50
Application of Organic Fungicides	13.56	16528.56	48003.49	11314.53
Application of Synthetic Fungicides	17.05	5752.94	14864.20	3605.10
Pick ripe	40.11	10829.98	32817.60	4892.16

Table 149: Business-level practices and technologies practiced in the firms (n=264)

Reasons for Experienced Post-Harvest Losses	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall	
					f	%
Financial Management	3	16	45	24	88	30.78
Record Management	2	14	47	21	84	23.10
Input, Output, and Needs Computation	1	11	25	14	51	18.83
Business Planning	3	15	29	18	65	20.67
Human Resources Management	3	12	24	15	54	15.54
Marketing and Promotion	6	15	41	20	82	27.11
Inventory Management	3	13	26	12	54	17.50
Quality Management Systems	1	9	11	7	28	10.11
Strategic Planning	1	18	18	24	61	27.59

Table 150: Adoption rate of coffee post-harvest technologies and other processing and value-addition technologies among firms (n=264)

Technology/Technique/Practice	Adoption rate%	Number of coffee plants		
		mean	sd	se
Washing	28.88	641.519	2529.756	88.19
Floatation	17.99	781.027	2579.753	89.67
Pulping	20.91	934.213	2817.633	97.84
Fermentation	13.45	2454.784	3568.401	124.76
Use of Elevated Dryers	15.34	568.44	3091.502	107.62
Drying	40.38	686.041	1671.547	58.15
Polishing	6.94	476.97	4466.557	155.32
Sorting and Defects Classification	21.4	8236.073	3343.136	116.20
Size grading	8.38	3847.37	3591.506	124.97
Storing	9.38	749.380	3306.95	115.30
Hulling	6.78	3984.4	4164.576	144.90
Grinding	11.05	3769.37	3240.129	113.04
Roasting	6.18	1945.6	5218.669	181.97
Packaging	5.63	942.847	5737.418	199.50
Cupping	13.26	148.08	3547.715	123.66
Measuring sugar content	4.93	1225	1528.316	132.3

Table 151: Average area in protected areas where these technologies were applied by firms (n=264).

Firms Beneficiary Types	No	Yes	%Yes	Areas in protected areas, ha		
				Mean	SD	SE
Non-Government Organizations or Civil Societies	9	4	14.38	7.94	14.721	7.36
Private Sector Firms (including private Universities and Colleges)	30	15	19.14	9.1	16.116	4.161101
Producer Organizations	83	53	43.13	28.458	119.645	16.43453
Public/Government Agencies (including SUCs)	43	27	22.01	20.897	45.486	8.753743
Overall	165	99	31.15	22.634	90.798	9.125593

Table 152: Did any of the new technologies that you applied due to PhilCAFE assistance influence your organization's sales (n=264)?

Firms Beneficiary Types	No	Yes	%Yes
Non-Government Organizations or Civil Societies	5	8	74.14
Private Sector Firms (including private Universities and Colleges)	14	31	63.41
Producer Organizations	50	86	65.37
Public/Government Agencies (including SUCs)	30	40	65.09
Overall	99	165	65.38

Table 153: Average number of organizations who have seen the beneficiaries applying these technologies/practices (n=264).

Firms Beneficiary Types	NO	YES	%YES	Number of organizations		
				Mean	SD	SE (mean)
Non-Government Organizations or Civil Societies	11	2	19.52	1.5	0.707	0.4966766
Private Sector Firms (includes private Universities and Colleges)	31	14	37.57	5.071	5.677	1.51717
Producer Organizations	113	23	10.85	3.261	6.002	1.25143
Public/Government Agencies (includes SUCs)	56	14	39.71	5.857	10.205	2.727268
Overall	211	53	22.44	4.35	4.358491	0.9802455

Table 154: What coffee production technologies did they copy? (n=184)

Coffee Production Practices and Technologies	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall	
					f	%
Site selection	1	4	9	3	17	4.8
Seedlings Selection	0	0	0	0	0	0.0
Proper planting distance	0	0	0	0	0	0.0

Digging of hole	0	0	0	0	0	0.0
Field planting	1	2	3	3	9	3.2
Shading	1	3	3	2	9	3.3
Farm Planning (Sketch Map, SWOT, Action Plan)	1	3	3	2	9	3.3
Mother plant selection	1	3	4	2	10	3.3
Soil sterilization	1	2	3	1	7	3.0
Proper bag size	0	2	3	1	6	2.9
Media mixture	0	1	2	1	4	2.8
Mother plant garden	0	2	3	1	6	1.7
Seed selection	0	1	2	2	5	2.9
Seed germination	0	2	2	1	5	2.8
Proper pruning	0	2	2	0	4	1.5
Propagation Chamber	0	1	2	0	3	1.5
Grafting	0	2	2	2	6	2.9
Capping	1	2	2	1	6	2.8
Stumping / Rejuvenation	1	2	3	1	7	3.2
Leaf sampling	1	3	2	1	7	3.0
Soil Sampling	0	2	1	1	4	2.6
Soil Analysis	0	3	2	2	7	3.3
Application of Organic Fertilizer	0	2	2	1	5	2.8
Application of Inorganic Fertilizer	0	1	1	1	3	1.5
Application of Basal Fertilizer	0	2	1	1	4	2.6
Identification of Pest	0	1	1	2	4	2.8
Application of Organic Pesticide	0	2	2	1	5	2.8
Application of Synthetic Pesticide	0	2	2	1	5	2.8
Use of Biocontrol Agents	0	2	2	1	5	2.8
Identification of Disease	0	2	2	1	5	2.8
Application of Organic Fungicides	0	1	2	1	4	1.6
Application of Synthetic Fungicides	0	2	2	1	5	2.8
Pick ripe	0	2	2	0	4	1.5

Table 155What coffee post-harvest technologies and other processing and value-addition technologies did they copy (n=184)?

					Overall

Post-Harvest Practices and Technologies	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	f	%
Washing	0	2	2	0	4	1.5
Floatation	0	1	2	0	3	0.3
Pulping	0	1	2	0	3	0.3
Fermentation	1	2	4	1	8	1.8
Use of Elevated Dryers	0	0	0	0	0	0.0
Drying	0	0	0	0	0	0.0
Polishing	0	0	0	0	0	0.0
Sorting and Defects Classification	0	3	3	3	9	3.2
Size grading	0	4	3	3	10	3.7
Storing	1	3	3	3	10	3.3
Hulling	1	3	2	3	9	3.2
Grinding	0	4	3	3	10	3.7
Roasting	1	3	5	3	12	3.5
Packaging	0	3	2	1	6	2.9
Cupping	1	3	3	5	12	4.2
Measuring sugar content	1	3	3	3	10	3.3

Table 156: What climate risk reduction and/or natural resource management did they copy (n=184)?

Climate Risk Reduction Practices and Technologies	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall	
					f	%
Biodiversity conservation	1	3	3	2	9	3.2
Woodlot management	1	3	3	2	9	3.2
Restoration of organic soils and degraded lands	1	3	3	2	9	3.2
Use of drought and flood resistant varieties	1	3	2	2	8	3.0
Low- or no-till practices	1	3	3	2	9	3.8
Efficient nitrogen fertilizer use	1	3	2	2	8	3.0
Adjustment of sowing/planting time	1	3	2	0	6	1.6
Use of perennial varieties	0	0	0	0	0	0.0
Practices that promote methane reduction	0	0	0	0	0	0.0
Introduction/expansion of perennials	0	0	0	0	0	0.0
Stream bank management, restoration, re/afforestation	1	1	4	2	8	3.8

Agroforestry	0	0	3	0	3	0.4
Irrigation (drip)	0	1	3	0	4	1.6
Use of short-duration varieties	0	1	3	0	4	1.6
Diversification	0	0	3	0	3	0.4

Table 157: Business Related Practices and Technologies among firms (n=264).

Business-Related Practices and Technologies	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall	
					f	%
Financial Management	0	1	3	1	5	4.5
Record Management	0	1	4	1	6	9.6
Input, Output, and Needs Computation	0	0	3	0	3	1.1
Business Planning	0	1	3	0	4	4.2
Human Resources Management	0	0	3	0	3	1.1
Marketing and Promotion	0	1	3	0	4	4.2
Inventory Management	0	1	3	0	4	4.2
Quality Management Systems	0	1	2	0	3	3.8
Strategic Planning	0	1	3	0	4	4.2

Table 158: Average number of labourers working on-farm (n=264).

Firms Beneficiary Types	Adult		Youth		Overall Mean
	Female	Male	Female	Male	mean
Non-Government Organizations or Civil Societies	6	9	0.0	5	18.0
Private Sector Firms (includes private Universities and Colleges)	6	3	2	3	13.5
Producer Organizations	3	6	0.5	3	7
Public/Government Agencies (includes SUCs)	11	11	6	9	37

Table 159: Change in labor, % among coffee farms (n=264).

Business-Related Practices and Technologies	Remained the same	Increased	Decreased
Non-Government Organizations or Civil Societies	94.93	5.7	0.0
Private Sector Firms (includes private Universities and Colleges)	87.27	11.90	0.0
Producer Organizations	89.83	5.52	4.65

Public/Government Agencies (includes SUCs)	94.31	5.69	0.0
Overall	90.75	6.53	2.72

Table 160: Have you accessed warehouse/storage space due to PhilCAFE assistance (n=264).

Firms Beneficiary Types	NO	YES	% YES
Non-Government Organizations or Civil Societies	11	2	2.73
Private Sector Firms (includes private Universities and Colleges)	41	4	7.89
Producer Organizations	129	7	4.00
Public/Government Agencies (includes SUCs)	65	5	3.07
Overall	246	18	4.32

Table 161: Average size (in cubic meters) of new facility dry storage (n=18)

Firms Beneficiary Types	Mean
Non-Government Organizations or Civil Societies	275
Private Sector Firms (includes private Universities and Colleges)	266.25
Producer Organizations	282.14
Public/Government Agencies (includes SUCs)	309
Overall	285.5

Table 162: Purchased/Accessed additional coffee equipment/facility (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	10	3	20.19
Private Sector Firms (including private Universities and Colleges)	33	12	16.28
Producer Organizations	118	18	20.22
Public/Government Agencies (including SUCs)	62	8	6.82
Participant	223	41	16.32

Table 163: Acquired equipment and facility (n=264).

Equipment and Facility	NGOs or Civil Societies	Private Sector Firms	Producer Organization	Public/ Government Agencies	Overall	
					f	%
Elevated dryer	1	4	10	5	20	11.40
Mechanical dryer	1	3	4	0	8	9.69
Fermentary	0	3	4	1	8	1.54
Pulpers	1	6	4	3	14	3.12
Dehullers	0	6	6	1	13	2.46
Warehouse/storage	2	6	5	0	13	2.61

Other	0	1	2	1	4	0.69

Table 164: Percentage of firms and organizations actively market their coffee products (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	6	7	69.19
Private Sector Firms (including private Universities and Colleges)	16	29	69.30
Producer Organizations	61	75	54.85
Public/Government Agencies (including SUCs)	42	28	58.38
Overall	125	139	58.57

Table 165: Distribution of firms by methods of marketing used in October 2022 to June 2023 (n=139)

Firms Beneficiary Types	Radio Station	TV Station	Newspaper Ads	Posters/flyers	Attendance to exhibits/fairs	Participation to trade missions	Website	Social media
Non-Government Organizations or Civil Societies	0.0	0.0	0.0	0.0	93.92	100.00	0.0	74.18
Private Sector Firms (including private Universities and Colleges)	11.75	11.96	37.83	84.71	62.30	75.01	93.77	50.55
Producer Organizations	90.09	90.09	0.0	96.67	49.07	78.50	71.43	84.76
Public/Government Agencies (including SUCs)	100	100	100.00	42.42	78.74	82.77	93.72	79.37
Overall	92.88	96.87	92.53	82.47	66.63	80.55	90.25	74.89

Table 166: Distribution of firms by frequency of accessing agricultural market and price information (n=264).

Type of Firm	Daily	Weekly	Monthly	Quarterly	Bi-Annual	Annual
Non-Government Organizations or Civil Societies	17.47	30.73	35.93	4.36	5.27	6.23
Private Sector Firms (including private Universities and Colleges)	8.07	0.56	20.04	27.76	16.41	27.15
Producer Organizations	0.79	10.00	26.53	28.46	19.91	14.30

Public/Government Agencies (including SUCs)	3.94	35.54	16.16	22.74	11.67	9.94

Table 167: Percentage of firms and organizations involved in purchasing and consolidating coffee products from October 2022 to June 2023 (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	7	6	51.40
Private Sector Firms (including private Universities and Colleges)	20	25	50.34
Producer Organizations	59	77	45.57
Public/Government Agencies (including SUCs)	19	51	45.78
Overall	104	160	46.61

Table 168: Average of Total Volume Purchased/ Consolidated, in kilo, by coffee farm (n=104).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Ground Coffee
Non-Government Organizations or Civil Societies	33888	2772	4995.667	4939	150	150
Private Sector Firms (includes private Universities and Colleges)	27167.91	2671.167	5070.778	5244	719.5	774
Producer Organizations	29656.5	2485.629	5039.55	4573	68	43.75
Public/Government Agencies (includes SUCs)	29296.59	2611.5	4968	5173	0	.
Overall	29082.75	2533.76	5033.919	4978.556	424.727	

Table 169: Average buying price (PHP/kg) of Purchased/Consolidated Coffee (n=104).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Ground Coffee
Non-Government Organizations or Civil Societies	38	112	331	234	150	150
Private Sector Firms (includes private Universities and Colleges)	30.818	107.833	284.5	326.25	241.143	314.5
Producer Organizations	29.545	106.829	304.95	301.667	606.667	580
Public/Government Agencies (includes SUCs)	25.941	98.875	274	288	200	.

Overall	28.784	105.78	297.553	303.556	321.5	414.222

Table 170: Average number of farmers and middlemen/aggregators purchased/consolidated (n=104).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Ground Coffee
Non-Government Organizations or Civil Societies	39	77	18.667	24	7	7
Private Sector Firms (includes private Universities and Colleges)	30.727	76.167	15.5	16.75	84.429	252.25
Producer Organizations	31.682	65.714	16.65	16	13.667	8
Public/Government Agencies (includes SUCs)	29.882	72.375	16.2	20	200	.
Overall	31.02	68.26	16.447	17.667	69.917	116.444

Table 171: Average number of new farmers purchased coffee from (n=104).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Ground Coffee
Non-Government Organizations or Civil Societies	3	1	3	4	1	1
Private Sector Firms (includes private Universities and Colleges)	2	1	2	3	14	4
Producer Organizations	2	2	4	3	3	2
Public/Government Agencies (includes SUCs)	2	2	5	0	200	.
Overall	2	2	4	3	26	2

Table 172: Percentage of firms and organization selling coffee products from October 2022- June 2023 (n=264).

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	3	10	33.36
Private Sector Firms (includes private Universities and Colleges)	15	30	27.84

Producer Organizations	70	66	56.62
Public/Government Agencies (includes SUCs)	27	43	51.79
Overall	115	149	49.98

Table 173: Percentage of firms and organizations that do domestic and international marketing (n=264).

Firms Beneficiary Types	Domestic	%	International	%
Overall	116	50.25	3	6.1
Non-Government Organizations or Civil Societies	3	33.36	0	0.0
Private Sector Firms (includes private Universities and Colleges)	16	29.59	1	2.42
Producer Organizations	70	56.62	2	0.03
Public/Government Agencies (includes SUCs)	27	51.59	0	0.00

Table 174: Average of Volume Sold, in kilo, by coffee farm (n=115).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Specialty	Ground Coffee
Non-Government Organizations or Civil Societies	3822	3398	5400	-	-	-	-
Private Sector Firms (includes private Universities and Colleges)	11387	4281.9	1937.5	3435	357.3	1374.28	1288.88
Producer Organizations	15744.5	7309.2	5860.5	1358	960	14512.5	2059
Public/Government Agencies (includes SUCs)	29389.5	12671	5642.5	-	80	248	662
Overall	18931.25	7966.5	3117.25	72.75	227.5	167.5	352.5

Note: Markets are all domestic.

Table 175: Average selling price, PHP/kg, by coffee farm (n=115).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Specialty	Ground Coffee
Non-Government Organizations or Civil Societies	45	240	590	-	-	-	-

Private Sector Firms (includes private Universities and Colleges)	47.85	116.7	147.8	132.5	380	651.4	352.4
Producer Organizations	71.9	145.8	208.53	158	262.5	490.9	440.6
Public/Government Agencies (includes SUCs)	95.4	123.6	135.1	-	360	834	350
Overall	76.04	138.78	197.25	141.8	318.7	614.3	390.3

Note: Markets are all domestic.

Table 176: Average sales (PHP) by the coffee farm (n=115).

Firms Beneficiary Types	Fresh Cherries	Dried Cherries	Green Coffee Beans	Parchment	Roasted Coffee	Specialty	Ground Coffee
Non-Government Organizations or Civil Societies	-	-	-	-	-	-	-
Private Sector Firms (includes private Universities and Colleges)	206.6	154	240	190	240	240	240
Producer Organizations	141.7	198	250	120	350	120	120
Public/Government Agencies (includes SUCs)	130	130	80	80	80	180	440
Overall	160.7	160.6	178	145	227.5	195	296

Note: Markets are all domestic

Table 177: Percentage of firms and organizations who achieved their targets (coffee) sales in Oct 2021-Sept 2023 (n=264).

Firms Beneficiary Types	No	YES	%YES
Non-Government Organizations or Civil Societies	8	5	23.89
Private Sector Firms (includes private Universities and Colleges)	21	24	66.12
Producer Organizations	95	41	37.73
Public/Government Agencies (includes SUCs)	50	20	15.64
Overall	37	90	36.12

*NA- no sales related to coffee due to no operation, no production related to coffee, non-bearing coffee trees (young).

Table 178: Reasons for not attaining the target sales (n=175).

Firms Beneficiary Types	NGOs or Civil Societies	Private Sector Firms (includes private Universities and Colleges)	Producer Organizations	Public/Government Agencies (includes SUCs)	Overall (Participant)
Poor/Limited Markets	0.0	23.16	29.86	16.81	23.56
Poor Farm- To-Market Access	4.23	2.03	15.35	7.45	11.13
Post-harvest Losses	0.00	40.31	13.78	55.13	28.64
Insufficient Post-Harvest Facilities	4.23	0.47	5.32	3.02	4.12
Difficulty accessing inputs or services to get desired yields	4.23	0.96	2.71	12.10	5.68
Problem with accessing labor	36.15	8.15	14.21	10.61	13.67
Climate/Weather issues	60.40	13.60	40.26	22.25	33.27
Others, Specify	7.44	19.98	21.98	9.83	17.14

Table 179: Percentage of firms and organizations satisfied with the received average price in October 2022 to June 2023 (participant n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	6	7	30.89
Private Sector Firms (includes private Universities and Colleges)	19	26	61.89
Producer Organizations	55	81	58.73
Public/Government Agencies (includes SUCs)	37	33	30.98
Overall	117	147	51.22

Table 180: From October 2022 to June 2023, to whom does the organization sell the coffee? (n=115).

Firms Beneficiary Types	Walk-in Clients	Coffee Shops/ Stores/ Cafe	Department Stores/ Supermarkets	Local Trader	Neighbors	Other Coop/ Association	Processors	Roasters
Non-Government Organizations or Civil Societies	0.00	3.89	36.38	0.00	0.00	0.00	20.69	0.00
Private Sector Firms (includes private	13.91	40.52	45.44	12.93	8.79	6.70	5.10	8.38

Universities and Colleges)								
Producer Organizations	9.83	47.30	31.84	4.97	4.40	3.50	21.66	16.82
Public/Government Agencies (includes SUCs)	6.69	61.50	12.60	6.36	3.12	8.01	1.70	8.39
Overall	9.27	47.87	29.42	6.33	4.58	4.95	14.16	12.73

Table 181: Percentage of firms and organizations selling coffee products by selling platform (n=115).

Firms Beneficiary Types	Website	Facebook / Messenger	Text And Call	Pick Up by The Buyer	Deliver To Buyer	"Padala" System	Others
Non-Government Organizations or Civil Societies	0.0	22.54	56.61	91.61	87.92	20.49	5.17
Private Sector Firms (includes private Universities and Colleges)	32.34	37.83	28.64	60.38	40.90	15.61	22.22
Producer Organizations	4.32	33.96	33.02	53.30	54.75	23.47	18.35
Public/Government Agencies (includes SUCs)	7.52	50.80	12.42	67.15	52.46	7.61	18.17
Overall	9.26	38.20	28.30	59.44	53.47	18.23	18.34

Table 182: Percentage of firms and organizations satisfied with the average price received for their products or services from October 2022 to June 2023 (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	6	7	30.89
Private Sector Firms (includes private Universities and Colleges)	19	26	61.89
Producer Organizations	55	81	58.73
Public/Government Agencies (includes SUCs)	37	33	30.98
Overall	117	147	51.22

Note: NR-no response (no operation, no production yet related to coffee).

Table 183: Percentage of firms and organizations with external sources of agricultural market/price information (n=264).

Firms Beneficiary Types	No, only relied on firm/ cooperative/ institutional efforts	Yes	%Yes
Non-Government Organizations or Civil Societies	11	2	29.57
Private Sector Firms (includes private Universities and Colleges)	36	9	19.49
Producer Organizations	95	41	25.13
Public/Government Agencies (includes SUCs)	60	10	44.36
Overall	202	62	29.16

Table 184: Correlation Analysis of quality management certifications through PhilCAFE assistance (n=264).

Variable	rpb	P- value
Technology adoption	0.1214	0.0488
Buying Agreement	0.4237	<0.001
Passed/approved policies, regulations, and administrative procedures	0.4344	<0.001

Table 185: Percentage of firms and organizations satisfied with the end markets that they are accessing/selling (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	3	10	79.42
Private Sector Firms (includes private Universities and Colleges)	18	27	52.21
Producer Organizations (Associations)	39	97	70
Public/Government Agencies (includes SUCs)	21	49	80.79

Table 186: Table 159: Percentage of firms and organizations who had their coffee cupped since 2019 (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	6	7	71.12
Private Sector Firms (includes private Universities and Colleges)	26	19	39.02
Producer Organizations (Associations)	91	45	47.45
Public/Government Agencies (includes SUCs)	40	30	26.00

Table 187: Average cupping score of the most recent coffee cupping (n=101).

Firms Beneficiary Types	Cupping Score
Non-Government Organizations or Civil Societies	59.86
Private Sector Firms (includes private Universities and	66.63
Producer Organizations (Associations)	63.40
Public/Government Agencies (includes SUCs)	60.17

Table 188: Percentage of firms and organizations with coffee cupping scores perceived that grade/score coffee influences the sales price or other aspects of sales (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	5	8	88.59
Private Sector Firms (includes private Universities and Colleges)	26	19	48.98
Producer Organizations (Associations)	83	53	48.76
Public/Government Agencies (includes SUCs)	43	27	52.93

Table 189: Percentage of firms and organizations with coffee cupping scores perceived that cupping score of a q grader is the basis to classify the coffee sold as specialty or fine (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	4	9	89.26
Private Sector Firms (includes private Universities and Colleges)	25	20	39.49
Producer Organizations (Associations)	89	47	44.50
Public/Government Agencies (includes SUCs)	39	31	57.84

Table 190: Percentage of firms and organizations with coffee cupping score who are selling specialty coffee, (n=61).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	4	0	0
Private Sector Firms (includes private Universities and Colleges)	7	7	65.55
Producer Organizations (Associations)	15	12	50.1
Public/Government Agencies (includes SUCs)	9	7	65.06

Table 191: Average volume (in kg) and price (PHP/kg) of specialty coffee (n=40).

Firms Beneficiary Types	Arabica-Fine Coffee		Robusta-Fine Coffee	
	Volume, Kg	Price/Kg	Volume, Kg	Price/Kg
Non-Government Organizations or Civil Societies	-	-	-	-
Private Sector Firms (includes private Universities and Colleges)	54.74	277.88	402.13	164.5
Producer Organizations (Associations)	256	692	657	215.60
Public/Government Agencies (includes SUCs)	47	234	487.64	218

Table 192: Percentage of firms and organizations with difficulty accessing specific coffee inputs or technologies in the past production year (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	12	1	3.22
Private Sector Firms (includes private Universities and Colleges)	42	3	11.95

Producer Organizations (Associations)	125	11	4.75
Public/Government Agencies (includes SUCs)	66	4	3.5
Overall	245	19	5.49

Table 193: Percentage of firms and organizations who supply Improved Inputs and/or services (n=264).

Firms Beneficiary Types	NO	YES	%YES
Non-Government Organizations or Civil Societies	12	1	4.39
Private Sector Firms (includes private Universities and Colleges)	32	13	31.52
Producer Organizations (Associations)	111	25	9.23
Public/Government Agencies (includes SUCs)	51	19	45.56
Overall	206	58	24.02

Table 194: Type of Improved inputs and/or services supplied by the firms and organizations (n=58).

Items	f	%
Fertilizer	33	67.37
Pesticide	15	14.60
Training	30	62.30
Loans/Credit	6	8.95
Savings	8	9.87
Microfinancing	7	6.74
Technical Assistance	15	23.60
Trucking	3	1.61
Storage	6	3.79
Weighing	6	3.32
Grinding	7	4.08
Fermentation	3	1.73
Drying	12	44.44
Seedlings	12	45.26

Table 195: Average quantity of farm inputs (n=58)

Firms Beneficiary Types	Coffee Seedlings (pcs) (per species)	Synthetic Fertilizers (bags)	Organic Fertilizers (bags)	Pesticide (L/kg)
Non-Government Organizations or Civil Societies	100	-	-	-
Private Sector Firms (includes private Universities and Colleges)	6483.33	2632.5	2142	46.25
Producer Organizations (Associations)	12024	-	-	100

Public/Government Agencies (includes SUCs)	175	-	5	-

Table 196: Average quantity of farm inputs allocated for members of the organization (n=58).

Firms Beneficiary Types	Coffee Seedlings (pcs) (per species)	Synthetic Fertilizers (bags)	Organic Fertilizers (bags)	Pesticide (L/kg)
Non-Government Organizations or Civil Societies	10	-	-	-
Private Sector Firms (includes private Universities and Colleges)	12220	65	70.2	15.25
Producer Organizations (Associations)	7142	-	-	100
Public/Government Agencies (includes SUCs)	127.5	-	5	-

Table 197: Average quantity of farm inputs allocated for general public/other buyers (n=58).

Firms Beneficiary Types	Coffee Seedlings (pcs) (per species)	Synthetic Fertilizers (bags)	Organic Fertilizers (bags)	Pesticide (L/kg)
Non-Government Organizations or Civil Societies	-	-	-	-
Private Sector Firms (includes private Universities and Colleges)	12725	293.75	145	20.25
Producer Organizations (Associations)	6914	-	-	100
Public/Government Agencies (includes SUCs)	125.25	-	5	-

Table 198: Average quantity of farm inputs sold (n=58)

Firms Beneficiary Types	Coffee Seedlings (pcs) (per species)	Synthetic Fertilizers (bags)	Organic Fertilizers (bags)	Pesticide (L/kg)
Non-Government Organizations or Civil Societies	500	-	-	-
Private Sector Firms (includes private Universities and Colleges)	5280	57.5	86	16
Producer Organizations (Associations)	6070	-		50
Public/Government Agencies (includes SUCs)	275.25	-	15	-

Table 199: Average selling price of farm inputs in PHP per unit (n=58).

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Non-Government Organizations or Civil Societies	100			

Private Sector Firms (includes private Universities and Colleges)	475	517.25	153.8	188
Producer Organizations (Associations)	205		50	100
Public/Government Agencies (includes SUCs)	551		105	

Table 200: Percentage of firms and organizations who provide In-Kind Loans to Farmers or Other Stakeholders due to PhilCAFE (external assistance for comparison group) Assistance (n=264).

Firms Beneficiary Types	Yes	No	%Yes
Non-Government Organizations or Civil Societies	0	13	0.00
Private Sector Firms (includes private Universities and Colleges)	7	38	22.42
Producer Organizations	5	131	1.52
Public/Government Agencies (includes SUCs)	4	66	4.85
Overall	16	248	5.51

Table 201: Percentage of firms and organizations who have received increased investment/financing from an external firm due to PhilCAFE facilitated assistance (n=264).

Firms Beneficiary Types	Yes	No	%Yes
Non-Government Organizations or Civil Societies	2	12	2.45
Private Sector Firms (includes private Universities and Colleges)	4	41	8.26
Producer Organizations	4	132	0.97
Public/Government Agencies (includes SUCs)	4	66	6.94
Overall	13	251	3.61

Table 202: Percentage of firms and organizations who think that they influenced other organizations to start providing/producing similar coffee-related services or products due to their organizations' success (n=264).

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	3	10	23.31
Private Sector Firms (includes private Universities and Colleges)	16	29	27.7
Producer Organizations	29	107	28.45
Public/Government Agencies (includes SUCs)	21	49	47.99
Overall	69	195	32.91

Table 203: Percentage of firms and organizations with nursery (n=264).

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	6	7	33.34
Private Sector Firms (includes private Universities and Colleges)	10	35	11.2
Producer Organizations	36	100	18.53
Public/Government Agencies (includes SUCs)	21	49	49.32
Overall	73	191	25.58

Table 204: Percentage of firms and organizations who started their business due to PhilCAFE facilitation assistance (n=73)

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	1	5	11.37
Private Sector Firms (includes private Universities and Colleges)	1	9	21.58
Producer Organizations	4	32	4.4
Public/Government Agencies (includes SUCs)	3	18	3.83
Overall	9	64	5.69

Table 205: Percentage of firms and organizations developing a new approach or strategy due to PhilCAFE facilitated assistance (n=264).

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	6	7	30.99
Private Sector Firms (includes private Universities and Colleges)	18	27	38.95
Producer Organizations	36	100	34.49
Public/Government Agencies (includes SUCs)	28	42	59.15
Overall	88	176	41.08

Table 206: Percentage of firms and organizations who influenced individuals that newly started farming coffee between October 2022 to June 2023, due to their organization's training or services (n=264).

Firms Beneficiary Types	YES	NO	%YES
Non-Government Organizations or Civil Societies	4	9	8.97
Private Sector Firms (includes private Universities and Colleges)	9	36	17.62

Producer Organizations	13	123	5.06
Public/Government Agencies (includes SUCs)	15	55	12.83
Overall	41	223	9.08

Table 207: Percentage of firms and organizations that signed a formal agreement with buyers between October 2022 to June 2023 due to PhilCAFE facilitated assistance (for Participant) or external assistance (n=264).

Firms Beneficiary Types	Yes, we have formal agreement/contract with buyers.	No, formal agreement/contract	% Yes
Non-Government Organizations or Civil Societies	0	13	0
Private Sector Firms (includes private Universities and Colleges)	7	38	15.6
Producer Organizations	4	132	0.87
Public/Government Agencies (includes SUCs)	5	65	8.79
Overall	16	248	5.05

Table 208: Percentage of firms and organizations who perceived that formal buying agreement is worthwhile (n=16).

Firms Beneficiary Types	Yes	No	%Yes
Non-Government Organizations or Civil Societies	7	0	100
Private Sector Firms (includes private Universities and Colleges)	4	0	100
Producer Organizations	4	1	72.91
Overall	15	1	88.45

Table 209: Percentage of firms and organizations who obtained any quality management certifications through PhilCAFE facilitated assistance (for Participant) between October 2022 to June 2023 (n=264).

Firms Beneficiary Types	Yes	No	%Yes
Non-Government Organizations or Civil Societies	2	11	2.73
Private Sector Firms (includes private Universities and Colleges)	8	37	10.65
Producer Organizations	14	122	22.27
Public/Government Agencies (includes SUCs)	10	60	7.19
Overall	34	230	15.93

Table 210: Percentage of firms and organizations who passed/approved policies, regulations, and/or administrative procedures for coffee since 2019 due to PhilCAFE's intervention(n=264).

Firms Beneficiary Types	Yes	No	%Yes
Non-Government Organizations or Civil Societies	1	12	2.45
Private Sector Firms (includes private Universities and Colleges)	5	40	7.38

Producer Organizations	5	131	1.47
Public/Government Agencies (includes SUCs)	7	63	4.77
Overall	18	246	3.24

Table 211: Average share of coffee in terms of income contribution to the organization (n=264).

Firms Beneficiary Types	Average Percentage share of Coffee in organizational income
Non-Government Organizations or Civil Societies	50.3
Private Sector Firms (includes private Universities and Colleges)	49.2
Producer Organizations	39.6
Public/Government Agencies (includes SUCs)	35.6
Overall	40.75

Table 212: Percentage of firms citing a change in organizational cost since 2019 (n=264).

Firms Beneficiary Types	Decreased		Increased		Remained the same	
	f	%	f	%	f	%
Non-Government Organizations or Civil Societies	0	0.0	4	30.76	9	69.23
Private Sector Firms (includes private Universities and Colleges)	0	0.00	11	24.44	34	75.55
Producer Organizations	12	8.82	20	14.7	104	76.47
Public/Government Agencies (includes SUCs)	1	1.4	8	11.42	61	87.14
Overall	13	4.92	43	16.29	208	78.79

Table 213: Percentage of change in organizational costs since 2019 (n=264).

Firms Beneficiary Types, Change (Decrease/Increase)	% Decreased	% Increase
Non-Government Organizations or Civil Societies	-	10.0
Private Sector Firms (includes private Universities and Colleges)	22.5	30.0
Producer Organizations	30.0	24.4
Public/Government Agencies (includes SUCs)	30.0	26.7

Table 214: Percentage of farmers that perceived changes in price due to change in coffee quality due to adoption of technologies and practices, per region. Participant (n=824) and Comparison (n=349)

Region	No	Yes	Yes (%)
Participant			
CAR	76	2	1.45
1	3	3	48.06
2	7	0	0
4-A	41	11	14.23

6	32	3	2.22
10	121	66	37.02
11	178	20	10.8
12	135	13	21.81
13	58	43	56.64
BARMM	3	9	92.79
Overall	654	170	23.73
Comparison			
Region 4-A	49	39	44.32
Region 6	21	9	30
Region 11	63	17	21.25
Region 12	73	78	51.66
Overall	206	143	40.97

Table 215: Perceive changes in coffee sales since 2019, Participant (n=824) and Comparison (n=349).

Region	Decreased	Increased	No Sales	Remained the same
Participant				
CAR	25	4.62	25.29	45.1
1	48.06	0	51.94	0
2	55.43	0	44.57	0
4-A	37.53	3.59	17.39	41.49
6	5.29	2.7	88.39	3.63
10	59.11	2.48	15.23	23.18
11	47.33	9.48	38.34	4.86
12	23.07	6.43	2.43	68.07
13	90.29	7.23	2.05	0.43
BARMM	100	0	0	0
Overall	45.18	5.6	25.94	23.28
Comparison				
Region 4-A	61.36	10.23	26.14	2.27
Region 6	10	66.67	23.33	0
Region 11	22.5	2.5	31.25	43.75
Region 12	51.66	2.65	44.37	1.32
Overall	43.84	10.03	34.96	11.17

Table 216: Average annual coffee production cost per hectare, in PHP (n=170).

Coffee Production Cost Items	NGOs or Civil Societies	Private Sector Firms	Producer Organizations	Public/ Government Agencies	Overall Mean
Planting materials	50000	22341.6	20851.81	83783.33	50339.63
Paid labor	35000	48400	20821.12	38236.2	30224.222
Fertilizers and pesticides	9000	24337.5	9439.583	30351.667	17466.739

Tools and equipment	50000	97916.66	10108.333	11033.333	33000
Transport of materials and produce	600	136000	5786.429	24900	35444.4
Interest on loans	-	10300	23000	32045	20326
Taxes	23400	15000	4000	2650	18330
Rentals	-	15000	27800	-	15000

Table 217: Average perceived change (%) in coffee sales since 2019 for farmers, participant (n=598) and comparison (n=310).

Region	Increased			Decreased		
	mean	sd	se(mean)	mean	sd	se(mean)
Participant						
CAR	27.50	31.82	15.91	30.00	.	
1	53.33	5.77	1.92	-	-	-
2	-	-	-	-	-	-
4-A	32.46	18.04	1.39	-	-	-
6	2.00	.	-	74.29	11.34	4.32
10	10.02	8.89	0.10	4.00	-	-
11	22.86	10.04	0.36	22.17	10.59	4.28
12	34.30	23.32	2.33	19.00	23.02	10.29
13	36.52	12.95	0.28	55.00	8.37	3.41
BARMM	5.11	1.27	0.14	-	-	-
Overall	21.32	17.13	1.22	42.77	27.34	5.36
Comparison						
4-A	11.48	7.55	1.03	15.56	7.26	2.42
6	12.67	15.04	8.69	69.50	21.14	4.73
11	25.56	32.57	7.68	16.00	5.66	4.00
12	18.83	9.88	1.12	15.00	9.13	4.56
Overall	16.91	14.58	1.18	46.34	31.73	5.36

Table 218: Average selling price, PHP/kg, by coffee firm type (n=115).

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Parchment	Roasted Coffee
Overall	**176.04**	**138.79**	**197.26**	**141.88**	**390.35**
Non-Government Organizations or Civil Societies	145.0	240.0	590.0	-	-
Private Sector Firms (includes private Universities and Colleges)	147.9	116.7	147.9	132.5	352.4
Producer Organizations	171.9	145.8	208.5	158.0	440.6
Public/Government Agencies (includes SUCs)	195.4	123.6	135.1	80.0	350.0

Table 219: Average selling price, PHP/kg, by region (n=115)

Region	Fresh Cherries	Dried Cherries	Green coffee beans	Parchment	Specialty	Ground Coffee	Roasted
CAR	87.333	117	217.5	350	600	900	478.8
Region 1	45.333	.	100	.	.	1000	300
Region 2	228.667	172.333	.	.	.	800	500
Region 4-A	161.333	166.667	300	100	.	706.667	313.333
Region 6	55.625	114.111	166.25	.	250	600	426.667
Region 10	65.55	127.444	190.412	90	312.5	178	382.8
Region 11	64.077	142.333	155.25	.	.	1100	200
Region 12	54.714	172	154.364	175	250	506.667	416.667
Region 13	145	115.4	575	150	200	.	.
BARMM	100	110.5	165	.	.	100	.
Overall	76.042	138.788	197.255	141.875	318.75	614.348	390.348
SE	8.524	39.264	44.161	10.801	16.007	46.992	42.562

MSA Tables

Table 220: Distribution of MSA respondents, by region, by gender, and by age category (n=356).

Regions	Sub-Regions	Total Sample	Gender		Age-Category	
			Female	Male	Youth	Adult
Luzon	CAR	28	17	11	7	21
	NCR	13	2	11	3	10
	Region I	3	1	2	1	2
	Region II	9	5	4	0	9
	Region IV-A	6	4	2	1	5
Visayas	Region VI	12	7	5	4	8

Mindanao	Region X	38	20	18	13	25
	Region XI	138	70	68	67	71
	Region XII	59	40	19	12	47
	Region XIII	47	24	23	34	13
	BARMM	3	1	2	1	2
Total Achieved		356	191	165	143	213

Table 221: Distribution (%) of MSA respondents by ethnicity, by classification (n=356).

ETHNICITY	Type of Beneficiary Category							
	People in Civil Society		People in Firms		People in the Government		Total	
	f	%	f	%	f	%	f	%
Aplai	0	0	1	0.99	1	0.47	2	0.55
Bisaya	29	20.32	45	36.79	18	23.77	92	26.21
Boholano	1	0.92	7	2.2	1	1.75	9	1.8
Bol-Anon	9	6.9	4	1.29	0	0	13	0.58
Cebuano	8	6.6	16	4.19	14	24.01	38	19.24
Dabawenyo	3	2.39	5	1.21	3	6.34	11	5.13
Higaonon	0	0	4	0.81	4	7.6	8	5.89
Ilocano	3	4.14	11	4.37	6	6.87	20	6.25
Ilonggo	2	2.53	10	37.63	46	8.33	58	13.91
Manobo	41	46.28	8	3.81	0	0	49	2.92
Tagalog	2	1.54	13	3	4	7.24	19	6.13
Others: specify	8	8.37	7	3.71	21	11.73	36	9.98
Refused	0	0	0	0	1	1.88	1	1.42

Table 222: Support distribution across the MSAs and disaggregated by gender among respondents of the farmers survey and MSA survey (n=356).

Market System Actors	Received training or technical assistance		Received some form of financing or resources		Participated in an event facilitated by PhilCAFE	
	Female	Male	Female	Male	Female	Male
Academe/Researcher (Government)	14	14	5	11	16	15
Academe/Researcher (Private)	2	3	1	2	2	3
Coffeeshop Owner/Staff	4	5	2	1	4	4
Consolidator/Aggregator	2	2	0	2	2	2

Market System Actors	Received training or technical assistance		Received some form of financing or resources		Participated in an event facilitated by PhilCAFE	
	Female	Male	Female	Male	Female	Male
Financial Service Provider (Government)	1	0	0	0	0	0
Financial Service Provider (Private)	3	9	2	4	6	10
Government Agent/Employee (Extension/Technician)	16	18	14	14	18	17
Government Agent/Employee (Non-Extension)	25	7	6	4	16	4
Importer	0	1	0	1	1	1
Input Supplier	4	1	3	0	4	1
Laborer	7	4	7	3	8	4
Non-Governmental Organization (Extension)	16	9	12	6	14	7
Non-Governmental Organization (Non-Extension)	37	39	28	29	33	38
Processor/Manufacturer	2	1	1	0	2	1
Roaster	1	8	1	6	1	7
Trader-Local (Buy and Sell)	28	27	18	17	22	21
Training or Capacity building service Provider (NGO)	0	0	0	0	1	0
Training or Capacity Building Service Provider (Private)	0	2	0	1	0	2
Others	1	1	0	0	1	1

Table 223: Percentage of MSA respondents who adopted agricultural production technologies, by technology, by classification (n=356).

Agricultural production technologies and nursery-related technologies	Civil Society	Firms	Government Agency	Over all
Site selection	4.1	1.07	3.07	2.72
Seedlings Selection	8.67	2.95	4.23	4.18
Proper planting distance	22.11	29.36	18.81	21.07

Agricultural production technologies and nursery-related technologies	Civil Society	Firms	Government Agency	Over all
Digging of hole	35.9	42.68	12.33	19.48
Field planting	11.4	1.45	7.93	6.8
Shading	10.76	15.2	7.6	9.26
Farm Planning (Sketch Map, SWOT, Action Plan)	0.44	14.51	1.38	3.96
Mother plant selection	0.00	1.25	2.91	2.44
Seed selection	5.63	3.35	9.23	7.89
Seed germination	1.61	0.29	1.91	1.58
Proper pruning	36.1	38.38	13.87	19.79
Capping	14.04	30.76	8.58	13.26
Stumping / Rejuvenation	30.39	16.43	10.99	12.98
Leaf sampling	5.79	20.6	2.91	6.57
Soil Sampling	1.24	12.98	6.22	7.34
Soil Analysis	1.61	14.36	3.16	5.32
Application of Organic Fertilizer	10.53	1.78	8.12	6.97
Application of Inorganic Fertilizer	3.81	1.02	3.39	2.93
Application of Basal Fertilizer	0.00	13.39	4.51	6.07
Identification of Pest	2.32	0.8	2.26	1.97
Application of Organic Pesticide	1.37	0.88	5.6	4.46
Application of Synthetic Pesticide	0.00	20.77	2.46	5.99
Use of Biocontrol Agents	0	0.2	0.7	0.57
Identification of Disease	0.44	1.39	3.67	3.06
Application of Organic Fungicides	0.44	0.82	0.7	0.71
Application of Synthetic Fungicides	0.44	12.49	0.62	2.98
Pick ripe	20.57	16.3	2.87	6.38

Table 224: Percentage of MSA respondents who adopted post-harvest technologies and other processing and value addition technologies, by technology, by classification (n=356).

Post-harvest technologies and other processing and value-addition technologies	Civil Society	Firms	Government Agency	Overall
Washing	51.60	60.45	50.32	55.28
Floatation	41.55	43.50	32.18	33.80
Pulping	30.07	35.62	27.44	32.18
Fermentation	36.28	35.65	26.83	32.18
Use of Elevated Dryers	31.47	35.89	26.83	31.80

Post-harvest technologies and other processing and value-addition technologies	Civil Society	Firms	Government Agency	Overall
Drying	63.78	58.47	56.41	58.17
Polishing	28.70	26.83	26.83	25.55
Sorting and Defects Classification	35.83	35.95	26.83	32.18
Size grading	26.83	28.57	26.83	26.83
Storing	35.38	35.07	29.59	30.83
Hulling	33.21	35.18	27.44	32.18
Grinding	28.04	35.18	28.23	32.18
Roasting	62.45	50.18	41.55	59.30
Packaging	26.26	35.00	25.56	28.17
Cupping	31.95	35.00	42.02	38.36
Measuring sugar content	25.37	13.21	25.89	19.45

Table 225: Percentage of MSA respondents who adopted climate risk management, by technology, by classification (n=356).

Climate Risk Management	Civil Society	Firms	Government Agency	Overall
Biodiversity conservation	3.3	13.26	0.7	3.33
Woodlot management	5.06	0.48	0.7	0.86
Restoration of organic soils and degraded lands	6.1	1.27	0.7	1.07
Use of drought and flood resistant varieties	7.31	0.93	0.09	0.59
Low- or no-till practices	12.38	0.73	0.62	1.19
Efficient nitrogen fertilizer use	1.37	1.07	1.85	1.67
Adjustment of sowing/planting time	3.93	0.2	1.03	1
Use of perennial varieties	0	0.2	0.09	0.1
Practices that promote methane reduction	1.24	0	0.7	0.59
Introduction/expansion of perennials	0	0	0.7	0.53
Stream bank management, restoration, re/afforestation	0	0	0.09	0.06
Agroforestry	5.47	1.5	3.11	2.89
Irrigation (drip)	2.85	0	0.62	0.6
Use of short-duration varieties	0.44	0.8	0.09	0.24
Diversification	4.1	0.2	1.03	1

Table 226: Percentage of MSA respondents who adopted management practices by technology, by classification (n=356).

Climate Risk Management	Civil Society	Firms	Government Agency	Overall
Processing	29.61	25.18	19.24	20.91
Recordkeeping	3.93	31.07	12.37	15.71
Financial Planning	24.52	18.4	14.53	15.77
Use of Information/Communication technology	15.48	18.54	16.72	17.03
Marketing/Trading	35.19	22.18	16.04	18.16
Accounting	12.62	6.15	11.07	10.16
Human Resources	12.62	6.15	11.07	10.16

Table 227: Percentage of MSA respondents who adopted nursery-related technologies by technology, by classification (n=356).

Nursery-related Technologies/adopted or promoted	Civil Society	Firms	Government Agency	Overall
Site selection	2.05	0.42	3.60	2.89
Seedlings Selection	4.25	0.88	3.80	3.24
Proper planting distance	4.22	0.37	6.33	5.04
Digging of hole	7.52	0.20	5.23	4.34
Field planting	5.27	0.07	2.37	2.05
Shading	5.35	1.44	2.37	2.32
Farm Planning (Sketch Map, SWOT, Action Plan)	0.00	0.35	0.62	0.53
Mother plant selection	0.00	12.51	0.62	2.96
Soil sterilization	0.00	0.35	1.85	1.46
Proper bag size	1.24	0.26	2.37	1.90
Media mixture	0.00	0.07	0.70	0.54
Mother plant garden	0.00	0.30	0.62	0.52
Seed selection	2.53	1.11	3.60	3.05
Seed germination	0.00	0.13	2.37	1.81
Proper pruning	5.98	0.13	3.64	3.05
Propagation Chamber	0.00	0.22	0.62	0.51
Grafting	0.00	0.13	2.37	1.81
Capping	5.02	1.04	3.26	2.90
Stumping / Rejuvenation	3.43	0.48	0.62	0.72
Leaf sampling	0.00	0.17	0.62	0.50
Soil Sampling	1.61	0.07	3.31	2.59
Soil Analysis	0.00	0.17	1.93	1.49

Nursery-related Technologies/adopted or promoted	Civil Society	Firms	Government Agency	Overall
Application of Organic Fertilizer	0.15	0.49	4.78	3.71
Application of Inorganic Fertilizer	0.15	0.06	1.55	1.18
Application of Basal Fertilizer	0.15	0.00	0.00	0.01
Identification of Pest	0.00	0.07	0.70	0.54
Application of Organic Pesticide	0.00	0.20	0.00	0.04
Application of Synthetic Pesticide	0.00	0.13	0.62	0.49
Use of Biocontrol Agents	0.00	0.07	0.62	0.48
Identification of Disease	0.00	0.25	0.62	0.51
Application of Organic Fungicides	3.61	0.00	1.23	1.10
Application of Synthetic Fungicides	0.00	0.17	0.62	0.50
Pick ripe	6.89	0.40	6.09	4.99

Agriculture Production	Civil Society	Firm	Government	Overall	SE
Site selection	320	23650.2	10400	12560.92	7527.13
Seedlings Selection	246.286	4600.3	6700	3692.14	1860.68
Proper planting distance	215.143	8630.167	635.667	2450.31	1479.12
Digging of hole	164.588	13807.071	686	3547.5	1910.21
Field planting	111.583	401.833	988.75	448.46	138.35
Shading	170.071	12514.133	643	5405.39	3047.82
Farm Planning (Sketch Map, SWOT, Action Plan)	25	17151	1415	13101.17	8609.25
Mother plant selection	-	6650.33	1500	5362.75	3670.67
Seed selection	170	4290.1	1712.5	2497.87	1320.45
Seed germination	100	39066.67	2800	20483.33	14111.23
Proper pruning	152.774	3565.93	483.455	1157.052	542.72
Capping	157.133	9206.05	793.143	4340.45	2673.43
Stumping / Rejuvenation	149.867	7677.67	828.714	2412.731	1689.07
Leaf sampling	66	2120	1500	969	620.3
Soil Sampling	60	31713.6	124.2	14477.12	9324.86
Soil Analysis	50	19835	625.5	12402.46	7956.55
Application of Organic Fertilizer	86.125	17271.42	541.667	5944.71	4294.48
Application of Inorganic Fertilizer	45.25	23300.25	1100	8789.27	7841.18
Application of Basal Fertilizer	-	19102	787.75	10962.33	7538.35
Identification of Pest	32.5	10.5	4.667	14.286	7.99
Application of Organic Pesticide	150.5	18741.83	1300	9829.33	7281.52
Application of Synthetic Pesticide	-	7637.75	1500	5591.83	4900.44
Use of Biocontrol Agents	-	43600	2800	30000	28509.88

Agriculture Production	Civil Society	Firm	Government	Overall	SE
Identification of Disease	25	19505.33	450	11840.7	8861.93
Application of Organic Fungicides	200	23490.2	2800	17207.29	12348.46
Application of Synthetic Fungicides	150	21016.67	2800	13200	7502.216
Pick ripe	172.45	3452.81	2033.33	1397.94	888.90

Table 228: Number and percentage of MSA respondents providing MSA services as inputs (seedling) suppliers, academic/technical providers, and policy and government support (n=356).

MSA Beneficiary Type	Inputs (seedlings) Supplier	Academic/ Technical Provider	Policy and Government Support	Any one or a combination
Civil Society	0	1	0	105
	0%	1.62%	0%	98.38%
Firms	5	8	21	97
	0.89%	2.35%	6.73%	90.04%
Government Agency	0	36	80	3
	0%	40.65%	56.86%	2.49%
Overall	5	45	101	205
	0.18%	31.19%	44.21%	24.42%

Table 229: Average number of coffee trees applied with agriculture production-related technologies per actor type by technology (n=356).

Agriculture Production	Civil Society	Firm	Government	Overall	SE
Site selection	320	23650.2	10400	12560.92	7527.13
Seedlings Selection	246.286	4600.3	6700	3692.14	1860.68
Proper planting distance	215.143	8630.167	635.667	2450.31	1479.12
Digging of hole	164.588	13807.071	686	3547.5	1910.21
Field planting	111.583	401.833	988.75	448.46	138.35
Shading	170.071	12514.133	643	5405.39	3047.82
Farm Planning (Sketch Map, SWOT, Action Plan)	25	17151	1415	13101.17	8609.25
Mother plant selection	-	6650.33	1500	5362.75	3670.67
Seed selection	170	4290.1	1712.5	2497.87	1320.45
Seed germination	100	39066.67	2800	20483.33	14111.23
Proper pruning	152.774	3565.93	483.455	1157.052	542.72
Capping	157.133	9206.05	793.143	4340.45	2673.43
Stumping / Rejuvenation	149.867	7677.67	828.714	2412.731	1689.07
Leaf sampling	66	2120	1500	969	620.3
Soil Sampling	60	31713.6	124.2	14477.12	9324.86

Agriculture Production	Civil Society	Firm	Government	Overall	SE
Soil Analysis	50	19835	625.5	12402.46	7956.55
Application of Organic Fertilizer	86.125	17271.42	541.667	5944.71	4294.48
Application of Inorganic Fertilizer	45.25	23300.25	1100	8789.27	7841.18
Application of Basal Fertilizer	-	19102	787.75	10962.33	7538.35
Identification of Pest	32.5	10.5	4.667	14.286	7.99
Application of Organic Pesticide	150.5	18741.83	1300	9829.33	7281.52
Application of Synthetic Pesticide	-	7637.75	1500	5591.83	4900.44
Use of Bio Control Agents	-	43600	2800	30000	28509.88
Identification of Disease	25	19505.33	450	11840.7	8861.93
Application of Organic Fungicides	200	23490.2	2800	17207.29	12348.46
Application of Synthetic Fungicides	150	21016.67	2800	13200	7502.216
Pick ripe	172.45	3452.81	2033.33	1397.94	888.90

Table 230: Average number of coffee trees applied with nursery-related technologies per actor type, by technology by classification (n=356).

Nursery Related Technologies	Civil Society	Firm	Government	Overall	SE
Site selection	40	29350	2000	10681	9552.34
Seedlings Selection	1283	1735	1650	1590	515.18
Proper planting distance	1308	29017	1120	8157	7182.07
Digging of hole	716	43525	1130	6196	5398.11
Field planting	73	50	1500	477	387.86
Shading	959	636	900	810	352.10
Farm Planning (Sketch Map, SWOT, Action Plan)	-	325	2800	1150	840.13
Mother plant selection	-	30500	2800	23575	21144.28
Soil sterilization	-	44000	2033	18820	17048.71
Proper bag size	5000	46500	1500	20200	16729.73
Media mixture	-	50	1400	950	1375
Mother plant garden	-	43501	2800	29934	28544.6
Seed selection	150	18940	1575	9209	7797.78
Seed germination	-	87000	1500	30000	28509.88
Proper pruning	1230	1650	1300	1335	550.81
Propagation Chamber	-	1000	31000	16000	15000
Grafting	-	87000	100	29067	28966.72
Capping	1196	2692	517	1692	1081.25
Stumping / Rejuvenation	1164	30267	0	10735	9551.2
Leaf sampling	-	-	2800	1401	-

Nursery Related Technologies	Civil Society	Firm	Government	Overall	SE
Soil Sampling	50	0	1067	650	-
Soil Analysis	-	1	1525	1220	-
Application of Organic Fertilizer	8	951	1096	929	-
Application of Inorganic Fertilizer	8	3300	2400	2027	-
Application of Basal Fertilizer	8	-	-	8	-
Identification of Pest	-	50	250	183	-
Application of Organic Pesticide	-	43500	-	43500	-
Application of Synthetic Pesticide	-	87000	2800	44900	-
Use of Biocontrol Agents	-	0	2800	1400	-
Identification of Disease	-	50	400	167	-
Application of Organic Fungicides	50	-	1900	790	-
Application of Synthetic Fungicides	-	1	2800	1401	-
Pick ripe	816	7550	1067	1814	-

Table 231: Average volume (kg) of coffee applied with post-harvest technologies and other processing and value addition technologies, by technology, by MSA beneficiary type (n=356).

PHH Practices	Civil Society	Firm	Government	Overall	SE
Pulping	13.45	35.09	30	25.5	9.619714
Fermentation	15.64	22.58	26.83	22.4	5.966946
Washing	73	86.09	145	81.2	28.60761
Drying	255.38	480.62	469.37	553.2	319.7327
Hulling	11.08	34.55	56.37	33.2	9.98866
Sorting	23.46	42.33	51.66	37.9	8.000625
Grading	39.66	39.62	35.16	51	11.41734
Polishing	35.5	42.71	22	36.4	8.488162
Storage	32.22	39.73	43.37	36.4	8.56245

Table 232: Percentage of MSA who applied introduced technologies/techniques/practices applied to conservation/protected areas (n=356).

MSA Beneficiary Classification	No	Yes	% Yes	Average hectares
Civil Society	90	16	15.44	3.1
Firms	100	31	34.28	2.71
Government Agency	101	18	22.74	4.12
Overall	291	65	24.7	3.2

Table 233: Number and percentage of MSA respondents who were trained and are practicing business-level practices and technologies by MSA beneficiary type (n=365).

MSA Respondents	Civil Society	Firms	Government Agency	Overall
Trained on Business-Level Practices and Technologies (amongst MSA project beneficiary respondents, n=356)	2	8	5	15
	1.08%	13.58%	8.29%	9.01%
Practicing Business-Level Practices and Technologies (amongst MSA project beneficiary respondents, n=356)	33	32	19	84
	34.22%	21.95%	21.33%	22.05%

Table 234: Percentage of MSA respondents who have influenced other organizations and other coffee producers by MSA beneficiary type (n=365).

MSA Respondents	Civil Society	Government Agency	Private Sector
Influenced other organizations			
Amongst MSA respondents, n=356	18.08	13.58	8.29
Influenced other coffee producers			
Amongst MSA respondents, n=356	1.70	25.70	11.81

Table 235: Percentage of promoted post-harvest technologies by classification by firm type (n=356).

Technologies	Civil Society	Government Agency	Private Sector	Overall
Pulping	10.91	15.7	4.28	6.87
Fermentation	14.33	16.41	3.35	6.47
Washing	11	16.95	3.54	6.57
Drying	27.02	21	15.77	17.34
Hulling	13.32	15.51	4.76	7.3
Sorting	13.35	15.83	4.52	7.19
Grading	2.47	16.96	7.35	9.04
Polishing	2.16	3.11	0.7	1.25
Storage	18.89	16.74	6.91	9.43

Table 236: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction with coffee sectors in terms of producers by MSA beneficiary type (n=365).

MSA Respondents	Civil Society	Firm	Government	Overall
Among MSA respondents, n=356	81.01	88.81	76.89	79.46

Table 237: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction with the coffee sector in terms of firms that support producers such as input providers, technical service providers, or processing/value addition firms.

MSA Respondents	Civil Society	Firm	Government	Overall

Amongst MSA respondents, n=356	78.45	74.81	70.90	72.03

Table 238: Percentage of MSA who perceived that PhilCAFE's assistance changed how they market/advertise these services or programs (n=365).

MSA Respondents	Civil Society	Firms	Government Agency	Overall
Amongst MSA respondents, n=356	73	70	36	179
	72.69%	34.78%	47.58%	46.19%

Table 239: Percentage of MSA who are currently engaging in local cooperatives, coffee associations, producer organizations, SUCs, and local intermediaries to expand stakeholder reach in terms of coffee services (n=356).

MSA Beneficiary Types	Yes	No	% Yes
Civil Society	49	57	47.86
Government Agency	58	73	30.39
Private Sector	29	90	31.09
Overall	136	220	31.73

Table 240: Impact of stakeholder engagement on organizational reach in terms of coffee services (n=356).

MSA Beneficiary Types	Local	Regional/ National	International
Civil Society	**94.65**	**5.35**	-
Cooperatives	100	0	-
Coffee Associations	97.3	2.7	-
Producer Organizations	100	0	-
State Universities	83.64	16.36	-
Local Intermediaries	84.74	15.26	-
Government Agency	**37.95**	**60.91**	**1.14**
Cooperatives	81.59	18.41	0
Coffee Associations	67.19	32.81	0
Producer Organizations	79.64	20.36	0
State Universities	85.61	14.39	0
Local Intermediaries	9.69	88.4	1.91
Private Sector	**75.77**	**22.06**	**2.16**
Cooperatives	0	100	0
Coffee Associations	100	0	0
Producer Organizations	100	0	0
State Universities	93.11	0	6.89
Local Intermediaries	47.83	52.17	0

Table 241: Present engagement (percentage) of MSAs to expand their stakeholder reach in terms of coffee services (n=356).

MSA Beneficiary Types	Civil Society	Firms	Government Agency	Overall
Cooperatives	17.61	24	14.49	16.5
Coffee Associations	19.41	22	23.66	23.08
Producer Organizations	27.72	20	10.93	13.48
State Universities	3.73	16	12.97	13.14
Local Intermediaries	11.82	15	6.81	8.74

Table 242: Percentage of MSAs perceived that PhilCAFE contributes/assists in these initiatives per organization (n=103).

MSA Beneficiary Types	# Yes	# No	% Yes
Cooperatives	41	15	86.88
Coffee Associations	45	14	92.88
Producer Organizations	45	11	79.52
State Universities	18	10	55.98

Table 243: Percentage of MSAs confirmed that PhilCAFE contributed to expanding your shareholder's reach in terms of coffee services (n=82).

MSA Respondents	Civil Society	Firms	Government Agency	Overall
Among MSA respondents, n=82	37.08	25.58	21.59	23.11

Table 244: Percentage of MSAs who perceived that the engagement has a significant impact on their organization's reach at the local, regional, or international level (n=90).

MSA Respondents	Civil Society	Firms	Government Agency
Among MSA respondents, n=91	30.59	23.45	21.59

Table 245: Average number of stakeholders reached by PhilCAFE assistance (n=78).

MSA Beneficiary Types	Average number of Adults	Average number of Youth
Civil Society	7	5
Firms	36	37
Government Agency	61	64
Overall	32	28

Table 246: Percentage of MSAs who perceived changes in stakeholder reach (increased, decreased, or remained the same) since 2019, the percentage of change (n=147).

	Perceived changes	Percentage change

MSA Beneficiary Types	Remained the same	Decreased	Increased	Decreased	Increased
Civil Society	4.21	66.03	4.95	32.71	67.29
Firm	16.34	13.35	40.51	1.19	98.81
Government	79.44	20.62	54.54	1.36	98.64
Overall	84.47	0.55	14.99	3.51	96.49

Table 247: Estimated percentage change in stakeholder reach by category (n=147).

MSA Beneficiary Types	Male		Female	
	Adult	Youth	Adult	Youth
Civil Society	4.35	4.5	4.21	4.37
Firm	15.67	8.59	11.21	9.66
Government	20	23.83	19.85	23.5
Overall	11.82	10.27	10.2	11.23

Table 248: Percentage of MSAs who perceived that PhilCAFE's assistance somehow influenced the quality of the services they offer to stakeholders (n=356).

MSA Respondents	Civil Society	Firm	Government	Overall
Among MSA respondents, n=356	66.26	66.34	48.82	51.62

Table 249: Percentage of MSAs with risk management plans in the areas planted with coffee (n=356).

MSA Respondents	Civil Society	Firm	Government	Overall
Among MSA respondents, n=356	26.75	14.34	5.28	8.09

Table 250: Percentage of MSAs who perceived that their organization already asked for some type of assistance in support of coffee businesses in their area (n=365).

MSA Respondents	Civil Society	Firm	Government	Overall
Among MSA respondents, n=356	71.15	56.57	60.97	60.57

Table 251: Percentage of MSA respondents who confirmed their participation in PhilCAFE facilitated/organized activities, by classification (n=356).

MSA Firms	Received some form of enterprise growth or improvement training or technical assistance from an organization and facilitator due to PhilCAFE	Received some form of financing or resources from the organization due to PhilCAFE assistance	Participated in an event facilitated by PhilCAFE	None
Civil Society	4.86	5.85	4.89	-

MSA Firms	Received some form of enterprise growth or improvement training or technical assistance from an organization and facilitator due to PhilCAFE	Received some form of financing or resources from the organization due to PhilCAFE assistance	Participated in an event facilitated by PhilCAFE	None
Firms	21.31	18.61	15.87	-
Government	73.83	75.55	79.24	-
Overall	88.48	62.91	87	0

Table 252: Average volume of production for firms (converted to GCB) (n=133).

Region	Mean Volume	Std. err.
CAR	7725.39	2261.47
Region 1	2937.95	1022.25
Region 2	3669.37	1613.23
Region 4-A	7383.81	3205.27
Region 6	5192.29	1366.75
Region 10	5687.16	1170.07
Region 11	7001.97	1660.78
Region 12	7414.11	2894.49
Region 13	3284.16	926.183
BARMM	2792.88	804.96
Overall	6011.62	693.85