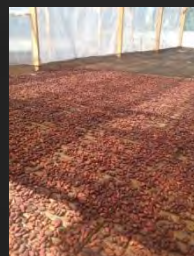


2018

FINAL REPORT

FINAL EVALUATION OF THE
FY 2014 Food for Progress
MINDANAO PRODUCTIVITY FOR
AGRICULTURAL COMMERCE & TRADE
(MinPACT) PROJECT



• COCONUT • COFFEE • CACAO

Submitted to:



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Development Academy of the Philippines



[Final evaluation for the FY 2014 Food for Progress Mindanao Productivity for Agricultural Commerce and Trade (MinPACT) project in the Philippines]

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List of Acronyms and Abbreviations

ARBO	Agrarian Reform Beneficiary Organization
ARSK	Agraryong Reporma Samahang Kababaihan
BCS	Bansalan Co-operative Society
BPI	Bureau of Plant Industry
BPMAC	<i>Barcelona</i> Primary Multi-Purpose Agricultural Co-operative
CBU	Capital Build-Up
CMU	Central Mindanao University
COCOLINK	Coconut Industry Cluster Link, Inc.
CAO	City Agriculturist Office
CDA	Co-operative Development Administration
CSI	Chocolate de San Isidro
DA	Department of Agriculture
DAP	Development Academy of the Philippines
DAR	Department of Agrarian Reform
DID	Difference-in-Differences
DOLE	Department of Labor and Employment
DSIP	Detailed Survey Implementation Plan
DTI	Department of Trade and Industry
FACOMA	Sindangan <i>Facoma</i> Community Multi-Purpose Co-operative
FARMCO-OP	Foundation for Agrarian Reform Co-operatives in Mindanao
FEDCO	Federation of Co-operatives
FGD	Focus Group Discussion
FOGs	Fixed Obligation Grants
FPA	Fertilizer and Pesticide Authority
HH	Household
ITMPC	Inhandig Tribal Multi-Purpose Co-operative
JORIFA	Jose Rizal Farmers Association
KII	Key Informant Interview
KFI	Kennemer Foods International
KSCFMPC	Katipunan Small Coconut Farmers Multi-Purpose Co-operative
LAMPCO	Laak MPC Co-operative
LGU	Local Government Unit
M&E	Monitoring and Evaluation
MACOFED	Macabatug Co-operative Federation
MAMPCO	<i>Maragusan</i> Multi-Purpose Co-operative
MAO	Municipal Agriculturist Office
MARBMCO	Magastos Agrarian Reform Beneficiaries Multi-Purpose Co-operative
MASS-SPEC	Mindanal Alliance for Self-Help Societies
MILALITTRA	Miarayon-Lapok-Lirongan-Tinaytayan Tribal Association
MinDA	Mindanao Development Authority

MinPACT	Mindanao Productivity for Agricultural Commerce and Trade
MPC	Multi-Purpose Co-operative
NAGMASID	Nagkahiusang Mag-uumasa San Isidro Co-operative
NELECOFAPA	<i>New Leyte Cacao and Coffee Farmers Association</i>
NCIP	National Commission on Indigenous People
NICO	Nabunturan Integrated Co-operative
NOMIARC	Northern Mindanao Integrated Agricultural Research Center
OECD	Organisation for Economic Co-operation and Development
PAO	Provincial Agriculturist Office
PCA	Philippine Coconut Authority
PEF	Peace and Equity Foundation
PHF	Post-harvest Facilities
PO	People's Organization
PPS	Probability Proportional to Size
PRDP	Philippine Rural Development Program
RFP	Request For Proposal
SASCOFAMCO	Salug Small Coconut Farmers Multi-Purpose Co-operative
USAID	US Agency for International Development
USDA	US Department of Agriculture
USPD	United Sugarcane Planters of Davao Savings and Credit Co-operative
VCA	Value Chain Actors
3Cs	Coffee, Cacao, Coconut

I. Executive Summary

This report contains the endline evaluation findings of the project entitled “Mindanao Productivity for Agricultural Commerce and Trade (MinPACT)” funded by the USDA and implemented by ACDI/VOCA from October 1, 2014 to October 31, 2018. MinPACT aimed to increase the incomes of smallholder cocoa, coconut and coffee farming families in Southern and Western Mindanao. The project strategy to achieve the results framework Strategic Objectives of 1) Increased Agriculture Productivity, and 2) Expanded Trade of Agriculture Products was to:

- Improve the competitiveness of coffee, cocoa, and coconut value chains;
- Strengthen local capacity of farmers and other value chain actors and the services available for improved production, post-harvest systems, practices and product quality;
- Facilitate enhanced financial services, including insurance and credit availability for farmers and agribusiness service providers;
- Increase market access, opportunities, and efficiency of agricultural products and services.

The evaluation study was based on the Scope of Work and the underlying market systems development approach that considered such system components as a) how the producers and the buyers interact in the value chain, b) formal and informal norms and practices affecting the system, and c) the indirect services that help make the market system work. The Evaluation Team used the difference-in-differences (DiD) analysis method^{1,2} to compare baseline data of beneficiaries and the control group with the endline data of beneficiaries and the control group. Thus, the evaluation used both quantitative and qualitative methods for data gathering, processing and analysis. For the quantitative part, the study covered 995 household survey respondents and 80 Value Chain Actors (VCA) survey respondents while the qualitative part engaged 64 key informants and 29 focus groups.

According to Columbia University Mailman School of Public Health “DiD is typically used to estimate the effect of a specific intervention, such as large-scale program implementation, by comparing the changes in outcomes over time between a population that is enrolled in a program (the intervention group) and a population that is not (the control group). DiD requires data from pre-/post-intervention. The approach removes biases in post-intervention period comparisons between the treatment and control group that could be the result from permanent differences between those groups, as well as biases from comparisons over time in the treatment group that could be the result.

The key findings include the following:

- The difference-in-differences (DiD) estimate is positive for farm income and yield of coffee, cacao and coconut. However, only the increase in cacao yield is statistically significant.

¹ www.mailman.columbia.edu/research/population-health-methods/difference-difference-estimation

² <http://web.mit.edu/teppej/www/teaching/Keio2016/06dd.pdf>

- There is significantly higher farm income among those farmers in the MinPACT areas (treatment) than in the control group after MinPACT project intervention. However, DiD results suggest that there is no significant difference in income among men and women, families of different sizes and amongst farmers with different marital status between treatment and control group.
- The increased income of farmers reached by MinPACT was highly attributed to improved farm practices, particularly pruning, sleeving (cacao), “pick-ripe-only” (coffee), fermentation and drying. These resulted in cacao and coffee beans with better quality and higher grade, which commanded higher market prices. Farmers and cooperatives alike consider the use of post-harvest facilities (PHF) like the all-weather dryer provided by MinPACT as great help, but it was noted that on-site PHFs will be needed to support greater volumes in the future.
- Although there was no immediate income from newly-planted cacao trees among treatment farmers, the fertilization of the soil was likely an important factor in the increases in coconut yield and that of other crops in the area (banana, vegetables). The greater number of whole nuts plus thicker coconut meat resulted in more kilos of copra sold to the market.
- Farmers with existing coffee, cacao, or coconut, commonly referred to as the 3Cs that qualified or were certified by the Bureau of Plant Industry (BPI) as producers of quality planting material for seedling production nurseries generated additional income as a result of increased demand from 3Cs nurseries.
- Cost-saving contributed to increased farm income among MinPACT beneficiaries. For example, a farmer can avail themselves of technical services for free from their member co-op technicians trained by MinPACT instead of paying for such services from private providers. The provision of these services by co-ops is often embedded in into the cost of other co-op products, e.g. seedlings and other inputs, loans, buying of coffee, cacao, or coconut, etc. However, where the cost is not embedded, and it is done on a voluntary basis by fellow members a modest allowance from co-op operations should be built-in to help ensure long-term sustainability.
- In terms of total income, difference-in-differences estimates show no significant difference in total income because of the high non-farm income (salary, honorarium, remittances and non-farm enterprises) of the control group. Moreover, the total income is also not significantly different between male and female, age, marital status and the 3Cs being cultivated in the farm. But families with more educated family head and higher number of family members have significantly higher total income.
- Families reached by MinPACT reported higher total income from their involvement in the expanded production and marketing activities of the project.

- The MinPACT beneficiaries have statistically significant higher yield per hectare per year of cacao compared to the control group after the project. The difference-in-difference estimate shows that there is a significant increase in the mean differences of yield after the MinPACT project.
- The MinPACT project was able to increase the production of coconut, but not enough to be statistically significant. The increase in coconut yield is because of the shared benefits for the fertilization of the intercropped cacao, as opposed to where coconut is not managed.
- There was a decline in the productivity of coffee in both groups (due to climate conditions – El Nino or drought in 2016 caused falling of leaves and cherries and the effect manifested in the 2017 to 2018 yield data). Comparison of yield after the project shows that MinPACT beneficiaries have statistically significant higher yield compared to the yield of farmers in the control group. However, the difference-in-differences estimate shows no significant difference in the yield of coffee.
- MinPACT improved the regulatory capacities of various stakeholders and value chain actors to meet international quality standards (e.g. Cooperative Development authority (CDA) assessment of cooperatives, BPI and Philippine Coconut Authority (PCA) accreditation of nurseries, Central Mindanao University (CMU) coffee cupping/ grading laboratory, quality assurance of 3C products by the Food and Drug Administration (FDA), Department of Trade and Industry (DTI) and other authorities). Related to this, one unexpected change worthy of note is the shift from rules and regulations for compliance by both service provider and client in enhancing competitiveness through quality and added value (e.g. healthy options for certified organic products).
- Overall, MinPACT succeeded in improving 3Cs productivity in terms of increased number of hectares planted, increased number of 3Cs trees, increasing quality standards of 3C products from farm-to-market/plate, improving the economic condition of its beneficiaries, transferring technological know-how and good agricultural practices, strengthening co-op management capabilities, and influencing industry network systems to support sustained sector growth. However, the ultimate goal of reaching volume and consistency of quality that satisfy market demand is not yet evident at project-end.

The key recommendations include the following:

- *Farm Production:* The crop specific credit programs initiated under MinPACT should be tracked and if proven effective expanded to new credit cooperatives, banks and other MFIs. The approach to production finance where agricultural inputs and technical support are part of a credit package which projects returns based on proper management offers great potential especially in collaboration and coordination with various value chain actors (government programs,

financing institution, traders, processors) to meet market demand both in terms of volume and quality.

- *Nursery Operations:* The emphasis on co-op established and managed nurseries to help ensure a direct and continual relationship with farmer clients/members and to help obtain and maintain quality assurance accreditation (co-ops are tax-exempt) and linkage with institutional buyers including government entities for financial sustainability is a good approach and should be continued. Independent private nurseries should also be supported and solutions to the private nursery tax evasion issue, which limits quality assurance accreditation, should be pursued, including elimination or reduction of threshold at the policy/regulatory level and or tax reform for micro, small, or medium agriculture enterprises.
- *Post-harvest/ Processing Facilities:* The MinPACT project facilitated provision of working capital through co-ops, along with equipment, post-harvest and processing facilities and hands-on training and support materials through incentive in-kind grants and tie-ups with government programs and various VCA and investors. Incentive in-kind grants are useful to kick-start investment but should be used in a limited basis and be linked to government and market-based solutions. Incentive in-kind grants should be continued but the priority should be on facilitating access to credit and linking beneficiaries with government programs and market-led investments.
- *Marketing:* Facilitating the establishment of value chain specific trade and technical fairs along with support in the participation in trade and technical fairs by project beneficiaries, increased their knowledge and understanding of market dynamics, requirements, buyer expectations. The provision of technical assistance and training on product development, packaging, pricing, distribution and trade (through DTI and industry networks), as well as the promotion and use of contracts between buyers and sellers proved to be effective in building knowledge and trust. These three strategies, trade and technical fairs, marketing skills training and technical assistance, and the promotion of buyer contracts should be continued.
- *Financing:* Facilitating access to credit through select banks, government programs, and most importantly credit cooperatives, including supporting credit cooperatives to pilot crop specific loan products was a good approach, though the pilots need to be tracked to determine scalability among other credit cooperatives. Overall increased access to working capital is needed, to cover cost of production, product development and marketing; financial institutions need to consider assets other than land-ownership collaterals, including buyer contracts, warehouse receipts, among others.
- *Management Capacities:* Improved agribusiness management skills in marketing, accounting and financing, leadership and client or membership services proved to be effective in improving business efficiency, product volume and quality, and market share. Continued provision of training, technical assistance, coaching, and mentoring of micro, small, and medium

enterprises, including cooperatives and industry organizations is recommended, along with the continued linking to management support services through cooperative federations, government agencies and programs, and public and private educational and training institutions. Industry associations like CIDAMI, Cocolink, and PCC can further collaborate in launching alternative platforms for learning and exchange other than annual summits.

- *Industry development:* Capacity building of industry organizations that can promote sector development and advocate on behalf of value chain actors should be continued, often the difference of a well-developed industry (sector) in a country is the level of institutionalism and organization. If existing institutions or organizations are not functioning properly or don't have the buy-in or trust of all value chain actors, restructuring, renaming, or starting-over would be advised.
- *Research and development:* The linkage with public and private universities to create standardized curriculum, research trials to determine the most appropriate varieties based on climate change and market demands, and increased university led training and extension should be expanded upon for all three crops.
- *Behavior change:* Communication strategies and engagement approaches for training and awareness which took into consideration gender, rural and urban differences, and ethnic diversity proved affective under MinPACT, including in the context of participatory workshops, technical manuals, crop specific trade fairs and expos, supplementation training tarpaulins, videos, news conferences, etc. These strategies should be continued to advocate for technology adoption, access and utilization of financing services, and monitoring and evaluation for accountability and learning.

II. Background/Brief Project Description, Context and Rationale

An evaluation team from the Development Academy of the Philippines (DAP) conducted the final evaluation of the four-year project entitled “Mindanao Productivity for Agricultural Commerce and Trade (MinPACT)”. The baseline study of the project was undertaken in February 2015, while the mid-term evaluation was done in May 2017. The final evaluation study was conducted from July to October 2018.

The MinPACT project, a four-year, \$9M project funded by the USDA Food for Progress and implemented by ACDI/VOCA aimed to increase the incomes of smallholder cocoa, coconut, and coffee farming families in Southern and Western Mindanao. The project strategy to achieve the results framework Strategic Objectives of 1) Increased Agriculture Productivity, and 2) Expanded Trade of Agriculture Products was to a) improve the competitiveness of coffee, cocoa, and coconut value chains; b) strengthen local capacity of farmers and other value chain actors and the services available for improved production, post-harvest systems, practices and product quality; c) facilitate

Figure 1. Cacao Production Data

Cacao: Volume of Production, Area Planted and Yield per Hectare from 2007 to 2017											
GEOGRAPHIC LOCATION	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volume of Production (in metric tons)											
PHILIPPINES	5,237.24	5,148.88	5,133.76	5,019.43	4,856.48	4,831.34	4,875.82	5,427.66	6,023.34	6,262.77	7,009.10
MINDANAO	4,661.18	4,570.47	4,550.74	4,481.43	4,348.23	4,319.79	4,366.52	4,904.98	5,463.16	5,622.61	6,362.92
% Share to Philippines	89.00	87.27	86.89	85.57	83.03	82.48	83.37	93.66	104.31	107.36	121.49
ZAMBOANGA PENINSULA	141.69	135.29	132.43	121.63	112.37	115.24	103.51	128.30	131.02	127.30	144.57
NORTHERN MINDANAO	548.50	550.88	561.58	554.52	396.07	220.94	196.31	175.87	164.06	180.16	194.40
DAVAO REGION	3,475.90	3,469.67	3,509.89	3,506.33	3,617.11	3,762.89	3,844.30	4,365.90	4,920.27	5,073.83	5,752.99
SOCCSKSARGEN	86.17	83.16	79.38	73.36	72.71	73.97	79.10	93.45	103.77	93.17	109.27
CARAGA	287.73	213.23	157.40	124.14	58.57	63.44	57.84	59.40	60.31	65.31	80.71
ARMM	121.19	118.24	110.06	101.45	91.40	83.31	85.46	82.06	83.73	82.84	80.98
Area Planted (in hectares)											
PHILIPPINES	9,984.72	9,750.87	9,538.29	9,462.35	9,581.93	9,338.73	9,431.48	12,034.79	13,910.60	14,815.54	18,264.44
MINDANAO	8,283.00	8,030.00	7,830.82	7,779.80	7,920.00	7,581.90	7,413.00	10,022.00	11,771.50	12,416.67	15,774.90
% Share to Philippines	82.96	80.42	78.43	77.92	79.32	75.94	74.24	100.37	117.90	124.36	157.99
ZAMBOANGA PENINSULA	604.00	527.00	446.00	425.00	394.00	359.00	348.00	340.00	529.50	603.00	641.00
NORTHERN MINDANAO	975.00	941.00	937.00	927.00	877.00	877.00	678.00	663.00	622.00	620.30	1,051.00
DAVAO REGION	5,011.00	4,945.00	4,945.00	4,958.00	5,226.00	5,151.00	5,193.00	7,451.00	8,938.00	9,528.37	11,317.00
SOCCSKSARGEN	143.00	137.00	133.00	130.00	134.00	161.00	177.00	436.00	525.00	505.00	1,511.00
CARAGA	875.00	855.00	850.00	840.00	825.00	585.00	570.00	701.00	735.00	741.00	849.00
ARMM	675.00	625.00	514.82	499.80	464.00	448.90	447.00	431.00	422.00	419.00	405.90
Yield per Hectares (metric ton per hectare)											
PHILIPPINES	0.52	0.53	0.54	0.53	0.51	0.52	0.52	0.45	0.43	0.42	0.38
MINDANAO	0.43	0.43	0.43	0.42	0.37	0.34	0.34	0.29	0.26	0.25	0.21
ZAMBOANGA PENINSULA	0.23	0.26	0.30	0.29	0.29	0.32	0.30	0.38	0.25	0.21	0.23
NORTHERN MINDANAO	0.56	0.59	0.60	0.60	0.45	0.25	0.29	0.27	0.26	0.29	0.18
DAVAO REGION	0.69	0.70	0.71	0.71	0.69	0.73	0.74	0.59	0.55	0.53	0.51
SOCCSKSARGEN	0.60	0.61	0.60	0.56	0.54	0.46	0.45	0.21	0.20	0.18	0.07
CARAGA	0.33	0.25	0.18	0.15	0.07	0.11	0.10	0.08	0.08	0.09	0.10
ARMM	0.18	0.19	0.21	0.20	0.20	0.19	0.19	0.19	0.20	0.20	0.20

Source: Philippine Statistics Authority (<http://countrystat.psa.gov.ph>)

enhanced financial services, including insurance and credit availability for farmers and agribusiness service providers; and d) increase market access, opportunities, and efficiency of agricultural products and services.

The project was introduced at a time when the cocoa, coconut and coffee industries in the country experienced a generally downward trend, especially in terms of yield per hectare.

For the past ten years (2007-2017), the Philippines increased its cacao production from 5,237 metric tons in 2007 to 7,009.10 metric tons in 2017. In Mindanao, cacao production also increased from 4,661 metric tons in 2007 to 6,363 metric tons in 2017. Although the area planted nearly doubled for the Philippines and Mindanao during the same period (see figure 1), the yield per hectare in Mindanao drastically reduced from 0.43 metric ton per hectare in 2007 to 0.21 metric ton per hectare in 2017.

Figure 2. Coconut Production Data

GEOGRAPHIC LOCATION	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volume of Production (in metric tons)											
PHILIPPINES	14,852,926.80	15,319,526.75	15,667,564.85	15,510,282.61	15,244,609.30	15,863,800.92	15,354,334.19	14,696,298.35	14,735,188.98	13,825,080.08	14,049,131.06
MINDANAO	9,124,427.59	9,230,709.42	9,311,464.47	9,199,288.42	8,959,354.45	9,444,439.62	9,039,175.22	9,078,909.53	9,137,719.10	8,337,197.48	8,437,742.20
% Share to Philippines	61.43	62.15	62.69	61.94	60.32	63.59	60.86	61.13	61.52	56.13	56.81
ZAMBOANGA PENINSULA	1,766,478.91	1,714,907.48	1,744,738.04	1,713,018.08	1,557,621.30	1,730,428.16	1,743,791.81	1,659,014.20	1,682,120.60	1,529,763.09	1,700,249.57
NORTHERN MINDANAO	1,669,281.24	1,713,354.00	1,743,337.77	1,757,164.52	1,745,949.54	1,816,501.47	1,816,577.68	1,838,404.69	1,851,702.14	1,802,402.56	1,807,046.16
DAVAO REGION	2,581,102.87	2,671,203.34	2,691,904.84	2,635,866.63	2,627,248.20	2,720,232.61	2,275,979.56	2,332,089.54	2,246,187.53	1,894,663.08	1,886,599.87
SOCCSKSARGEN	854,581.49	870,094.01	895,085.87	864,270.35	879,867.50	985,175.40	1,040,610.03	1,071,706.81	1,159,818.07	958,350.87	938,162.31
CARAGA	1,010,275.43	1,011,096.28	985,426.87	974,213.35	879,399.51	880,883.08	834,917.16	821,512.71	804,722.84	775,472.67	781,615.38
ARMM	1,242,707.65	1,250,054.31	1,250,971.08	1,254,755.49	1,269,268.40	1,311,218.90	1,327,298.98	1,356,181.58	1,393,167.92	1,376,545.21	1,324,068.91
Area Planted (in hectares)											
PHILIPPINES	3,359,776.50	3,379,740.90	3,401,499.73	3,575,944.47	3,561,981.11	3,574,613.61	3,551,298.83	3,502,011.47	3,517,742.85	3,565,059.37	3,612,304.29
MINDANAO	1,740,299.50	1,746,687.90	1,749,360.73	1,769,900.47	1,761,202.00	1,762,647.50	1,730,580.10	1,781,721.40	1,794,789.40	1,799,553.59	1,835,829.00
% Share to Philippines	51.80	51.99	52.07	52.68	52.42	52.46	51.51	53.03	53.42	53.56	54.64
ZAMBOANGA PENINSULA	363,624.00	368,365.00	369,012.73	372,971.47	375,080.00	377,389.00	380,919.00	417,314.00	420,798.00	423,792.00	453,994.00
NORTHERN MINDANAO	298,984.50	299,904.90	300,575.00	301,257.00	301,697.00	301,660.00	302,433.00	302,818.00	302,818.00	302,816.00	302,816.00
DAVAO REGION	376,398.00	375,932.00	375,922.00	375,885.00	375,630.00	375,622.00	348,483.00	356,480.00	357,497.00	357,453.00	357,890.00
SOCCSKSARGEN	167,985.00	168,969.00	169,254.00	185,021.00	175,764.00	176,752.00	184,961.00	186,111.00	193,933.00	190,841.00	192,721.00
CARAGA	218,932.00	219,102.00	219,107.00	219,121.00	218,613.00	215,285.00	191,107.00	191,108.00	191,103.00	193,018.59	196,774.00
ARMM	314,376.00	314,415.00	315,490.00	315,645.00	314,418.00	315,939.50	322,677.10	327,890.40	328,640.40	331,633.00	331,634.00
Yield per Hectares (metric ton per hectare)											
PHILIPPINES	4.42	4.53	4.61	4.34	4.28	4.44	4.32	4.20	4.19	3.88	3.89
MINDANAO	5.16	5.20	5.24	5.09	5.00	5.28	5.20	5.13	5.14	4.68	4.64
ZAMBOANGA PENINSULA	4.86	4.66	4.73	4.59	4.15	4.59	4.58	3.98	4.00	3.61	3.75
NORTHERN MINDANAO	5.58	5.71	5.80	5.83	5.79	6.02	6.01	6.07	6.11	5.95	5.97
DAVAO REGION	6.86	7.11	7.16	7.01	6.99	7.24	6.53	6.54	6.28	5.30	5.27
SOCCSKSARGEN	5.09	5.15	5.29	4.67	5.01	5.57	5.63	5.76	5.98	5.02	4.87
CARAGA	4.61	4.61	4.50	4.45	4.02	4.09	4.37	4.30	4.21	4.02	3.97
ARMM	3.95	3.98	3.97	3.98	4.04	4.15	4.11	4.14	4.24	4.15	3.99

During the same period, coconut production decreased from 14,852,926 metric tons in 2007 to 14,049,131 metric tons in 2017 (see figure 2). In Mindanao, coconut production also decreased from 9,124,427 metric tons in 2007 to 8,437,742 metric tons. Decreased production occurred despite the increase in area planted: from 3,359,776.50 hectares in 2007 to 3,612,304.29 hectares in 2017 for the Philippines, and from 1,740,299.50 hectares in 2007 to 1,835,829 hectares in 2017 for Mindanao. In terms of yield, the national data showed a decrease from 4.42 metric ton per hectare in 2007 to 3.89 metric ton per hectare in 2017. For Mindanao, yield also decreased from 5.16 metric ton per hectare in 2007 to 4.64 metric ton per hectare in 2017.

Figure 3. Coffee Production Data

Coffee: Volume of Production, Area Planted and Yield per Hectare from 2007 to 2017

GEOGRAPHIC LOCATION	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volume of Production (in metric tons)											
PHILIPPINES	97,876.68	97,427.99	96,432.95	94,536.01	88,526.09	88,943.00	78,633.92	75,454.49	72,341.82	68,822.93	62,077.95
MINDANAO	73,173.65	72,673.92	71,822.00	70,656.86	67,666.32	65,452.36	59,564.58	57,932.54	57,254.83	55,088.26	50,948.64
% Share to Philippines	74.76	74.25	73.38	72.19	69.13	66.87	60.86	59.19	58.50	56.28	52.05
ZAMBOANGA PENINSULA	1337.43	1313.64	1262.98	1202.44	1022.9	993.28	961.08	969.31	1007.3	777.24	513.77
NORTHERN MINDANAO	6287.47	6203.44	6016.3	5956.83	5858.03	5225.3	5334.81	5415.67	5436.78	5604.95	5695.4
DAVAO REGION	24466.45	24066.31	23632.28	22681.56	20465.07	18949.88	12388.99	11792.65	11680.62	11429.78	10839.95
SOCCSKSARGEN	27123.13	27021.73	27553.93	27761.44	27423.17	27868.53	28891.37	28000.2	26957.82	25100.78	22118.79
CARAGA	3115.48	3147.06	2619.12	2251.67	2007.53	1786.8	1497.16	1405.53	1645.95	1833.92	1583.2
ARMM	10843.69	10921.74	10737.39	10802.92	10889.62	10628.57	10491.17	10349.18	10526.36	10341.59	10197.53
Area Planted (in hectares)											
PHILIPPINES	123974.51	123268.96	122644.82	121399.35	119636.73	120000.16	116460.42	117450.77	113737.97	114838.87	112843
MINDANAO	83,057.80	82,867.30	82,849.50	81,730.00	80,968.65	81,369.60	77,876.75	78,804.25	75,065.92	74,960.30	73,617.55
% Share to Philippines	67.00	66.84	66.83	65.92	65.31	65.63	62.82	63.56	60.55	60.46	59.38
ZAMBOANGA PENINSULA	1443.8	1406.3	1331.5	1303.5	1080.2	1029	928	890	918.5	922	903
NORTHERN MINDANAO	13218	13137	13083	11629	11632.75	11837.6	11841.75	11852	11709.17	11748.8	11600.1
DAVAO REGION	26677	26633	26624	25847	25371	25166	21573	21524	17344	17256	16344
SOCCSKSARGEN	23930	23919	24038	25171	25117	25223	25487	26434	26731	26611.75	26326.75
CARAGA	4061	4047	4039	4045	4019	4368	4368	4397.25	4417.25	4485.75	4485.7
ARMM	13728	13725	13734	13734.5	13748.7	13746	13679	13707	13946	13936	13958
Yield per Hectares (metric ton per hectare)											
PHILIPPINES	0.79	0.79	0.79	0.78	0.74	0.74	0.68	0.64	0.64	0.60	0.55
MINDANAO	0.83	0.84	0.81	0.79	0.77	0.74	0.72	0.70	0.73	0.68	0.61
ZAMBOANGA PENINSULA	0.93	0.93	0.95	0.92	0.95	0.97	1.04	1.09	1.10	0.84	0.57
NORTHERN MINDANAO	0.48	0.47	0.46	0.51	0.50	0.44	0.45	0.46	0.46	0.48	0.49
DAVAO REGION	0.92	0.90	0.89	0.88	0.81	0.75	0.57	0.55	0.67	0.66	0.66
SOCCSKSARGEN	1.13	1.13	1.15	1.10	1.09	1.10	1.13	1.06	1.01	0.94	0.84
CARAGA	0.77	0.78	0.65	0.56	0.50	0.41	0.34	0.32	0.37	0.41	0.35
ARMM	0.79	0.80	0.78	0.79	0.79	0.77	0.77	0.76	0.75	0.74	0.73

Source: Philippine Statistics Authority (<http://countrystat.psa.gov.ph>)

During the same period, coffee production in the Philippines significantly decreased from 97,876 metric tons in 2007 to 62,077 metric tons in 2017 (see figure below). For Mindanao, the data showed a significant decrease from 73,173 metric tons in 2007 to 50,948 metric tons in 2017. The area planted to coffee also decreased during the same period from 123,974 hectares in 2007 to 112,843 hectares in 2017 for the Philippines, and from 83,057 hectares in 2007 to 73,617 hectares in 2017 for Mindanao. In terms of yield, data showed a decrease of 0.24 metric ton per hectare for the Philippines, and 0.22 metric ton per hectare for Mindanao from 2007 to 2017.

The key factors affecting the performance of these industries include unfavorable weather conditions³, senile trees, low soil fertility, access to quality and affordable inputs (planting material, fertilizers, pesticides), limited control of pests and diseases, limited skills and technical know-how, etc. Some of these factors are being addressed at the national level by the Philippine government though investments identified in the coffee and cacao industry roadmaps for the period 2017-2022.

III. Purpose, Objectives and Expected Use of the Study

The independent final evaluation study aimed to take stock of the project's accomplishments, reflect on the causal pathway of the intervention, review the sustainability measures, as well as document the project design and implementation weaknesses, lessons learned and best practices. Specifically, the Evaluation Team was expected to:

- Document key lessons learned.

³ FAO expands El Niño response in Mindanao. Retrieved from <http://www.fao.org/philippines/news/detail/en/c/433730>

- Assess the extent of achievement of project objectives, the positive and negative changes, sustainability measures put in place and relevance of the project intervention.
- Review the project's effectiveness, efficiency and timeliness.
- Provide an independent eye to assess whether the assumptions of the Project-Results Framework still hold true.

In addition to the evaluation questions specified in the scope of work, the study assessed the following:

- **Relevance** - extent to which the project interventions met the needs of the project beneficiaries and aligned with the country intended and unintended impacts; identify attribution of the project's intervention's development goals, objectives, and strategies; extent to which the project was designed taking into account the economic, cultural and political context and existing relevant program activities.
- **Effectiveness** - extent to which the project has achieved its objectives. Effectiveness should also assess the extent to which the interventions contributed to the expected results or objectives.
- **Efficiency** - extent to which the project resources (inputs) have led to the achieved results; whether the same results could have been achieved with fewer resources or whether alternative approaches could have been adopted to achieve the same results.
- **Impact** - assessment of the medium and long-term effects (direct or indirect, positive or negative, intended and unintended) of a project intervention; extent to which the effects are due to the project intervention and not to other factors.
- **Sustainability** - assessment of the likelihood that the benefits of the project will endure over time after the completion of the project; extent to which the project has planned for the continuation of project activities, developed local ownership for the project, and developed sustainable partnerships.

Moreover, the study probed the project's underlying market systems development approach, including such system components as a) how the producers and the buyers interact in the value chain, b) formal and informal norms and practices affecting the system, and c) the indirect services that help make the market system work. Thus, the study also looked into the value chain actors and the system change evaluation elements, namely the system of interest (boundaries, relationships, perspectives), system change intervention (governance, theory of change, intended outcomes), and the system change evaluation (stakeholders, purposes, methods).

The expected uses of the study include the following: a) take stock of project achievements and reflect on the development objective/causal pathway that guided the design and implementation of project interventions; b) review the sustainability measures to ensure that accrued benefits will continue after the project; c) document the design and implementation weaknesses, lessons learned and best practices to benefit future interventions, and d) integrate lessons gained from the project in designing related interventions.

IV. Study Methodology, Survey Sampling and Data Collection Techniques

The Evaluation Team used the difference-in-differences (DiD) method to compare the outcomes or impacts for the treatment and control groups with the baseline and endline as time periods as described in the Inception Report. The treatment group was the project beneficiaries, while the control group was not a project beneficiary, detail of selection process and group make-up appears in the subsequent paragraphs. Through the DiD method, the Evaluation Team undertook an endline study, and then compared and measured the differences of the endline and baseline study findings of the treatment and control group.

The selection of respondents was done using the multi-stage sampling design based on geographical location, type of commodity and gender. The endline sample size was based on the population of 15,396 beneficiaries reached by MinPACT. Using the same sample size determination calculation in the baseline survey, a total of 995 were targeted for the interview. The parameters used in the sample size calculation were 95% confidence interval, 0.5 population proportions, and 3% accuracy level. The total sample size of 995 was divided into two: 332 individuals from the control group, and 663 individuals from the treatment group.

The 995-sample size was distributed proportionally to the sample provinces of the final evaluation survey. The sample for the control group was taken from the Registry System of Basic Sector in Agriculture (RSBSA) in the sample provinces. Propensity score was used to match the control and treatment group based on individual characteristics.

The study targeted 24 producer organizations (POs) or co-operatives directly assisted by MinPACT. The treatment sample size was proportionally distributed by co-operatives and by commodity based on the number of beneficiaries.

In addition to the household/ farmer-level survey, 80 value chain actors across the study sites were surveyed to assess the influence of MinPACT had on other stakeholders.

Qualitative evaluation methodology was designed to complement the quantitative survey results. Primarily, the qualitative piece of the whole evaluation exercise was intended to generate qualitative data focusing on the impacts and outcomes and/or learning questions. These data included the perceptions and opinions of critical project stakeholders.

The qualitative data were collected using Key Informant Interviews (KII) and Focus Group Discussions (FGDs). A total of 64 key informants representing partner government agencies, Fixed Obligation Grants (FOGs), local government units (LGUs), producer organizations and selected value chain actors from the private sector were targeted for the interview. On the part of the MinPACT Project Team, eight key staff served as key informants. The targeted participants to the FGDs were representatives of 20 producer organizations, two sector groups (nursery operators and input suppliers), and seven youth groups.

Some target respondents (from the baseline), however, were replaced for certain reasons such as non-existence (deceased, migrated, closed operations), declined to participate since not catering to 3Cs (e.g. Trader/Processor), and need to gather information related to interventions in Control Areas to help explain their movements.

V. Survey Team Management and Operations

Survey team management and operations followed the same track as discussed in the Inception Report and as detailed in the Deployment Plan. A team of enumerators were deployed per site; pro-rated based on target and difficulty of access. Simultaneous deployment was done with the aim of reaching the targets in approximately 10-15 days. However, the timetable for data-gathering was extended due to additional procedures (10% pre-test across sites), peace and order situation, weather conditions, availability of target respondents, and logistics.

VI. Data Analysis, Management and Presentation

The study used the market systems as the overarching framework to appreciate, interpret and analyze the DiD findings. The statistical analyses were complemented and triangulated with qualitative data mainly through review of related literature, focused group discussions and interviews. The quantitative data gathered comprehensive information from the respondents, while the qualitative data generated opinions and perceptions.

The quantitative and qualitative instruments were pilot-tested as part of the training of the enumerators and the field team supervisors. Quantitative data collection and management included the use of Magpi (<http://home.Magpi.com>), a mobile data collection platform. This required the provision of tablets to the enumerators and the uploading of data online. The *Magpi* platform also helped in data storage, monitoring, and basic presentation.

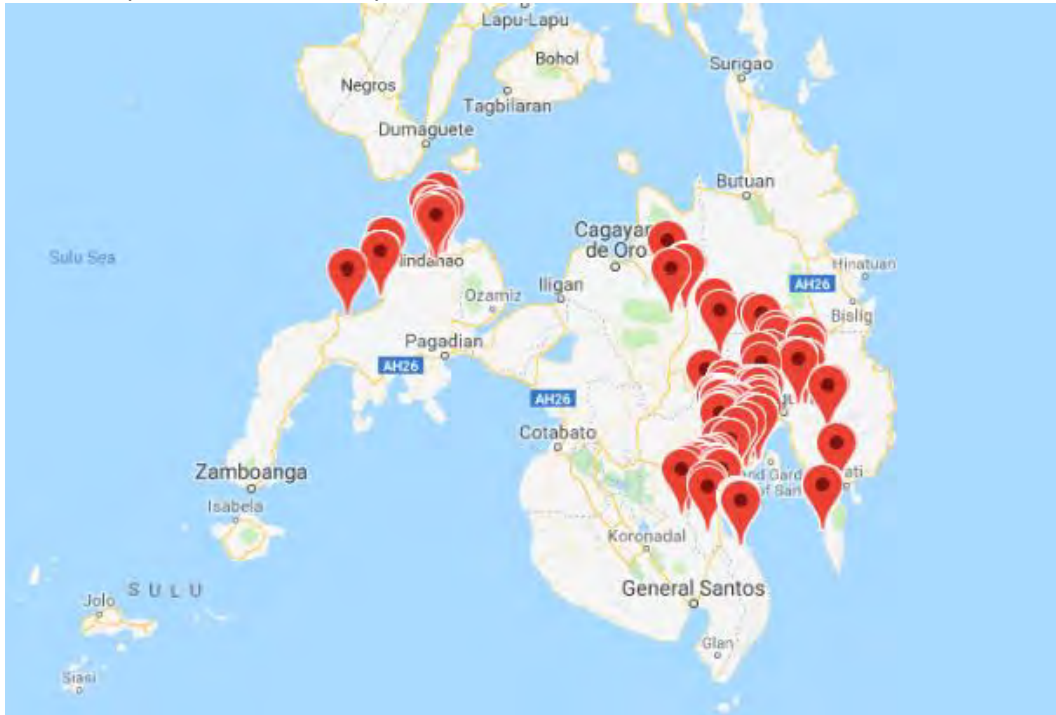
All data generated from the FGDs and KIIs were audio recorded and transcribed. Data checks were done to ensure that the FGD and KII transcripts are verbatim. The electronic version was checked against the written documentation to prevent errors and gaps in the data entry. Themes were then developed and used to triangulate the quantitative data.

VII. GIS Data and Reporting

Data generated from the Household and VCA surveys were automatically reported/uploaded in the Magpi platform. The GIS maps and the corresponding web links included in this section show the real-time and actual location of respondents across the study sites.

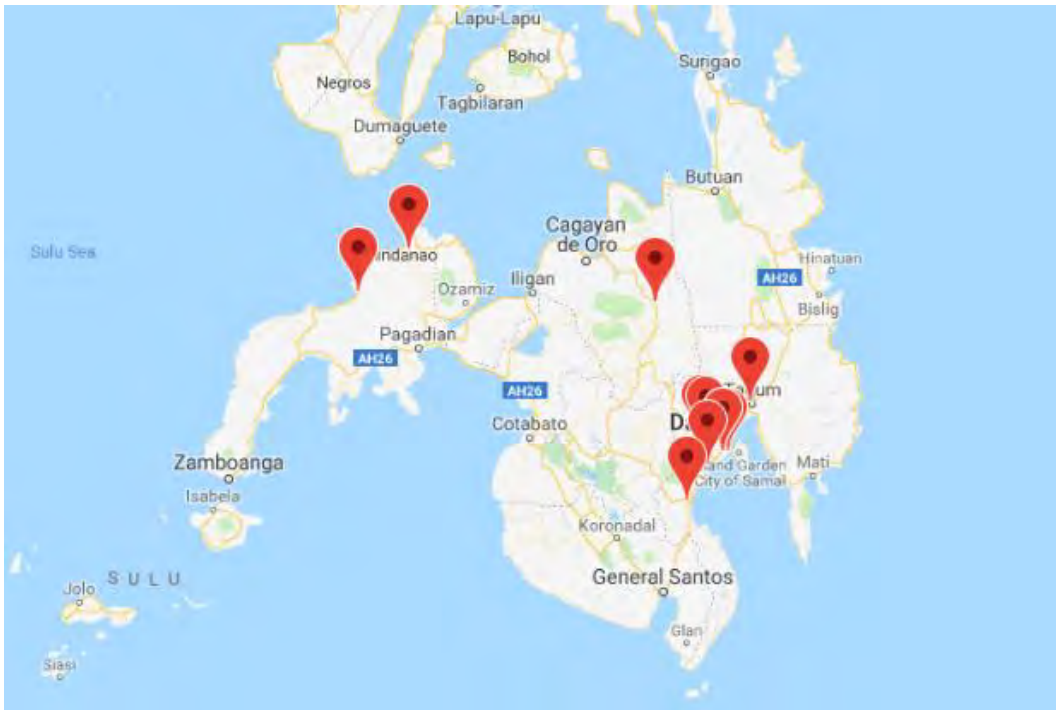
Household Survey

Figure 4: GIS Map – Household Survey



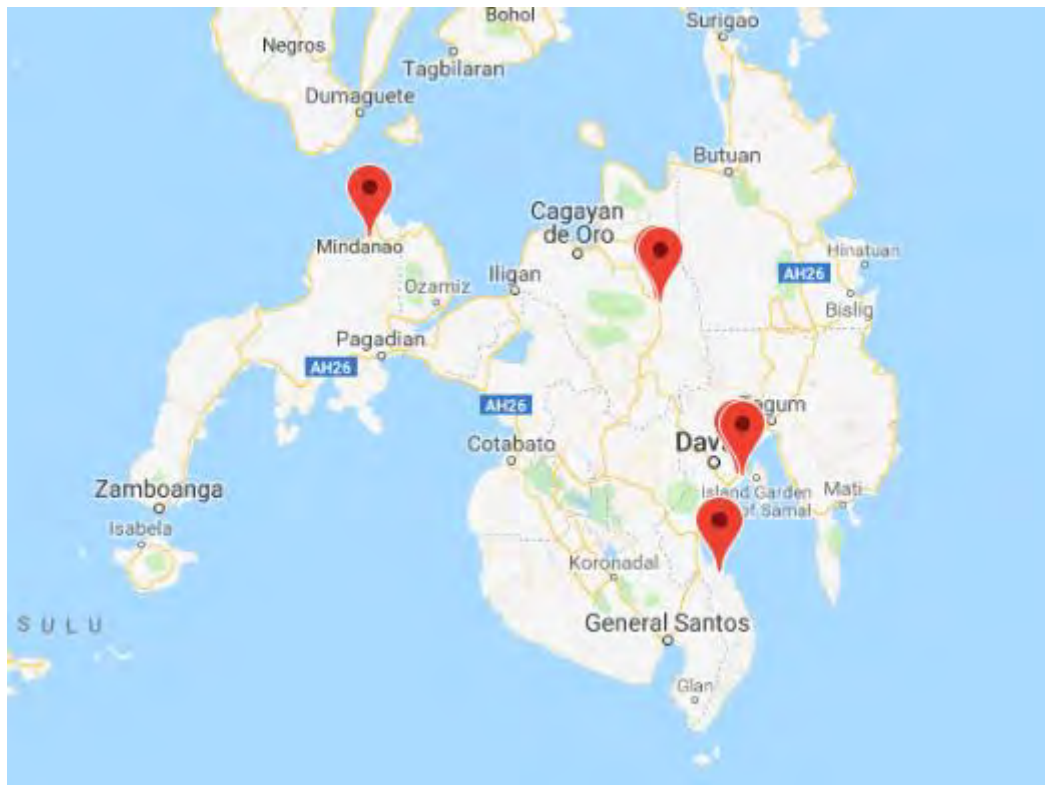
VCA Survey: Micro-Finance Institutions

Figure 5: GIS Map – VCA Survey (MFI)



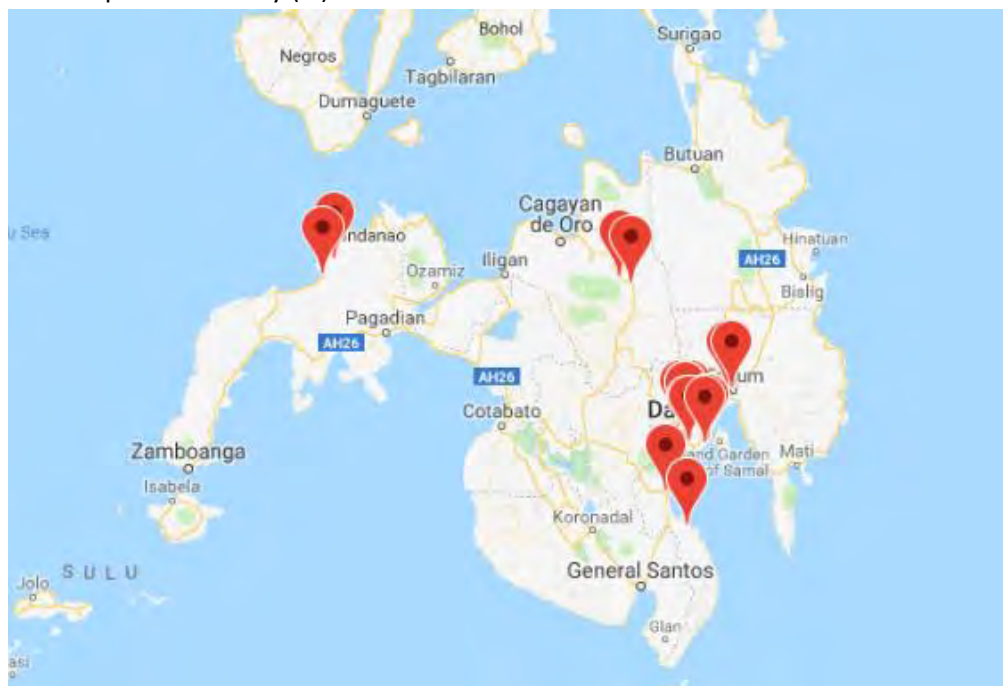
VCA Survey: Business Development Service Providers

Figure 6: GIS Map – VCA Survey (BDS)



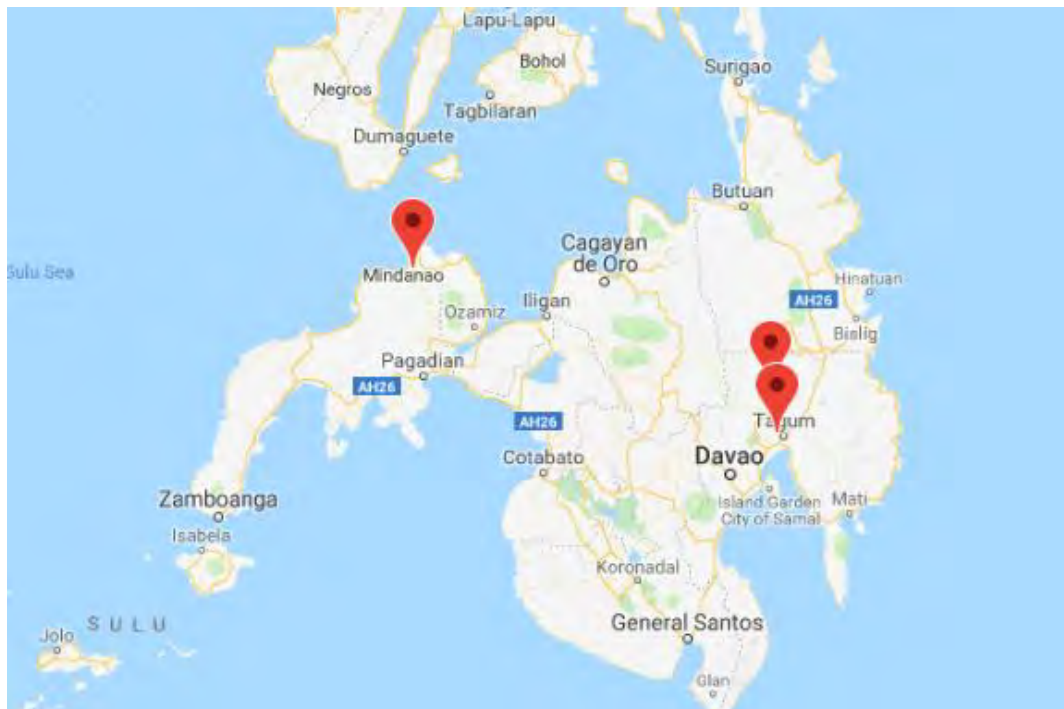
VCA Survey: Input Suppliers

Figure 7: GIS Map – VCA Survey (IS)



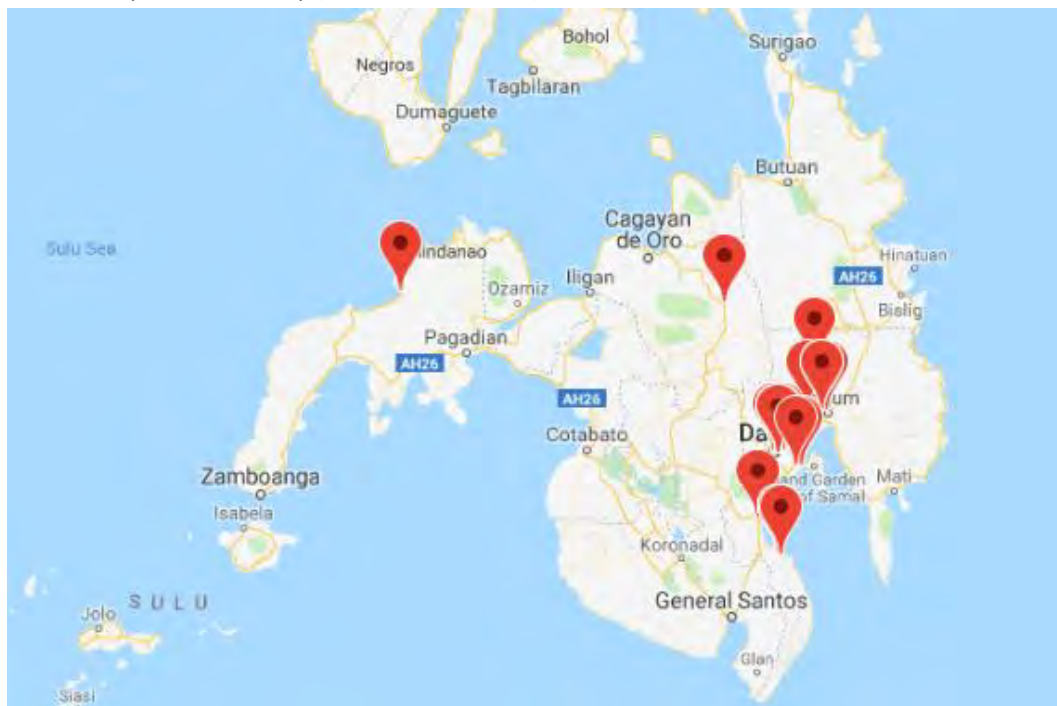
VCA Survey: Nursery Operators

Figure 8: GIS Map – VCA Survey (Nursery Operators)



VCA Survey: Processors

Figure 9: GIS Map – VCA Survey (Trader/Processor)



VIII. Results and Discussion

This section contains the findings from the field with details provided in the Appendices. These are anchored on MinPACT's key performance indicators as outlined in the Project's Results Framework and Performance Monitoring Plan (PMP).

Mainly, the data and discussions in this section are clustered into three aspects, to wit:

- Strategic Objective (SO) 1 – Improving Agricultural Productivity.
- Strategic Objective (SO) 2 – Expanding Trade including observations on market systems development.
- Other thematic results and overall assessment based on the evaluation parameters (relevance, effectiveness, efficiency, impact and sustainability).

A. Strategic Objective 1

Data pertinent to indicators under SO 1 were largely generated from the Household Survey that covered 995 farmers. The profile of the respondents shows that there is equitable distribution of males and females between the treatment and control groups and that the average years of education of the respondents from the treatment group is 9 years and 8 years in the control group. Majority of the respondents both from the control and treatment groups are married and the average family size both in the control and the treatment group is 4. (See [Appendix A](#) for details).

A.1 Impact Estimates – Income and Production

The impact estimation used the difference-in-differences (DiD) approach. DiD estimates are based on the difference in the changes in the outcome between treatment and control (untreated) groups overtime. It removes any differences in the indicator between groups that are present at the baseline and also removes the effects of general trends affecting both treatment and control observations. Data from the baseline survey and final evaluation survey were utilized for the analysis.

DiD provides unbiased estimates of program impact if the “parallel trends” assumption holds, that the outcome variable follows the same trajectory overtime in both groups without the MinPACT interventions. Unfortunately, this assumption cannot be tested (Ryan et al. 2015)⁴, however, this assumption is more likely to hold if a matching method, such as propensity score matching has been used to control for the observable causes of differences in trajectory.

⁴ Ryan, A. M., J. F. Burgess, Jr., and J. B. Dimick. 2015. Why We Should Not Be Indifferent to Specification Choices for Difference-in-Differences. *Health Services Research*. 50 (4). pp. 1211–1235. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4545355/pdf/hesr0050-1211.pdf>.

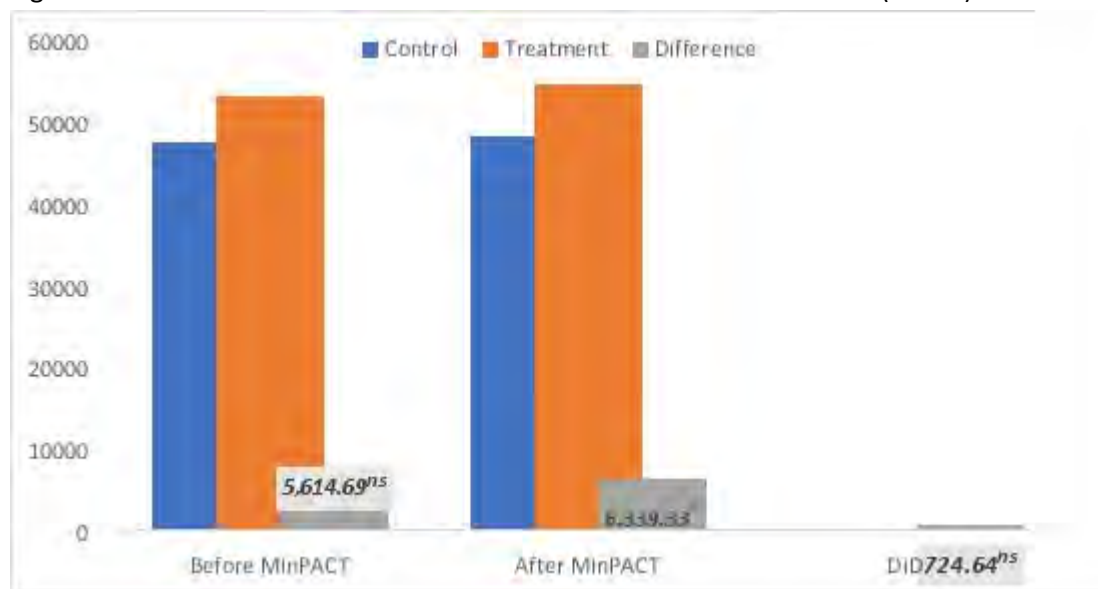
Prior to DiD estimation propensity score matching is conducted. The propensity scores generated is used to match the control and treatment observations. Those observation within the common support (control observation with score lower than the lowest observed value of the treatment are unused, while observations in the treatment group with score higher than the highest value in the control are also dropped) were utilized for the DiD estimation of the MinPACT outcomes.

Five (5) outcomes of interest of the MinPACT project were subjected to the difference-in-difference analysis, to wit: 1) Household income - farm income and total income (including non-farm income); and 2) Production per hectare per commodity – 3Cs (cacao, coconut and coffee). The results of the DiD estimation on these five outcomes are presented below with details on the 3Cs yield in [Appendix B](#).

Farm Income

Result of the DiD estimation on farm income as the outcome variable shows that there is a small increase in farm income, however, it is not statistically significant (Figure 10). Result of the pooled regression adjusted for heteroscedasticity shows that older and more educated farmers have higher farm income. Results suggest that there is no significant difference in income among men and women, family with different sizes and among farmers with different marital status. Also, there is no significant difference in farm income across farmers cultivating the 3Cs. The F-Statistic shows that the model is highly significant (Table 1).

Figure 10. Difference-in-differences estimate of the annual farm income (in PhP) of farmers



Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

Table 1. Estimated parameters of the farm income regression model

Variables	Estimated Coefficient	Robust Std. Error	P-Value
Time	-4125.2 ^{ns}	6452.1	0.5230
Treatment	5228.0 ^{ns}	6037.3	0.3870
DiD	2749.4 ^{ns}	6989.0	0.6940
Sex	-595.5 ^{ns}	3052.6	0.8450
Age	474.2 ^{***}	109.3	0.0000
Marital Status	3933.5 ^{ns}	3689.9	0.2870
Education (in Years)	2418.9 ^{***}	469.9	0.0000
Household Size	906.7 ^{ns}	809.3	0.2630
Cacao	2049.1 ^{ns}	9024.7	0.8200
Coconut	-4489.6 ^{ns}	8039.8	0.5770
Coffee	-4603.9 ^{ns}	5876.7	0.4330
Intercropping	-3337.2 ^{ns}	9634.8	0.7290
Constant	3912.2 ^{ns}	19870.8	0.8440
R-squared	0.0300	F(11,1673) Prob> F	4.6900 0.0000

Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

The general increase in on-farm income of small farmers in both treatment and control sites is due to various interventions that boost agricultural production and trade in accordance with national thrusts and priorities, particularly those that promote food security, livelihood, watershed rehabilitation, and micro-entrepreneurial capacity. These are embodied in statutory instruments like the Agency Strategic Roadmaps (e.g. DA, PCA and DTI), the Philippine Cacao Challenge, and the Philippine Development Plan (PDP) 2016-2022, among others, which call for government budgetary allocation and investments from external sources. MinPACT contributed to the development of the 3Cs roadmaps and complemented the implementation of these. Specifically, MinPACT provided agricultural inputs to producers, as well as funded numerous capacity-building activities that paved the way to the sector's entry to the world market. In parallel, MinPACT facilitated linkages for agricultural lending and marketing. All these contributed to increases in farm income.

According to government sources, there have been massive investments in the 3Cs sector in the last three years from production to marketing. On the production side, three (3) of the biggest government programs providing investments in the 3Cs sector are the High-Value Commercial Crop Program (HVCCP) and the Philippine Rural Development Program (PRDP) of the DA, the Participatory Coconut Re-Planting Program (PCRP) of PCA, and DENR's Watershed Rehabilitation Program (including reforestation in IP ancestral domains and forest buffer zones where coffee production is highly viable). On the market side, the DPWH and DTI jointly build farm-to-market roads, while the DA and DTI provide trainings on post-harvest handling, processing, and organizing of trade events. All these benefit farmers in both the treatment and control areas, providing explanation to the general movement in the 3Cs sector.

Farmers reached by MinPACT generally had greater income from farm production because they received agricultural inputs and accessed farm support on top of provisions from the government. They also participated in trade events where their products reached the world market, though not yet on large scale.

A classic example on how MinPACT contributed to increased farm income are stories of MinPACT model farmers who adopted intercropping of cacao in areas with existing coconut trees (e.g. FEDCO, NICO, BCS), and thus received cacao seedlings from MinPACT and DA, and sourced fertilizers through in-kind loan from the co-ops where they belong. While there was no immediate income from newly-planted cacao trees, the fertilization of the soil caused increases in the yield of coconut and other crops in the area (banana, vegetables). The greater number of whole nuts plus thicker coconut meat resulted in more kilos of copra sold to the market. Thus, a MinPACT model farmer that received seedlings, trainings, and were facilitated access to fertilizer and other inputs and opted to apply the technology advocated by the project, harvested greater yield that resulted in more farm income.

Among the beneficiaries with existing coffee and cacao trees (before MinPACT), the increase in income of farmers reached by MinPACT was highly attributed to improved farm practices, particularly pruning, sleeving (cacao), “pick-ripe-only” (coffee), fermentation and drying. These resulted in cacao and coffee beans with better quality and higher grade, which commanded higher market prices. For example, in the case of BACOFA and MILALITTRA which traditionally produced Arabica, before MinPACT where green coffee beans (GCB) had parchment, the price was P80-100 per kilo; after MinPACT, without parchment, GCB now sells at P300-400 per kilo. Meaning, even with relatively the same volume produced by existing coffee trees, the improved quality of the GCB leads to greater income by virtue of the price difference.

On the supply side, farmers with existing 3Cs that passed as source materials for seedling production also generated additional income as a result of increased demand from 3Cs nurseries. These are farmers with trees that passed BPI and PCA inspection as mother palms (coconut) and scion grove for grafting (cacao), and high-quality wild lings (coffee).

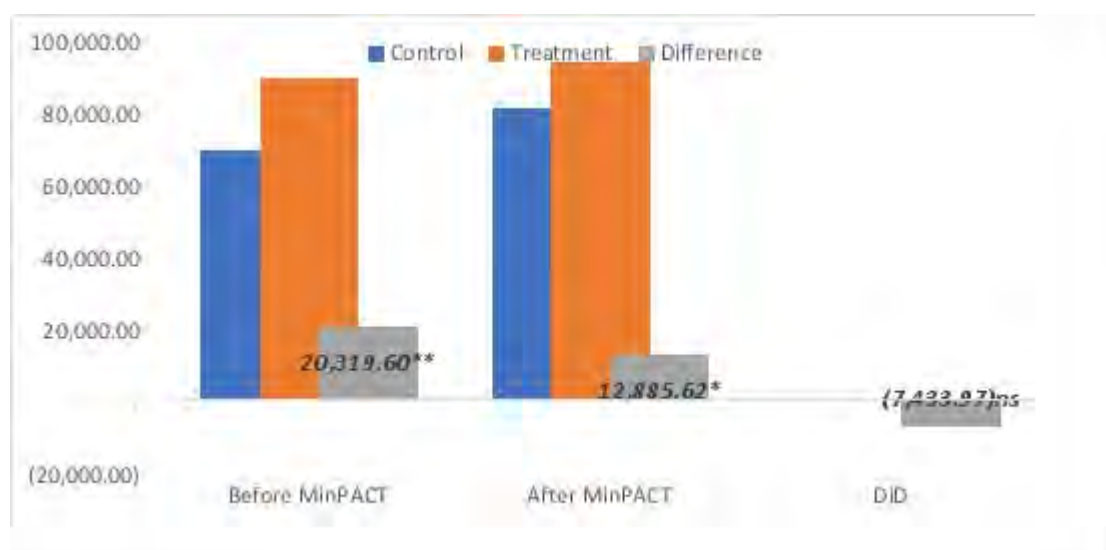
Another factor that contributed to increased farm income among MinPACT beneficiaries are cost-savings from production to marketing as gathered from FGDs. For example, a farmer can avail of technical services for free from co-op technicians trained by MinPACT instead of paying for such services from private providers. Also, with knowledge gained on good agricultural practices (GAP), they use organic wastes (composting) as fertilizers instead of buying for such inputs all the time. (*Refer to costs of production in the survey results for estimates of cost-savings*).

Better farm-to-market roads paved by the government and private corporations (e.g. plantations in Bukidnon) also contributed in less wastage in transporting raw farm products to buyers or processing sites. Before, due to rough and muddy roads during rainy season that limit transportation, there were cases of dried coffee/cacao beans getting molds due to moisture that reduced quality and marketability of the products. Farmers, particularly those without storage facility, shared that better roads enabled them to bring their products to buyers at less transportation cost, or buyers go to the sites more often to purchase their products.

Total Income

In terms of total income, result shows that farmers in the MinPACT areas have significantly higher total income before and after the MinPACT project. The farmer beneficiaries of MinPACT have more access to non-farm income and activities like remittances, as daily/common laborer, and wholesale and retail trade (including market vending, sidewalk vending and peddling, small shop) compared to the non-MinPACT areas. However, the impact estimate (DiD) shows no significant difference in the differences of mean of total income.

Figure 11. Difference-in-differences estimate of the annual total income (in PhP) of farmers



Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

In terms of the subgroup impact, it shows that total income is not significantly different between male and female, age, marital status and the kind of 3Cs being cultivated in the farm. On the other hand, families with more educated family head and higher number of family members have significantly higher total income. (Table 2)

Table 2. Estimated parameters of the total income regression model

Variable	Estimated Coefficient	Robust Std. Error	P-Value
Time	-1191.2 ^{ns}	8888.9	0.8930
Treatment	21268.7***	8036.7	0.0080
DiD	-3970.2 ^{ns}	10774.3	0.7130
Sex	-2938.7 ^{ns}	5693.0	0.6060
Age	341.9 ^{ns}	198.2	0.0850
Marital Status	10496.9 ^{ns}	6546.9	0.1090
Education (in Years)	7903.3***	1054.7	0.0000
Household Size	5985.9***	1332.7	0.0000
Cacao	14984.6 ^{ns}	15637.4	0.3380

Coconut	-2917.0 ^{ns}	13534.0	0.8290
Coffee	-17801.2 ^{ns}	12248.3	0.1460
Intercropping	-6516.6 ^{ns}	17609.9	0.7110
Constant	-37628.9 ^{ns}	34504.5	0.2760
R-squared	0.0836	F(11,1665)	7.6600
		Prob> F	0.0000

Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

Details of income and the socio-economic status and livelihood activities of the survey respondents and their families are contained in [Appendix C](#).

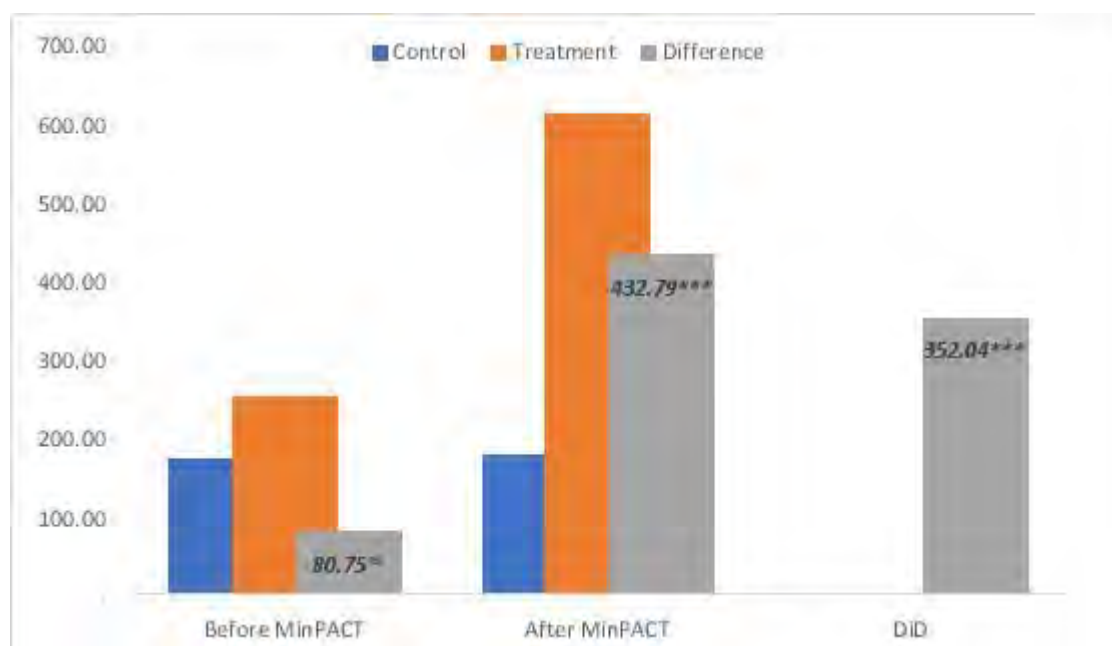
Families reached by MinPACT reported higher income from their involvement in the expanded production and marketing activities brought about by the Project. As told by FGD participants, in a typical farm household, everyone shares in the chores (*Filipino culture of "tulong-tulong"*). This happened all the more with greater work due to intercropping and crop diversification where division of labor in the family became necessary, i.e., women and children had to take part in planting, pruning, sleeving, harvesting, processing (e.g. tablea-making) and selling of farm products to local buyers. Children get paid when they prune and sleeve another farmers' lot, usually on weekends only for a few hours when there are no classes in school. In Philippine culture, children normally help-out in non-intensive farming activities as part of family livelihood/ enterprise. Some adult out-of-school youth also got opportunity to earn from farm and nursery operations based on prevailing wage rates in the locality.

Whether amongst MinPACT beneficiaries or not, the increased production of 3Cs had a ripple effect in the local economy. As an example, a youth participant from Nabunturan Integrated Cooperative (NICO), whose family had limited resources to earn a living, was able to take advantage of the proliferation of buyers of milled cacao (cocoa) in the local market. From initially trading dried beans to selling milled cacao/ cocoa, they were able to earn a net increase in income of P35/kg.

Production per hectare: cacao yield

The yield of cacao was converted to dried beans (kg/hectare/year). The Difference in difference estimator is significant at 1% with the treatment having a positive effect. Result suggests that there is a significant increase in the mean differences of yield between the MinPACT beneficiaries and non-beneficiaries before and after the project. This implies that the MinPACT project created a positive impact in the cacao sector.

Figure 12. Difference-in-differences estimate of the Cacao yield (in kg) per hectare per year



Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

The increased yield in cacao mostly came from those planted before MinPACT and those rehabilitated since the cacao trees planted under MinPACT are not yet bearing fruits (1-2 years of age; cacao peaks at 3-5 years). The farmers attribute the increase to proper farm management (pruning, sleeving, grafting). As one farmer related, before MinPACT his cacao harvest for one cycle was at an average of 20 kg of dried beans. When he did regular pruning and applied fertilizers, the same are coverage and number of cacao trees produced 35 kg of dried beans, or an increase of 15 kg in one cycle.

With the 50 seedlings per farmer planted under MinPACT, even mortality of around 5%, there is an expected significant rise in cacao yield in the next 2-3 years (2020-2022).

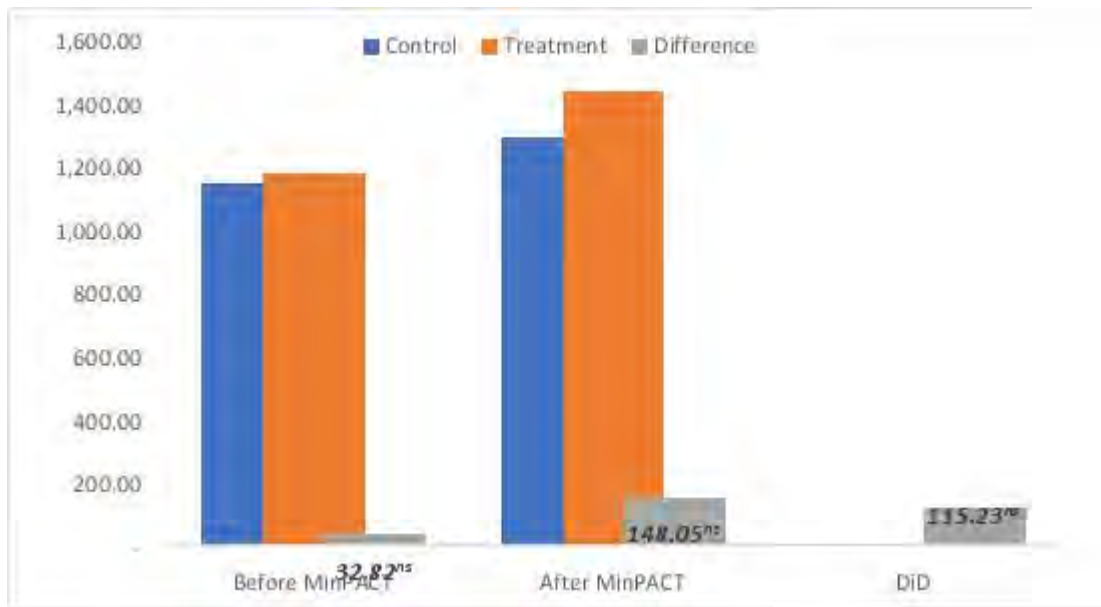
Production per hectare: coconut yield

In terms of coconut production, the DiD estimator shows positive effect, but it is not statistically significant. The MinPACT project was able to increase the production of coconut, but not sufficient to be statistically significant. Generally, coconut farmers do not practice fertilization because it is an added cost, unless they are provided for free by the government and other actors, or part of a contract-growing arrangement with processors like Franklin Baker. Farmers appreciate fertilization and the increased yield as a result but for coconut producers without disposable income, they apply only limited amounts or just once a year. Most of the time, they count on government subsidies or inputs from partner traders/processors.

On a whole, the coconut industry experienced a downfall in overall yield due to climate conditions, i.e., El Nino or drought in 2015/ 2016 the effect of which was felt in 2017.

Further, according to PCA, cutting of senile trees for the conversion of lands into residential and commercial purposes comes as a major factor in decreasing production over time. While there are efforts at re-planting, depending on the variety it typically takes 6-10 years before new trees become productive.

Figure 13. Difference-in-differences estimate of the Coconut yield (in kg) per hectare per year

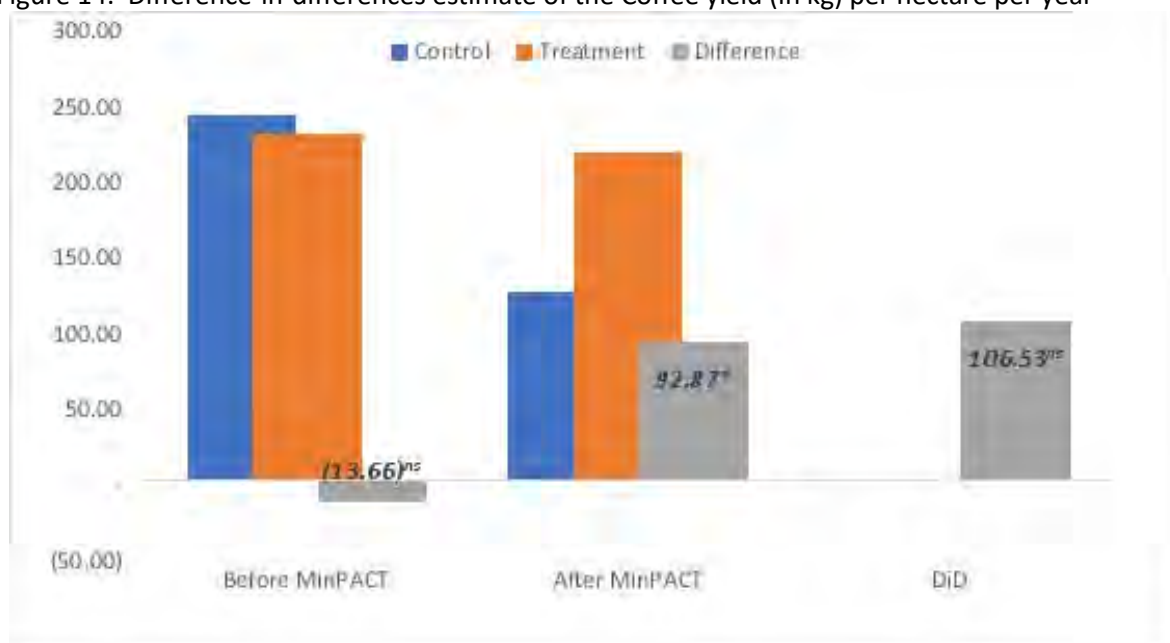


Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

Production per hectare: coffee yield

The difference-in-differences estimate shows positive effect in the yield of coffee (Figure 14) but not sufficient to be statistically significant. It was observed that there is a decline in the productivity of coffee in both groups. The difference-in-differences estimate shows no significant difference in the yield of coffee before and after the project.

Figure 14. Difference-in-differences estimate of the Coffee yield (in kg) per hectare per year



Note: * significant at 10%, **significant at 5%, *** Significant at 1%, and^{ns} not significant

The yield from coffee also comes from existing trees before MinPACT. Areas covered by the project report more space planted but it will take 3-5 years before yields could be seen.

Just like the coconut industry, the coffee sector also suffered from the negative effects of changes in weather patterns. The drought in 2015/1016 caused pre-mature falling of leaves and cherries (“nalagas”).

In other areas like Inhandig in Bukidnon, while the quality of their coffee is of the highest grade, the community cannot significantly increase production apparently due to their lack of capacity to shoulder maintenance costs (e.g. labor for pruning and nursery operations). The tribal head said their income is just enough to cover food, education and basic needs; no disposable income for farm production. When asked about access to agricultural loans to beef up financial capacity, a representative of Inhandig said “taking a loan” is not a practice of the tribe; instead, they live within their means.

In the case of BACOFA, some coffee farmers accordingly did not easily adopt pruning. They refused to cut old coffee trees which they considered as “inheritance and must be kept intact”. Others, on the other hand, wanted to see benefits of new technologies first, or the attitude of “to see is to believe”.

A.2 Production per Commodity

The amount of crop yield and income is largely a function of the physical area planted and the number of trees therein. Over the duration of MinPACT, a significant increase in area planted happened by virtue of the seedlings provided (e.g. 50 seedlings of cacao per farmer) and other material inputs. Many of the farmers covered by MinPACT also availed of additional seedlings from government programs on top of their own

purchases or arrangements made with co-ops and traders/ processors. The graphs below show the averages in area planted, number of trees and type of produce per commodity. (See [Appendix D](#) for details).

Cacao Production

Figure 15: Average area planted (hectares) for cacao, by province after MinPACT project.

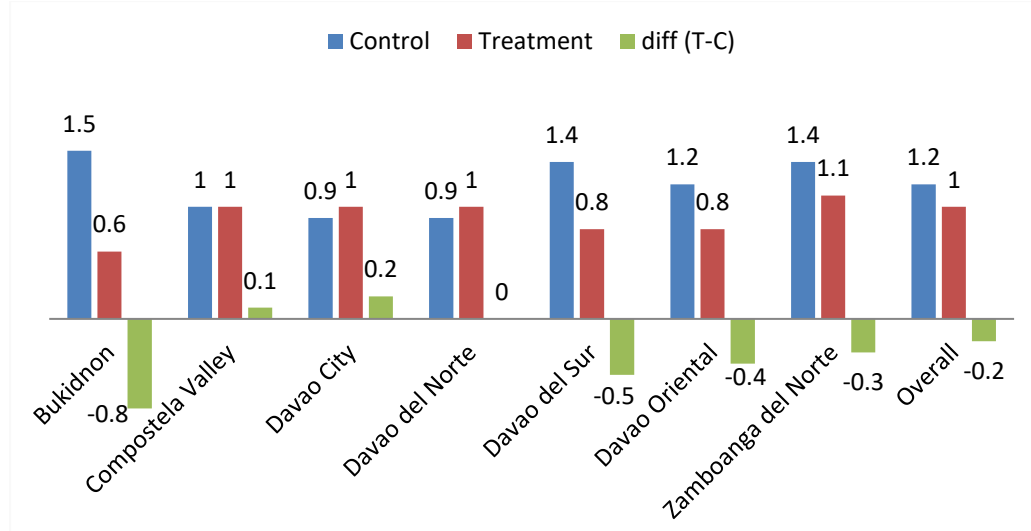


Figure 16: Average trees per hectare of Cacao, by province after MinPACT project.

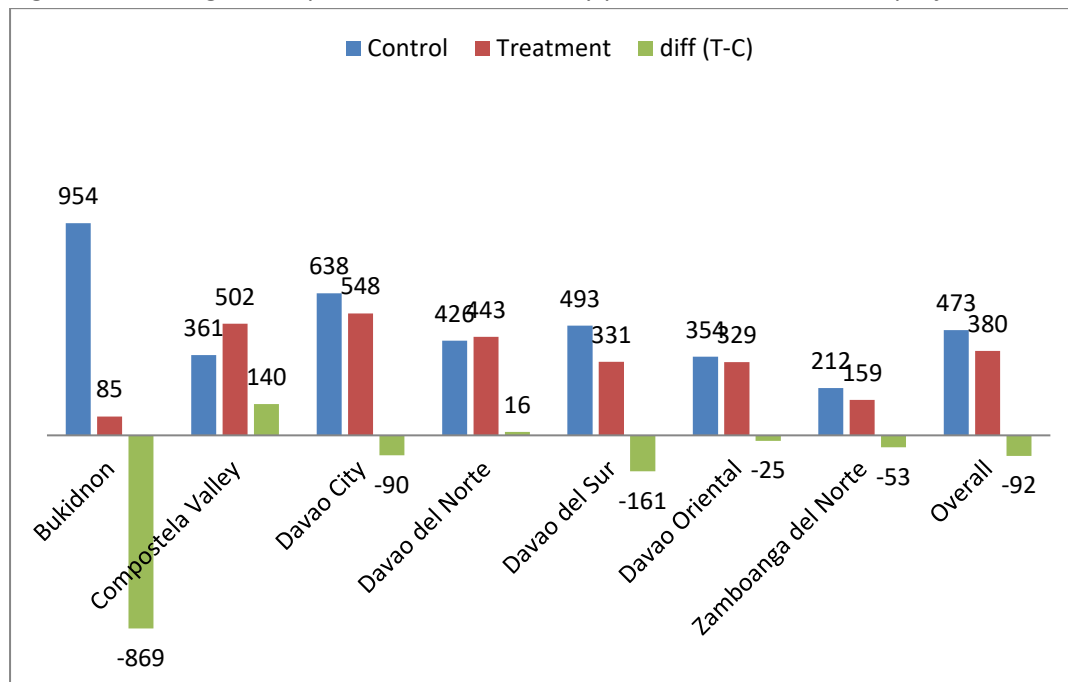
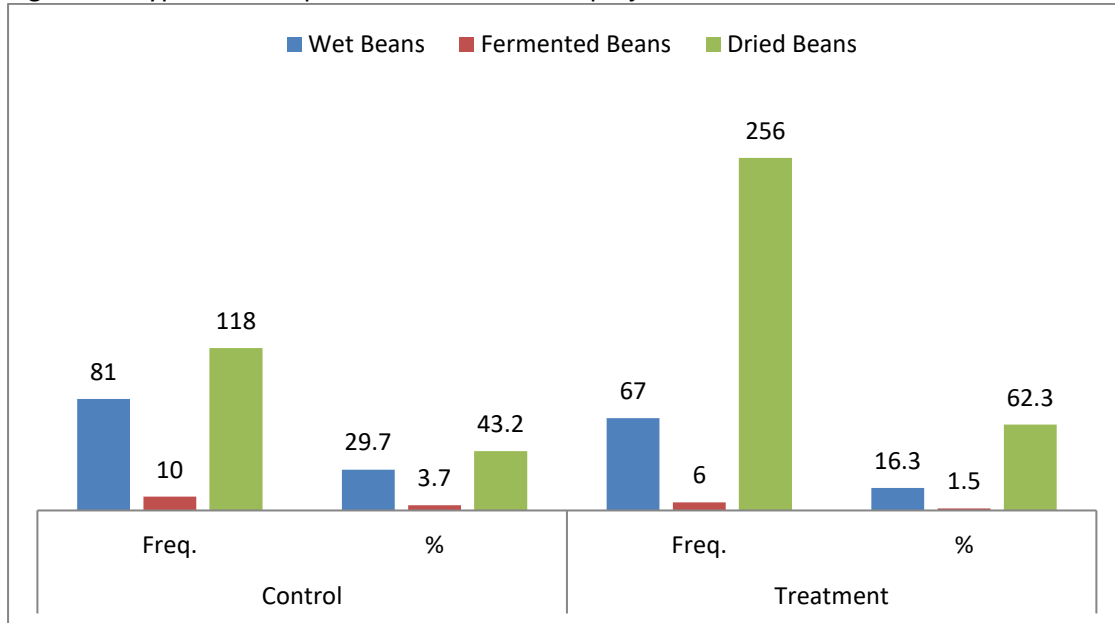


Figure 17: Type of cacao produce after MinPACT project.



Coconut Production

Figure 18: Average area planted (hectares) for coconut, by province after MinPACT project.

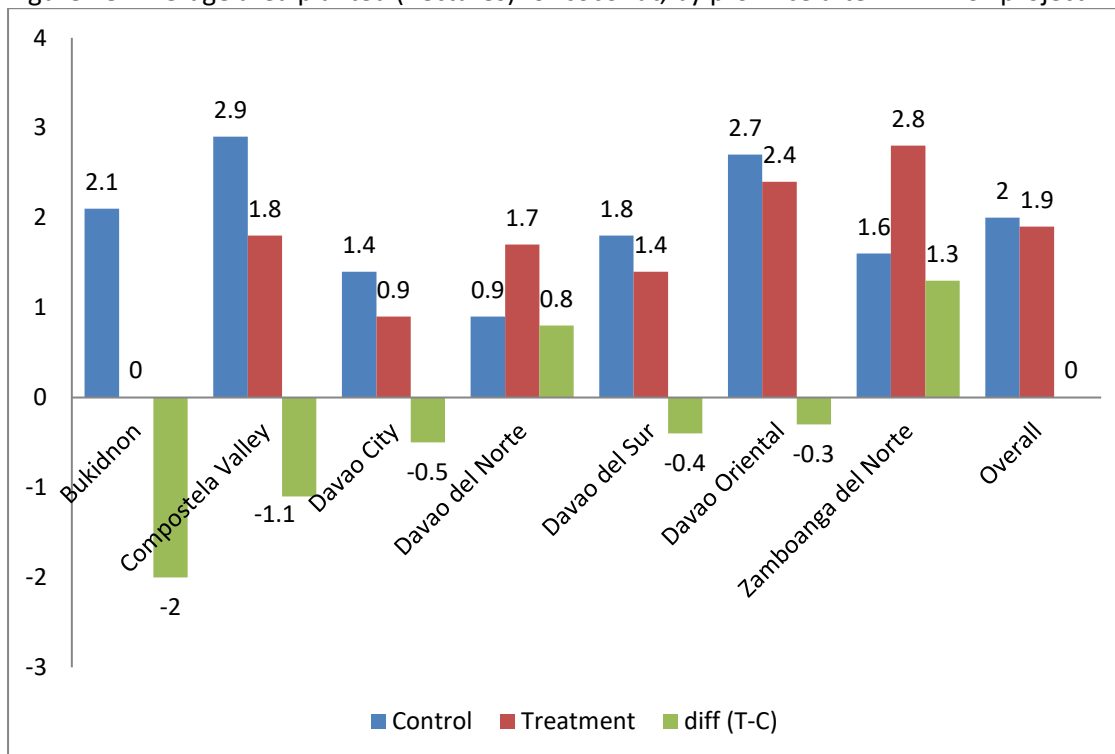


Figure 19: Average trees per hectare of coconut, by province after MinPACT project.

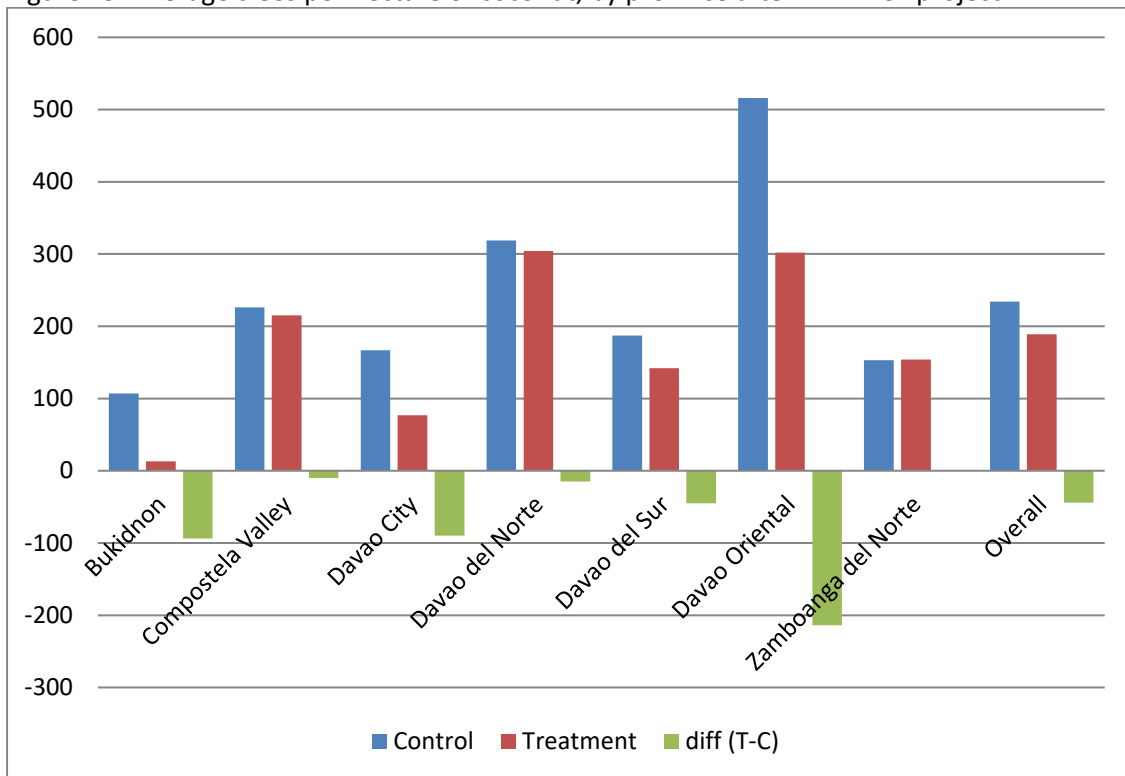
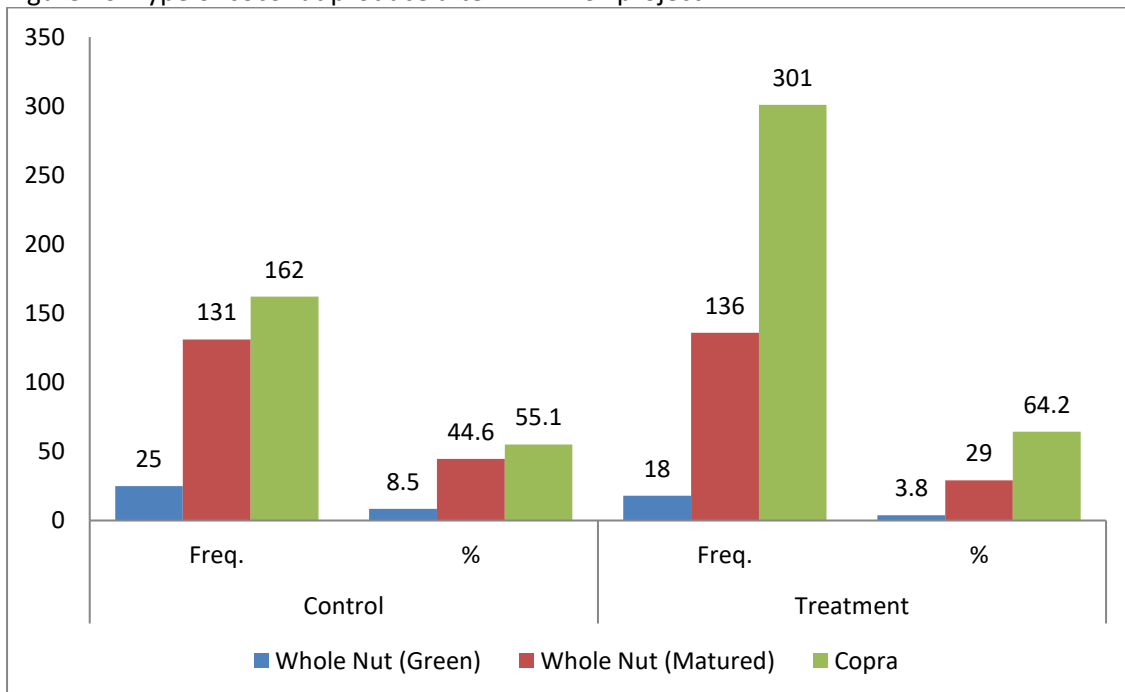


Figure 20: Type of coconut produce after MinPACT project.



Coffee Production

Figure 21: Average area planted (hectares) for coffee, by province after MinPACT project.

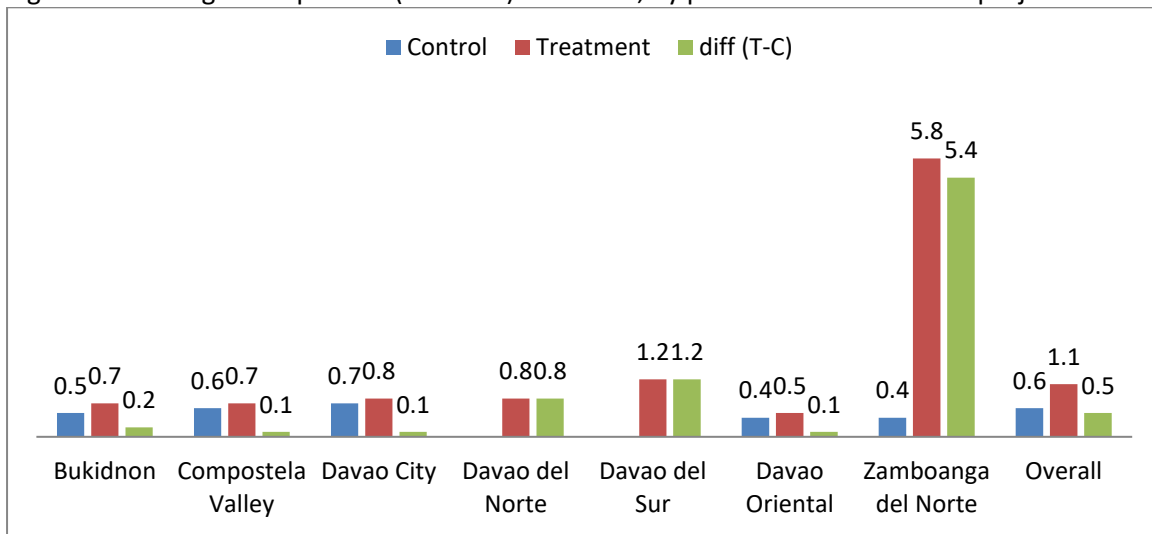


Figure 22: Average trees per hectare of coffee, by province after MinPACT project.

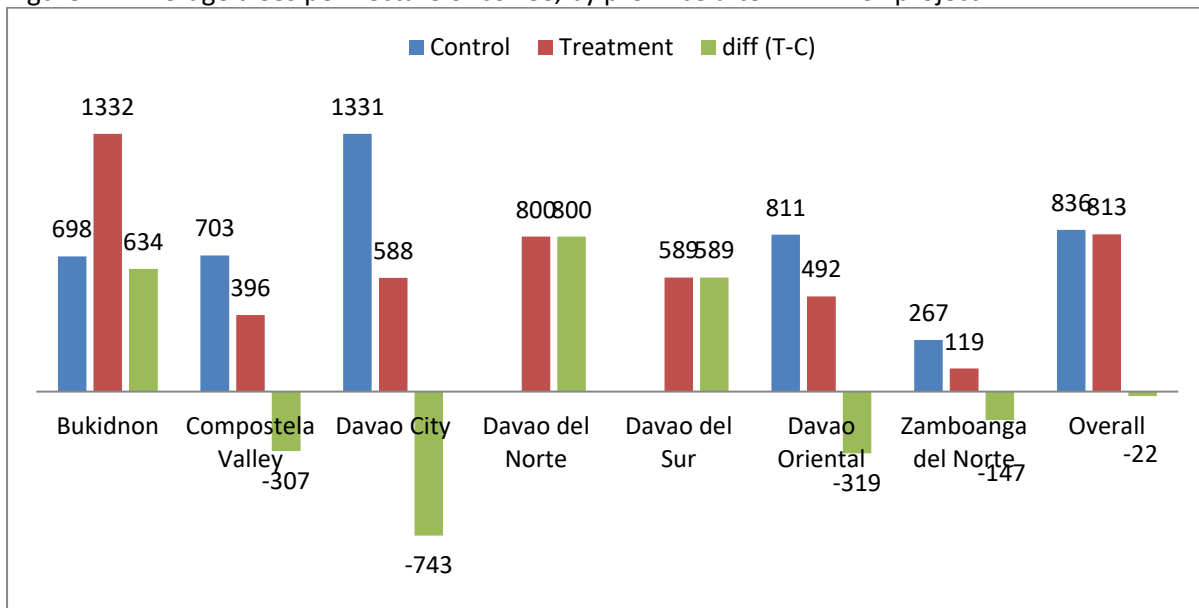
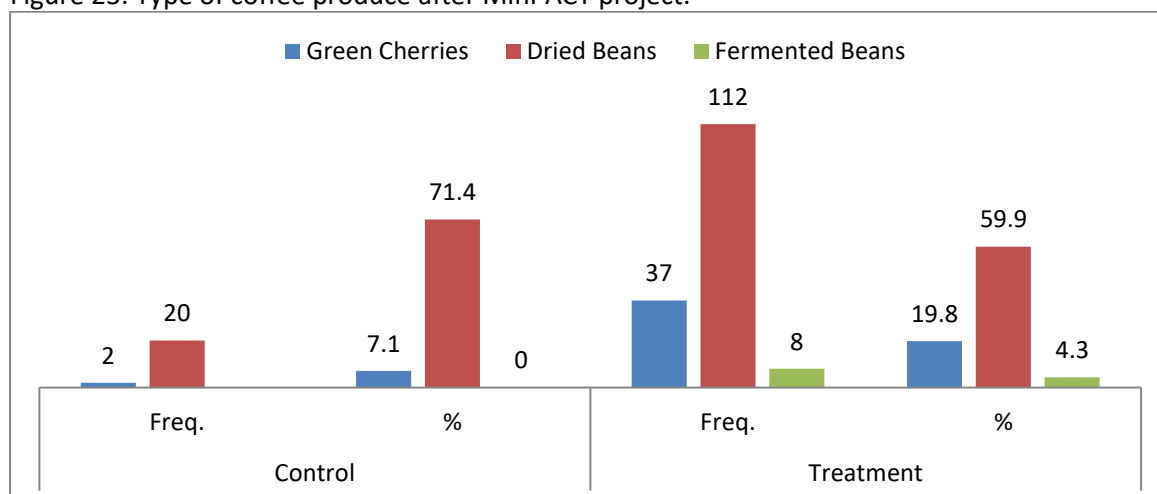


Figure 23: Type of coffee produce after MinPACT project.



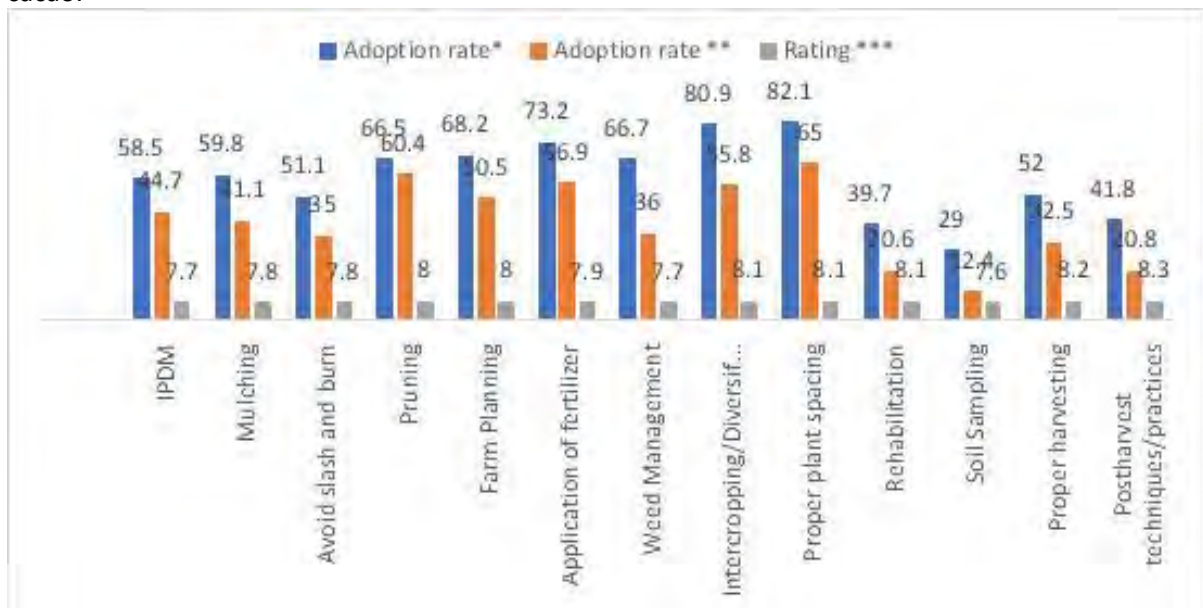
A.3 Technology Adoption

Technology adoption, or the learning and application of farm management and practices, is another crucial factor that determine the level of productivity both in terms of volume and quality. MinPACT provided various trainings and exposure trips to farmers to facilitate technology transfer and adoption of world-class standards.

This section presents the findings from the perspective of farmers surveyed. Generally, farmers who adopted the technologies introduced by MinPACT experienced more harvest than before. As earlier mentioned, for example, the intercropping of cacao with existing coconut trees increased the yield of the latter due to fertilization.

MinPACT areas optimized 3Cs production by way of intercropping, crop diversification, utilizing open spaces, applying soil fertilization, and post-harvest processing to a certain extent. Generally, even as MinPACT beneficiaries may have fewer hectares covered and number of trees per hectare, they produce more because of good farm practices, including fertilization. The succeeding graphs depict the adoption rates of farmers of farm technologies introduced by MinPACT. More findings are contained in [Appendix E](#).

Figure 24: Farmers technology adoption rate and rating of MinPACT introduced technologies for cacao.



* Adoption rate among cacao farmers who learned the technology

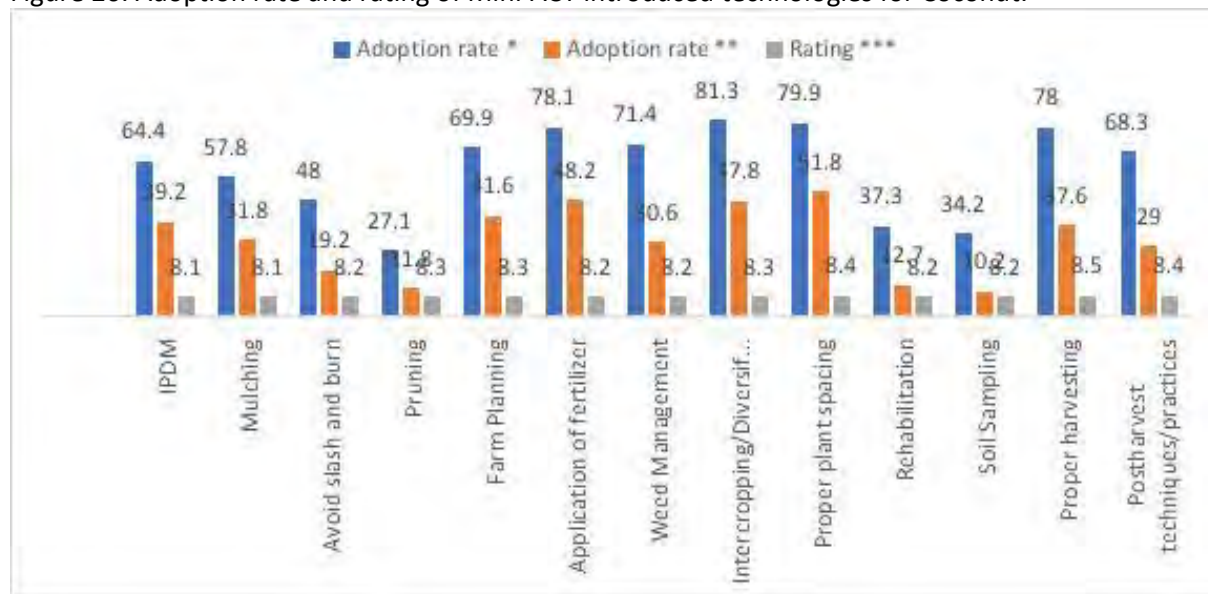
**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Figure 25: Percentage of respondents who applied the Cacao technologies and perceived changes in the farm



Figure 26: Adoption rate and rating of MinPACT introduced technologies for Coconut.



* Adoption rate among coconut farmers who learned the technology

**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Figure 27: Percentage of respondents who applied the Coconut technologies and perceived changes in the farm

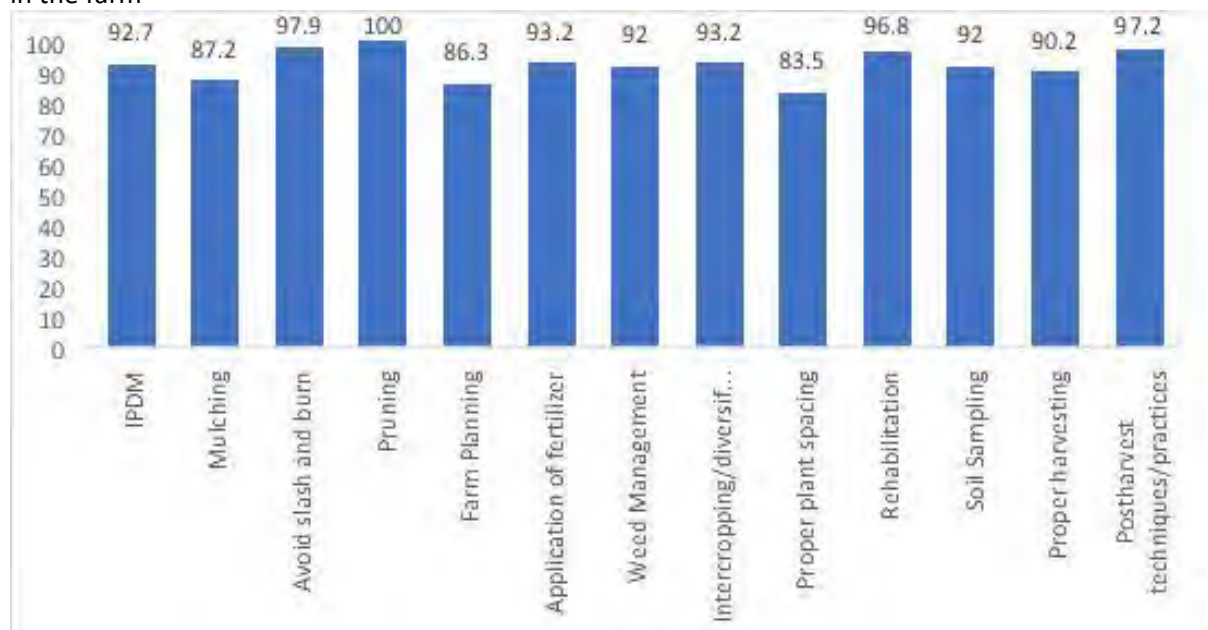
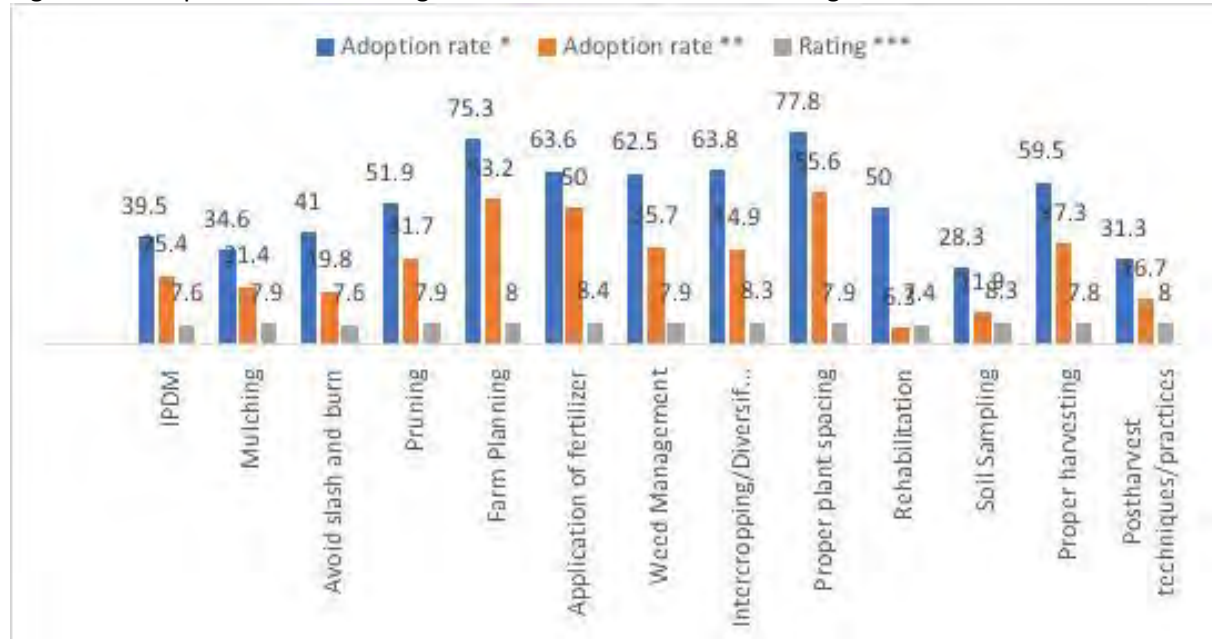


Figure 28: Adoption rate and rating of MinPACT introduced technologies for Coffee

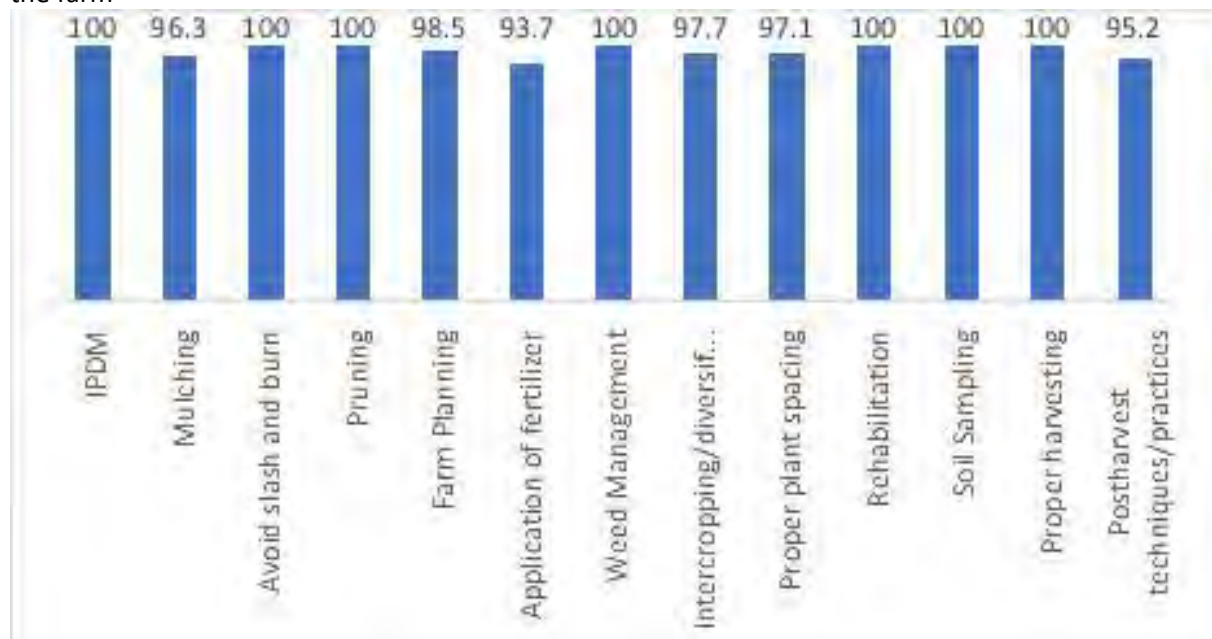


* Adoption rate among coffee farmers who learned the technology

**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Figure 29: Percentage of respondents who applied the Coffee technologies and perceived changes in the farm



Under MinPACT, adoption of farm technology happened at different levels. First, the TOT enabled farmer leaders and technicians to increase their knowledge and skills. Second, technicians employed by government agencies, cooperatives, or other private service providers and select farmer leaders trained other farmers. Then, trained farmers would impart to other members of the family and community.

According to key informants, some of those who participated in the TOT did not train others for lack of confidence on the technicalities of farming and non-provision of allowance. It may be noted that farmer leaders were expected to train others on voluntary basis. In the government, cooperatives, and private corporations, farm technicians have allowances.

Although the Household Survey revealed high adoption rate of technologies and farm practices introduced by MinPACT, farmers themselves and authorities say that there is a need for continuous training and education plus advocacy for GAP. Behaviors of farmers used to traditional farming methods cannot change overnight for certain reasons like the “plant-and-forget” attitude (no fertilization and sleeving), “inheritance value” of old coffee trees (no cutting/pruning), and overuse of inorganic fertilizers. Moreover, intercropping/ diversification with cacao does not easily get “buy-in” due to its long gestation period; farmers prefer cash crops that yield faster like banana and vegetables, especially those who have no other source of income.

In some areas, technology adoption was affected by the delivery of seedlings. The establishment of nurseries had to follow proper proposal, procurement, and construction processes which ranged from 5-10 months and once the nurseries were operational it took on average 9-months before seedlings can be released to farmers. In some cases, the receiving of seedlings was long after the production training was provided by MinPACT and so some farmers said they have forgotten the “how-to”.

Another story told was that a farmer trained on nursery operations failed to impart the proper application of fertilizers to a colleague which resulted in seedling mortality (Katipunan Co-op). In other areas, more women attended the trainings, and even with their efforts to share what they learned some technical knowledge was not transferred to the men who do much of the farm work.

More of the findings on the involvement of farmers and their general farm management and practices including access to post-harvest facilities (PHF) are contained in [Appendix F](#).

A.4 Credit and Financing

The cost of production and marketing of farm produce among smallholder 3C farmers is seen as a challenge especially because they do not have disposable income. Agricultural lending facilities offer solution but not many farmers resort to it. Under MinPACT, farmers that opted to expand their productive capacity through intercropping/ diversification required greater working capital to cover material inputs, labor cost and post-harvest processes.

Adoption of technology and certain management practices also is not without cost. For example, Inhandig has good quality Arabica coffee owing to its elevation (1,400 – 1,800 meters above sea level) and the varieties. For Inhandig to be able to meet the demand of the world market, it has to sustain the application of technology from seed to market over time. Unfortunately, the Tribe does not have the financial capacity to support growth of coffee production in the area. Similarly, in the case of MILALITTRA with a 200-hectare production area, processing needs to be on-site to retain a consistent high-grade quality GCB. As Hineleban puts it, it takes a lot of resources

(technology, human and financial capital included) to ensure consistency of volume and quality that would satisfy the demand for specialty coffee in the world market.

Similarly, with the increased farm activities, farmers resorted to borrowing to help finance farm operations as well as their day-to-day needs. While MinPACT assisted its beneficiaries to access agricultural loans from formal lending facilities (co-ops, banks and non-bank institutions), not many availed of such loans for many reasons like collaterals (LBP), IP values against borrowing (Inhandig Tribe), and dependency on government support (conditional cash transfer and other public welfare programs). As a measure to address collateral issues, the government has opened a new lending facility through the ACPC (Agricultural Credit Policy Council) which considers fruit trees as collateral.

Details on the cost of production and the sources of financing per crop are given in the figures below while more data on the borrowing activities of farmers are contained in [Appendix G](#).

Figure 30: Cost of Cacao production per cropping

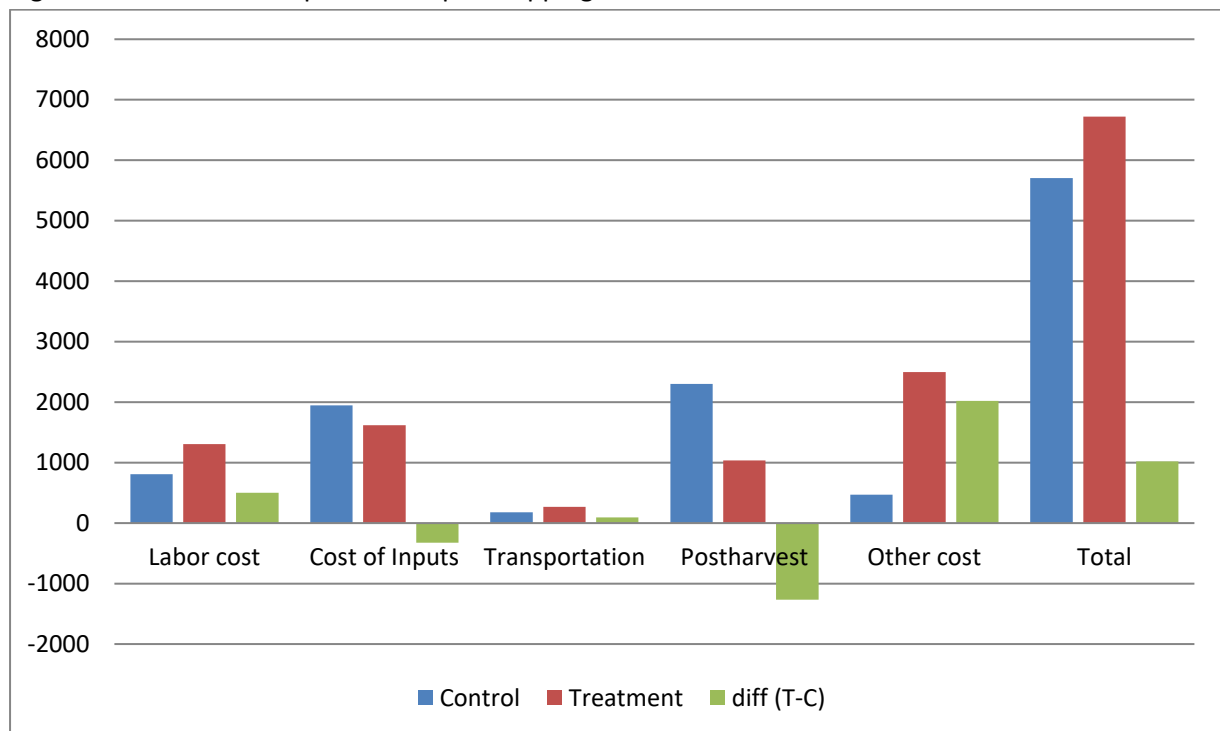


Figure 31: Sources of financing for Cacao production

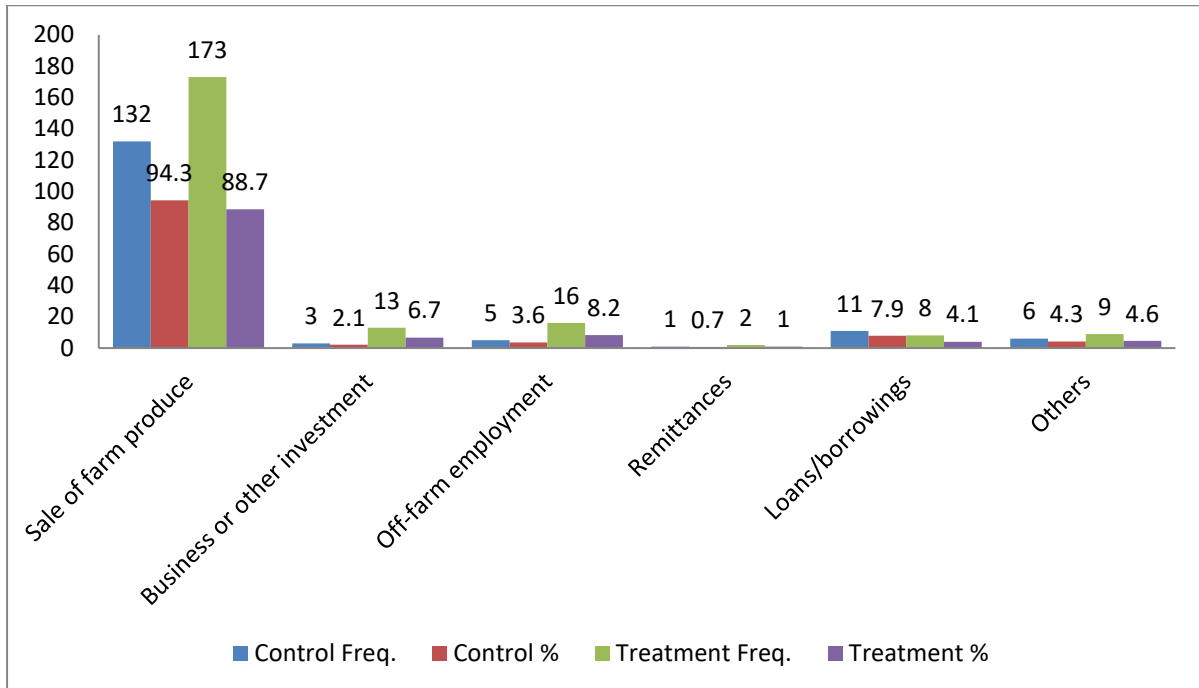


Figure 32: Cost of coconut production per cropping

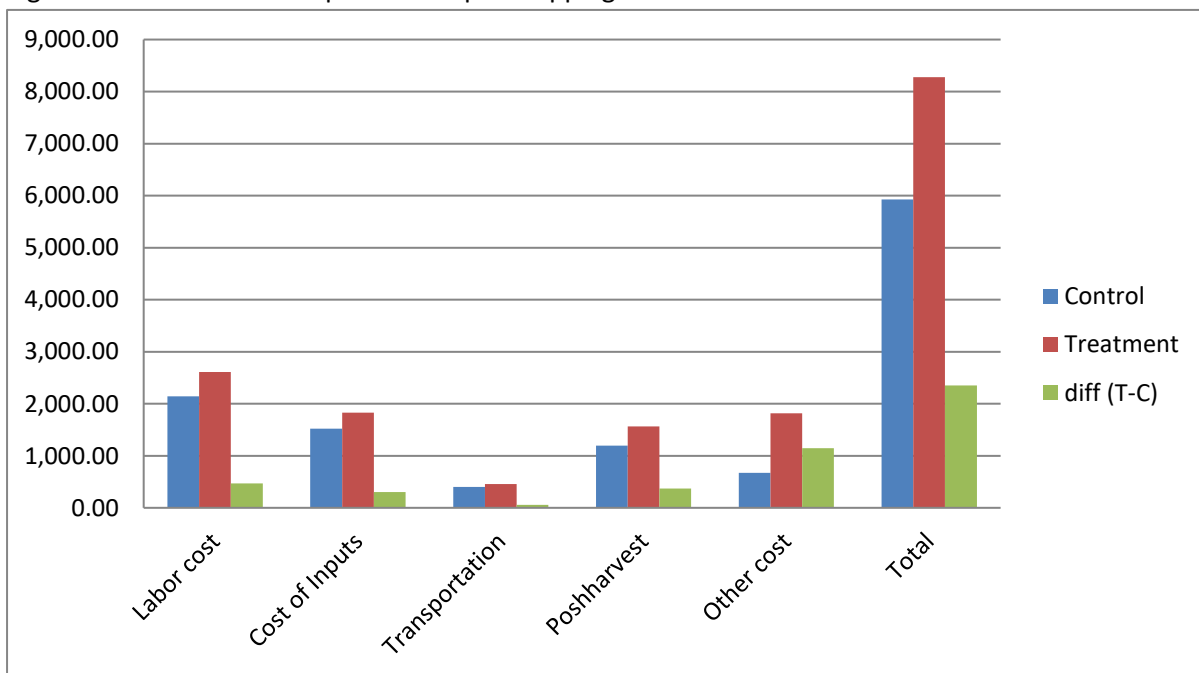


Figure 33: Sources of financing for coconut production

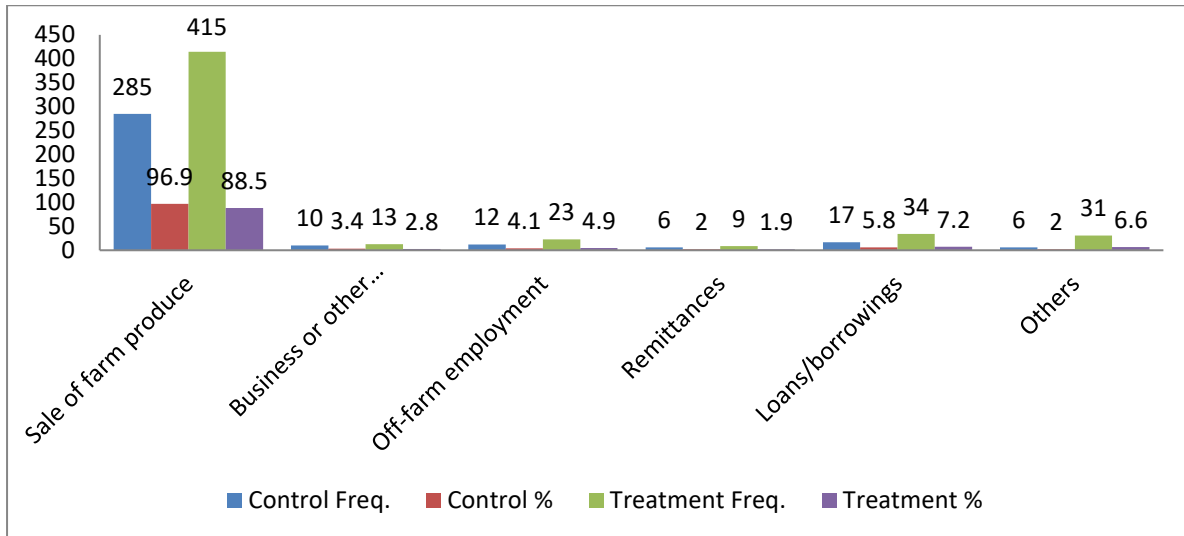


Figure 34: Cost of coffee production per cropping

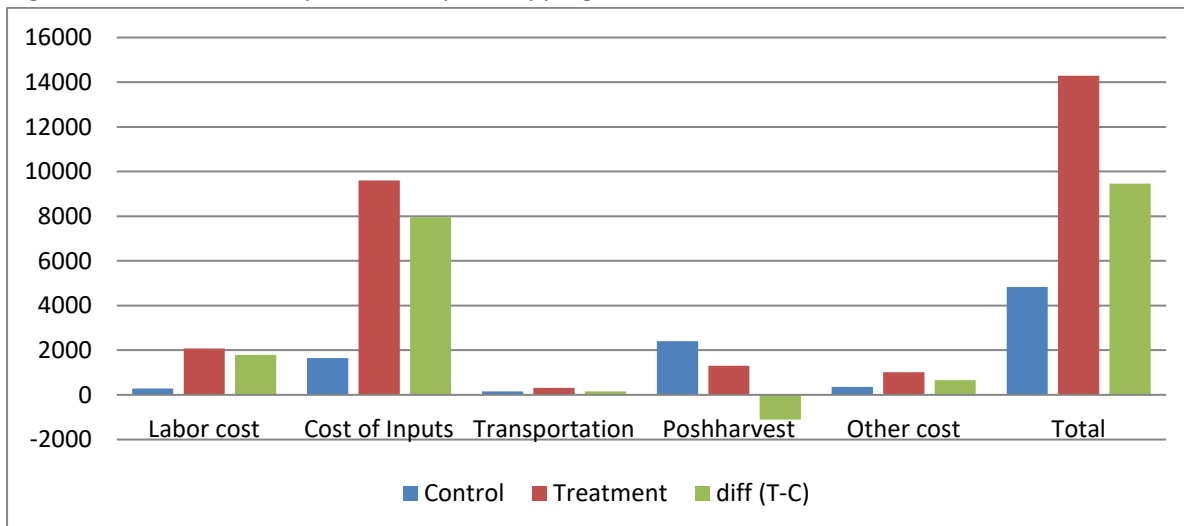
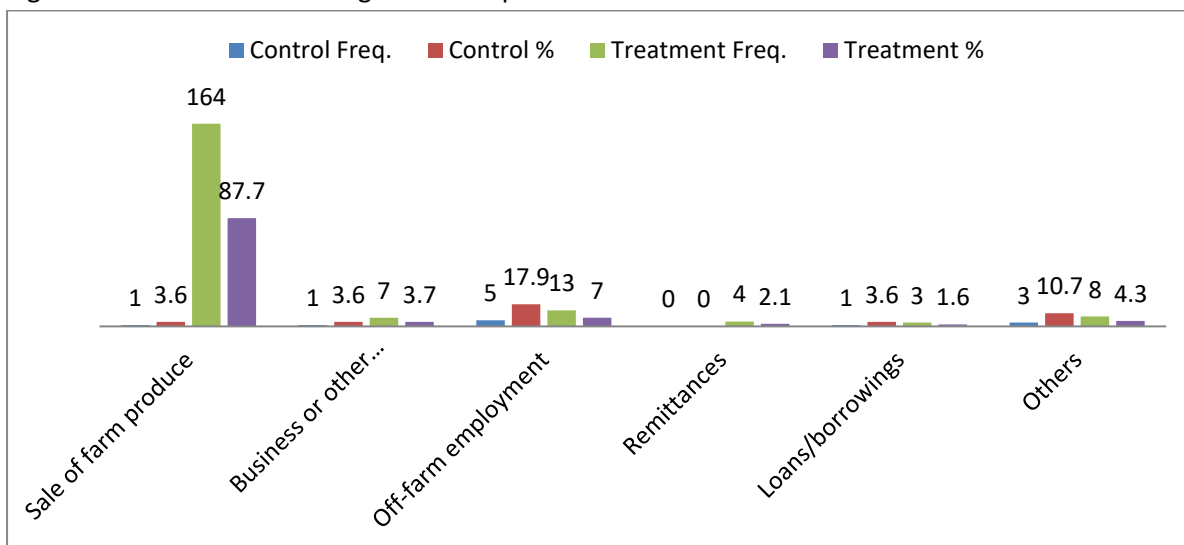


Figure 35: Sources of financing for coffee production



Among MinPACT beneficiaries who were assisted by the Project in seeking financial services, many perceived that it helped in enhancing agricultural productivity and income as seen in the figures below.

Figure 36: Percentage of respondents assisted by MinPACT that were linked to financial services

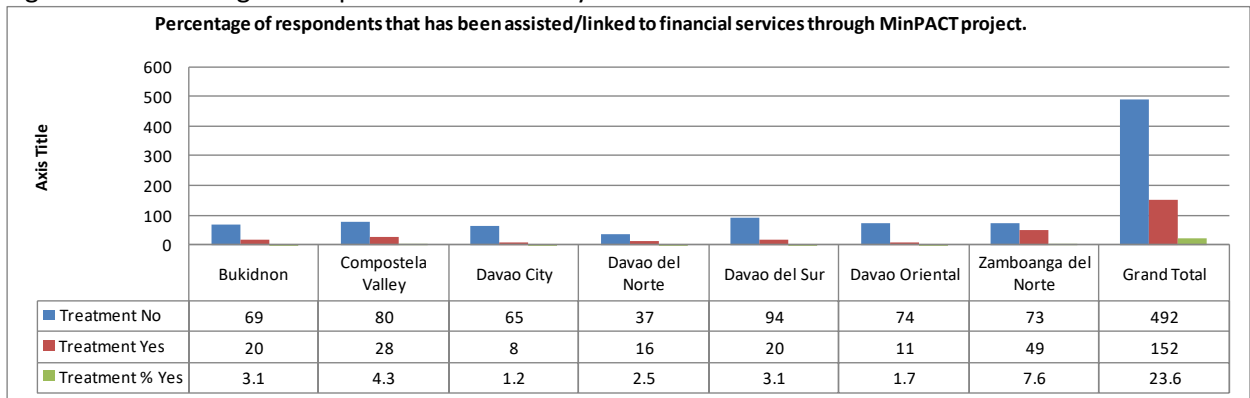


Figure 37: Percentage of MinPACT beneficiaries that received financial services

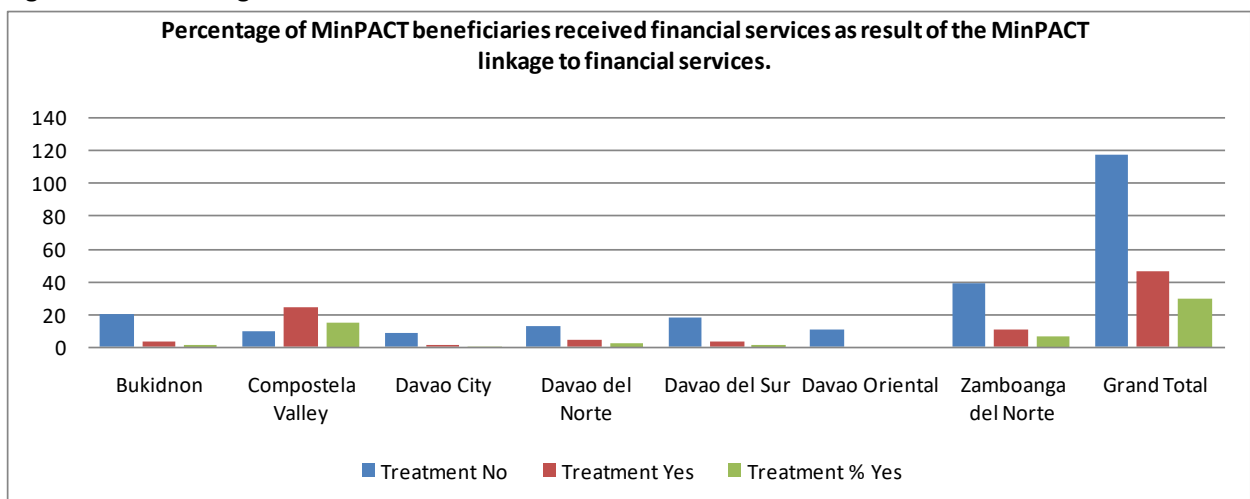
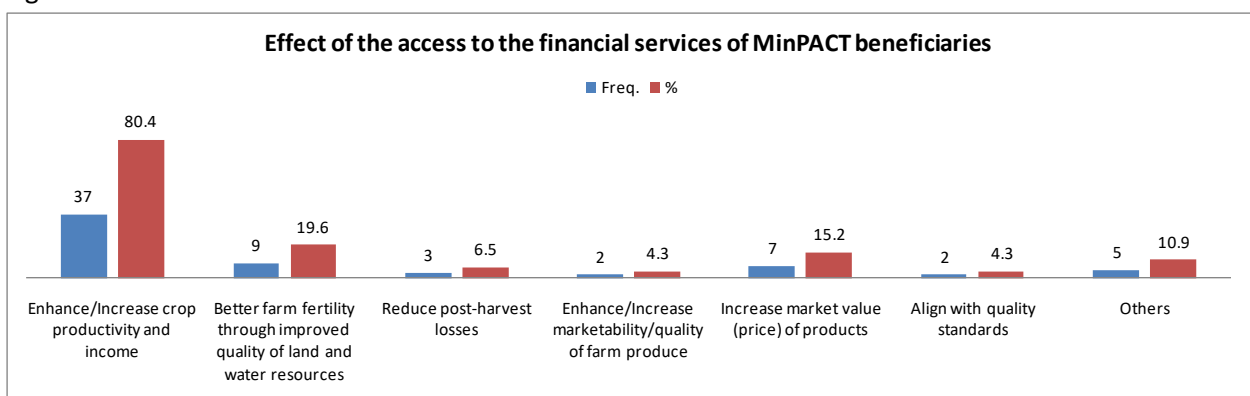


Figure 38: Effect of the access of financial services



B. Strategic Objective 2 – Expanding Trade

B.1 Access to Market

A big part of MinPACT interventions had to do with linking farmer producers directly to key players on the demand side of the value chain. In the process, the aim is to eliminate traditional middlemen such that farmers will gain more for their produce. As can be seen in the figures below, though, farmers find their market among local buyers.

Figure 39: Market of cacao produce

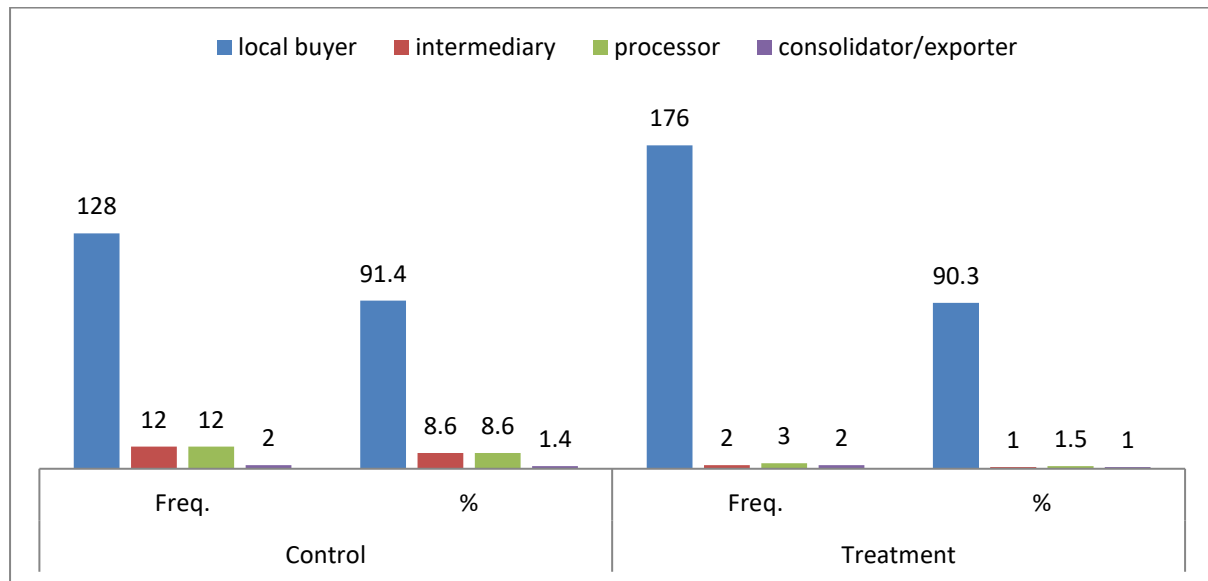


Figure 40: Market for coconut produce

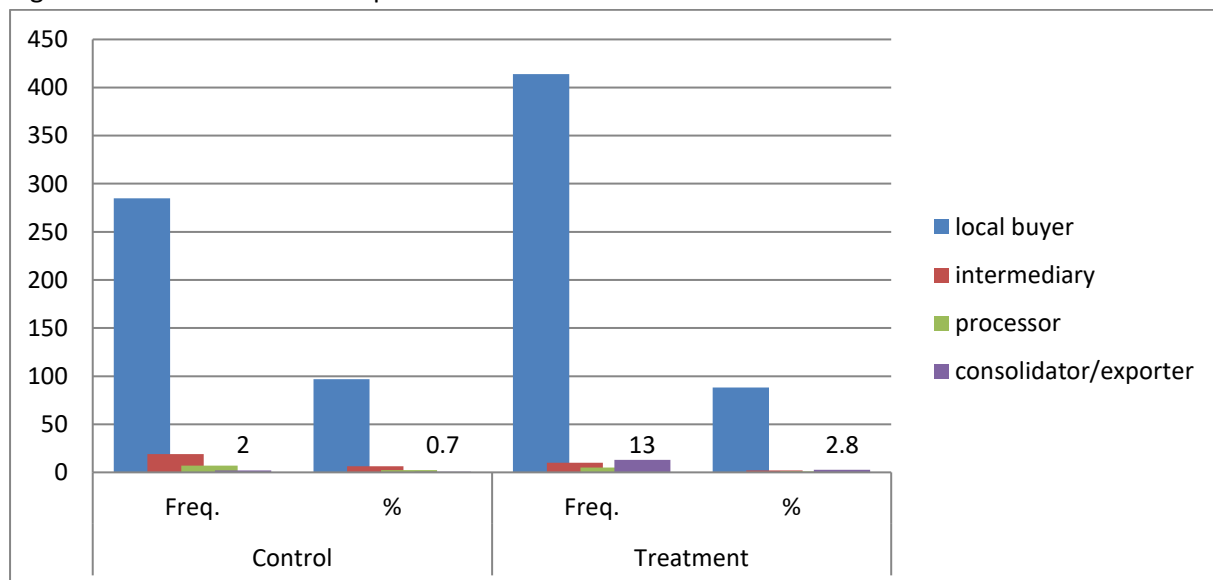
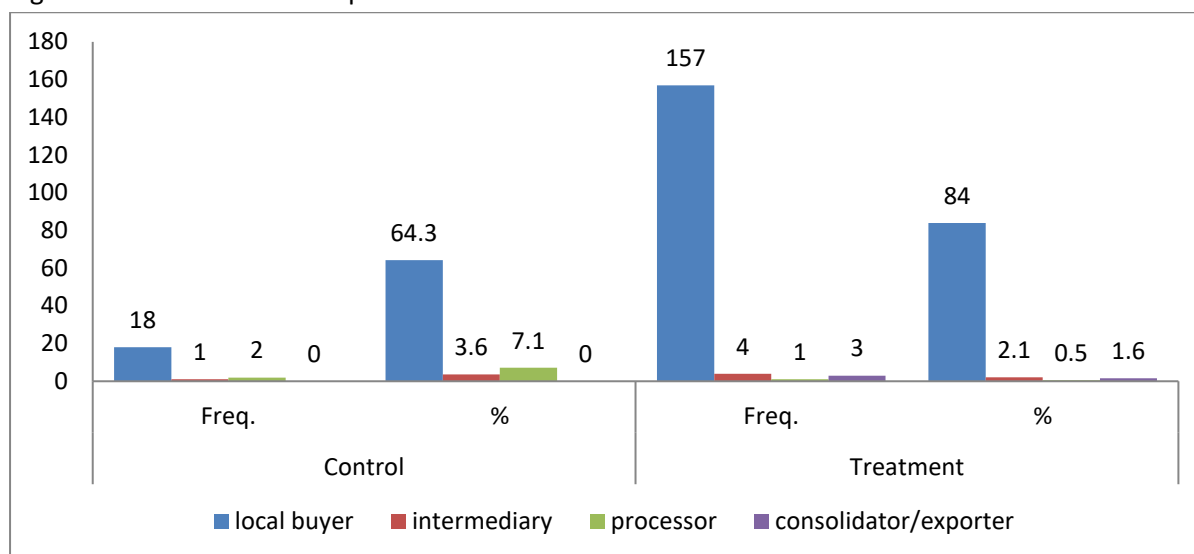


Figure 41 : Market of coffee produce



As revealed by the survey, MinPACT beneficiaries generally sell more in the form of dried beans (cacao), GCB (coffee) and copra (coconut) which is reflective of their capacity to produce and sell. For cacao, MinPACT beneficiaries cannot yet go into chocolate-making because of the high investments in processing and working capital. So, at the most, they only produce and package tablea. For coconut, while some earn from whole nuts, most farmers go into copra production for added-value and other by-products like husks and coal. For coffee, only those provided with post-harvest equipment produce GCB (co-op level) while individual farmers sell their cherries to the nearest trader/processor in the community.

The increased production in 3Cs made farmers deal with the market through different channels. Traditionally, farmers sell their harvest to intermediaries or middlemen at farm-gate prices which are much lower than market prices. MinPACT assisted its beneficiaries to directly engage consolidators, traders, and processors to increase their income. While there have been remarkable direct linkages with the big players like Franklin Baker (coconut), Kennemer International Foods (cacao) and Hineleban (coffee), many smallholder farmers cannot yet maintain consistency of the required volume and quality. Further, due to freight costs and risks of wastage in transporting their products from farm-to-market, especially the hard-access upland coffee areas, farmers still sell to traditional middlemen and traders who pick up on-site or at the nearest point-of-sale. Details of their experiences and assessment are contained in [Appendix H](#).

B. 4 Other Observations – Market Systems Development

MinPACT market development influence was evident to other stakeholders in the value chain. Their perceptions are contained in [Appendix I](#).

VCA players reached or engaged by MinPACT registered positive changes in terms of increased level of operations (e.g. greater volume of cacao beans and whole nuts for trading/processing, increased inventory of agricultural inputs, increased manpower), improved operational and management capacities (e.g. access to credit and financing for working capital, compliance with business registration and accreditation requirements), extension/ expansion of new services that cater to 3C-specific requirements (e.g. private-owned/operated nurseries), and direct linkage with farmer producers (consolidation, economies of scale). Altogether, this resulted in a more dynamic market system and contributed to a vibrant local economy at least in the areas covered by MinPACT.

Overall, MinPACT made significant influence in spurring improvements in important elements of the market system as highlighted below.

Resources: Increased Use and Investment

- Raw materials – used in nursery operations and production (seedling bag, soil, pruned leaves as organic fertilizers).
- Processing – conversion of harvests to various forms, i.e., value-adding.
- Land use: a) Intercropping/ diversification/optimization of areas with available space; b) Expansion- planting of 3Cs in unutilized areas (including IP ancestral domains and buffer zones declared by the DENR); c) Nursery – use of idle lots of co-ops.
- Budgetary Allocation: a) Government regular programs and special projects - nursery operations, farm inputs, post-harvest facilities, farm-to-market roads, allowances of farm technicians, non-strop trainings, agricultural loans, and trade promotion; b) Co-ops- allocation for agricultural loans in-cash and in-kind; and c) Other VCA - allocation of funds and resource mobilization for continuous support to contract-growing, marketing, product innovation and research and development

Roles

- Individual farmers –participation in government and non-government agri-related programs (planting of high-value commercial crops), training/ adoption of non-traditional farm technologies, access to micro-credits, direct selling to consolidators.
- POs/Co-ops – expansion of membership/ clientele and array of services to include nursery operations, contract growing with members (co-op-managed), provision of technical services, lending and marketing.
- Government + SUC – industry development; policy and program development; regulation for quality assurance; promotion of agri-related higher education and continuing curriculum development (agronomics).
- Other VCA - expansion of clientele and technical services (co-op/ farm management); demand-driven product innovation; advocacy for government support (incentives).

- Women – participation in production, processing and marketing; involvement in social entrepreneurship.
- Youth – participation in production, processing and marketing; aim for formal education and/or related training.

Relationships

- Direct Linkage / Contract-growing - Processors and Co-ops/ Farmers; Co-ops and Farmers (e.g. Franklin Baker and Katipunan Co-op, Kennemer Foods International and POEMCO).
- Institutional networks as mechanisms of collaboration and convergence for technical assistance, product development, trade promotion, learning exchange, etc. (e.g. CIDAMI, Cocolink, Provincial Coffee Council).
- Regular inter-agency consultation meetings.

Rules

- Adherence to production protocols and quality control/ standards (e.g. co-op assessment by CDA, nursery accreditation by BPI and PCA, fertilization and pest management by FPA).
- Clustering approach - PRDP clusters in Zamboanga del Norte where co-ops are assigned to nursery operation (Pinan) or processing/ marketing (FACOMA and POEMCO).

Results

- Increased area planted with 3C (hectares) – increased demand for farm inputs (production side).
- Increased number of farmers and co-ops that ventured in 3C production and processing (dried beans).
- Resiliency against natural calamities (e.g. buffer seedling production by government-operated nurseries).
- Massive investments in 3Cs production and infrastructure support (government and private corporations).

Crowding-in

- Development of coffee-specific business loan policy by Rizal Micro Bank (character loan, no collaterals to individual farmers for amount below P50,000); co-op machineries and equipment as collateral (e.g. P300K loan to Kape Maramag).
- Increased demand for record-keeping and audit services from Model Co-op Network by POs/Associations becoming co-operatives (CDA compliance) – those provided with the “Sell More for More” Training.
- Increased demand for coffee cupping/grading services from CMU (licensed coffee grader courtesy of MinPACT Training).
- Increased demand for fertilizers was noted by Agri-Input Suppliers (indicated by the increased inventory and distribution network like that of ATLAS Fertilizers, Inc.).

- Increased demand for seedlings (private buyers, walk-ins).
- Increased number of coffee shops placing orders to Co-ops (e.g. BACOFA, Inhandig, Milalittra).

Copying

- More benchmarking activities – visitors from across the nation and abroad (e.g. Hineleban model farm and CMU cupping laboratory).
- Technology transfer – trained farm technicians cascade knowledge to other farmers including women and the youth (e.g. grafting).

Sector Growth

- Household incomes increased with the additional sources from 3C production and processing, but not yet at the level of disposable income.
- Co-op Income – additional source of income (nursery, consolidation, processing), but not yet at significant level.
- Market prices of specialty coffee significantly increased through quality assurance and coffee grading (e.g. rare variety; the higher the elevation, the sweeter the coffee like that of Inhandig in Mt. Kitanglad).

Backward and Forward Linkages

- Employment generation brought about by nursery operations and expansion of farm areas cultivated.
- The revival of the cacao industry increased transactions with government (e.g. Kenninger Foods International providing seedlings to LGUs by virtue of its accreditation and bid qualification and CIDAMI providing technical services to PRDP-funded trainings).
- Sustained partnerships between suppliers and the government for farm inputs (e.g. PCA and ATLAS Fertilizers); suppliers collaborate (instead of competing) to complete all the necessary materials in 3Cs – providing options to buyers
- Agri-Input Suppliers serve as “MFI” by providing in-kind loans to Co-ops.

Other Indirect Impact

- Promotion of health benefits of coffee, cacao and coconut boosted demand for these products (e.g. coconut water as energy drink – being developed by Franklin Baker).
- Increased importation of raw materials for manufacturing of inorganic fertilizers (nutritional requirements of plants and trees that cannot be sourced from organic matters).

C. Thematic Results and Overall Assessment

Part of the developmental perspective of MinPACT is anchored on the principles of inclusion and participation, thereby promoting participatory decision-making processes in the household, particularly as regards access and control of resources.

In the same manner, MinPACT promotes gender awareness as well as promotion and mainstreaming of women and youth participation in development. More of this section is contained in [Appendices J and K](#).

On **control of resources**, the study found out that among MinPACT beneficiaries, the father, followed by the mother, have higher decision-making power on different issues including resource management and development planning, budgeting, participation in community development projects and activities, formulation of ordinances related to agriculture and trade, membership in committees, revenue generation and others. Overall, joint decision-making between the father and the mother ranked third when it comes to issues including resource management and development planning, budgeting, participation in community development projects and activities.

On **women**, the Study noted significant changes on the roles (duties) of women that can be attributed to MinPACT. On one hand women appreciate their economic empowerment through their involvement in farm activities and in generating income for the household (productive roles). However, some women perceive unfair distribution of household (reproductive) roles because they still do much of the work at home. On another note, it was gathered in the FGDs and KII that women played more prominent roles in farm management, technology adoption (model farmer) and enterprise activities.

Among the **youth**, their involvement in MinPACT highlighted in the FGDs was in planting of seedlings, harvesting, and nursery operations.

Overall Assessment

This section presents the overall assessment of the study participants in terms of the evaluation parameters. The general perceptions of the household respondents are presented here with related notes from other sources (key informants, FGD participants and VCA players). More information is contained in [Appendices L and M](#).

Relevance

The relevance of MinPACT is all the more emphasized by the government sector in recognition of its major contributions in moving forward the national agenda on agricultural productivity and trade promotion.

According to key informants from the government at all levels, MinPACT largely contributed to reviving the cacao industry, as well as the development and implementation of strategic plans toward meeting the Philippine Cacao Challenge (Cacao Roadmap). In the intercropping of cacao with coconut-planted areas, MinPACT likewise contributed in improving coconut yield though on a limited scale. For coffee, the biggest contribution of MinPACT as recognized by the government and other stakeholders is the introduction of specialty coffee with corollary cupping/grading technology based on world-class standards. While it is still early to see impact in terms of volume, MinPACT has made great strides in promoting quality of 3Cs products that can compete in the world market.

Further, the government credits MinPACT with strengthening institutional capacities of cooperatives, farmer associations, VCA players and industry groups and networks at various levels, and in facilitating direct market linkages between producers and processors/ consumers.

The high ratings given by the government is tantamount to MinPACT having addressed the felt needs of the 3Cs sector which stretches from production to marketing assistance. This is also to say that the interventions are deemed appropriate.

Efficiency

The cooperatives covered by MinPACT claim improvements in their business processes and practices. Some of the positive changes mentioned include financial management with the help of computerized systems as part of MinPACT support (accounting, bookkeeping and inventory), development of manuals and business plans through the Sell More for More trainings, improved management and decision-making capabilities of Co-op Officers, ability to link with government partners and other market players, expanded loan facilities (in-kind and in-cash), and provision of technical support to farmers through the trained Co-op Technician.

Effectiveness

MinPACT interventions were very effective in that they brought about many positive changes, even though it has not yet fully achieved large-scale production and marketing (export level). Among the stand-out accomplishments of the Project are technology transfer, quality assurance, and institutional strengthening of various stakeholders.

Impact

In terms of impact, while it is too soon to estimate outcomes on yield and income, MinPACT is widely credited for the adoption of technologies, bringing in expert knowledge on 3Cs, increased awareness of opportunities in the 3Cs, new products developed and marketed, and providing services and knowledge that the government and other stakeholders cannot fully provide.

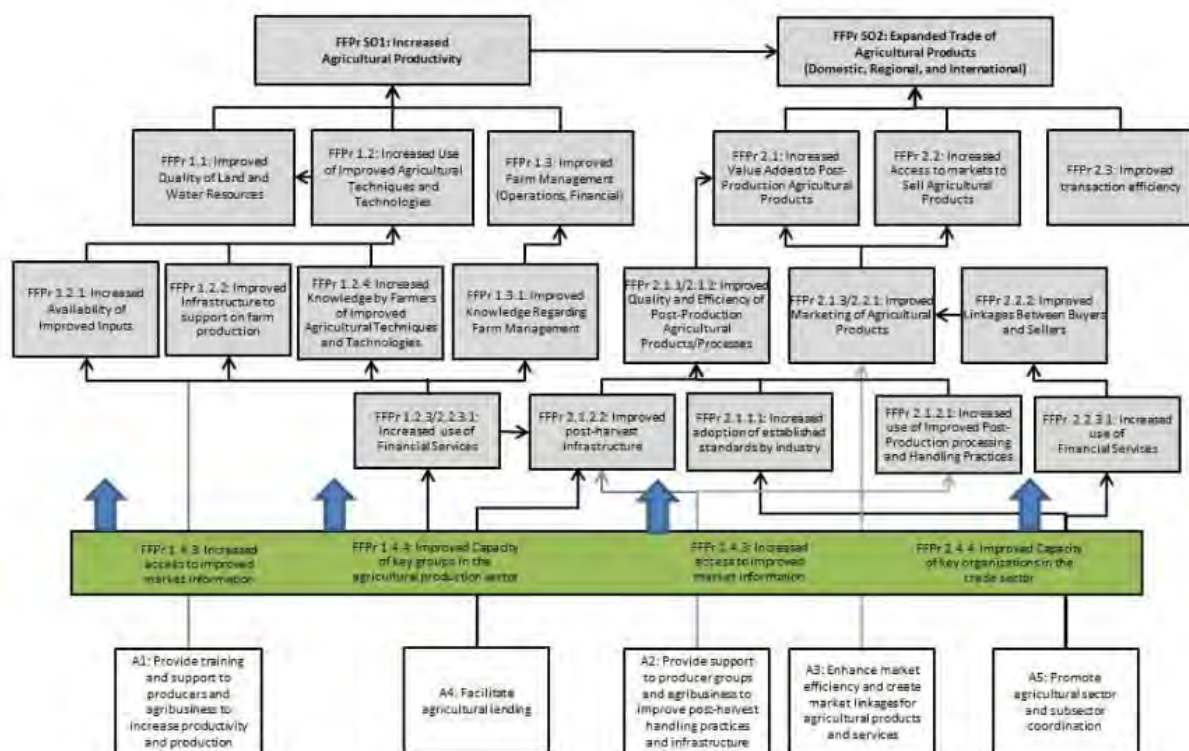
Sustainability

There are many efforts and indications toward sustainability of MinPACT gains such as the capacity building of industry associations and cooperatives and their ability to provide services to their members, the installation of cupping laboratories and certified trainers that will continue to build local knowledge, integration with colleges and universities for pursuit of continuing research and development, and curriculum on 3Cs, new product development and market penetration, transitioning of farmer

associations into cooperatives, establishment and accreditation of nurseries, and institutionalized industry conferences. However, the challenge on sustaining and expanding the 3Cs industry is still significant due to costs of production, shifts to cash crops, lack of PHF and working capital, among others.

Results Framework

Overall, the MinPACT Results Framework remains valid. An expanded trade of the 3Cs requires increased 3Cs productivity, better products to sell, increased access to markets, and improved transaction efficiency. Each of these strategies is supported by the lower level strategies, e.g., improved farming techniques, improved marketing, increased access to funds and inputs, etc.



If at all, the possible opportunities to enhance the results framework include the following:

- Revisit the time frame allotted for the results to happen. As the report showed, some crops need more time to show evidences of increased yield.
- Consider how traditional practices and culture-influenced beliefs can be effectively changed among some small system actors so that they become as competitive as the others within a specified period.
- Integrate in the project design a more purposive approach to develop local champions or advocates who can help sustain the gains of the project.
- Clarify the important assumptions for the each of the identified strategic results taking into consideration the local conditions, customs and risks, among others.

IX. Lessons Learned

Following are some lessons that can be drawn from the above results and discussions:

- Increasing production requires continuous maintenance (fertilization, rejuvenation of soil quality). One-time or short-term provision of agricultural inputs is not enough, especially for smallholder farmers with minimal resources.
- Adoption of farm technology takes time due to behavioral/cultural and other factors (e.g. to-see-is-to-believe and plant-and-forget attitudes).
- Linkage with the market was done, but farmers/ co-ops are not yet ready to meet the growth in demand (no harvest from newly-planted trees yet).
- Farmers tend to shift to other crops that provide immediate income like banana and vegetables because newly-planted cacao and coffee trees takes 3-5 years to peak.
- Specialty market for coffee and cacao requires consistency in terms of volume and quality. This remains a challenge across the value chain.
- Co-ops with nursery become competitors of partners that have existing nursery operations, e.g., POEMCO and Kennemer Foods International.
- Agricultural lending requires solutions to systemic factors like collaterals, indigenous culture, absorptive capacity of farmers and the risks involved.

X. Conclusions

Based on the findings, the Evaluation Team concludes that overall:

- MinPACT partly achieved its objectives of increasing agricultural productivity as evidenced by increased number of hectares planted with 3Cs, and more yield and income from existing 3C trees (before MinPACT). However, the increased area has not translated into additional household income since 3C trees planted during the project take years to become fully productive.
- MinPACT gained recognition from the government and other stakeholders for its contribution in promoting and achieving quality standards of 3Cs products as well as on good agricultural practices. The same is true in terms of organization-level quality seals.
- MinPACT interventions are fully aligned with national development goals and priorities and it has significantly contributed to the substantive implementation of strategic industry-level initiatives on 3Cs.
- MinPACT has caused significant ripple effects in the local economy as exemplified by increased demand for agricultural inputs, crowding-in of industry players like specialty coffee shops and cocoa-based consumer goods.
- MinPACT introduced innovations and state-of-the-art technologies in the 3Cs industry that promote competitiveness in the world market (e.g. chocolate making, coffee cupping/grading).
- MinPACT promoted mutual benefits among industry players, thereof strengthening collaboration and coordination and contributing to country goals.

XI. Recommendation

Based on the findings and discussions above, the Evaluation Team gives the following recommendations, which all key stakeholders may consider within their respective mandates, including the institutionalized industry networks (CIDAMI, Cocolink, PCBI or Provincial Coffee Councils):

Farm Production:

- The crop specific credit programs initiated under MinPACT should be tracked and if proven effective expanded to new credit cooperatives, banks and other MFIs.
- The approach to production finance where agricultural inputs and technical support are part of a credit package which projects returns based on proper management offers great potential especially in collaboration and coordination with various VCA actors (government programs, financing institution, Traders/Processors) to meet market demand both in terms of volume and quality.

Nursery Operations:

- The emphasis on co-op established and managed nurseries to help ensure a direct and continual relationship with farmer clients/members and to help obtain and maintain quality assurance accreditation (co-ops are tax-exempt) and linkage with institutional buyers including government entities for financial sustainability is a good approach and should be continued.
- Independent private nurseries should also be supported and solutions to the private nursery tax evasion issue, which limits quality assurance accreditation, should be pursued, including elimination or reduction of threshold at the policy/regulatory level and or tax reform for micro, small, or medium agriculture enterprises.

Post-harvest/ Processing Facilities:

- The MinPACT project facilitated provision of working capital through co-ops, along with equipment, post-harvest and processing facilities and hands-on training and support materials through incentive in-kind grants and tie-ups with government programs and various value chain actors and investors this approach should continue with emphasis on facilitation resources and capacity building.
- Incentive in-kind grants are useful to kick-start investment but should be used in a limited basis and be linked to government and market-based solutions. Incentive in-kind grants should be continued but the priority should be on facilitating access to credit and linking beneficiaries with government programs and market-led investments.

Marketing:

- Facilitating the establishment of value chain specific trade and technical fairs along with support in the participation in trade and technical fairs by project beneficiaries, increased their knowledge and understanding of market dynamics, requirements, buyer expectations and should be continued.
- The provision of technical assistance and training on product development,

packaging, pricing, distribution and trade (through DTI and industry networks), as well as the promotion and use of contracts between buyers and sellers proved to be effective in building knowledge and trust. These three strategies, trade and technical fairs, marketing skills training and technical assistance, and the promotion of buyer contracts should be continued.

Financing:

- Facilitating access to credit through select banks, government programs, and most importantly credit cooperatives, including supporting credit cooperatives to pilot crop specific loan products was a good approach, though the pilots need to be tracked to determine scalability among other credit cooperatives. Overall increased access to working capital is needed, to cover cost of production, product development and marketing; financial institutions need to consider assets other than land-ownership collaterals, including buyer contracts, warehouse receipts, among others.

Management Capacities:

- Improved agribusiness management skills in marketing, accounting and financing, leadership and client or membership services proved to be effective in improving business efficiency, product volume and quality, and market share. Continued provision of training, technical assistance, coaching, and mentoring of micro, small, and medium enterprises, including cooperatives and industry organizations is recommended, along with the continued linking to management support services through cooperative federations, government agencies and programs, and public and private educational and training institutions.
- Industry associations like CIDAMI, Cocolink, and PCC can further collaborate in launching alternative platforms for learning and exchange other than annual summits.

Industry development:

- Capacity building of industry organizations that can promote sector development and advocate on behalf of value chain actors should be continued, often the difference of a well-developed industry (sector) in a country is the level of institutionalism and organization. If existing institutions or organizations are not functioning properly or don't have the buy-in or trust of all value chain actors, restructuring, renaming, or starting-over would be advised.

Research and development:

- The linkage with public and private universities to create standardized curriculum, research trials to determine the most appropriate varieties based on climate change and market demands, and increased university led training and extension should be expanded upon for all three crops.

Behavior change:

- Communication strategies and engagement approaches for training and awareness which took into consideration gender, rural and urban differences, and ethnic diversity proved affective under MinPACT, including

in the context of participatory workshops, technical manuals, crop specific trade fairs and expos, supplementation training tarpaulins, videos, news conferences, etc. These strategies should be continued to advocate for technology adoption, access and utilization of financing services, and monitoring and evaluation for accountability and learning.

Appendices

Appendix A: Profile of Household Survey Respondents

There is equitable distribution of male and female respondents between the treatment and control groups (Table 1). Overall, the average years of education of respondents from the treatment group is 9 years and 8 years in the control group (Table 2). Majority of the respondents both from the control and treatment groups are married (Table 3) and the average family size both in the control and the treatment group is 4 (Table 4).

Table 1. Distribution of respondents by sex

Items	Control		Treatment	
	Freq.	%	Freq.	%
Female	154	43.8	330	48.7
Male	197	56.0	346	51.1
LGBTQI	1	0.3	1	0.1

Table 2. Distribution of respondents by age and years of education, by province

Province	Age		Education (in years)	
	Control	Treatment	Control	Treatment
Bukidnon	47	45	8	6
Compostela Valley	53	51	8	9
Davao City	59	52	9	9
Davao del Norte	49	55	7	8
Davao del Sur	55	53	9	9
Davao Oriental	56	53	8	8
Zamboanga del Norte	54	53	9	9
Overall	53	52	8	9

Table 3. Distribution of respondents by marital status

Items	Control		Treatment	
	Freq.	%	Freq.	%
Divorced/ separated	5	1.4	12	1.8
Married/ long term partner	287	81.5	535	79.0
Single/ never married	16	4.5	49	7.2
Widowed	44	12.5	81	12.0

Table 4. Average household/family size

Province	Control	Treatment
Bukidnon	4	4
Compostela Valley	5	4
Davao City	5	4
Davao del Norte	3	4
Davao del Sur	4	4
Davao Oriental	5	4
Zamboanga del Norte	3	3
Overall	4	4

Appendix B: Impact Estimates

1. Farm Income

```
. regress farm_income time treatment sex age ms educ hh_size cacao coconut coffee inter
```

Source	SS	df	MS	Number of obs =	1685
Model	1.9042e+11	11	1.7311e+10	F(11, 1673) =	4.69
Residual	6.1749e+12	1673	3.6909e+09	Prob > F =	0.0000
Total	6.3653e+12	1684	3.7799e+09	R-squared =	0.0299
				Adj R-squared =	0.0235
				Root MSE =	60753

farm_income	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
time	-1912.646	3639.807	-0.53	0.599	-9051.702 5226.409
treatment	7137.734	3537.401	2.02	0.044	199.5364 14075.93
sex	-581.0229	3012.57	-0.19	0.847	-6489.827 5327.781
age	472.312	119.3976	3.96	0.000	238.1275 706.4964
ms	3871.988	3963.736	0.98	0.329	-3902.417 11646.39
educ	2423.085	431.7983	5.61	0.000	1576.163 3270.007
hh_size	902.1258	729.157	1.24	0.216	-528.0304 2332.282
cacao	2043.953	8621.93	0.24	0.813	-14866.95 18954.86
coconut	-4308.794	7821.639	-0.55	0.582	-19650.02 11032.44
coffee	-4455.908	6350.419	-0.70	0.483	-16911.51 7999.696
inter	-3194.38	9637.76	-0.33	0.740	-22097.72 15708.96
_cons	2135.07	18417.87	0.12	0.908	-33989.42 38259.56

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 1685

	Before	After	
Control:	109	339	448
Treated:	642	595	1237
	751	934	

Outcome var.	farm_~e	S. Err.	t	P> t
Before				
Control	4.8e+04			
Treated	5.3e+04			
Diff (T-C)	5614.692	6026.395	0.93	0.352
After				
Control	4.8e+04			
Treated	5.5e+04			
Diff (T-C)	6339.334	3635.737	1.74	0.081*
Diff-in-Diff	724.642	7038.183	0.10	0.918

R-square: 0.00

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

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

2. Total Income

```
regress total_income time treatment sex age ms educ hh_size cacao coconut coffee inter
```

Source	SS	df	MS	Number of obs = 1685		
Model	1.9684e+12	11	1.7895e+11	F(11, 1673) =	13.90	
Residual	2.1535e+13	1673	1.2872e+10	Prob > F =	0.0000	
				R-squared =	0.0838	
				Adj R-squared =	0.0777	
Total	2.3503e+13	1684	1.3957e+10	Root MSE =	1.1e+05	

total_income	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
time	-4340.426	6797.294	-0.64	0.523	-17672.52	8991.671
treatment	19458.88	6606.052	2.95	0.003	6501.879	32415.87
sex	-3310.187	5625.937	-0.59	0.556	-14344.8	7724.43
age	336.5101	222.9736	1.51	0.131	-100.8265	773.8467
ms	10022.34	7402.228	1.35	0.176	-4496.267	24540.94
educ	7871.411	806.3779	9.76	0.000	6289.795	9453.027
hh_size	5988.569	1361.692	4.40	0.000	3317.77	8659.368
cacao	16077.87	16101.35	1.00	0.318	-15503.04	47658.78
coconut	-2009.293	14606.81	-0.14	0.891	-30658.85	26640.26
coffee	-16986.63	11859.33	-1.43	0.152	-40247.32	6274.053
inter	-4645.274	17998.4	-0.26	0.796	-39947.02	30656.48
_cons	-37733.27	34395.14	-1.10	0.273	-105195.3	29728.78

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 1685

	Before	After	
Control:	109	339	448
Treated:	642	595	1237
	751	934	

Outcome var.	total~e	S. Err.	t	P> t
Before				
Control	6.9e+04			
Treated	9.0e+04			
Diff (T-C)	2.0e+04	8238.910	2.47	0.014**
After				
Control	8.1e+04			
Treated	9.4e+04			
Diff (T-C)	1.3e+04	6997.192	1.84	0.066*
Diff-in-Diff	-7.4e+03	1.1e+04	0.69	0.492

R-square: 0.00

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

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

3. Cacao yield per hectare per year (Dried Beans)

```
. regress cacao_yield time treatment DiD
```

Source	SS	df	MS			
Model	16519413	3	5506471	Number of obs =	425	
Residual	29845703.3	421	70892.407	F(3, 421) =	77.67	
Total	46365116.3	424	109351.689	Prob > F =	0.0000	
				R-squared =	0.3563	
				Adj R-squared =	0.3517	
				Root MSE =	266.26	

cacao_yield	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
time	6.487929	103.4594	0.06	0.950	-196.8734	209.8493
treatment	80.75014	103.4822	0.78	0.436	-122.6561	284.1563
DiD	352.0395	108.1421	3.26	0.001	139.4738	564.6052
_cons	171.4823	100.6354	1.70	0.089	-26.32814	369.2928

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 425

	Before	After		
Control:	7	123	130	
Treated:	122	173	295	
	129	296		

Outcome var.	cacao~d	S. Err.	t	P> t
Before				
Control	171.482			
Treated	252.232			
Diff (T-C)	80.750	103.482	0.78	0.436
After				
Control	177.970			
Treated	610.760			
Diff (T-C)	432.790	31.403	13.78	0.000***
Diff-in-Diff	352.040	108.142	3.26	0.001***

R-square: 0.36

* Means and Standard Errors are estimated by linear regression

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

4. Coconut Yield per hectare per year (Copra)

```
. regress coconut_yield time treatment DiD
```

Source	SS	df	MS	
Model	16036145.7	3	5345381.9	Number of obs = 1236
Residual	2.7219e+09	1232	2209364.44	F(3, 1232) = 2.42
Total	2.7380e+09	1235	2216982.29	Prob > F = 0.0646

R-squared = 0.0059
Adj R-squared = 0.0034
Root MSE = 1486.4

coconut_yi~d	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
time	142.4532	181.1719	0.79	0.432	-212.9864 497.8929
treatment	32.81886	170.1976	0.19	0.847	-301.0903 366.7281
DiD	115.2329	207.5366	0.56	0.579	-291.9314 522.3973
_cons	1144.113	156.6796	7.30	0.000	836.7245 1451.501

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 1236

	Before	After
Control:	90	267
Treated:	500	379
	590	646

Outcome var.	cocon~d	S. Err.	t	P> t
Before				
Control	1144.113			
Treated	1176.932			
Diff (T-C)	32.819	170.198	0.19	0.847
After				
Control	1286.566			
Treated	1434.618			
Diff (T-C)	148.052	118.761	1.25	0.213
Diff-in-Diff	115.233	207.537	0.56	0.579

R-square: 0.01

* Means and Standard Errors are estimated by linear regression

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

5. Coffee Yield per hectare per year

```
. regress total_coffee time treatment DiD
```

Source	SS	df	MS			
Model	156183.711	3	52061.2371	Number of obs =	235	
Residual	9197918.9	231	39817.8308	F(3, 231) =	1.31	
Total	9354102.61	234	39974.7975	Prob > F =	0.2727	
				R-squared =	0.0167	
				Adj R-squared =	0.0039	
				Root MSE =	199.54	

total_coffee	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
time	-117.6594	102.2359	-1.15	0.251	-319.0934	83.77467
treatment	-13.65907	91.04912	-0.15	0.881	-193.0519	165.7338
DiD	106.531	105.8837	1.01	0.315	-102.0903	315.1522
_cons	243	89.23882	2.72	0.007	67.17395	418.826

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 235

	Before	After	
Control:	5	16	21
Treated:	122	92	214
	127	108	

Outcome var.	total~e	S. Err.	t	P> t
Before				
Control	243.000			
Treated	229.341			
Diff (T-C)	-13.659	91.049	-0.15	0.881
After				
Control	125.341			
Treated	218.213			
Diff (T-C)	92.872	54.050	1.72	0.087*
Diff-in-Diff	106.531	105.884	1.01	0.315

R-square: 0.02

* Means and Standard Errors are estimated by linear regression

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

Appendix C: Household Socio-Economic Profile

Family Members

Across the seven provinces, the average age of family members of the respondents from the treatment group is 34 years while that of the control group is 35 years (See Table 1). Majority of the respondents from the treatment group are straight males (52.54%) and straight females (47.07%). The same is also true with the control group where 50.55% are straight male and 48.94% are straight female (See Table 2).

Table 1. Average age of family members

Province	Control	Treatment
Bukidnon	32	29
Compostela Valley	33	33
Davao City	36	33
Davao del Norte	33	35
Davao del Sur	39	36
Davao Oriental	33	33
Zamboanga del Norte	38	37
Overall	35	34

Table 2. Distribution of family members by gender

Gender	Control		Treatment	
	Freq.	%	Freq.	%
Bisexual (Male)			1	0.04
Gay	4	0.29	6	0.23
Lesbian	3	0.22	3	0.12
Straight Female	669	48.94	1213	47.07
Straight Male	691	50.55	1354	52.54

The primary activities of the treatment and the control groups are more or less the same both for the males and females. Majority of the family members of the respondents from both the treatment and the control groups are farmers (parents) and students (children) (See Table 3). Majority of the male and female respondents both from the treatment and control groups said that they have no secondary activities (See Table 4).

Table 3. Primary activities of family members by sex

Items	Control				Treatment			
	Female		Male		Female		Male	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Farming	148	22.0	341	49.1	293	24.1	598	43.9

Household Activities	151	22.5	4	0.6	232	19.1	13	1.0
Trading	12	1.8	3	0.4	26	2.1	3	0.2
Off Farm Labor	8	1.2	34	4.9	51	4.2	87	6.4
School	188	28.0	173	24.9	342	28.1	396	29.1
Others	82	12.2	73	10.5	138	11.3	145	10.7
None	83	12.4	67	9.6	134	11.0	119	8.7

Table 4. Secondary activities of family members by sex

Items	Control				Treatment			
	Female		Male		Female		Male	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Farming	46	6.8	46	6.6	93	7.6	106	7.8
Household Activities	72	10.7	26	3.7	171	14.1	66	4.8
Off Farm Labor	6	0.9	24	3.5	23	1.9	57	4.2
Trading	8	1.2	8	1.2	7	0.6	7	0.5
School	11	1.6	12	1.7	10	0.8	24	1.8
Others	17	2.5	47	6.8	44	3.6	75	5.5
None	512	76.2	532	76.5	868	71.4	1026	75.4

Family and Farm Assets

There is no significant difference in terms of average number of items/assets respondents owned between the treatment and control groups (Table 5). There is no significant difference in the average number of farm animals' respondents owned (Table 6) and in the percentage of respondents with access to farm land (Table 7), in the average number of parcels of land (Table 8) in the treatment and control sites. Majority of the respondents from the treatment and control sites said that they inherited the land that they are farming (Table 9).

There is no significant difference in the farm size (hectares) between the treatment and control sites (Table 10). Majority of the farmers from the treatment site (78.3%) and the control site (83%) said that they own the land that they are farming (Table 11). Majority of the farmer respondents from the treatment sites (77.1%) and from the control sites (83.8%) said that they use their lands to plant multiple crops (Table 12).

There is no significant difference in terms of the average years of farming (Table 13) and percentage of productive land (Table 14) between the treatment and control sites.

Table 5. Average number of items/assets respondents owned

Items	Control	Treatment	<i>diff (T-C)</i>
a bicycle or trisikad	0.14	0.11	-0.04
a motorcycle or tricycle	0.77	0.70	-0.06
an animal-drawn cart	0.11	0.08	-0.03
a car or jeep or van	0.11	0.10	0.00

a tractor	0.01	0.02	0.01
a boat/banca with motor	0.04	0.02	-0.02
a radio / radio cassette	1.58	0.65	-0.93
a television	0.84	0.78	-0.06
a landline telephone	0.05	0.02	-0.04
a cellular phone	1.70	1.97	0.26
a personal computer	0.15	0.15	-0.01
a CD, VCD or DVD player	0.30	0.29	-0.02
Internet	0.04	0.06	0.03
Electricity	0.07	0.90	0.83

Table 6. Average number of farm animals' respondents owned

Items	Control	Treatment	diff (T-C)
Cows	0.4	0.4	0.0
Carabaos	0.3	0.2	0.0
Goats	0.6	0.4	-0.2
Sheep	0.0	0.0	0.0
Chickens/Ducks/gees	1.0	1.0	0.0
Horses	19.0	16.5	-2.6
Other farm animal	0.0	0.1	0.1

Table 7. Percentage of respondents with access to farm land, by province, by type

Province	Control			Treatment			diff (T-C)
	No	Yes	% Yes	No	Yes	% Yes	
Bukidnon	1	49	98.0	2	88	97.8	-0.2
Compostela Valley		54	100.0	1	108	99.1	-0.9
Davao City	16	29	64.4	20	60	75.0	10.6
Davao del Norte	1	28	96.6	4	50	92.6	-4.0
Davao del Sur	6	64	91.4	25	106	80.9	-10.5
Davao Oriental		44	100.0	1	90	98.9	-1.1
Zamboanga del Norte		60	100.0	1	121	99.2	-0.8
Grand Total	24	328	93.2	54	623	92.0	-1.2

Table 8. Average number of parcels, by province, by type

Province	Control	Treatment	diff (T-C)
Bukidnon	1.29	1.39	0.10
Compostela Valley	1.31	1.36	0.05
Davao City	1.57	1.31	-0.26
Davao del Norte	1.46	1.34	-0.12
Davao del Sur	1.19	1.33	0.14
Davao Oriental	1.30	1.29	-0.01
Zamboanga del Norte	1.42	1.06	-0.36
Overall	1.34	1.28	-0.05

Table 9. Means of obtaining the land

Items	Control		Treatment		diff (T-C)
	Freq.	%	Freq.	%	
Bought	55	15.6	114	16.8	1.2
CARP/ OLT	79	22.4	28	4.1	-18.3
Inheritance	177	50.3	421	62.2	11.9
Public land/ stewardship	10	2.8	42	6.2	3.4
Squatting	8	2.3	19	2.8	0.5

Table 10. Average farm size (hectares), by province, by type

Province	Control	Treatment
Bukidnon	2.3	2.2
Compostela Valley	2.0	2.4
Davao City	1.8	1.6
Davao del Norte	1.6	2.0
Davao del Sur	1.9	2.1
Davao Oriental	3.4	2.9
Zamboanga del Norte	1.6	2.0
Overall	2.1	2.2

Table 11. Land tenure, by type

Items	Control		Treatment	
	Freq.	%	Freq.	%
Amortizing owner	7	2.0	23	3.4
Caretaker	6	1.7	15	2.2
Leaseholder		0.0	2	0.3
Owner	292	83.0	530	78.3
Tenant	23	6.5	53	7.8

Table 12. Land use, by type

Items	Control		Treatment	
	Freq.	%	Freq.	%
Agroforest	3	0.9	16	2.4
Intercrop	295	83.8	522	77.1
Monocrop	29	8.2	80	11.8
Untilled land	1	0.3	5	0.7

Table 13. Average years of farming, by province, by type

Province	Control	Treatment
Bukidnon	24	26
Compostela Valley	25	21
Davao City	22	25
Davao del Norte	15	19
Davao del Sur	23	21
Davao Oriental	29	22
Zamboanga del Norte	20	18

Overall	23	21
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Table 14. Percentage of productive land, by province, by type

Province	Control	Treatment	diff (T-C)
Bukidnon	92.6	82.4	-10.2
Compostela Valley	91.5	85.5	-6.0
Davao City	75.3	78.0	2.7
Davao del Norte	75.2	85.4	10.2
Davao del Sur	89.2	85.0	-4.1
Davao Oriental	73.1	78.4	5.2
Zamboanga del Norte	85.5	79.8	-5.7
Overall	84.8	82.1	-2.7

Family Livelihood Activities

Crop farming and gardening are the main livelihood of majority of the respondents from the treatment and control sites (Table 15). Overall rating to access of work/income generating activity of the respondents both from the treatment and control sites is average to good (Table 16). The average farm income of the respondents from the treatment sites is generally higher than that of the control sites (Table 17). The average non-farm income of the treatment group is also higher than that of the control group (Table 18). Both the treatment and control groups reported negative annual savings (Table 19).

Table 15. Main livelihood activities of the respondents

Items	Control		Treatment	
	Freq.	%	Freq.	%
Products from Crop farming and gardening	312	88.6	557	82.3
Livestock and poultry raising (such as raising of carabaos, cattle, hogs, horses, chicken, ducks, etc. and the production of fresh milk, eggs, etc.)	2	0.6	6	0.9
Fishing (such as capture fishing gathering fry, shells, seaweeds, etc. ; and culturing fish, oyster, mussel, etc.)		0.0	3	0.4
Charcoal making / Forestry, tree planting, firewood, small-scale logging, forestry products (cogon, nipa, rattan, bamboo , resin, gum, etc.)		0.0	1	0.1
Hunting wild animals/birds		0.0		0.0
Wholesale and retail trade (including market vending, sidewalk vending and peddling, small shop)	4	1.1	12	1.8
Manufacturing/handicraft (such as mat weaving, tailoring, dressmaking)		0.0	1	0.1
Remittances	2	0.6	14	2.1
Daily/common labourer (agriculture, construction etc)	8	2.3	28	4.1
Skilled salaried employment (such as medical, teaching ,bank, government	11	3.1	13	1.9
Construction/ skilled labour (repair of a house, building/structure, etc.) 14. Pension, Government allowances (peace council member)	3	0.9	8	1.2

Unskilled salaried employment (assistant, hair dresser, massage, hotel staff, housemaid, laundry etc)	1	0.3	4	0.6
Transportation, storage and communication services (e.g., jeepneys or taxis, storage and warehousing activities, messenger services, etc.)	1	0.3	3	0.4
Mining and quarrying (such as mineral extraction like salt making, gold mining, gravel, sand and stone quarrying, etc.)		0.0	1	0.1
Other	8	2.3	26	3.8

Table 16. Overall rating to access of work/income generating activity of the respondents

Items	Control		Treatment	
	Freq.	%	Freq.	%
Very Good	26	7.4	49	7.2
Good	180	51.1	338	49.9
Average	120	34.1	244	36.0
Bad	26	7.4	37	5.5
Very Bad		0.0	9	1.3

Table 17. Average farm income, by sources

Items	Control	Treatment
Livestock		56,000.00
Sales from Crops	47,954.26	55,205.17
Working on others farms	19,666.67	34,369.23
Others		36,333.33
Average	47,691.52	54,655.08

Table 18. Average non-farm income, by sources

Items	Control	Treatment
Honorarium	74,173.33	51,277.04
Nonfarm Enterprise you own	64,190.48	76,522.05
Remittances	43,714.29	37,564.12
Rent from properties	34,000.00	21,000.00
Salary	83,799.84	89,395.94
Sale of Assets	70,000.00	47,500.00
Others	53,391.07	72,983.77
Average	65,664.55	74,039.50

Table 19. Estimated annual income and expenditure (savings/dissavings), by province

Province	Control			Treatment		
	Annual Income	Annual Expenditure	Savings/ dissaving	Annual Income	Annual Expenditure	Savings/ dissaving
Bukidnon	102,340.00	98,691.12	3,648.88	64,055.62	79,122.80	- 15,778.91
Compostela Valley	97,570.37	93,959.11	3,611.26	135,312.98	100,044.33	29,061.63

Davao City	80,671.78	117,897.87	- 37,226.09	93,890.38	106,989.15	- 14,272.40
Davao del Norte	81,698.28	77,786.90	3,911.38	105,700.0 0	126,579.56	- 22,836.96
Davao del Sur	98,546.00	155,515.54	- 56,969.54	97,289.88	142,292.18	- 52,429.01
Davao Oriental	75,840.91	81,786.00	- 5,945.09	76,339.55	99,310.68	- 24,648.92
Zamboanga del Norte	57,122.53	80,576.80	- 23,454.27	73,445.22	85,863.15	- 14,825.97
Average	85,363.22	104,797.88	- 19,434.66	91,923.08	105,721.07	- 17,056.71

Appendix D: Production per Hectare per Commodity

Cacao

There is insignificant difference in terms of cacao farm area (hectares) between the treatment and control areas (Table 1). However, there is significant difference in terms of average trees per hectare of cacao between the treatment and control areas. Overall, the control areas have more trees per hectare than the treatment area (Table 2), which is due to the presence of other crops in the same space, which is still good as to yield from diversified farming. In terms of cacao produce, the treatment sites are producing more dried beans (62.3%) compared to the control site (43.2%) (Table 3).

Table 1. Average area planted (hectares) for cacao, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	1.5	0.6	-0.8
Compostela Valley	1.0	1.0	0.1
Davao City	0.9	1.0	0.2
Davao del Norte	0.9	1.0	0.0
Davao del Sur	1.4	0.8	-0.5
Davao Oriental	1.2	0.8	-0.4
Zamboanga del Norte	1.4	1.1	-0.3
Overall	1.2	1.0	-0.2

Table 2. Average trees per hectare of Cacao, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	954	85	-869
Compostela Valley	361	502	140
Davao City	638	548	-90
Davao del Norte	426	443	16
Davao del Sur	493	331	-161
Davao Oriental	354	329	-25
Zamboanga del Norte	212	159	-53
Overall	473	380	-92

Table 3. Type of cacao produce.

Items	Control		Treatment	
	Freq.	%	Freq.	%
Wet Beans	81	29.7	67	16.3
Fermented Beans	10	3.7	6	1.5
Dried Beans	118	43.2	256	62.3

Coconut

There is no difference in terms of coconut farm area (hectares) between the treatment and control areas (Table 4). However, there is significant difference in terms of average trees per hectare of

coconut between the treatment and control areas. Overall, the control areas have more trees per hectare than the treatment area (Table 5). In terms of type of coconut produce, the treatment sites are producing more copra (64.2%) compared to the control site (55.1%) while the control site is producing more whole nut (44.6%) compared to the treatment site (29%)(Table 6).

Table 4. Average area planted (hectares) for coconut, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	2.1	0.0	-2.0
Compostela Valley	2.9	1.8	-1.1
Davao City	1.4	0.9	-0.5
Davao del Norte	0.9	1.7	0.8
Davao del Sur	1.8	1.4	-0.4
Davao Oriental	2.7	2.4	-0.3
Zamboanga del Norte	1.6	2.8	1.3
Overall	2.0	1.9	0.0

Table 5. Average trees per hectare of coconut, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	107	13	-94
Compostela Valley	226	215	-10
Davao City	167	77	-90
Davao del Norte	319	304	-15
Davao del Sur	187	142	-45
Davao Oriental	516	302	-214
Zamboanga del Norte	153	154	1
Overall	234	189	-44

Table 6. Type of coconut produce.

Items	Control		Treatment	
	Freq.	%	Freq.	%
Whole Nut (Green)	25	8.5	18	3.8
Whole Nut (Matured)	131	44.6	136	29.0
Copra	162	55.1	301	64.2

Coffee

There is insignificant difference in terms of coffee farm area (hectares) (Table 7) and in the average trees per hectare of coffee between the treatment and control areas (Table 8). In terms of coffee produce, the treatment sites are producing more green cherries (19.8%) compared to the control site (7.1%) while the control site is producing more dried beans (71.4%) compared to the treatment site (59.9%) (Table 9).

Table 7. Average area planted (hectares) for coffee, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	0.5	0.7	0.2

Compostela Valley	0.6	0.7	0.1
Davao City	0.7	0.8	0.1
Davao del Norte		0.8	0.8
Davao del Sur		1.2	1.2
Davao Oriental	0.4	0.5	0.1
Zamboanga del Norte	0.4	5.8	5.4
Overall	0.6	1.1	0.5

Table 8. Average trees per hectare of coffee, by province

Province	Control	Treatment	diff (T-C)
Bukidnon	698	1332	634
Compostela Valley	703	396	-307
Davao City	1331	588	-743
Davao del Norte		800	800
Davao del Sur		589	589
Davao Oriental	811	492	-319
Zamboanga del Norte	267	119	-147
Overall	836	813	-22

Table 9. Type of coffee produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
Green Cherries	2	7.1	37	19.8
Dried Beans	20	71.4	112	59.9
Fermented Beans		0.0	8	4.3

Appendix E: Technology Adoption per Commodity

Cacao

There are varying levels of adoption of technology introduced by MinPACT. Adoption rate among cacao farmers who learned the technology of plant spacing ranked highest at 82.1% followed by intercropping/diversification at 80.9% and application of fertilizer at 73.2%. The least adopted technology is soil sampling at 12.4%, rehabilitation at 20.6% and post-harvest techniques/practices at 20.8%. While adoption may be average to low among certain types of technology, the respondents' ratings on the application are consistent. In a scale of 1-10, the respondents' rated the application of technology between 7-8 (See Table 1).

Based on available data (See Table 2), majority of the respondents is convinced on the benefits of the technology, but some of them were not able to apply the technology because it is laborious/time consuming and input intensive/expensive. Those who did apply the technology noticed positive changes in their farm in terms of quality of produce, productivity and marketability (See Tables 3-4).

Table 1. Adoption rate and rating of MinPACT introduced technologies for Cacao

Technology	Learned the Technology			Applied the Technology			Adoption rate **	Rating ***	Average Trees
	No	Yes	% Yes	No	Yes	% Yes *			
IPDM	97	301	76.4	125	176	58.5	44.7	7.7	326
Mulching	123	271	68.8	109	162	59.8	41.1	7.8	343
Avoid slash and burn	124	270	68.5	132	138	51.1	35.0	7.8	356
Pruning	35	358	90.9	120	238	66.5	60.4	8.0	403
Farm Planning	100	292	74.1	92	199	68.2	50.5	8.0	360
Application of fertilizer	85	306	77.7	82	224	73.2	56.9	7.9	455
Weed Management	178	213	54.1	71	142	66.7	36.0	7.7	362
Intercropping/Diversification	119	272	69.0	52	220	80.9	55.8	8.1	350
Proper plant spacing	79	312	79.2	56	256	82.1	65.0	8.1	357
Rehabilitation	187	204	51.8	123	81	39.7	20.6	8.1	322
Soil Sampling	222	169	42.9	120	49	29.0	12.4	7.6	432
Proper harvesting	145	246	62.4	118	128	52.0	32.5	8.2	474
Postharvest techniques/practices	195	196	49.7	114	82	41.8	20.8	8.3	475

* Adoption rate among cacao farmers who learned the technology

**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Table 2. Reasons for non-adoption of Cacao introduced technologies

Technology	Reasons											
	Do not own a land (Tenure)		Input intensive/expensive		Laborious/time consuming		Not appropriate for the crop		Not convinced on the benefits of the technology		Others	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
IPDM	11	8.8	37	29.6	50	40.0	4	3.2	22	17.6	0	0.0
Mulching	2	1.8	14	12.8	26	23.9	47	43.1	2	1.8	15	13.8
Avoid slash and burn	1	0.8	7	5.3	41	31.1	67	50.8	6	4.5	9	6.8
Pruning		0.0	5	4.2	16	13.3	78	65.0	2	1.7	17	14.2
Farm Planning	1	1.1	6	6.5	39	42.4	31	33.7	6	6.5	7	7.6
Application of fertilizer		0.0	30	36.6	17	20.7	21	25.6	3	3.7	10	12.2
Weed Management		0.0	6	8.5	41	57.7	17	23.9	2	2.8	4	5.6
Intercropping/ Diversification	2	3.8	4	7.7	19	36.5	21	40.4	0	0.0	5	9.6
Proper plant spacing	1	1.8	3	5.4	17	30.4	18	32.1	6	10.7	9	16.1
Rehabilitation	1	0.8	9	7.3	39	31.7	48	39.0	2	1.6	22	17.9
Soil Sampling	2	1.7	16	13.3	45	37.5	45	37.5	4	3.3	7	5.8
Proper harvesting		0.0	4	3.4	18	15.3	51	43.2	3	2.5	40	33.9
Postharvest techniques/practices	1	0.9	2	1.8	30	26.3	45	39.5	1	0.9	34	29.8

Table 3. Percentage of respondents who applied the Cacao technologies and perceived changes in the farm

Items	Is there a change?		
	No	Yes	%Yes
IPDM	25	150	85.2
Mulching	17	145	89.5
Avoid slash and burn	19	117	84.8
Pruning	24	214	89.9
Farm Planning	29	169	84.9
Application of fertilizer	17	207	92.4
Weed Management	8	133	93.7
Intercropping/diversification	18	202	91.8
Proper plant spacing	33	222	86.7
Rehabilitation	7	74	91.4
Soil Sampling	1	48	98.0
Proper harvesting	6	122	95.3
Postharvest techniques/practices	2	80	97.6

Table 4. Details of the perceived changes in the farm operation due to Cacao technologies

Items	Changes in....											
	Quality			Productivity			Cost			Marketability		
	Decrease	Increase	% Increase	Decrease	Increase	% Increase	Decrease	Increase	% Increase	Decrease	Increase	% Increase
IPDM	15	123	82.0		81	54.0	5	8	5.3		11	7.3
Mulching	10	122	84.1	2	89	61.4	7	4	2.8	0	10	6.9
Avoid slash and burn	11	94	80.3	0	47	40.2	16	2	1.7	1	7	6.0
Pruning	12	177	82.7	1	125	58.4	20	2	0.9	0	26	12.1
Farm Planning	12	143	84.6	2	91	53.8	15	5	3.0	0	15	8.9
Application of fertilizer	12	171	82.6	2	131	63.3	15	15	7.2	0	17	8.2
Weed Management	8	112	84.2	1	77	57.9	10	4	3.0	1	3	2.3
Intercropping/diversification	7	155	76.7	2	129	63.9	21	6	3.0	0	33	16.3
Proper plant spacing	11	189	85.1	3	129	58.1	14	6	2.7	0	19	8.6
Rehabilitation	7	56	75.7	0	46	62.2	8	1	1.4	0	5	6.8
Soil Sampling	5	36	75.0	0	28	58.3	2	3	6.3	0	1	2.1
Proper harvesting	5	101	82.8	0	80	65.6	9	2	1.6	0	8	6.6
Postharvest techniques/practices	3	63	78.8	0	57	71.3	4	1		0	9	11.3

Coconut

Like in the case of cacao, there are varying levels of adoption of technology introduced for coconuts by MinPACT. Adoption rate among coconut farmers who learned the technology of intercropping/diversification is highest at 81.3% followed by proper plant spacing at 79.9% and application of fertilizer at 78.1%. The least adopted technology is pruning at 27.1%, soil sampling at 34.2% and rehabilitation at 37.3% (See Table 5). Compared to cacao farmers, coconut farmers are a bit more included to adopt new technologies. In a scale of 1-10, the average rating given by the respondents on the use of technology is 8 (See Table 6).

Common reasons given by the respondents on why they did not adopt the technology introduced by MinPACT were as follows: a) the application of the technology is laborious, b) the use of the technology is expensive, and c) the technology is not appropriate for the crop (See Table 7).

Farmers who applied the technology introduced by MinPACT reported positive changes in their farm in terms of quality of produce, volume of production and marketability (See Tables 8).

Table 5. Adoption rate and rating of MinPACT introduced technologies for Coconut

Technology	Learned the Technology			Applied the Technology			Adoption rate **	Rating ***	Average Trees
	No	Yes	% Yes	No	Yes	% Yes *			
IPDM	96	149	60.8	52	96	64.4	39.2	8.1	256
Mulching	109	135	55.1	57	78	57.8	31.8	8.1	269
Avoid slash and burn	146	98	40.0	51	47	48.0	19.2	8.2	227
Pruning	137	107	43.7	77	29	27.1	11.8	8.3	202
Farm Planning	98	146	59.6	44	102	69.9	41.6	8.3	239
Application of fertilizer	93	151	61.6	33	118	78.1	48.2	8.2	195
Weed Management	137	105	42.9	30	75	71.4	30.6	8.2	186
Intercropping/Diversification	99	144	58.8	27	117	81.3	47.8	8.3	195
Proper plant spacing	84	159	64.9	32	127	79.9	51.8	8.4	228
Rehabilitation	159	83	33.9	52	31	37.3	12.7	8.2	224
Soil Sampling	169	73	29.8	48	25	34.2	10.2	8.2	229
Proper harvesting	124	118	48.2	26	92	78.0	37.6	8.5	203
Postharvest techniques/practices	138	104	42.4	33	71	68.3	29.0	8.4	209

* Adoption rate among cacao farmers who learned the technology

**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Table 6. Reasons for non-adoption of Coconut introduced technologies

Technology	Reasons											
	Do not own a land (Tenure)		Input intensive/expensive		Laborious/time consuming		Not appropriate for the crop		Not convinced on the benefits of the technology		Others	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
IPDM	2	3.8	2	3.8	23	44.2	19	36.5	2	3.8	4	7.7
Mulching	2	3.5	3	5.3	21	36.8	24	42.1		0.0	7	12.3
Avoid slash and burn	1	2.0	1	2.0	19	37.3	25	49.0	1	2.0	4	7.8
Pruning	1	1.3	0	0.0	21	27.3	49	63.6		0.0	6	7.8
Farm Planning	1	2.3	0	0.0	16	36.4	15	34.1	2	4.5	4	9.1
Application of fertilizer	1	3.0	11	33.3	13	39.4	5	15.2	1	3.0	2	6.1
Weed Management	1	3.3	5	16.7	18	60.0	6	20.0		0.0		0.0
Intercropping/ Diversification		0.0	4	14.8	8	29.6	7	25.9	2	7.4	6	22.2
Proper plant spacing	1	3.1	1	3.1	12	37.5	10	31.3		0.0	8	25.0
Rehabilitation		0.0	1	1.9	25	48.1	17	32.7	2	3.8	6	11.5
Soil Sampling		0.0	5	10.4	26	54.2	13	27.1	3	6.3	1	2.1
Proper harvesting		0.0	3	11.5	13	50.0	6	23.1	1	3.8	3	11.5
Postharvest techniques/practices		0.0	3	9.1	20	60.6	8	24.2		0.0	1	3.0

Table 7. Percentage of respondents who applied the Coconut technologies and perceived changes in the farm

Items	Is there a change?		
	No	Yes	%Yes
IPDM	7	89	92.7
Mulching	10	68	87.2
Avoid slash and burn	1	46	97.9
Pruning		29	100.0
Farm Planning	14	88	86.3
Application of fertilizer	8	110	93.2
Weed Management	5	69	92.0
Intercropping/diversification	8	109	93.2
Proper plant spacing	20	106	83.5
Rehabilitation	1	30	96.8
Soil Sampling	2	23	92.0
Proper harvesting	8	83	90.2
Postharvest techniques/practices	2	69	97.2

Table 8. Details of the perceived changes in the farm operation due to Coconut technologies

Items	Changes in....											
	Quality			Productivity			Cost			Marketability		
	Decrease	Increase	% Increase	Decrease	Increase	% Increase	Decrease	Increase	% Increase	Decrease	Increase	% Increase
IPDM	6	66	74.2	2	52	58.4	1	6	6.7	1	7	7.9
Mulching	2	51	75.0	4	47	69.1	5	3	4.4	0	5	7.4
Avoid slash and burn	0	36	78.3	1	30	65.2	9	1	2.2	0	6	13.0
Pruning	0	21	72.4	1	19	65.5	0	2	6.9	0	2	6.9
Farm Planning	5	69	78.4	2	48	54.5	4	5	5.7	0	11	12.5
Application of fertilizer	2	84	76.4	1	89	80.9	6	8	7.3	0	15	13.6
Weed Management	0	52	75.4	1	52	75.4	2	3	4.3	0	5	7.2
Intercropping/diversification	1	82	75.2	3	75	68.8	6	5	4.6	0	22	20.2
Proper plant spacing	4	81	76.4	2	73	68.9	5	3	2.8	0	16	15.1
Rehabilitation	1	21	70.0	1	19	63.3	0	2	6.7	0	4	13.3
Soil Sampling	1	18	78.3	0	16	69.6	0	0	0.0	0	0	0.0
Proper harvesting	3	64	77.1	0	63	75.9	0	5	6.0	1	10	12.0
Postharvest techniques/practices	1	50	72.5	0	55	79.7	0	6	8.7	0	18	26.1

Coffee

Like in the case of cacao and coconut farmers, there are varying levels of adoption of technology introduced for coffee by MinPACT. Adoption rate among coffee farmers who learned the technology of proper plant spacing is highest at 77.8% followed by farm planning at 75.3%, intercropping/diversification at 63.8% and application of fertilizer at 63.6%. The least adopted technology is soil sampling at 28.3%, post-harvest techniques/practices at 31.3% and mulching at 34.6% (See Table 9). In a scale of 1-10, the average rating given by the respondents on the use of technology is 7-8 (See Table 10).

Common reasons given by the respondents on why they did not adopt the technology introduced by MinPACT were as follows: a) the application of the technology is laborious, b) the use of the technology is expensive, and c) the technology is not appropriate for the crop (See Table 11).

Same as in the cacao and coconut industry, farmers who applied the technology introduced by MinPACT reported positive changes in their farm in terms of quality of produce, volume of production and marketability (See Tables 12).

Table 9. Adoption rate and rating of MinPACT introduced technologies for Coffee

Technology	Learned the Technology			Applied the Technology			Adoption rate **	Rating ***	Average Trees
	No	Yes	% Yes	No	Yes	% Yes *			
IPDM	45	81	64.3	49	32	39.5	25.4	7.6	564
Mulching	48	78	61.9	51	27	34.6	21.4	7.9	751
Avoid slash and burn	65	61	48.4	36	25	41.0	19.8	7.6	595
Pruning	49	77	61.1	37	40	51.9	31.7	7.9	620
Farm Planning	37	89	70.6	22	67	75.3	53.2	8.0	569
Application of fertilizer	27	99	78.6	36	63	63.6	50.0	8.4	618
Weed Management	54	72	57.1	27	45	62.5	35.7	7.9	618
Intercropping/Diversification	57	69	54.8	25	44	63.8	34.9	8.3	486
Proper plant spacing	36	90	71.4	20	70	77.8	55.6	7.9	472
Rehabilitation	110	16	12.7	8	8	50.0	6.3	7.4	170
Soil Sampling	73	53	42.1	38	15	28.3	11.9	8.3	729
Proper harvesting	47	79	62.7	32	47	59.5	37.3	7.8	607
Postharvest techniques/practices	59	67	53.2	46	21	31.3	16.7	8.0	778

* Adoption rate among cacao farmers who learned the technology

**Adoption rate from the total sample

***Rating on the application of the technology (The lowest is 1 and the highest is 10)

Table 10. Reasons for non-adoption of Coffee introduced technologies

Technology	Reasons for non-adoption									
	Input intensive/expensive		Laborious/time consuming		Not appropriate for the crop		Not convinced on the benefits of the technology		Others	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
IPDM	18	36.7	15	30.6	10	20.4	1	2.0	3	6.1
Mulching	18	35.3	18	35.3	12	23.5		0.0	3	5.9
Avoid slash and burn	2	5.6	23	63.9	8	22.2		0.0	3	8.3
Pruning	1	2.7	20	54.1	12	32.4		0.0	4	10.8
Farm Planning		0.0	15	68.2	2	9.1	1	4.5	3	13.6
Application of fertilizer	22	61.1	7	19.4	3	8.3		0.0	4	11.1
Weed Management	1	3.7	22	81.5	2	7.4	1	3.7	1	3.7
Intercropping/Diversification		0.0	20	80.0	2	8.0	2	8.0	1	4.0
Proper plant spacing		0.0	8	40.0	2	10.0	2	10.0	8	40.0
Rehabilitation		0.0	1	12.5	6	75.0		0.0	1	12.5
Soil Sampling	12	31.6	21	55.3	4	10.5		0.0	1	2.6
Proper harvesting	1	3.1	13	40.6	3	9.4	1	3.1	14	43.8
Postharvest techniques/practices	7	15.2	25	54.3	1	2.2		0.0	13	28.3

Table 11. Percentage of respondents who applied the Coffee technologies and perceived changes in the farm

Items	Is there a change?		
	No	Yes	%Yes
IPDM	0	32	100.0
Mulching	1	26	96.3
Avoid slash and burn	0	25	100.0
Pruning	0	40	100.0
Farm Planning	1	66	98.5
Application of fertilizer	3	59	93.7
Weed Management	0	45	100.0
Intercropping/diversification	1	43	97.7
Proper plant spacing	2	68	97.1
Rehabilitation	0	8	100.0
Soil Sampling	0	15	100.0
Proper harvesting	0	47	100.0
Postharvest techniques/practices	1	20	95.2

Table 12. Details of the perceived changes in the farm operation due to Coffee technologies

Items	Changes in....											
	Quality			Productivity			Cost			Marketability		
	Dec reas e	Incr eas e	% Incre ase	Dec reas e	Incr eas e	% Incre ase	Dec reas e	Incr eas e	% Incre ase	Dec reas e	Incr eas e	% Incre ase
IPDM	2	27	84.4	0	22	68.8	4	4	12.5	0	5	15.6
Mulching	1	21	80.8	0	20	76.9	2	4	15.4	0	8	30.8
Avoid slash and burn	0	22	88.0	0	18	72.0	1	4	16.0	0	1	4.0
Pruning	0	33	82.5	0	35	87.5	6	6	15.0	0	7	17.5
Farm Planning	1	59	89.4	0	43	65.2	4	8	12.1	0	19	28.8
Application of fertilizer	1	55	93.2	0	42	71.2	5	7	11.9	0	15	25.4
Weed Management	0	42	93.3	0	30	66.7	4	7	15.6	0	9	20.0
Intercropping/diversification	0	37	86.0	0	32	74.4	5	9	20.9	0	10	23.3
Proper plant spacing	1	60	88.2	0	41	60.3	5	5	7.4	0	9	13.2
Rehabilitation	0	6	75.0	0	6	75.0	1	0	0.0	0	0	0.0
Soil Sampling	0	12	80.0	0	11	73.3	1	2	13.3	0	3	20.0
Proper harvesting	1	40	85.1	0	34	72.3	3	13	27.7	0	16	34.0
Postharvest techniques/practices	1	16	80.0	0	14	70.0	0	2	10.0	0	7	35.0

Appendix F: Farm Management and Practices

Application of Farm Techniques

Majority of the respondents (84.3%) from the treatment site said that they participated in the training for farmers and agribusiness service providers (Table 1). There is a slight significant difference in terms of planting materials used by the treatment and control groups (Table 2). Treatment groups use more clone/hybrid materials compared to the control sites. However, there is no significant difference in terms of their sources of planting materials (Tables 3-5).

Overall, 67.8% MinPACT beneficiaries leveraged seedling from MinPACT partners (Table 6) while 44.3% of the beneficiaries said that they also received seedlings from the Department of Agriculture (Table 7).

Overall, there is no significant difference in terms of the use of synthetic and organic fertilizer among cacao and coconut farmers in the treatment and control areas. However, in the coffee farms, more farmers (34.3%) prefer to use synthetic fertilizer over organic fertilizer (Table 8). Leading factors considered in decision on the type and amount of fertilizer to apply include recommendation from DA, recommendation from MinPACT and influence by neighbors (Table 9). There is no significant difference in terms of considerations before applying fertilizer, in the access to post-harvest facilities and post-harvest practices for cacao between the treatment and control areas (Table 10-12). However there is a slight difference in the post-harvest practices from coconut in terms of cleaning/ de-husking. Farmers from the treatment sites tend to practice cleaning/de-husking more often than that the farmers from the control site (Table 13).

There is a significant difference in the post-harvest practices between the treatment and control sites for coffee. Farmers from the treatment sites tend to practice pulping more often than farmers from the control sites (Table 14).

There is no significant difference in terms of post-harvest losses by farmers before and after MinPACT (Table 15).

There is no significant difference in the percentage of respondents with farm covered by crop insurance between the treatment and control sites (Table 16).

There is no significant change in the percentage of respondents who change cultivated crops for the last 3 years both in the treatment and control sites (Table 17). Factors that influence the decision to change cultivated crops include influence of MinPACT (8.2%) and market price of the produce (7.7%) (Table 18).

There is no significant difference in terms of percentage of respondents with farm certification between the treatment and control sites (Table 19).

Table 1. MinPACT beneficiaries involvement or /any member of the family in MinPACT project

Items	Freq.	%
Training for farmers and agribusiness service providers	571	84.3

Financial services to facilitate agricultural lending and insurance	112	16.5
Market access to enhance market opportunities and efficiency for agricultural products and services.	86	12.7
Capacity building for improved post-harvest systems for producer groups and agribusiness	71	10.5
Grants for improving post-harvest systems	109	16.1
Capacity building for improved post-harvest handling practices	100	14.8
Supportive grants for trained beneficiaries (inputs, plants, tools, trade shows, group development)	158	23.3
Value chain analysis and development	31	4.6
Others	67	9.9

Table 2. Type of planting materials, by crop, by type

Items		Cacao		Coconut		Coffee	
		Freq.	%	Freq.	%	Freq.	%
Control	Clone/Hybrid	161	56.1	43	14.6	8	21.1
	Traditional	104	36.2	212	72.1	27	71.1
	Propagated	77	26.8	49	16.7	8	21.1
Treatment	Clone/Hybrid	312	62.3	95	20.3	72	33.80
	Traditional	171	34.1	307	65.7	132	61.97
	Propagated	154	30.7	99	21.2	48	22.54
diff (% T-C)	Clone/Hybrid	6.2		5.7		12.75	
	Traditional	-2.1		-6.4		-9.08	
	Propagated	3.9		4.5		1.48	

Table 3. Sources of Cacao planting materials

Sources	Control		Treatment		diff (% T-C)
	Freq.	%	Freq.	%	
Accredited and Certified Nurseries	133	46.3	209	41.7	-4.6
Unaccredited and Uncertified Nurseries	1	0.3	2	0.4	0.1
Unaccredited Nurseries		0.0	5	1.0	1.0
Own	110	38.3	152	30.3	-8.0
Friends/Community	54	18.8	50	10.0	-8.8
Others	36	12.5	74	14.8	2.2

Table 4. Sources of Coconut planting materials

Sources	Control		Treatment		diff (% T-C)
	Freq.	%	Freq.	%	
Accredited and Certified Nurseries	57	19.4	80	17.1	-2.3
Unaccredited and Uncertified Nurseries		0.0	6	1.3	1.3
Unaccredited Nurseries	2	0.7	6	1.3	0.6
Own	240	81.6	348	74.5	-7.1
Friends/Community	70	23.8	83	17.8	-6.0

Others	10	3.4	24	5.1	1.7
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Table 5. Sources of Coffee planting materials

Sources	Control		Treatment		diff (% T-C)
	Freq.	%	Freq.	%	
Accredited and Certified Nurseries	6	15.8	70	32.9	17.1
Unaccredited and Uncertified Nurseries		0.0	1	0.5	0.5
Unaccredited Nurseries		0.0	2	0.9	0.9
Own	24	63.2	137	64.3	1.2
Friends/Community	8	21.1	73	34.3	13.2
Others	7	18.4	29	13.6	-4.8

Table 6. Percentage of MinPACT beneficiaries leveraged seedling from MinPACT partners, by province

Province	No	Yes	% Yes
Bukidnon	23	67	74.4
Compostela Valley	32	77	70.6
Davao City	25	55	68.8
Davao del Norte	14	40	74.1
Davao del Sur	58	73	55.7
Davao Oriental	32	59	64.8
Zamboanga del Norte	33	88	72.1
Overall	217	459	67.8

Table 7. Percentage of MinPACT beneficiaries received seedlings, by sources

Partners	Freq.	%	Average No. of Seedlings
LGUS	48	7.1	208
DA	300	44.3	196
DENR	14	2.1	267
CENRO	2	0.3	28
Others	178	26.3	197

Table 8. Type of fertilizer used, by crop, by type

Items		Cacao		Coconut		Coffee	
		Freq.	%	Freq.	%	Freq.	%
Control	Synthetic	143	49.8	114	38.8	0	0.0
	Organic	122	42.5	115	39.1	18	47.4
Treatment	Synthetic	243	48.5	153	32.8	73	34.3
	Organic	203	40.5	197	42.2	97	45.5
diff (% T-C)	Synthetic	-1.3		-6.0		34.3	
	Organic	-2.0		3.1		-1.8	

Table 9. Factors considered in decision on the type and amount of fertilizer to apply

Items	Control		Treatment		diff (% T-C)
	Freq.	%	Freq.	%	

Soil testing	40	11.4	103	15.2	3.9
Cost of fertilizer	41	11.6	71	10.5	-1.2
Influence by neighbours	90	25.6	140	20.7	-4.9
Recommendation of DA	122	34.7	214	31.6	-3.0
Recommendation from MinPACT	0	0.0	214	31.6	31.6
Others	51	14.5	60	8.9	-5.6
Do not apply fertilizer	84	23.9	188	27.8	3.9

Table 10. Considerations before applying fertilizer

Items	Control		Treatment		diff (% T-C)
	Freq.	%	Freq.	%	
Calendar dates	96	27.3	186	27.5	0.2
done at the first sight of pest, etc.	22	6.3	63	9.3	3.1
Based on crop growth	129	36.6	247	36.5	-0.2
Upon recommendation by DA technician	83	23.6	100	14.8	-8.8
Upon recommendation of MinPACT	0	0.0	150	22.2	21.9
Done when pest exceed acceptable level	2	0.6	5	0.7	0.2
Others	13	3.7	18	2.7	-1.0

Table 11. Access to post-harvest facilities

Items	Control		Treatment		diff (T-C)
	Freq.	%	Freq.	%	
% with access to storage facility	12	3.4	52	7.7	4.3
Cost of Storage facility	3,463.64		71,923.04		68,459.40
% with access to fermentation Facility	6	1.7	13	1.9	0.2
Cost of fermentation facility	3,333.33		40,326.67		36,993.33
% with access to dryer	31	8.8	91	13.4	4.6
Cost of dryer facility	5,311.39		9,744.85		4,433.46

Table 12. Percentage of respondents practicing Cacao postharvest practices

Items	Control		Treatment		diff (T-C)
	Freq.	%	Freq.	%	
Pod Breaking	12	4.2	28	5.6	1.4
Fermentation	51	17.8	104	20.8	3.0
Drying	46	16.0	114	22.8	6.7
Sorting/classifying	10	3.5	22	4.4	0.9
Grading	9	3.1	21	4.2	1.1
Storage	18	6.3	14	2.8	-3.5
Others	37	12.9	197	39.3	26.4

Table 13. Percentage of respondents practicing Coconut postharvest practices

Items	Control		Treatment		diff (T-C)
	Freq.	%	Freq.	%	
Cleaning/Dehusking	135	45.9	264	56.5	10.6

Grading	51	17.3	100	21.4	4.1
Sorting/classifying	51	17.3	83	17.8	0.4
Splitting	68	23.1	123	26.3	3.2
Drying	136	46.3	248	53.1	6.8
Storage	12	4.1	35	7.5	3.4
Others	2	0.7	2	0.4	-0.3

Table 14. Percentage of respondents practicing Coffee postharvest practices

Items	Control		Treatment		diff (T-C)
	Freq.	%	Freq.	%	
Pulping	1	2.6	30	14.1	11.5
Fermentation	0	0.0	8	3.8	3.8
Washing	2	5.3	10	4.7	-0.6
Drying	18	47.4	89	41.8	-5.6
Hulling	2	5.3	21	9.9	4.6
Polishing	2	5.3	21	9.9	4.6
Grading	5	13.2	25	11.7	-1.4
Sorting/classifying	8	21.1	46	21.6	0.5
Storage	0	0.0	11	5.2	5.2
Others	1	2.6	6	2.8	0.2

Table 15. Post-harvest losses, before and after MinPACT

Crops	Control			Treatment			diff (T-C)
	Before	Now	diff B-N	Before	Now	diff B-N	
Cacao	15.9	12.0	-3.8	14.3	11.3	-3.0	0.8
Coconut	16.2	15.0	-1.2	16.0	14.8	-1.2	0.0
Coffee	15.6	16.0	0.4	14.9	14.2	-0.7	-1.1

Table 16. Percentage of respondents with farm covered by crop insurance

Province	Control			Treatment			Diff (T-C)
	No	Yes	% Yes	No	Yes	% Yes	
Bukidnon	33	17	4.9	89	1	0.2	-4.7
Compostela Valley	53	1	0.3	93	16	2.5	2.2
Davao City	44	1	0.3	75	5	0.8	0.5
Davao del Norte	27	2	0.6	43	11	1.7	1.1
Davao del Sur	54	16	4.6	131		0.0	-4.6
Davao Oriental	40	4	1.2	87	4	0.6	-0.5
Zamboanga del Norte	58	2	0.6	116	6	0.9	0.4
Overall	309	43	12.4	634	43	6.7	-5.7

Table 17. Percentage of respondents who change cultivated crops for the last 3 years

Province	Control			Treatment			Diff (T-C)
	No	Yes	% Yes	No	Yes	% Yes	
Bukidnon	42	8	2.3	69	21	3.3	0.9
Compostela Valley	54		0.0	107	2	0.3	0.3

Davao City	33	12	3.5	67	13	2.0	-1.4
Davao del Norte	29		0.0	53	1	0.2	0.2
Davao del Sur	70		0.0	123	8	1.2	1.2
Davao Oriental	44		0.0	81	10	1.5	1.5
Zamboanga del Norte	30	30	8.6	74	48	7.4	-1.2
Overall	302	50	14.4	574	103	15.9	1.5

Table 18. Factors that influence the decision to change cultivated crops

Items	Control		Treatment	
	Freq.	%	Freq.	%
Market Price of the produce	23	6.6	50	7.7
Accessibility of Market	16	4.6	25	3.9
Fertilizer requirements	8	2.3	10	1.5
Laborious	4	1.2	8	1.2
Vulnerability to pest and diseases	6	1.7	19	2.9
Shift to crops with support	6	1.7	13	2.0
Market preference	5	1.4	19	2.9
As influence of MinPACT	0	0.0	53	8.2
Others	6	1.7	4	0.6

Table 19. Percentage of respondents with farm certification

Province	Control			Treatment			Diff (T-C)
	No	Yes	% Yes	No	Yes	% Yes	
Bukidnon	39	11	3.2	90		0.0	-3.2
Compostela Valley	54		0.0	108	1	0.2	0.2
Davao City	43	2	0.6	78	2	0.3	-0.3
Davao del Norte	24	5	1.4	36	18	2.8	1.3
Davao del Sur	68	2	0.6	130	1	0.2	-0.4
Davao Oriental	44		0.0	91		0.0	0.0
Zamboanga del Norte	60		0.0	122		0.0	0.0
Overall	332	20	5.8	655	22	3.4	-2.4

Table 20. Type of farm certification

Items	Control		Treatment	
	Freq.	%	Freq.	%
GAP	3	0.9	1	0.1
Organic	16	4.5	21	3.1
Under Fair Trade	2	0.6	2	0.3

MANAGEMENT PRACTICES

Overall, 59.4% of the MinPACT beneficiaries attended management trainings (Table 21). In a scale of 1-10 where 10 is the highest, the ratings given by the respondents for management practices application/adoption is between 7 to 8 (Table 22). Common reasons from adopting the practices were the following a) easy to follow, b) helpful in decision making, c)

professionalize/formalize the farm operation, c) enhances efficiency of the operation and others (Table 23). On the other hand, the common reasons from not adopting the practices were the following a) very hard to follow and apply, b) lack of equipment/tools to apply the practice, c) does not think this is helpful in my operation, d) inconvenient, e) time consuming, e) did not fully understand the management practices and others (Table 24).

Table 21. Percentage of MinPACT beneficiaries attended management trainings

Province	No response	No	Yes	% Yes
Bukidnon	22	15	53	7.8
Compostela Valley	20	18	69	10.2
Davao City	5	12	38	5.6
Davao del Norte	35	7	11	1.6
Davao del Sur	31	18	82	12.1
Davao Oriental	3	31	57	8.4
Zamboanga del Norte	14	16	92	13.6
Overall	130	117	402	59.4

Table 22. Management practices applied and adoption rate

Items	Applied?			Adoption Rate**	Rating ***
	No	Yes	% Yes*		
Input, Output, and Labor Needs Computation	195	145	36.1	21.4	7.6
Business practices (related to the management of land, crops, equipment, facilities, transportation)	248	269	66.9	39.7	8.0
Use of Information Technology (including computers and GPS)	406	98	24.4	14.5	8.3
Financial planning, cash flow, balance sheet, income statements, variable and fixed agents	292	221	55.0	32.6	8.0
Record Keeping (including financial and production documents, receipts and expenses, maintaining and using inventories, etc)	234	277	68.9	40.9	8.7
Gender Equity/Equality/Development/mainstreaming	246	264	65.7	39.0	8.1

* Adoption rate among cacao farmers who learned the technology

**Adoption rate from the total sample

*** Rating on the application of the technology (The lowest is 1 and the highest is 10)

Table 23. Reasons for practicing/applying the management practices

Items	Input, Output, and Labor Needs Computation		Business practices (related to the management of land, crops, equipment, facilities, transportation)		Use of Information Technology (including computers and GPS)		Financial planning, cash flow, balance sheet, income statements, variable and fixed agents		Record Keeping (including financial and production documents, receipts and expenses, maintaining and using inventories, etc)		Gender Equity/ Equality/ Development/ mainstreaming	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Easy to follow	101	69.7	75	27.9	18	18.4	48	21.7	91	32.9	116	43.9
Helpful in decision making	65	44.8	51	19.0	12	12.2	55	24.9	75	27.1	117	44.3
Professionalize/formalize the farm operation	34	23.4	34	12.6	9	9.2	37	16.7	42	15.2	86	32.6
Enhances efficiency of the operation..	53	36.6	28	10.4	12	12.2	34	15.4	44	15.9	88	33.3
Others	0	0.0	2	0.7	0	0.0	1	0.5	4	1.4	5	1.9

Table 24. Reasons for not applying management practices

Items	Input, Output, and Labor Needs Computation		Business practices (related to the management of land, crops, equipment, facilities, transportation)		Use of Information Technology (including computers and GPS)		Financial planning, cash flow, balance sheet, income statements, variable and fixed agents		Record Keeping (including financial and production documents, receipts and expenses, maintaining and using inventories, etc)		Gender Equity/ Equality/ Development/ mainstreaming	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very hard to follow and apply	41	21.0	39	15.7	28	6.9	15	5.1	39	16.7	25	10.2
Lack of equipment/tools to apply the practice	42	21.5	34	13.7	32	7.9	8	2.7	40	17.1	22	8.9
Does not think this is helpful in my operation	20	10.3	24	9.7	21	5.2	4	1.4	28	12.0	10	4.1
Inconvenient	55	28.2	57	23.0	43	10.6	7	2.4	66	28.2	23	9.3

Time consuming	103	52.8	88	35.5	55	13.5	18	6.2	117	50.0	40	16.3
Did not fully understand the management practice	22	11.3	23	9.3	11	2.7	5	1.7	13	5.6	14	5.7
Others	84	43.1	88	35.5	6	1.5	42	14.4	89	38.0	137	55.7

Appendix G: Access to Credit and Financing

Costs and Financing for 3Cs Production

Cacao

There is a significant difference in terms of the total cost of cacao production per cropping between the treatment and the control sites. The total cost of production per cropping is higher in the treatment site than in the control site (Table 1). There is insignificant difference in terms of sources of financing for cacao production between the treatment and the control areas (Table 2).

Table 1. Cost of Cacao production per cropping

Cost Items	Control	Treatment	diff (T-C)
Labor cost	808.24	1,307.14	498.91
Cost of Inputs	1,943.97	1,617.33	- 326.64
Transportation	176.00	267.83	91.83
Postharvest	2,302.59	1,036.43	- 1,266.16
Other cost	471.60	2,494.38	2,022.78
Total	5,702.40	6,723.10	1,020.70

Table 2. Sources of financing for Cacao production

Items	Control		Treatment	
	Freq.	%	Freq.	%
Sale of farm produce	132	94.3	173	88.7
Business or other investment	3	2.1	13	6.7
Off-farm employment	5	3.6	16	8.2
Remittances	1	0.7	2	1.0
Loans/borrowings	11	7.9	8	4.1
Others	6	4.3	9	4.6

Coconut

There is a significant difference in terms of the total cost of coconut production per cropping between the treatment and the control sites. The total cost of production per cropping is higher in the treatment site than in the control site (Table 3). There is insignificant difference in terms of sources of financing for cacao production between the treatment and the control areas (Table 4).

Table 3. Cost of coconut production per cropping

	Control	Treatment	diff (T-C)
Labor cost	2,141.21	2,612.96	471.76
Cost of Inputs	1,520.89	1,827.03	306.14
Transportation	402.59	456.93	54.35
Postharvest	1,192.94	1,562.38	369.45
Other cost	671.74	1,819.20	1,147.47
Total	5,929.36	8,278.51	2,349.15

Table 4. Sources of financing for coconut production

Items	Control		Treatment	
	Freq.	%	Freq.	%
Sale of farm produce	285	96.9	415	88.5
Business or other investment	10	3.4	13	2.8
Off-farm employment	12	4.1	23	4.9
Remittances	6	2.0	9	1.9
Loans/borrowings	17	5.8	34	7.2
Others	6	2.0	31	6.6

Coffee

There is a very significant difference in terms of the total cost of coffee production per cropping between the treatment and the control sites. The total cost of production per cropping is higher in the treatment site than in the control site (Table 5). There is a significant difference in terms of sources of financing for cacao production between the treatment and the control areas (Table 6).

Table 5. Cost of coffee production per cropping

	Control	Treatment	diff (T-C)
Labor cost	280.00	2,073.52	1,793.52
Cost of Inputs	1,645.00	9,594.39	7,949.39
Transportation	156.67	309.30	152.64
Posharvest	2,400.00	1,299.50	- 1,100.50
Other cost	350.00	1,013.00	663.00
Total	4,831.67	14,289.71	9,458.05

Table 6. Sources of financing for coffee production

Items	Control		Treatment	
	Freq.	%	Freq.	%
Sale of farm produce	1	3.6	164	87.7
Business or other investment	1	3.6	7	3.7
Off-farm employment	5	17.9	13	7.0
Remittances	0	0.0	4	2.1
Loans/borrowings	1	3.6	3	1.6
Others	3	10.7	8	4.3

General Borrowing

There is no significant difference in terms of indebtedness between the respondents from the treatment and the control group. Overall, 36.2% of the respondents from the control group said that they have debts while 33.7% of the respondents from the control group said that they have debts (See Table 7). Majority of the respondents from the treatment group borrow money from

the cooperatives/paluwagan (58.5%) while those from the control group usually borrow money from credit facilities/entities such as traders (29.1%) and cooperatives (16.2%) and micro finance institutions (15.4%) (See Table 8). Both the treatment and control group respondents usually access bigger loan amounts from banks (See Table 9). The average overall interest rate of loans accessed by the treatment group is 4.28% per month and 4.95% for the control group (See Table 10). Overall, majority of the treatment respondents are paying their debts on a monthly basis (38.5%) while majority from the control group are paying their debts at agreed terms of either daily/every other/others (48.7%)(See Table 11).

Table 7. Percentage of respondents with debt

Province	Control				Treatment			
	No	Refuse to answer	Yes	% Yes	No	Refuse to answer	Yes	% Yes
Bukidnon	23	17	10	20.0	65	16	9	10.0
Compostela Valley	23	3	28	51.9	40		68	63.0
Davao City	13	10	20	46.5	28	18	27	37.0
Davao del Norte	17		12	41.4	21		32	60.4
Davao del Sur	40	4	23	34.3	66	4	45	39.1
Davao Oriental	20	6	18	40.9	46	5	34	40.0
Zamboanga del Norte	47	7	6	10.0	99	4	19	15.6
Overall	183	47	117	33.7	365	47	234	36.2

Table 8. Sources of debt

Items	Control		Treatment	
	Freq.	%	Freq.	%
5/6 Borrowing	6	5.1	4	1.7
Banks	13	11.1	15	6.4
Cooperatives/Paluwagan	19	16.2	137	58.5
Local lender/ pawnshop	7	6.0	7	3.0
Microfinance Institutions/ MFIs	18	15.4	20	8.5
Relatives/friends	15	12.8	25	10.7
Traders/ processors	34	29.1	16	6.8
Others	11	9.4	22	9.4

Table 9. Amount of debt by sources

Sources	Control	Treatment
5/6 Borrowing	4,000.00	3,000.00
Banks	160,076.92	141,642.86
Cooperatives/Paluwagan	46,147.06	41,432.89
Local lender/ pawnshop	7,714.29	26,428.57
Microfinance Institutions/ MFIs	45,277.78	12,050.00
Relatives/friends	7,186.67	23,114.29

Traders/ processors	19,968.75	13,021.43
Others	51,872.73	46,923.40
Average (Overall)	42,982.20	40,766.71

Table 10. Average interest rate by sources

Sources	Control	Treatment
5/6 Borrowing	14.00	15.00
Banks	1.91	2.68
Cooperatives/Paluwagan	4.56	3.67
Local lender/ pawnshop	6.43	4.71
Microfinance Institutions/ MFIs	4.56	6.38
Relatives/friends	6.79	5.26
Traders/ processors	4.48	4.50
Others	3.73	4.05
Average (Overall)	4.95	4.28

Table 11. Terms of payment by sources

Items	Control				Treatment			
	Monthly	Weekly	Yearly	Others	Monthly	Weekly	Yearly	Others
5/6 Borrowing	3			2	1	1		2
Banks		1	1	11	3	6	3	2
Cooperatives/ Paluwagan	9	1	1	6	46	7	21	58
Local lender/ pawnshop	3	4			4	2		1
Microfinance Institutions/ MFIs	4	12		2	2	16		2
Relatives/ friends	7	1	2	5	11	3		7
Traders/ processors	9			23	7	1		6
Others	2	1		8	15	3		3
Grand Total	37	20	4	57	90	39	24	81
Percentage	31.6	17.1	3.4	48.7	38.5	16.7	10.3	34.6

There is a slightly significant difference in the reason for borrowing money between the respondents from the treatment and the control group. Majority of the respondents both from the treatment group said that they borrow money to purchase farm inputs/finance the farm (65.8% treatment) and to buy food (35%). On the other hand, 54.7% of the control group respondents said that they borrow money to purchase farm inputs/finance the farm and 35.9% said that they borrow money to buy food (see Table 12).

Table 12. Reasons for borrowing

Reasons	Control		Treatment	
	Freq.	%	Freq.	%
To buy food	42	35.9	82	35.0
Purchase farm inputs/ finance the farm	64	54.7	154	65.8
Illnesses	16	13.7	23	9.8
Community activity	2	1.7	3	1.3
Others	32	27.4	57	24.4

There is a slightly significant difference between the treatment and control group in terms of the number of respondents who said that they have savings. Around 36.4% of the respondents from the treatment group said that they have savings while 27.1% of the respondents from the control group said that they have savings (See Table 13). Majority of the respondents (45.5%) from the treatment group said that they keep their savings in their cooperatives/paluwagan while majority of the respondents from the treatment group (43.6%) said that they keep their savings at home or in their piggy bank (See Table 14).

Table 13. Percentage of respondents with savings

Province	Control			Treatment		
	No	Yes	% Yes	No	Yes	% Yes
Bukidnon	46	4	1.2	74	16	2.5
Compostela Valley	42	12	3.5	67	41	6.3
Davao City	31	12	3.5	42	31	4.8
Davao del Norte	18	11	3.2	31	22	3.4
Davao del Sur	44	23	6.6	55	60	9.3
Davao Oriental	32	12	3.5	58	27	4.2
Zamboanga del Norte	40	20	5.8	84	38	5.9
Grand Total	253	94	27.1	411	235	36.4

Table 14. Means of savings

Items	Control		Treatment	
	Freq.	%	Freq.	%
At home/piggy bank	41	43.6	78	33.2
Banks	32	34.0	71	30.2
Cooperatives/Paluwagan	23	24.5	107	45.5
Others	9	9.6	13	5.5

There is no significant difference in terms of engagement as control growing/farming between the treatment and control groups. Across all sites, less than 10% of the respondents, both from the treatment and control groups, engage in contract growing (See Table 15).

Table 15. Percentage of respondents engaged in contract growing/farming

Province	Control			Treatment		
	No	Yes	% Yes	No	Yes	% Yes
Bukidnon	43	7	2.0	90		0.0
Compostela Valley	43	11	3.2	95	13	2.0
Davao City	37	6	1.7	70	3	0.5
Davao del Norte	25	4	1.2	47	6	0.9
Davao del Sur	65	2	0.6	111	4	0.6
Davao Oriental	44		0.0	82	3	0.5
Zamboanga del Norte	59	1	0.3	120	2	0.3
Grand Total	316	31	8.9	615	31	4.8

Across all treatment areas, 23.6% of the respondents said that they have been assisted/linked to financial services through MinPACT project (See Table 16). Out of those who said that they were linked by MinPACT to financial services, 30.3% said that they received financial services as result of the MinPACT assistance (See Table 17). Around 80.4% of those who were able to access financial services through the assistance of MinPACT said that they experienced enhanced/increased crop productivity and income because of the financial infusion (See Table 18). Of the total number of respondents who were able to access financial services through the help of MinPACT, 71.7% perceived that amount of loan that they were able to access is sufficient to address the identified needs of their farms (See Table 19).

When asked to rate the effectiveness of the MinPACT supported credit facilities, majority (38.1%) of the respondents said that it is effective while 28.6% said that it is not effective and 28.9% said that it is not applicable (See Table 20).

Table 16. Percentage of respondents that has been assisted/linked to financial services through MinPACT project.

Province	Treatment		
	No	Yes	% Yes
Bukidnon	69	20	3.1
Compostela Valley	80	28	4.3
Davao City	65	8	1.2
Davao del Norte	37	16	2.5
Davao del Sur	94	20	3.1
Davao Oriental	74	11	1.7
Zamboanga del Norte	73	49	7.6
Grand Total	492	152	23.6

Table 17. Percentage of MinPACT beneficiaries received financial services as result of the MinPACT linkage to financial services.

Province	Treatment		
	No	Yes	% Yes
Bukidnon	20	3	2.0
Compostela Valley	9	24	15.8
Davao City	8	1	0.7
Davao del Norte	13	4	2.6
Davao del Sur	18	3	2.0
Davao Oriental	11		0.0
Zamboanga del Norte	39	11	7.2
Grand Total	118	46	30.3

Table 18. Effect of the access to the financial services of MinPACT beneficiaries

Items	Freq.	%
Enhance/Increase crop productivity and income	37	80.4
Better farm fertility through improved quality of land and water resources	9	19.6
Reduce post-harvest losses	3	6.5
Enhance/Increase marketability/quality of farm produce	2	4.3

Increase market value (price) of products	7	15.2
Align with quality standards	2	4.3
Others	5	10.9

Table 19. Percentage of those who have accessed to financial services perceived that amount of loan availed is sufficient.

Province	No	Yes	%Yes
Bukidnon		3	100.0
Compostela Valley	8	14	58.3
Davao City		1	100.0
Davao del Norte		4	100.0
Davao del Sur		3	100.0
Zamboanga del Norte	2	8	72.7
Grand Total	10	33	71.7

Table 20. Overall rating on the effectiveness of MinPACT-supported credit.

Ratings	Treatment	
	Freq.	%
Very effective	24	3.7
Effective	246	38.1
Not effective	185	28.6
Not Applicable	187	28.9

Appendix H: Access to Market

Cacao Market

Majority of treatment respondents (90.3%) and control respondents (91.4%) prefer to sell their produce to local buyers (Table 1). Common reasons given for selling to local market are as follows, a) it is the closest market, b) local market offers the best price, and c) payment for cash advances (Table 2).

Table 1. Market of Cacao produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
local buyer	128	91.4	176	90.3
Intermediary	12	8.6	2	1.0
Processor	12	8.6	3	1.5
consolidator/exporter	2	1.4	2	1.0

Table 2. Reasons for choosing the market to sell the produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
It is the closest market	118	84.3	149	76.4
it had the best prices	37	26.4	49	25.1
payment for cash advances	9	6.4	6	3.1
Others	11	7.9	184	94.4

Coconut Market

Majority of treatment respondents (88.3%) and control respondents (96.9%) prefer to sell their produce to local buyers (Table 3). Common reasons given for selling to local market are as follows, a) it is the closest market, b) local market offers the best price, and c) payment for cash advances (Table 4).

Table 3. Market of coconut produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
local buyer	285	96.9	414	88.3
Intermediary	19	6.5	10	2.1
Processor	7	2.4	5	1.1
consolidator/exporter	2	0.7	13	2.8

Table 4. Reasons for choosing the market to sell the produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
It is the closest market	263	89.5	393	83.8
it had the best prices	57	19.4	83	17.7

payment for cash advances	28	9.5	27	5.8
Others	10	3.4	28	6.0

Coffee Market

Majority of treatment respondents (84%) and control respondents (64.3%) prefer to sell their produce to local buyers (Table 5). Common reasons given for selling to local market are as follows, a) it is the closest market, b) local market offers the best price, and c) payment for cash advances (Table 6).

Table 5. Market of coffee produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
local buyer	18	64.3	157	84.0
Intermediary	1	3.6	4	2.1
Processor	2	7.1	1	0.5
consolidator/exporter	0	0.0	3	1.6

Table 6. Reasons for choosing the market to sell the produce

Items	Control		Treatment	
	Freq.	%	Freq.	%
It is the closest market	18	64.3	143	76.5
it had the best prices	2	7.1	36	19.3
payment for cash advances	0	0.0	5	2.7
Others	4	14.3	19	10.2

Assessment on Market Access

There is no significant difference in terms of percentage of respondents who felt that they get the desired sales of their products (Table 7). Common possible causes given by respondents for not getting the desired sales of their products were as follows a) poor market, b) poor farm to market access, c) losses on handling, and d) no post-harvest facilities (Table 8). The average overall assessment of the respondents both from the treatment and control sites on the access to the market is average to good (Table 9). Overall, the treatment sites are farther from the market by 12 minutes as compared to the control sites (Table 10).

Table 7. Percentage of respondents felt that they get the desired sales of their products

Province	Control			Treatment			diff (T-C)
	No	Yes	% Yes	No	Yes	% Yes	
Bukidnon	26	24	6.8	41	49	7.2	0.4
Compostela Valley	23	31	8.8	53	56	8.3	-0.5
Davao City	24	21	6.0	55	24	3.5	-2.4

Davao del Norte	20	9	2.6	39	14	2.1	-0.5
Davao del Sur	52	18	5.1	70	58	8.6	3.5
Davao Oriental	22	22	6.3	43	48	7.1	0.8
Zamboanga del Norte	51	9	2.6	89	33	4.9	2.3
Overall	218	134	38.1	390	282	41.7	3.6

Table 8. Possible causes of not getting the desired sales of the products

Reasons	Control		Treatment	
	Freq.	%	Freq.	%
Poor market	133	37.8	211	31.2
Poor farm to market access	73	20.7	98	14.5
Losses on handling	66	18.8	100	14.8
No post-harvest facilities	35	9.9	70	10.3
Others	127	36.1	302	44.6

Table 9. Overall assessment on the access to market

Items	Control		Treatment	
	Freq.	%	Freq.	%
Very good	12	3.4	41	6.1
Good	175	49.7	291	43.0
Average	135	38.4	275	40.6
Bad	28	8.0	51	7.5
Very Bad	1	0.3	7	1.0

Table 10. Average time (in minutes) to access the nearest market by walking

Province	Control	Treatment	diff (T-C)
Bukidnon	98	93	-5
Compostela Valley	94	100	6
Davao City	267	253	-14
Davao del Norte	123	92	-31
Davao del Sur	47	116	69
Davao Oriental	100	102	1
Zamboanga del Norte	197	211	15
Overall	128	140	12

Appendix I: Findings and Perceptions of Other Stakeholders

1. VCA Processors

Survey respondents were 41.9% processors and 58.1% traders (Table 1). Overall, the average number of fulltime employees of VCA respondents is 14 while the average number of part-time employees is 5 (Table 2). 84.6% of respondent processors and 100% of the traders said that they experienced peak and lean seasons (Table 3-4).

Table 1. Role in the value chain and type of business

Items	Processor		Traders	
	Freq.	%	Freq.	%
Retailer	1	3.2	8	25.8
Wholesaler	9	29.0	9	29.0
Others	3	9.7	1	3.2
Grand Total	13	41.9	18	58.1

DETAILS OF OPERATION

Table 2. Average employment, fulltime and part-time, by type, by sex

Items	Fulltime Employee			Part-time Employee		
	Aver. Employee	Male	Female	Aver. Employee	Male	Female
Processor	21	15	6	10	9	2
Traders	9	6	3	3	1	2
Overall	14	10	4	5	2	2

Table 3. Percentage of respondents experienced peak and lean season

Peak/Lean		
Processor	No	2
	Yes	11
	% Yes	84.6
Trader	No	0
	Yes	18
	% Yes	100
Overall	No	2
	Yes	29
	% Yes	93.5

Table 4. Months of peak and lean

Months	Peak				Lean			
	Processor	Trader	Overall	% Overall	Processor	Trader	Overall	% Overall
All Year	3	3	6	19.4	4	2	6	19.4
January	1	4	5	16.1	5	9	14	45.2
February	0	2	2	6.5	5	8	13	41.9
March	2	5	7	22.6	5	8	13	41.9
April	2	1	3	9.7	5	8	13	41.9

May	3	2	5	16.1	5	7	12	38.7
June	3	4	7	22.6	6	5	11	35.5
July	2	2	4	12.9	6	7	13	41.9
August	3	2	5	16.1	4	7	11	35.5
September	6	9	15	48.4	1	4	5	16.1
October	6	11	17	54.8	2	0	2	6.5
November	7	12	19	61.3	2	0	2	6.5
December	7	11	18	58.1	2	1	3	9.7

The average volume of inputs for processing 984 kgs at Php 92/kilo for cacao, 216,000 kgs at Php 9.96/kilo for coconut and 1,125.3 kgs at Php 206.875/kilo for coffee (Table 5).

Table 5. Volume of inputs for processing (in Kgs) and Price (PhP/Kg)

Inputs	Average Volume (In Kgs)	Average Price (PhP/Kg)
Cacao	984.0	92
Cacao (Wet Beans)	8,100.0	34.5
Tableya	1,200.0	112
Coconut	216,000.0	7.96
whole nut	13,866.7	5
Baker	600.0	5
Coconut sap	50.0	100
Coffee	1,125.3	206.875

The average volume of outputs is 754.3 kgs at Php 106.43/kilo for cacao, 208,700 kgs at Php 10.06/kilo for coconut and 525.3 kgs at Php 80.00-200.00/kilo for coffee (Table 6).

Table 6. Average volume of outputs (in Kgs) and Price (PhP/Kg)

Outputs	Volume			Price			Price Mark-up (%)		
	Kgs	Liters	Others	Kg	Liter	Others	Kg	Liter	Others
Cacao	754.3			106.43			8.6		
Cacao (Dried Beans)	140.0			58.33			6.7		
Cacao (Wet Beans)	200.0			35			10.0		
Cacao Fermented	5,000.0			140.00			30.0		
Tableya	852.0		26,103.0	300.00		75.00	30.0		10.0
Coconut	208,700.0			10.06			19.8		
Copra	22,200.0			25.30			13.6		
Coconut sugar	30.0			100.00			10.0		
Coconut syrup		50.0			115.00			10.0	
Charcoal	20,000.0			17.00			8.0		
Coco Coir	35,622.0			10.00			20.0		
Whole nut	600.0		40,000.0	5.40		6.10	75.0		10.0
Coffee	525.3		24.0	80.00		200.00	14.0		180.0
Coffee Powder (Repacked)			1,600.0			300.00			25.0

PRODUCTION MANAGEMENT

The sources of inputs are direct from the farmers, middlemen/assemblers and supermarkets (Table 7). In terms of certification, only 2/31 has quality certification specifically certification on HACCP, ISO and GMP.

Table 7. Sources of inputs, by type

Items	Within the province		Outside the province		Outside the Mindanao	
	Freq.	%	Freq.	%	Freq.	%
Direct from the farmers	1	3.2	24	77.4		0.0
Middlemen/Assemblers	19	61.3	0	0.0	1	3.2
Supermarket	11	35.5	2	6.5	1	3.2

Majority of the VCA respondents are registered at the business licensing office (100%) and the Department of Trade and Industry (88.9%) while the others are registered with the Securities and Exchange Commission, the Bureau of Food and Drugs and others (Table 8).

Majority of the respondents said that they encountered problems on capitalization (44.4%), lack of awareness on how to get loans from financial intermediaries (27.8%), lack of access to credit (16.7%) and others (Table 9).

Overall, 41.9% of the respondents said that they have their own R7D/product development facility and business plans (Table 10-11).

Problems encountered in marketing including lack of information on marketing strategies, low awareness of consumers on the product, lack of government programs on general promotions of commodities (Table 12).

Overall, 54.8% of the respondents said that they have plans to expand their business (Table 13). Factors considered for business expansion include profitability, price of the product, input prices and others (Table 14).

Table 8. Percentage of respondent registered, by type

Items	Processor		Traders		Overall	
	Freq	%	Freq	%	Freq	%
Business Licensing Office (from the LGU for the license to operate)	12	92.3	18	100.0	30	96.8
Department of Trade and Industry (registration business name of single proprietorship)	10	76.9	16	88.9	26	83.9
Security and Exchange Commission (for registration the corporations)	6	46.2	1	5.6	7	22.6
Bureau of Food and Drugs (for the permit to operate)	4	30.8	1	5.6	5	16.1
Others	2	15.4	1	5.6	3	9.7

Table 9. Problems encountered in running the business

Items	Processor		Traders		Overall	
	Freq.	%	Freq.	%	Freq.	%
Lack of capital	5	38.5	8	44.4	13	41.9
Lack of awareness to get loans from financial intermediaries	1	7.7	5	27.8	6	19.4
Lack of financial assistance on expanding production.	4	30.8	3	16.7	7	22.6
Others	4	30.8	12	66.7	16	51.6

Table 10. Percentage of respondents with own R&D/product development

Items	No	Yes	% Yes
Processor	8	5	38.5
Traders	10	8	44.4
Overall	18	13	41.9

Table 11. Percentage of respondents with business plan

Items	No	Yes	% Yes
Processor	6	7	53.8
Traders	12	6	33.3
Grand Total	18	13	41.9

Table 12. Problems encountered in marketing

Items	Processor		Traders		Overall	
	Freq.	%	Freq.	%	Freq.	%
Lack of information on marketing strategies	4	30.8	10	55.6	14	45.2
Low awareness of consumers on the product	7	53.8	7	38.9	14	45.2
Lack of government programs on general promotions of commodities.	1	7.7	6	33.3	7	22.6
Others	4	30.8	7	38.9	11	35.5

Table 13. Percentage of respondents with plans to expand the business

Items	No	Yes	% Yes
Processor	2	11	84.6
Traders	12	6	33.3
Overall	14	17	54.8

Table 14. Factors considered for business expansion

Items	Processor		Traders		Overall	
	Freq.	%	Freq.	%	Freq.	%
Profitability	2	15.4	6	33.3	8	25.8
Price of the product	9	69.2	9	50.0	18	58.1
Input prices		69.2	1	50.0	1	58.1
Others:	3	0.0	6	5.6	9	3.2

ACCESS TO CREDIT AND FINANCING

Overall, 29% of the respondents said that they have existing debts (Table 15). Major credit sources are banks, cooperatives, micro finance institutions and traders/processors (Table 16). The average amount of debt is 1,375,000.00 for processors and 1,508,333.33 for traders (Table 17). The average interest rate is 4% (Table 18).

Table 15. Percentage of respondents with debt

Items	Refuse to answer	No	Yes	% Yes
Processor	6	4	3	23.1
Traders	3	9	6	33.3
Grand Total	9	13	9	29.0

Table 16. Sources of debt

Items	Processor	Traders	Overall	% Overall
Banks	2	4	6	19.4
Cooperatives/ Paluwagan		1	1	3.2
MicroFinance Institutions/ MFIs	1		1	3.2
Traders/ processors		1	1	3.2

Table 17. Average amount of debt, by source

Items	Processor	Traders	Overall
Banks	2,650,000.00	3,425,000.00	3,166,666.67
Cooperatives/ Paluwagan		100,000.00	100,000.00
MicroFinance Institutions/ MFIs	100,000.00		100,000.00
Traders/ processors		1,000,000.00	1,000,000.00
Average	1,375,000.00	1,508,333.33	1,091,666.67

Table 18. Average interest rate (%) by source

Items	Processor	Traders	Overall
Banks	11.3	1.5	5.4
Cooperatives/ Paluwagan		5.0	5.0
MicroFinance Institutions/ MFIs	2.0		2.0
Traders/ processors		-	-
Average	7.6	1.9	4.0

ACCESS TO INFORMATION/TECHNOLOGY

Only 1/31 processor has access to information specifically information on improved farm machineries and post-harvest management practices. In term of information to market, only 1/31 stated accessed to this information specifically on price and promotion.

INVOLVEMENT WITH MINPACT

A. Relevance

29% of the respondent said that they participated in the provision of agricultural supplies/ inputs/ equipment/ seedling to the MinPACT Project (Table 19). Most of them (67.7%) said that they participated for less than a year (Table 20). Around 25.8% of those who participated said that they noticed changes in skills and behavior brought about by the MinPACT project in their organization (Table 21).

When asked to rate in a scale of 1-5 (1 is the lowest and 5 is the highest) the extent MinPACT project influenced increased volume in sales in the sector of trader/processor, 29% rated 1, 25.8% rated 2, 19.4% rated 3, 22.6% rated 4 and 3.2% rated 5 (Table 22). On the extent MinPACT project influenced changes product quality in the sector of trader/processor, 29% of the respondents rated 1, 25.8% rated 2, 19.4% rated 3, 19.4% rated 4 and 6.5% rated 5 (Table 23). On the extent MinPACT project influenced changes in post-harvest handling in the sector of trader/processor, 29% rated 1, 25.85 rated 2, 22.6% rated 3, 16.1% rated 4 and 6.5% rated 5 (Table 24).

Table 19. Percentage of respondent participated in the provision of agricultural supplies/ inputs/ equipment/ seedling to the MinPACT project

Items	No	Yes	% Yes
Processor	5	8	61.5
Traders	17	1	5.6
Grand Total	22	9	29.0

Table 20. Years of partnership with the MinPACT Project

No. Years	Processor	Traders	Overall	% Overall
Less than 1 year	5	16	21	67.7
1	1		1	3.2
2	1		1	3.2
3	2		2	6.5
4	2	1	3	9.7
5	1	1	2	6.5
6	1		1	3.2

Table 21. Percentage of respondent noticed any changes in skills and behavior brought about by the MinPACT project to your organization

Items	No	Yes	% Yes
Processor	7	6	46.2
Traders	16	2	11.1
Grand Total	23	8	25.8

Table 22. The extent MinPACT project influenced increased volume in sales in the sector of trader/processor

Rating	Processor	Traders	Overall	% Overall
1	1	8	9	29.0
2	3	5	8	25.8
3	2	4	6	19.4
4	6	1	7	22.6

5	1		1	3.2
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Note: 1 is the lowest and 5 is the highest

Table 23. The extent MinPACT project influenced changes product quality in the sector of trader/processor

Rating	Processor	Traders	Overall	% Overall
1	1	8	9	29.0
2	3	5	8	25.8
3	2	4	6	19.4
4	5	1	6	19.4
5	2		2	6.5

Note: 1 is the lowest and 5 is the highest

Table 24. The extent MinPACT project influenced changes in post-harvest handling in the sector of trader/processor

Rating	Processor	Traders	Overall	% Overall
1	1	8	9	29.0
2	3	5	8	25.8
3	3	4	7	22.6
4	4	1	5	16.1
5	2		2	6.5

Note: 1 is the lowest and 5 is the highest

B. Efficiency

Overall, 29% of the respondents perceived that project is flexible to accommodate suggestions from the organization/sector (Table 25). When asked to rate from 1-5 (1 as the lowest and 5 as the highest) their average level of satisfaction with the MinPACT Project, 29% rated 1, 25.8% rated 2, 22.6% rated 3, 19.4% rated 4 and 3.2% rated 5 (Table 26).

Table 25. Percentage of respondents perceived that project is flexible to accommodate suggestions from the organization/sector.

Items	No	Yes	% Yes
Processor	7	6	46.2
Traders	15	3	16.7
Overall	22	9	29.0

Note: Answers for open ended questions, please refer to the database.

C. Effectiveness

Overall, 45.2% of the respondents observed that there are signs of new cocoa, coffee, coconut industry players that imitate program sponsored business models/interventions as a result of project facilitation (Table 26).

Table 26. Percentage of respondents observed that there are signs of new cocoa, coffee, coconut industry players that imitate program sponsored business models/interventions as a result of Project Facilitation

Items	No	Yes	% Yes
Processor	5	8	61.5

Traders	12	6	33.3
Overall	17	14	45.2

Note: Answers for open ended questions, please refer to the database.

Table 26. Average level of your satisfaction with the MinPACT Project

Rating	Processor	Traders	Overall	% Overall
1	1	8	9	29.0
2	3	5	8	25.8
3	2	5	7	22.6
4	6		6	19.4
5	1		1	3.2
Average Rating	3.2	1.8	2.4	

Note: 1 is the lowest and 5 is the highest

D. Impact

Overall, 9.7% of the respondents perceived changes in norms and behaviors among traders/processes (Table 27) and 22.6% of respondents noticed changes in the capacity of youth and women participation (as processor) in agriculture and economic activities in your area in the last 4 years (Table 28) due to MinPACT.

Overall, 29% of the respondents said that there are new technologies, systems, processes and protocols adopted brought about by the MinPACT Project (Table 29).

Overall, 32.3% of respondents perceived that the project attained its intended results (Table 30).

Perceived impacts of the MinPACT project to processor/traders include positive changes in the business transactions and norms and expansion in the market network systems while the negative impacts include disruption on the demand and supply patterns and contraction/distortion in the market network systems (Table 31).

Overall, 12.9% of the respondents said that they observed unintended results brought about by MinPACT (Table 32).

Table 27. Percentage of respondents perceived changes in norms and behaviors among traders/processes due to MinPACT.

Items	No	Yes	% Yes
Processor	12	1	7.7
Traders	16	2	11.1
Overall	28	3	9.7

Table 28. Percentage of respondents changes in the capacity of youth and women participation (as processor) in agriculture and economic activities in your area in the last 4 years

Items	No	Yes	% Yes
Processor	7	6	46.2
Traders	17	1	5.6
Overall	24	7	22.6

Table 29. Percentage of respondents that there are new technologies, systems, processes and protocols adopted brought about by the MinPACT Project

Items	No	Yes	% Yes
Processor	8	5	38.5
Traders	14	4	22.2
Overall	22	9	29.0

Table 30. Percentage of respondents perceived that the project attained its intended results

Items	No	Yes	% Yes
Processor	5	8	61.5
Traders	16	2	11.1
Overall	21	10	32.3

Table 31. Perceived impacts of the MinPACT project to processor/traders

Items	Processor	Traders	Overall	% Overall
Positive changes in the business transactions and norms	8	3	11	35.5
Disruption on the demand and supply patterns	6	3	9	29.0
Expansion in the market network systems	7	5	12	38.7
Contraction/distortion in the market network systems	5	3	8	25.8

Table 32. Percentage of respondents observed unintended results brought about by MinPACT

Items	No	Yes	% Yes
Processor	10	3	23.1
Traders	17	1	5.6
Overall	27	4	12.9

E. Sustainability

Overall, 19.4% of the respondents are aware of any interventions made to facilitate sustainability of project gains (Table 33) and 16.1% believe that there efforts that the project made to ensure continuity of these interventions after the project exits (Table 34).

Overall, 19.4% of respondents believe that there is adequate level of human and institutional capacity in place in order to ensure continuity services to clients even after the project ends (Table 35), 38.7% of respondents believe that the results under the MinPACT Project is replicable (Table 36) and 38.7% of respondents believe that the results under the MinPACT Project is scalable (Table 37).

Overall, 38.7% of respondents believe that the results under the MinPACT Project is sustainable (Table 38).

Table 33. Percentage of respondents aware of any interventions made to facilitate sustainability of Project gains

Items	No	Yes	% Yes
Processor	9	4	30.8

Traders	16	2	11.1
Overall	25	6	19.4

Table 34. Percentage of respondents believe that there efforts that the project made to ensure continuity of these interventions after the project exits

Items	No	Yes	% Yes
Processor	9	4	30.8
Traders	17	1	5.6
Overall	26	5	16.1

Table 35. Percentage of respondents believe that there is adequate level of human and institutional capacity in place in order to ensure continuity services to clients even after the project ends

Items	No	Yes	% Yes
Processor	10	3	23.1
Traders	15	3	16.7
Overall	25	6	19.4

Table 36. Percentage of respondents believe that the results under the MinPACT Project is replicable

Items	No	Yes	% Yes
Processor	6	7	53.8
Traders	13	5	27.8
Overall	19	12	38.7

Table 37. Percentage of respondents believe that the results under the MinPACT Project is scalable

Items	No	Yes	% Yes
Processor	6	7	53.8
Traders	13	5	27.8
Overall	19	12	38.7

Table 38. Percentage of respondents believe that the results under the MinPACT Project is sustainable

Items	No	Yes	% Yes
Processor	6	7	53.8
Traders	13	5	27.8
Overall	19	12	38.7

2. VCA Input Supplier

Survey respondents were retailer, wholesaler and government institutions. Chemical/fertilizer suppliers were 50.0% retailers and 37.5% wholesaler. Pesticides/herbicides/fungicides suppliers are 15.7% retailers and 25% wholesalers. Seedlings providers are 33.33% retailers and 25% wholesalers (Table 39).

Table 39. Role in the value chain and type of business

Items	Retailer		Wholesaler		Gov't Inst.		Overall	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Chemical/Fertilizer	6	50.0	3	37.5		0.0	9	42.9
Pesticides/ herbicides/ fungicides	2	16.7	2	25.0		0.0	4	19.0
Seedlings	4	33.3	2	25.0	1	100.0	7	33.3
Others		0.0	1	12.5		0.0	1	4.8
Total	12	100.0	8	100.0	1	100.0	21	100.0

Details of Operations

Overall, the average number of fulltime employees of VCA respondents is 9 while the average number of part-time employees is 9 (Table 2). 84.6% of respondent processors and 100% of the traders said that they experienced peak and lean seasons (Table 40). Overall, operations is deemed stable all year round (Table 41). Average volume of stock of major fertilizers and plant protection products is 2,072.7 kgs for chemical fertilizer, 1,356.7 for organic fertilizer, 153 liters for chemical insecticides and 1.25 liters of herbicides (Table 42).

19% of the respondents offer financial services to customers (Table 43).

Overall, 65% of the respondents are registered with the business licensing office of the LGU, 60% are registered with the Department of Trade and Industry (Table 44). Major problem encountered in conducting business is lack of capital (Table 45) while the major problem encountered during marketing are lack of information on marketing strategies and low awareness of consumers on the product (Table 46). 45% of the retailer and 25% of the wholesaler wants to expand business (Table 47).

Table 40. Average employment, fulltime and part-time, by type, by sex

Items	Fulltime Employee			Part-time Employee		
	Aver. Employee	Male	Female	Aver. Employee	Male	Female
Government (NOMIARC)	30	10	20			
Retailer	3	2	2	4	2	2
Wholesaler	14	9	5	17	8	9
Grand Total	9	5	4	9	5	4

Table 41. Months of peak and lean

Items	Peak				Lean			
	Retailer	Wholesaler	Overall	% Overall	Retailer	Wholesaler	Overall	% Overall
All Year	10	6	16	80.0	1	0	1	5.0
January	1	2	3	15.0	6	3	9	45.0
February	2	0	2	10.0	4	3	7	35.0
March	1	0	1	5.0	5	4	9	45.0
April	3	0	3	15.0	5	4	9	45.0
May	1	3	4	20.0	5	1	6	30.0
June	4	3	7	35.0	6	1	7	35.0
July	1	1	2	10.0	5	1	6	30.0
August	5	1	6	30.0	4	1	5	25.0
September	2	3	5	25.0	6	1	7	35.0
October	4	1	5	25.0	3	2	5	25.0
November	3	3	6	30.0	4	1	5	25.0
December	7	3	10	50.0	1	1	2	10.0

Table 42. Average volume of stock of major fertilizers and plant protection products

Items	Volume			Price			Price mark-up (%)		
	Kgs	Liters	Others	Kg	Liter	Others	Kg	Liter	Others
Cacao Seedlings			7666.7			18.33			28.3
Chemical Fertilizers	2072.7	7.6	1500.0	316.27	281.00	500.00	12.4	24.0	2.5
Chemical Insecticides		153.0			655.00			20.0	
Coconut Seedlings			3500.0			15.00			2.5
Coffee Seedlings			10000.0			20.00			5.0
Feeds	5000.0			28.00			0.5		
Fungicide			8.0			4.75			8.0
Harvester			100.0			500.00			10.0
Herbicides		125.0			500.00			-	
Organic Fertilizer	1356.7			203.33			113.3		

Table 43. Percentage of respondents financial services to customers

Item	No	Yes	% Yes
Government (NOMIARC)	1		0.0
Retailer	9	3	25.0
Wholesaler	7	1	12.5
Grand Total	17	4	19.0

In terms of certification, only 1/21 have ISO certification, while 4/21 have certification from PhilGeps, DENER, DTI, FDI and BPI.

Table 44. Percentage of respondent registered, by type

Items	Retailer	Wholesaler	Overall	% Overall
Business Licensing Office (of the LGU for the license to operate)	8	5	13	65.0
Department of Trade and Industry (business name of single proprietorship)	8	4	12	60.0
Security and Exchange Commission (for the registration of the corporation)	3	2	5	25.0
Bureau of Food and Drugs (for the permit to operate, if relevant)		2	2	10.0
Bureau of Plant Industry (for nursery accreditation)	1	3	4	20.0
Fertilizers and Pesticides Authority (for permit to operate)	5	4	9	45.0
Others	3		3	15.0

Table 45. Major operational problems do you encountered in running the business

Items	Retailer	Wholesaler	Overall	% Overall
Lack of capital	7	3	10	50.0
Lack of awareness to get loans from financial intermediaries	2		2	10.0
Lack of financial assistance on expanding production.	4	2	6	30.0

Table 46. Marketing problems encountered in selling products

Items	Retailer	Wholesaler	Overall	% Overall
Lack of information on marketing strategies	4	3	7	35.0
Low awareness of consumers on the product	2	5	7	35.0

Table 47. Percentage of respondents with plans to expand the business

Items	No	Yes	% Yes
Retailer	3	9	45.0
Wholesaler	3	5	25.0
Grand Total	6	15	75.0

Table 48. Factors considered for business expansion

Items	Retailer	Wholesaler	Overall	% Overall
Profitability	5	6	11	55.0
Price of the product	7	3	10	50.0
Input prices	3	3	6	30.0
Others:	5	2	7	35.0

ACCESS TO CREDIT AND FINANCING

Overall, 28.6% of the respondents have debts (15.7% retailer, 50% wholesaler) (Table 49). Sources of loans are banks, cooperative and relatives/friends (Table 50).

Table 49. Percentage of respondents with debt

Items	No	Refuse to answer	Yes	% Yes
Retailer	6	4	2	16.7
Wholesaler	3	1	4	50.0
Overall	10	5	6	28.6

Table 50. Sources of debt

Source	Retailer	Wholesaler	Overall	% Overall
Banks		2	2	10.0
Cooperatives/ Paluwagan	2		2	10.0
Relatives/ friends		1	1	5.0
Other		1	1	5.0

Table 51. Average amount of debt, by source

Source	Retailer	Wholesaler	Overall	Overall
Banks		1,000,000.00	1,000,000.00	1,000,000.00
Cooperatives/ Paluwagan	275,000.00		275,000.00	275,000.00
Relatives/ friends		5,000,000.00	5,000,000.00	5,000,000.00
Other		100,000.00	100,000.00	100,000.00
Overall	275,000.00	1,775,000.00	1,275,000.00	1,275,000.00

Table 52. Average interest rate (%) by source

Source	Retailer	Wholesaler	Grand Total
Banks		1.0	1.0
Cooperatives/ Paluwagan	2.5		2.5
Relatives/ friends		2.0	2.0
Other		0.0	0.0

Table 53. Financial challenges do you encountered

Items	Retailer	Wholesaler	Overall	% Overall
Lack of knowledge on loan application.	2	1	3	15.0
Lack of collateral	5	3	8	40.0
Default	2	1	3	15.0
Others	5	5	10	50.0

ACCESS TO INFORMATION/TECHNOLOGY

Overall, 55% of the respondents have access to information on various (agricultural) events (Table 54). Only 38.1% are aware of the value chain.

Table 54. Percentage of respondent with access to information on various (agricultural) events

Items	No	Yes	% Yes
Retailer	7	5	25.0
Wholesaler	2	6	30.0
Overall	10	11	55.0

Table 55. Sources of Information

Source	Freq.	%
Newspaper	2	10.00
Television	2	10.00
Cellphone	4	20.00
Internet	3	15.00
Friends/Religious Leaders/Local Leaders	2	10.00
NGOs, civil society	3	15.00
Reference materials/ FITS Center	2	10.00
Demonstration farms	1	5.00
Others	4	20.00

Table 55. Type of information

Items	Freq.	%
About the Product	7	35.0
Price	5	25.0
Promotion activities	6	30.0
Place for market	1	5.0

Table 56. Percentage of respondents who are aware of value chain

Items	No	Yes	% Yes
Retailer	7	5	41.7
Wholesaler	6	2	25.0
Grand Total	13	8	38.1

ASSISTANCE/EXISTENCE OF OTHER PROJECTS

Table 57. Percentage of respondents who are beneficiary of any foreign and locally funded projects

Items	No	Yes	% Yes
Retailer	9	3	25.0
Wholesaler	8		0.0
Grand Total	17	4	19.0

Note: Answers on open ended questions and details of "others", please refer to the database.

INVOLVEMENT WITH MINPACT

A. Relevance

Table 58. Years of partnership with the MinPACT Project

Years	Retailer	Wholesaler	Overall	% Overall
Less than a year	5	2	8	40.0
1	2	2	4	20.0
2	1		1	5.0
3	3	1	4	20.0
4	1	1	2	10.0
5		2	2	10.0

Table 59. Percentage of respondents who perceived overall results of MinPACT project in different development priorities

Items	No	Yes	% Yes
Peoples organizations	8	13	61.9
Industry Sectors	7	14	66.7
Local Government Units	7	14	66.7
Other value Chain Actors	10	11	52.4
Individual Producer	7	14	66.7

Note: Answers on open ended questions, please refer to the database.

B. Efficiency

Table 60. Percentage of respondents who perceived that MinPACT is efficient on the following areas

Items	Don't Know	Very Inefficient	Inefficient	Neither	Efficient	Very Efficient	% Efficient
Delivery of the Inputs, PHF, other goods, seedlings	9	1	1	2	6	2	38.10
Technical services, farm visits, meetings, consultations	10	1	1	5	3	1	19.05
Trainings, cross visits, exposure programs, (TOTs)	9	1	1	6	2	2	19.05
Referrals, Advisory	10	1	2	5	2	1	14.29

Services, Marketing Service							
Credit facilitation, loans	10	1	2	5	2	1	14.29

Table 61. Percentage of respondents who perceived that MinPACT was implemented in the most efficient way

Items	No	Yes	% Yes
Retailer	8	4	33.3
Wholesaler	3	5	62.5
Overall	11	10	47.6

Table 62. Percentage of respondents perceived that project is flexible to accommodate local suggestions as possible delivery system alternative

Items	No	Yes	% Yes
Retailer	8	4	33.3
Wholesaler	7	1	12.5
Overall	15	6	28.6

Table 63. In partnership with MinPACT was the delivery of interventions is timely as scheduled

Items	No	Yes	% Yes
Retailer	8	4	33.3
Wholesaler	6	2	25.0
Overall	15	6	28.6

Table 64. In partnership with MinPACT was the delivery of interventions is appropriate to the needs of beneficiaries

Items	No	Yes	% Yes
Retailer	9	3	25.0
Wholesaler	6	2	25.0
Overall	16	5	23.8

Table 65. In partnership with MinPACT was the delivery of interventions is responsive to adjustment to local conditions

Items	No	Yes	% Yes
Retailer	9	3	25.0
Wholesaler	5	3	37.5
Overall	15	6	28.6

Table 66. In partnership with MinPACT was the delivery of interventions is demand driven

Items	No	Yes	% Yes
Retailer	5	7	58.3

Wholesaler	4	4	50.0
Overall	9	12	57.1

C. Effectiveness

Table 67. Average level of perceived influenced on the behavior(norms) and practices(rules and regulations) of the coconut, cocoa, coffee industry and its producer organizations and farmers along the following areas

Items	Average Rating
Adoption of new technology in production	2.5
Adoption of good agricultural practices	2.6
Application of quality standards	2.6
Use of volume & quality based contracts	2.5
Use of product information/market segmentation	2.3
Use of inventory system	2.3
Clear and transparent governance system	2.3
Developed business plans and management systems that are functional	2.2
Improved financial literacy among beneficiary producers	2.3
Use of Formal Credit and Funding institutions	2.3
Improved & appropriate quality inputs, tools, planting materials and post-harvest facility to achieve national/international standards	2.3
Improved nursery/seedling quality standards to meet market demands	2.3

Table 68. Percentage of respondents perceived signs of new cocoa, coffee, coconut industry players “crowding-in” as a result of Project Facilitation

Items	No	Yes	% Yes
Retailer	10	2	16.7
Wholesaler	6	2	25.0
Overall	16	5	23.8

Table 69. Perceived level of satisfaction on the following areas

Items	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied	% Satisfied
Discuss clearly the objectives, targets, proposed activities, timelines and delineation of roles	1	2	11	5	2	33.3
Involve you in major decision-making points	1	3	10	5	2	33.3
Accommodate reasonable changes in schedule,	1	3	11	4	2	28.6

arrangements, activities, priorities						
Transfer knowledge and provide advice on improving organizational processes, systems, etc	1	4	10	4	2	28.6
Communication/coordination, including frequency and quality	1	3	11	4	2	28.6
Debriefing of learning session (after each important activity)	1	3	9	6	2	38.1

D. Impact

Table 70. Percentage of respondents who perceived changes in your organization and the industry players as a result from the Project

Items	No	Yes	% Yes
Adoption of new norms and behaviors	15	6	28.57
New business practices/models	17	4	19.05
New support functions (ICT, market finders, brokers)	19	2	9.52
New financial products, insurance system, credit sources	19	2	9.52
Farming and processing system	16	5	23.81
Environmental consciousness and standards	17	4	19.05
Inclusion of women, youth, marginalized groups (IPS etc)	19	2	9.52
Value addition activities	16	5	23.81
Transfer of technologies and best practices	16	5	23.81
New market opportunities	17	4	19.05
Increase in product referrals, inquiries, etc.	18	3	14.29
Expanded Sales, Productivity	15	6	28.57

Table 71. Percentage of respondents perceived changes in the demand of their services as a result of the partnership/relationship with MinPACT

Items	No	Yes	% Yes
Retailer	7	5	41.7
Wholesaler	6	2	25.0
Overall	14	7	33.3

Table 72. Perceived impacts of the MinPACT project to input suppliers

Items	No	Yes	% Yes
Disruption in the market	19	2	9.5
Crowding in	18	3	14.3
Scaling up services to producer groups either by government, other NGOs	12	9	42.9

Adoption/replication of approaches and technologies by other Pos	11	10	47.6
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E. Sustainability

Table 73. Percentage of respondents aware of any interventions made to facilitate sustainability of Project gains

Items	No	Yes	% Yes
Retailer	8	4	33.3
Wholesaler	5	3	37.5
Grand Total	14	7	33.3

Table 74. Percentage of respondents believe that there efforts that the project made to ensure continuity of these interventions after the project exits

Items	No	Yes	% Yes
Retailer	9	3	25.0
Wholesaler	7	1	12.5
Overall	17	4	19.0

Table 75. Percentage of respondents believe that there is adequate level of human and institutional capacity in place in order to ensure continuity services to clients even after the project ends

Items	No	Yes	% Yes
Retailer	8	4	33.3
Wholesaler	7	1	12.5
Overall	16	5	23.8

Table 76. Percentage of respondents believe that the results under the MinPACT Project is replicable

Items	No	Yes	% Yes
Retailer	5	7	58.3
Wholesaler	6	2	25.0
Overall	12	9	42.9

Table 77. Percentage of respondents believe that the results under the MinPACT Project is scalable

Items	No	Yes	% Yes
Retailer	5	7	58.3
Wholesaler	7	1	12.5
Overall	13	8	38.1

Table 78. Percentage of respondents believe that the results under the MinPACT Project is sustainable

Items	No	Yes	% Yes
Retailer	5	7	58.3
Wholesaler	4	4	50.0
Overall	10	11	52.4

Table 79. Percentage of respondents perceived gaps in the sector that need to be addressed.

Items	No	Yes	% Yes
Retailer	6	6	50.0
Wholesaler	6	2	25.0
Grand Total	13	8	38.1

3. VCA Nursery Operators

The average number of fulltime employees per nursery operator is 11 while the average number of part-time employees is 16. Most of the fulltime employees are female while most of the part-time employees are male (Table 80). Around 20% of the nursery operators offer financial services to customers (Table 81). Peak months of operation is July to August (Table 82). 60% of the nursery operators have business license issued by the LGUs while 40% are registered with the DTI and 20% registered with the SEC. Only 20% are registered with the Bureau of Plant Industry (for nursery accreditation) (Table 83).

In terms of certification, only 1 out of 5 has a certification with GAP.

Three (3) respondents said, "Yes, they have certification", but only 1 provided an answer, the 2 did not provide specific certification. The other 2 do not have certification.

Major problem encountered by the nursery operators is lack of capital (Table 84).

Table 80. Average employment, fulltime and part-time, by type, by sex

Items	Fulltime Employee			Part-time Employee		
	Aver. Employee	Male	Female	Aver. Employee	Male	Female
Retailer	2	1	1	2	1	1
Wholesaler						
Other	16	4	12	27	15	12
Grand Total	11	3	8	16	9	7

Table 81. Percentage of respondents financial services to customers

Item	No	Yes	% Yes
Retailer	1	0	0
Wholesaler	1	0	0
Other	2	1	33.3
Grand Total	4	1	20.0

Table 82: Peak of Operations

Months	Peak					Lean				
	Retailer	Wholesaler	Others	Frequency	% Overall	Retailer	Wholesaler	Others	Frequency	% Overall
All Year			1	1	20.0			1	1	20.0
January			1	1	20.0		1	1	2	40.0
February			1	1	20.0		1	1	2	40.0
March	1		1	2	40.0		1	1	2	40.0
April	1		1	2	40.0				1	20.0
May			1	1	20.0				1	20.0
June			1	1	20.0				0	0.0
July		1	2	3	60.0				0	0.0
August		1	2	3	60.0				0	0.0
September		1	1	2	40.0			1	1	20.0
October			1	1	20.0		1	1	2	40.0
November			1	1	20.0		1	1	2	40.0
December			1	1	20.0		1	1	2	40.0

In terms of certification, only 1 out of 5 has a certification with GAP.

Three (3) respondents said, "Yes, they have certification", but only 1 provided an answer, the 2 did not provide specific certification. The other 2 do not have certification.

Table 83. Percentage of respondent registered, by type

Items	Retailer	Wholesaler	Others	% Overall	% Overall
Business Licensing Office (of the LGU for the license to operate)	0	0	3	3	60
Department of Trade and Industry (business name of single proprietorship)	0	0	2	2	40
Security and Exchange Commission (for the registration of the corporation)	0	0	1	1	20
Bureau of Food and Drugs (for the permit to operate, if relevant)	0	0	0	0	0
Bureau of Plant Industry (for nursery accreditation)	0	1	0	1	20
Fertilizers and Pesticides Authority (for permit to operate)	0	0	0	0	0
Others	0	0	0	0	0

*Others- both retailer and wholesaler

Table 84. Major operational problems do you encountered in running the business

Items	Retailer	Wholesaler	Others	Overall	% Overall
Lack of capital	0	0	1	1	20
Lack of awareness to get loans from financial Intermediaries	0	0	0	0	0
Lack of financial assistance on expanding production.	0	0	0	0	0
Others	1	1	2	4	80

Note: Retailer- no current orders / Wholesaler- marketing due to low production of cacao seedlings/ Others- due to calamity or rainy season

4. VCA Business Development Service Providers

DETAILS OF OPERATION

Table 85. Average employment, full time and part-time, by type, by sex

Items	Full Time	Part-time
Male	271	27
Female	228	22
Overall	499	49

Table 86. Percentage of employees by department (as of January 2018)

Department/Office	%
Management	31.79
Operations/Services	53.77
Finance and Admin	24.79

Table 87. Respondents with part-time employees

Items	Frequency	%
Yes	3	33.33

No	6	66.67
Overall	9	100.00

Table 88. Number of part time employees

Items	Frequency	%
Male	22	44.90
Female	27	55.10
Overall	49	100.00

Table 89. Respondents who increase/decrease of employees during peak time

Items	Increase	Decrease
Yes	2	2
No	4	4
%Yes	33.33	33.33

Table 90. Months of peak and lean season

Month	Peak		Lean	
	Frequency	Overall %	Frequency	Overall %
All year	0	0	0	0
January	1	14.29	3	50.00
February	2	28.57	1	12.50
March	4	80.00	1	12.50
April	1	12.50	2	28.57
May	0	0.00	2	28.57
June	2	28.57	2	28.57
July	1	12.50	1	12.50

August	1	12.50	2	28.57
September	0	0.00	1	12.50
October	1	12.50	3	50.00
November	1	12.50	0	0.00
December	2	28.57	0	0.00

Table 91. Clients per month

	Frequen cy	%
Less than 10 per month	2	22.22
11 to 20 per month	0	0.00
21 to 30 per month	0	0.00
31 to 50 per month	0	0.00
More than 50 per month	7	77.78

REGISTRATION

Table 92. Registered business

Items	Frequency	%
Yes	8	88.89
No	1	11.11
Overall	9	100.00

Table 93. Registration with offices/organizations

Office/organizations	Frequency	%Yes
Business Licensing Office (from the LGU for the license to operate)	4	44.44

Department of Trade and Industry (registration business name of single proprietorship)	3	33.33
Security and Exchange Commission (for registration the corporations)	3	33.33
Bureau of Food and Drugs	1	11.11
Bureau of Plant Industry	1	11.11
Fertilizers and Pesticides Authority	2	22.22
Others	4	44.44

Table 94. Major operational problems in running the business

Problem	Frequency	%Yes
Lack of capital	0	0.00
Lack of awareness to get loans from financial institutions	1	11.11
Lack of financial assistance in expanding production	3	33.33
Others (lack of financial support, financial collection issues)	6	66.67

Table 95. Offering of new services

Items	Create/offer new services every year	If yes, developing new services internally (not outsourced)
Yes	6	6
No	3	0
%Yes	66.67	100

Table 96. Have own business plan

Items	Frequency
Yes	4
No	5
%Yes	44.44

Table 97. Marketing problems encountered in promoting services

Problem	Yes	%Yes
Too many competitors offering similar/cheaper services	3	33.33
Clients do not value the benefits of BDS	3	33.33
Clients are not aware of the services	4	44.44
Want free services (i.e. government)	4	44.44
Others (Documents for collection are thrown away, no proper collection/loan documentation)	1	11.11

Table 98. Plans to expand your business in the next 2 or 3 years

Items	Frequency
Yes	4
No	5
%Yes	44.44

Table 99. Factors that might affect expansion

Factors	Frequency	%Yes
Number of clients	4	44.44
Types of services requested/asked by clients	4	44.44
Service/Professional fees	2	22.22

Others (POs, Number of personnel to work in the company without financial capability)	3	33.33
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ACCESS TO CREDIT AND FINANCING

Table 100. Do you currently have any debt?

	Frequency
Yes	1
No	8
%Yes	11.11

Table 101. Source of credit

Source	Frequency	%
Relatives/friends	0	0.00
NGOs	0	0.00
Cooperatives/Paluwagan	0	0.00
Local Gov't Units (LGUs)	0	0.00
Local lender/ pawn shop	0	0.00
5-6 Borrowing	0	0.00
Banks	1	100.00
Others	0	0.00

Table 102. Amount borrowed

Amount	Frequency	%
<100,000	0	0.00
101,000 to 500,000	0	0.00
1,000,000 to 3,000,000	0	0.00
>3,000,000	1	100.00

Challenges	Frequency	%
Lack of knowledge on loan application.	2	22.22
Lack of collateral	1	11.11
Default	1	11.11
Others (government funds, lack of collectors/no employees, financial capacity for filling bankruptcy, just finishing DAR project, over liquidity)	6	66.67

ACCESS TO INFORMATION TECHNOLOGY

Table 103. Access to information on various events

Items	Frequency
Yes	7
No	2
%Yes	77.78

Table 104. Principal sources of information

Source	Frequency	%
Radio	4	44.44
Newspaper	3	33.33
Television	2	22.22
Cellphone	2	22.22
Internet	6	66.67
Friends/Religious Leaders/Local Leaders	3	33.33
NGOs, civil society	2	22.22
Reference materials/ FITS Center	4	44.44

Demonstration farms	4	44.44
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Table 105. Access to business information

Type of Business Information	Frequency	%Yes
Related to marketing agricultural products	4	44.44
Related to agricultural technology	5	55.56
Related to accessing finance	3	33.33
Related to policy and advocacy on agriculture, investment, trade	4	44.44
Related to infrastructure and logistics	3	33.33
Related to information	3	33.33
Related to training and technical assistance	5	55.56

Table 106. Knowledge on value chain

Items	Frequency
Yes	9
No	0
%Yes	100

ASSISTANCE/EXISTENCE OF OTHER PROJECTS

Table 107. Beneficiary of any foreign and locally funded projects

Items	Frequency
Yes	7
No	2
%Yes	77.78

Table 108. Assistance (Financial, operational, and marketing) needed to improve operation, market reach/base and profitability

Type of Assistance	Frequency	%Yes
Need additional technical staff (subject matter specialists or experts)	5	55.56
Need additional capability building activities for existing staff	4	44.44
Need additional funds to support operating expenses (since fees from services are not sufficient)	5	55.56
Need more networking to promote services to intended beneficiaries	5	55.56
Need to create/upgrade offerings to cater to more clientele	4	44.44
Need personnel to help recover the foundation and face bank cases	1	11.11

INVOLVEMENT WITH MINPACT

A. RELEVANCE

Table 109. Capacity/role in the MinPACT Project

Capacity/role	Frequency	%
Technical assistance/training	5	55.56
Grants (financial, in-kind)	4	44.44
Partner development	1	11.11
Facilitation on the process of required documents to the POs	1	11.11

Table 110. Years of partnership with MinPACT

Years	Frequency	%
less than 1 year	3	33.33

1	0	0
2	2	22.22
3	4	44.44

Table 111. MinPACT overall results as contributor to the development priorities of organizations/offices

Organization/Office	Frequency	%Yes
Peoples organizations	7	77.78
Industry sectors	7	77.78
Local government units	6	66.67
Other value chain actors	7	77.78
Individual producer	7	77.78

Table 112. Interventions to increase productivity

Intervention	Frequency	%
Development of varieties used	1	11.11
Assistance/additional farm implements inputs	3	33.33
Technical and financial support to project beneficiaries	3	33.33
Constant monitoring	1	11.11
Formal orientation	1	11.11
Registration with concerned authorities	1	11.11
Extension of project intervention	1	11.11

Table 113. Interventions to increase productivity

Intervention	Frequency	%
Enterprise development and marketing assistance	2	22.22

Identification of new buyer	1	11.11
Copra dryer assistance	1	11.11
Better financing and collection system	1	11.11
Expansion of production areas	1	11.11
Addition of another product of commodity	1	11.11

B. EFFICIENCY

Table 114. Delivery of Project Support and Services

Project Support and Services	Very Inefficient	Inefficient	Efficient	Very Efficient	Neither	Don't Know
Delivery of the Inputs, PHF, other goods, seedlings	0	1	1	2	1	4
Technical services, farm visits, meetings, consultations	1	1	1	2	1	3
Training, cross visits, exposure programs, (TOTs)	1	0	2	2	1	3
Referrals, Advisory Services, Marketing Service	2	1	0	2	2	2
Credit facilitation, loans	1	1	1	2	2	2

Table 115. Project Implementation

Items	Frequency	%Yes
Efficient	6	66.67
Flexible	6	66.67

Table 116. Evidence for efficiency

Evidence	Frequency	%
Planting activities	1	11.11
Provision of all training	1	11.11

Late implementation of nursery specifically	1	11.11
Once attended the stakeholder	1	11.11
Farmers are improving in produce	1	11.11
Completeness of the value chain, continuation the project with assistance from other value chain actors	1	11.11
Given free training and seminar to improved the institution	1	11.11

Table 117. Instances showing flexibility

Instance	Frequency	%
Direct from the farmer	1	11.11
Seminars conducted in nice venues	1	11.11
Output base results	1	11.11
Given inputs and equipment	1	11.11

Table 118. Delivery of interventions

	Frequency	%Yes
Timely as scheduled	3	33.33
Appropriate to their needs	5	55.56
Responsive to adjustment to local conditions	4	44.44
Demand driven	4	44.44

C. EFFECTIVENESS

Table 119. Level of influence of MinPACT on the behavior(norms) and practices (rules and regulations) of the coconut, cocoa, coffee industry and its producer organizations and farmers

Areas	Rating					Average
	1	2	3	4	5	
Adoption of new technology in production	0	4	1	2	2	3.22
Adoption of good agricultural practices	0	3	2	1	3	3.44
Application of quality standards	1	3	1	2	2	3.11
Use of volume & quality-based contracts	1	3	3	0	2	2.89
Use of product information/market segmentation	1	3	3	0	2	2.89
Use of inventory system	1	3	3	0	2	2.89
Clear and transparent governance system	0	3	2	1	3	3.44
Developed business plans and management systems that are functional	1	3	2	1	2	3.00
Improved financial literacy among beneficiary producers	1	3	2	1	2	3.00
Use of Formal Credit and Funding institutions	2	2	2	1	2	2.89
Improved & appropriate quality inputs, tools, planting materials and post-harvest facility to achieve national/international standards	2	2	2	0	3	3.00
Improved nursery/seedling quality standards to meet market demands	2	2	2	0	3	3.00

Table 120. Signs of new cocoa, coffee, coconut industry players “crowding-in” as a result of project facilitation

Items	Frequency
Yes	3
No	6

%Yes	33.33
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Table 121. Increase in the production and productivity in the three crop sectors (cacao, coconut, coffee) as a result of MinPACT's intervention

	Frequency	%
Increase in production	2	22.22
Increase in production but poor collection system	1	11.11
Thru gap	1	11.11
Only coconut production has increased	1	11.11
No change	2	22.22
Starting to develop commodity	1	11.11

Table 122. New services available to producers and other value chain actors

Service	Frequency	%
Post harvest equipment and facilities	3	33.33
Machineries and building	1	11.11
Community-based protection and management	1	11.11
Credit facilities and business development services to cooperatives	1	11.11

Table 123. Relationship with ACIDI-VOCA or MinPACT project officers/staff.

Items	Rating					Average
	1	2	3	4	5	
1. Discuss clearly the objectives, targets, proposed activities, timelines and delineation of roles	0	0	4	2	3	3.89
2. Involve you in major decision-making points	0	1	4	1	3	3.67

3. Accommodate reasonable changes in schedule, arrangements, activities, priorities	0	0	4	2	3	3.87
4. Transfer knowledge and provide advice on improving organizational processes, systems, etc	0	0	4	2	3	3.87
5 Communication/coordination, including frequency and quality	0	0	4	2	3	3.87
6. Debriefing of learning session (after each important activity	0	0	4	2	3	3.87

D. IMPACT

Table 124. Changes resulting from the MinPACT Project

Changes	Frequency	%Yes
Adoption of new norms and behaviors	2	22.22
New business practices/models	3	33.33
New support functions (ICT, market finders, brokers)	3	33.33
New financial products, insurance system, credit sources	3	33.33
Farming and processing system	3	33.33
Environmental consciousness and standards	2	22.22
Inclusion of women, youth, marginalized groups (IPS etc)	3	33.33
Value addition activities	3	33.33
Transfer of technologies and best practices	2	22.22
New market opportunities	3	33.33
Increase in product referrals, inquiries, etc.	2	22.22
Expanded Sales, Productivity	2	22.22

Table 125. Changes in the demand for your services as a result of your partnership/relationship with MinPACT

Items	Frequency
Yes	3
No	6
%Yes	33.33

Table 126. Effects brought about by approaches and technologies introduced by MinPACT

Items	Frequency	%Yes
Disruption in the market	0	0.00
Crowding in	2	22.22
Scaling up services to producer groups either by government, other NGOs	2	22.22
Adoption/replication of approaches and technologies by other POs	3	33.33

Table 127. Unintended results brought about by the project

Items	Frequency
Yes	1
No	8
%Yes	11.11

E. SUSTAINABILITY

Table 128. Awareness on interventions made to facilitate sustainability of project gains

	Frequency
Yes	4
No	5

%Yes	44.44
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Table 129. Organizations/agencies who initiated interventions for sustainability of project gains

Organizations/agencies	Frequency	%
Government agencies	2	22.22
Private agencies and institutions	2	22.22
NGOs	1	11.11

Table 130. Adequacy of level of human and institutional capacity in place to ensure continuity of good practices resulting from the project interventions

Items	Frequency
Yes	4
No	5
%	44.44

Table 131. Replicability, scalability and sustainability of the results under the MinPACT Project

Items	Frequency	%Yes
Replicable	5	55.56
Scalable	3	33.33
Sustainable	5	55.56

Table 132. Efforts for replicability

Items	Frequency	%
Addition of interventions of the project	1	11.11
Identification of needs and assessment	1	11.11
Implementation to more farmers	1	11.11

Dissemination and proper information on the process	1	11.11
Catering the needs of the community	1	11.11

Table 133. Efforts for scalability

Items	Frequency	%
Focusing on increasing the farmers income	1	11.11
Direct measurement of the portfolio	1	11.11
due to the demand and the needs	1	11.11

Table 134. Efforts for sustainability

Items	Frequency	%
Planting and giving a new technologies	1	11.11
Referring to the strong POs	1	11.11
Training other farmers	1	11.11
Introduction and development of commodity	1	11.11
For farmers it is sustainable	1	11.11

Table 135. Factors that can hinder the sustainability of project gains

Items	Frequency
Yes	5
No	4
%Yes	55.56

Table 136. Remaining market system gaps in the three crop sectors that are weak or need to be addressed

Items	Frequency
Yes	2
No	7
%Yes	22.22

5. VCA Micro-Finance Institutions

Details of Operations

Table 137. Average employment, fulltime and part-time, by type, by sex

Items	Fulltime Employee				Part-time Employee			
	Male	Female	Total Employee	Average (Total)	Male	Female	Total Employee	Average (Total)
Lending-Finance Coop	122	92	214	30.6	2	1	3	3.0
Micro Finance Institution	112	118	230	76.7	0	0	0	0.0
Others (Universal Bank & Savings and Credit Coop)	15	29	44	22.0	0	0	0	0.0
Savings bank/Rural Bank/Community Bank	26	6	32	32.0	0	0	0	0.0
Traders/Buyers/Shop Owners	7	3	10	10.0	13	2	15	15.0
Grand Total	282	248	530		15	3	18	

Table 138. Months of peak

Items	Peak						
	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Total	% Total
All Year			1			1	7.1
January					1	1	7.1
February						0	0.0
March		1		1		2	14.3
April		1				1	7.1
May		1				1	7.1
June	2	1		1		4	28.6
July	1					1	7.1
August	1					1	7.1
September	2			1	1	4	28.6
October	1	1				2	14.3
November	1	1			1	3	21.4

December	4			1	1	6	42.9
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Table 139. Lean Months

Items	Lean						Total	% Total
	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners			
All Year							0	0.0
January	2			1			3	21.4
February	2			1			3	21.4
March	2						2	14.3
April	2			1			3	21.4
May	2			1			3	21.4
June	1						1	7.1
July	2			1			3	21.4
August	2	1		1			4	28.6
September	1	1					2	14.3
October	1			1			2	14.3
November	1			1			2	14.3
December							0	0.0

Table 140. Commodities

Items	Commodity				
	Cacao	Coconut	Coffee	Total	% Total
Lending-Finance Coop	3	5	10	18.0	39.1
Micro Finance Institution	2	2	5	9.0	19.6
Others (Universal Bank & Savings and Credit Coop)	2	2	6	10.0	21.7
Savings bank/Rural Bank/Community Bank	1	1	2	4.0	8.7
Traders/Buyers/Shop Owners	1	1	3	5.0	10.9
Grand Total	9	11	26	46.0	100

Table 141. Individual borrowers

Items	Individual Borrowers						
	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Total	Average Total
Farmers	5339	116	2889	20	50	8414	601.0
Non-Farmers	1285	870	2885	23	0	5063	361.6

Table 142. Coop

Items	Coop						
	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Total	Average Total
Farmers	10	0	11	0	0	21	1.5
Non-Farmers	0	0	0	0	0	0	0.0

Table 143. Source of Funds

Items	Source of Funds						
	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Total	% Total
Government	3	0	2	0	0	5	35.7
Commercial Banks	0	1	0	1	1	3	21.4
Foundations-no for profit sector	2	1	0	0	0	3	21.4
Bilateral/Multilateral	2	0	0	0	0	2	14.3
Others	4	1	1	0	0	6	42.9
Total	11	3	3	1	1	19	

Note: Others – Share deposits, Savings & share capital of the members, RCBC Mother Bank

In terms of certification, only 2/14 have ISO certification, while 7/21 have certification from PCA, Foccus, BSP, CDA, DTI and SEC.

Table 144. Percentage of respondent registered, by type

Items	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Business Licensing Office (of the LGU for the license to operate)	4	3	1	0	1	9	64.3
Department of Trade and Industry (business name of single proprietorship)	2	2	1	0	1	6	42.9
Security and Exchange Commission (for the registration of the corporation)	2	1	1	0	0	4	28.6
Department of Finance	1	0	0	0	0	1	7.1
Bangko Sentral ng Pilipinas	1	2	1	1	0	5	35.7
Others	6	1	0	0	0	7	50.0

Note: Others are registered under CDA

Table 145. Major operational problems do you encountered in running the business

Items	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Lack of funding/limited loan portfolio	2	1	0	0	0	3	21.4
Lack of access by potential clients (proximity, affordability and eligibility)	0	1	1	0	0	2	14.3

Low level of usage of the financial services (regularity, frequency and patterns of use)	0	2	0	0	0	2	14.3
Increasing level of defaults	2	0	0	1	0	3	21.4
Others	0	0	1	0	1	2	14.3

Table 146. Financial Plan

Items	Lending Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Do own financial plans	2	1	0	0	0	3	21.4
Extend Technical Support	0	1	1	0	0	2	14.3
Have a business plan	0	2	0	0	0	2	14.3
Increasing level of defaults	2	0	0	1	0	3	21.4
Others	0	0	1	0	1	2	14.3

Table 147. Marketing problems

Items	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Lack of information on the financial services/products offered	4	1	1	0	0	6	42.9
Low awareness among potential clients	3	1	1	0	0	5	35.7
High level of interest rate/fees	0	1	0	1	0	2	14.3
Others	2	1	0	0	1	4	28.6

Note: Others- Competitors esp those with lower rates

Table 148. Factors considered for business expansion

Items	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Profitability	2	0	1	1	0	4	28.6
Number of potential clients	5	1	1	0	0	7	50.0
Overall business environment	5	0	2	0	0	7	50.0
Fees and other service charges	1	1	0	0	0	2	14.3
Others	1	1	1	0	1	4	28.6

ACCESS TO CREDIT AND FINANCING

Table 149. Percentage of respondents with debt

Items	No	Refuse to answer	Yes	% Yes
Lending-Finance Coop	4	1	2	14.3
Micro Finance Institution	2	0	1	7.1
Others (Universal Bank & Savings and Credit Coop)	1	1	0	0.0
Savings bank/Rural Bank/Community Bank	0	1	0	0.0
Traders/Buyers/Shop Owners	0	0	1	7.1
Total	7	3	4	

Table 150. Sources of debt

Source	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Banks		1			1	2	14.3
Cooperatives/Paluwagan	1					1	10
Government Assistance	1					1	5
Other		1				1	5

Note: Other- Foundation not for profit sector

Table 151. Average amount of debt, by source

Source	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Banks		600,000.00			15,000,000.00	15,600,000.00	

Cooperatives/ Paluwagan	1,000,000 .00					1,000,0 00.00	
Government Assistance	100,000.0 0					100,00 0.00	

Table 152. Financial challenges do you encounter

Items	Lending-Finance Coop	Micro Finance Institution	Others (Universal Bank & Savings and Credit Coop)	Savings bank/Rural Bank/Community Bank	Traders/Buyers/Shop Owners	Overall	% Overall
Outdated financial systems	3	1				4	28.6
High operational costs versus loans released or collection rate	4	3	1			8	57.1
Default	4		1	1		6	42.9
Others	1				1	2	14.3

Note: Others- Need more processing plants, stocks get stored in shop and in trucks/
Competition from other coops

ACCESS TO INFORMATION/TECHNOLOGY

Table 153. Percentage of respondent who use online mobile phone

Items	No	Yes	% Yes
Lending-Finance Coop	6	1	7.1
Micro Finance Institution	3	0	0.0
Others (Universal Bank & Savings and Credit Coop)	1	1	7.1
Savings bank/Rural Bank/Community Bank	1	0	0.0
Traders/Buyers/Shop Owners	1	0	0.0

Table 154. Percentage of respondent who have access to agri technology

Items	No	Yes	% Yes
Lending-Finance Coop	4	3	21.4
Micro Finance Institution	1	2	14.3

Others (Universal Bank & Savings and Credit Coop)	1	1	7.1
Savings bank/Rural Bank/Community Bank	0	1	7.1
Traders/Buyers/Shop Owners	0	1	7.1
Total	6	8	

Table 155. Access to Agriculture

Source	Freq.	%
Radio	1	7.1
Newspaper	1	7.1
Television	0	0.0
Cellphone	5	35.7
Internet	5	35.7
Friends/Religious Leaders/Local Leaders	2	14.3
NGOs, civil society	1	7.1
Reference materials/ FITS Center	4	28.6
Demonstration farms	0	0.0
Others	1	7.1

Note: Others- LGU/CDA/ NATCCO

Table 156. Access to Information

Item	Freq.	%
Financial Products	6	42.9
Pricing	3	21.4
Promotion	6	42.9
Potential Clients	3	21.4
Others	1	7.1

Note: Others- Trainings

Appendix J: Control of Resources

Overall, among MinPACT beneficiaries, the father, followed by the mother have higher decision-making power on different issues including resource management and development planning, budgeting, participation in community development projects and activities, formulation of ordinances related to agriculture and trade, membership in committees, revenue generation and others (Table 1-2). There is no significant difference in the percentage of family members' participation in decision making between treatment and control groups (Table 3).

Table 1. Involvement of family members in decision making on the different issues among MinPACT Beneficiaries

Item	Mother		Father		Both mother & father		Children		All members of the family	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Resource management and development planning	248	38.4	323	50.0	168	26.0	65	10.1	35	5.4
Budgeting	504	78.0	322	49.8	255	39.5	80	12.4	51	7.9
Participation in community development projects and activities	236	36.5	247	38.2	123	19.0	82	12.7	35	5.4
Formulation of ordinances related to agri and trade	89	13.8	144	22.3	47	7.3	32	5.0	9	1.4
Membership in committees	159	24.6	195	30.2	70	10.8	51	7.9	14	2.2
Revenue generation/livelihood engagement	142	22.0	181	28.0	78	12.1	38	5.9	15	2.3
Participation in community meetings/events	233	36.1	215	33.3	99	15.3	75	11.6	22	3.4
Farm management	301	46.6	465	72.0	221	34.2	114	17.6	63	9.8
What to plant (Commodities to produce)	130	20.1	238	36.8	71	11.0	41	6.3	13	2.0
Participating in technical trainings/meetings	171	26.5	214	33.1	79	12.2	38	5.9	13	2.0
Allocation of size of land for each produce	91	14.1	193	29.9	51	7.9	30	4.6	9	1.4
How much price to sell product	122	18.9	204	31.6	64	9.9	36	5.6	6	0.9
Where and quantity to sell (selling decision)	111	17.2	207	32.0	60	9.3	31	4.8	8	1.2
What inputs to procure/purchase	108	16.7	218	33.7	62	9.6	39	6.0	10	1.5
What Farming equipment to buy	127	19.7	248	38.4	74	11.5	39	6.0	11	1.7
Use of farming equipment	113	17.5	237	36.7	59	9.1	47	7.3	12	1.9
Choice of technology	97	15.0	179	27.7	54	8.4	31	4.8	8	1.2
Borrowing money for production	146	22.6	147	22.8	70	10.8	27	4.2	12	1.9
Used of borrowed funds	127	19.7	122	18.9	58	9.0	28	4.3	10	1.5
Whom to hire and how much labor to pay (labor sourcing)	117	18.1	190	29.4	62	9.6	30	4.6	10	1.5

Storage of products	58	9.0	127	19.7	32	5.0	23	3.6	8	1.2
How and Where to spend farm earnings	226	35.0	192	29.7	122	18.9	74	11.5	32	5.0

Table 2. Involvement of family members in decision making on the different issues among non-MinPACT Beneficiaries

Item	Mother		Father		Both mother & father		Children		All members of the family	
	Freq.	%	Freq.	%	Fre q.	%	Fre q.	%	Freq.	%
Resource management and development planning	125	36.0	150	43.2	77	22.2	27	7.8	10	2.9
Budgeting	289	83.3	170	49.0	136	39.2	47	13.5	30	8.6
Participation in community development projects and activities	85	24.5	104	30.0	43	12.4	26	7.5	6	1.7
Formulation of ordinances related to agri and trade	40	11.5	66	19.0	22	6.3	16	4.6	6	1.7
Membership committees in	67	19.3	90	25.9	32	9.2	29	8.4	10	2.9
Revenue generation/livelihood engagement	61	17.6	77	22.2	34	9.8	26	7.5	8	2.3
Participation in community meetings/events	90	25.9	101	29.1	43	12.4	30	8.6	7	2.0
Farm management	142	40.9	240	69.2	97	28.0	65	18.7	27	7.8
What to plant (Commodities to produce)	58	16.7	111	32.0	36	10.4	24	6.9	6	1.7
Participating in technical trainings/meetings	56	16.1	93	26.8	30	8.6	23	6.6	6	1.7
Allocation of size of land for each produce	39	11.2	91	26.2	26	7.5	20	5.8	6	1.7
How much price to sell product	57	16.4	106	30.5	26	7.5	20	5.8	4	1.2
Where and quantity to sell (selling decision)	60	17.3	96	27.7	33	9.5	20	5.8	6	1.7
What inputs to procure/purchase	50	14.4	97	28.0	29	8.4	18	5.2	6	1.7
What Farming equipments to buy	58	16.7	130	37.5	35	10.1	19	5.5	6	1.7
Use of farming equipments	52	15.0	127	36.6	29	8.4	26	7.5	5	1.4
Choice of technology	52	15.0	104	30.0	28	8.1	22	6.3	7	2.0
Borrowing money for production	86	24.8	73	21.0	40	11.5	20	5.8	8	2.3
Used of borrowed funds	78	22.5	64	18.4	38	11.0	18	5.2	7	2.0

Whom to hire and how much labor to pay (labor sourcing)	61	17.6	98	28.2	37	10.7	18	5.2	5	1.4
Storage of products	35	10.1	63	18.2	21	6.1	15	4.3	5	1.4
How and Where to spend farm earnings	131	37.8	101	29.1	78	22.5	32	9.2	20	5.8

Table 3. Difference (%) in family members' participation in decision making between treatment and control groups

Item	Mother	Father	Both mother & father	Child ren	All members of the family
Resource management and development planning	2.4	6.8	3.8	2.3	2.5
Budgeting	-5.3	0.9	0.3	-1.2	-0.8
Participation in community development projects and activities	12.0	8.3	6.6	5.2	3.7
Formulation of ordinances related to agri and trade	2.2	3.3	0.9	0.3	-0.3
Membership in committees	5.3	4.2	1.6	-0.5	-0.7
Revenue generation/livelihood engagement	4.4	5.8	2.3	-1.6	0.0
Participation in community meetings/events	10.1	4.2	2.9	3.0	1.4
Farm management	5.7	2.8	6.3	-1.1	2.0
What to plant (Commodities to produce)	3.4	4.9	0.6	-0.6	0.3
Participating in technical trainings/meetings	10.3	6.3	3.6	-0.7	0.3
Allocation of size of land for each produce	2.8	3.7	0.4	-1.1	-0.3
How much price to sell product	2.5	1.0	2.4	-0.2	-0.2
Where and quantity to sell (selling decision)	-0.1	4.4	-0.2	-1.0	-0.5
What inputs to procure/purchase	2.3	5.8	1.2	0.8	-0.2
What Farming equipment to buy	2.9	0.9	1.4	0.6	0.0
Use of farming equipment	2.5	0.1	0.8	-0.2	0.4
Choice of technology	0.0	-2.3	0.3	-1.5	-0.8
Borrowing money for production	-2.2	1.7	-0.7	-1.6	-0.4
Used of borrowed funds	-2.8	0.4	-2.0	-0.9	-0.5
Whom to hire and how much labor to pay (labor sourcing)	0.5	1.2	-1.1	-0.5	0.1
Storage of products	-1.1	1.5	-1.1	-0.8	-0.2
How and Where to spend farm earnings	-2.8	0.6	-3.6	2.2	-0.8

Most of the respondents said that there is consultation of family head to family members on different issues among MinPACT beneficiaries (Table 4-5). There is no significant difference in the percentage of respondents who said that there is consultation of family head to family members on different issues between treatment and control groups (Table 6).

Table 4. Extent of consultation of family head to family members on different issues among MinPACT beneficiaries

Items	All the Time		Most of the Time		Few Times		Never	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Resource management and development planning	125	19.3	275	42.6	205	31.7	40	6.2
Budgeting	121	18.7	292	45.2	182	28.2	50	7.7
Participation in community development projects and activities	108	16.7	276	42.7	222	34.4	39	6.0
Formulation of ordinances related to agri and trade	67	10.4	210	32.5	257	39.8	111	17.2
Membership in committees	79	12.2	234	36.2	250	38.7	82	12.7
Revenue generation/livelihood engagement	183	28.3	128	19.8	265	41.0	69	10.7
Participation in community meetings/events	112	17.3	263	40.7	227	35.1	43	6.7
Farm management	161	24.9	239	37.0	208	32.2	37	5.7
What to plant (Commodities to produce)	197	30.5	152	23.5	253	39.2	43	6.7
Participating in technical trainings/meetings	94	14.6	256	39.6	251	38.9	44	6.8
Allocation of size of land for each produce	93	14.4	218	33.7	280	43.3	54	8.4
How much price to sell product	79	12.2	225	34.8	243	37.6	98	15.2
Where and quantity to sell (selling decision)	95	14.7	224	34.7	264	40.9	62	9.6
What inputs to procure/purchase	102	15.8	243	37.6	241	37.3	59	9.1
What Farming equipment to buy	92	14.2	224	34.7	252	39.0	77	11.9
Use of farming equipment	85	13.2	226	35.0	252	39.0	82	12.7
Choice of technology	89	13.8	174	26.9	202	31.3	180	27.9
Borrowing money for production	87	13.5	166	25.7	197	30.5	195	30.2
Used of borrowed funds	90	13.9	195	30.2	262	40.6	98	15.2
Whom to hire and how much labor to pay (labor sourcing)	73	11.3	165	25.5	241	37.3	166	25.7
Storage of products	68	10.5	202	31.3	264	40.9	111	17.2
How and Where to spend farm earnings	129	20.0	244	37.8	222	34.4	50	7.7

Table 5. Extent of consultation of family head to family members on different issues among non-MinPACT beneficiaries

Items	All the Time		Most of the Time		Few Times		Never	
	Fre q.	%	Fre q.	%	Fre q.	%	Fre q.	%
Resource management and development planning	47	13.5	164	47.3	110	31.7	26	7.5
Budgeting	53	15.3	163	47.0	102	29.4	29	8.4
Participation in community development projects and activities	33	9.5	153	44.1	118	34.0	43	12.4
Formulation of ordinances related to agri and trade	26	7.5	126	36.3	114	32.9	81	23.3
Membership in committees	28	8.1	135	38.9	118	34.0	66	19.0
Revenue generation/livelihood engagement	90	25.9	62	17.9	136	39.2	59	17.0
Participation in community meetings/events	33	9.5	145	41.8	125	36.0	44	12.7
Farm management	64	18.4	133	38.3	112	32.3	38	11.0
What to plant (Commodities to produce)	96	27.7	75	21.6	134	38.6	42	12.1
Participating in technical trainings/meetings	32	9.2	123	35.4	131	37.8	61	17.6
Allocation of size of land for each produce	26	7.5	126	36.3	144	41.5	51	14.7
How much price to sell product	31	8.9	123	35.4	131	37.8	62	17.9
Where and quantity to sell (selling decision)	31	8.9	133	38.3	137	39.5	46	13.3
What inputs to procure/purchase	34	9.8	123	35.4	142	40.9	48	13.8
What Farming equipment to buy	33	9.5	127	36.6	129	37.2	58	16.7
Use of farming equipment	27	7.8	123	35.4	129	37.2	68	19.6
Choice of technology	24	6.9	100	28.8	114	32.9	109	31.4
Borrowing money for production	23	6.6	104	30.0	109	31.4	111	32.0
Used of borrowed funds	26	7.5	113	32.6	139	40.1	69	19.9
Whom to hire and how much labor to pay (labor sourcing)	28	8.1	85	24.5	141	40.6	93	26.8
Storage of products	24	6.9	111	32.0	129	37.2	83	23.9
How and Where to spend farm earnings	54	15.6	127	36.6	125	36.0	41	11.8

Table 6. Difference (%) in the extent of consultation of family head to family members on different issues between treatment and control (T-C) groups

Items	All the time	Most of the Time	Few Times	Never
Resource management and development planning	5.8	-4.7	0.0	-1.3
Budgeting	3.5	-1.8	-1.2	-0.6
Participation in community development projects and activities	7.2	-1.4	0.4	-6.4
Formulation of ordinances related to agri and trade	2.9	-3.8	6.9	-6.2
Membership in committees	4.2	-2.7	4.7	-6.3
Revenue generation/livelihood engagement	2.4	1.9	1.8	-6.3
Participation in community meetings/events	7.8	-1.1	-0.9	-6.0
Farm management	6.5	-1.3	-0.1	-5.2
What to plant (Commodities to produce)	2.8	1.9	0.5	-5.4
Participating in technical trainings/meetings	5.3	4.2	1.1	-10.8
Allocation of size of land for each produce	6.9	-2.6	1.8	-6.3
How much price to sell product	3.3	-0.6	-0.1	-2.7
Where and quantity to sell (selling decision)	5.8	-3.7	1.4	-3.7
What inputs to procure/purchase	6.0	2.2	-3.6	-4.7
What Farming equipment to buy	4.7	-1.9	1.8	-4.8
Use of farming equipment	5.4	-0.5	1.8	-6.9
Choice of technology	6.9	-1.9	-1.6	-3.5
Borrowing money for production	6.8	-4.3	-0.9	-1.8
Used of borrowed funds	6.4	-2.4	0.5	-4.7
Whom to hire and how much labor to pay (labor sourcing)	3.2	1.0	-3.3	-1.1
Storage of products	3.6	-0.7	3.7	-6.7
How and Where to spend farm earnings	4.4	1.2	-1.7	-4.1

Appendix K: Women and Youth

There is a significant difference in the level of awareness and empowerment among women and youth in the community between control and treatment after the MinPACT project. Across all sites, 55.6% of women and youth from the treatment sites and 43.4% from the control sites said that they are aware of program empowering women and youth in the community (See Table 1). The higher level of awareness on the treatment sites may be due to the gender related trainings provided by the project, the women-friendly farm practices promoted by the project and equal access to MinPACT support, (See Tables 2-8). Meanwhile, there is no significant difference in terms of the number of women and youth who hold leadership position in MinPACT groups and other groups, before and after the project (See Table 9).

Table 1. Awareness of respondents on program empowering women and youth in the community

Items	Control			Treatment		
	No	Yes	% Yes	No	Yes	% Yes
Bukidnon	29	19	39.6	29	60	67.4
Compostela Valley	31	22	41.5	56	50	47.2
Davao City	14	28	66.7	27	48	64.0
Davao del Norte	5	2	28.6	6	9	60.0
Davao del Sur	29	12	29.3	29	56	65.9
Davao Oriental	15	22	59.5	30	30	50.0
Zamboanga del Norte	31	13	29.5	56	39	41.1
Overall	154	118	43.4	233	292	55.6

Table 2. Participation in the gender first training conducted in the cooperative/association.

Items	No	Yes	% Yes
Bukidnon	40	49	55.1
Compostela Valley	74	32	30.2
Davao City	41	34	45.3
Davao del Norte	12	3	20.0
Davao del Sur	62	23	27.1
Davao Oriental	50	10	16.7
Zamboanga del Norte	35	60	63.2
Overall	314	211	40.2

Table 3. Percentage of respondents participated in the gender training felt the benefits in their organization.

Items	No	Yes	% Yes
Bukidnon		47	95.9
Compostela Valley	3	29	90.6
Davao City	3	30	88.2
Davao del Norte		3	100.0
Davao del Sur	4	19	82.6
Davao Oriental	5	5	50.0
Zamboanga del Norte	6	54	90.0
Overall	21	187	88.6

Table 4. Awareness of women-friendly farm practices promoted by MinPACT

Items	No	Yes	% Yes
Bukidnon	41	48	53.9
Compostela Valley	87	19	17.9
Davao City	45	30	40.0
Davao del Norte	13	2	13.3
Davao del Sur	70	15	17.6
Davao Oriental	52	8	13.3
Zamboanga del Norte	52	43	45.3
Overall	360	165	31.4

Table 5. Awareness of the kinds of women-friendly practices

Items	Freq.	%
Inclusion of women and youth in technical training, leadership skills, etc.	131	79.4
Equal access to credit or gender-specific window	91	55.2
Equal access to advice/mentor/extension	67	40.6
Equal access to input supply	80	48.5
Representation in decision-making bodies (cooperative, association, group)	76	46.1
Gender division of labor	91	55.2
Representation in marketing-related activities	54	32.7
Flexible working arrangements (productive and reproductive responsibilities)	53	32.1
Others	1	0.6

Table 6. Do women in the family have equal access to MinPACT support?

Items	No	Yes	% Yes
Bukidnon	19	65	73.0
Compostela Valley	61	45	42.5
Davao City	28	47	62.7
Davao del Norte	11	4	26.7
Davao del Sur	42	32	37.6
Davao Oriental	23	37	61.7
Zamboanga del Norte	42	53	55.8
Overall	226	283	53.9

Table 7. Average number of women and youth members of the family are involved in MinPACT project.

Province	Average
Bukidnon	1.01
Compostela Valley	0.58
Davao City	0.65
Davao del Norte	0.29
Davao del Sur	0.58
Davao Oriental	0.97
Zamboanga del Norte	0.69
Overall	0.72

Table 8. Modality of knowledge from trainings attended by women/youth.

Items	Freq.	%
Share the training materials	277	52.8
Demonstrate the knowledge/skills in the farm to husband/father/son	208	39.6
Not shared/transferred at all	27	5.1
Others	4	0.8

Table 9. Average number of women and youth who hold leadership position in MinPACT groups and other groups.

Province	MinPACT Groups			Other Groups		
	Before	After	diff	Before	After	diff
Bukidnon	0.21	0.15	-0.06	0.07	0.14	0.07
Compostela Valley	0.08	0.09	0.02	0.10	0.13	0.03
Davao City	0.27	0.31	0.04	0.17	0.24	0.07
Davao del Norte	0.00	0.00	0.00	0.00	0.07	0.07
Davao del Sur	0.05	0.08	0.03	0.06	0.15	0.10
Davao Oriental	0.12	0.37	0.25	0.12	0.25	0.13
Zamboanga del Norte	1.27	2.71	1.43	1.58	2.67	1.09
Overall	0.35	0.65	0.30	0.37	0.63	0.26

There is a significant difference in terms of perceived fair distribution of duties in the household to allow women to have meaningful participation in community activities, before and after MinPACT (See Table 10).

Table 10. Percentage of respondents perceived fair distribution of duties in the household to allow women to have meaningful participation in community activities, before and after MinPACT.

Province	Before			After			Diff
	No	Yes	%	No	Yes	%	
Bukidnon	44	45	50.6	8	81	91.0	40.4
Compostela Valley	21	85	80.2	9	97	91.5	11.3
Davao City	21	54	72.0	8	67	89.3	17.3
Davao del Norte	2	13	86.7	2	13	86.7	0.0
Davao del Sur	16	69	81.2	8	77	90.6	9.4
Davao Oriental	12	48	80.0	3	57	95.0	15.0
Zamboanga del Norte	55	40	42.1	34	61	64.2	22.1
Overall	171	354	67.4	72	453	86.3	18.9

There is a significant increase in the extent of women's participation in different areas between the treatment areas and the control areas (See Table 11). The relative increase in participation among women due to MinPACT interventions can be seen the areas of resource management and development planning, budgeting, participation in community development projects and activities, Formulation of ordinances related to agriculture and trade, membership in committees,

revenue generation/livelihood engagement, farm management, selection of commodities to produce, allocation of size of land for each produce, what inputs to procure/purchase, use of farming equipment, choice of technology, borrowing money for production, hiring of farm help, salaries of farm help, storage of products and in the spending to farm earnings.

Table 11. Change in Women extent of participation in different areas

Items	In General				Relative change due to MinPACT			
	Never	Few Times	Most of the time	All the time	Same	Decrease	Increase	% Increase
Resource management and development planning	51	227	207	37	318	5	199	37.9
Budgeting	50	149	225	98	283	5	234	44.6
Participation in community development projects and activities	54	200	221	47	284	9	229	43.6
Formulation of ordinances related to agri and trade	141	212	146	23	339	16	167	31.8
Membership in committees	87	221	178	36	302	14	206	39.2
Revenue generation/livelihood engagement	90	193	214	25	327	12	183	34.9
Farm management	57	223	158	83	299	10	212	40.4
What to plant (Commodities to produce)	83	224	169	45	298	12	211	40.2
Allocation of size of land for each produce	94	236	156	35	341	12	168	32.0
How much price to sell product	120	218	154	29	337	10	174	33.1
Where and quantity to sell (selling decision)	99	223	161	38	346	6	169	32.2
What inputs to procure/purchase	87	215	184	34	326	5	189	36.0
Use of farming equipments	101	225	162	32	335	6	179	34.1
Choice of technology	108	208	178	26	332	8	180	34.3
Borrowing money for production	163	166	154	37	368	12	140	26.7
Used of borrowed funds	160	168	155	37	370	10	140	26.7
Whom to hire and how much labor to pay (labor sourcing)	104	207	168	41	359	8	153	29.1
Storage of products	146	220	132	22	374	11	135	25.7
How and Where to spend farm earnings	78	167	200	75	304	12	204	38.9

A slight majority of the respondents perceived that MinPACT does not promote participation of the youth (See Table 12) while a large majority of the respondents said that youth in the family do

not have equal access to MinPACT support (See Table 13). There is a slight increase in the extent of youth participation in different areas (See Table 14). Overall, 34.7% of the respondents perceived that youth are motivated to continue farming due to exposure/participation to MinPACT (see Table 15). In the case of Davao Oriental, the farmers have the general sentiment and observation that many of the youth are more inclined to non-farm livelihood sources due to the intensive labor and working capital requirements. Some of the youth, on the other hand, would like to continue farming as a source of income but most of them expressed preference to more formal employment off-farm, given the opportunity, saying income from the farm is not enough since they do not own big parcels of farmlands.

Table 12. Percentage of respondents perceived that MinPACT promotes participation of the youth

Province	No	Yes	% Yes
Bukidnon	18	66	74.2
Compostela Valley	59	47	44.3
Davao City	36	39	52.0
Davao del Norte	10	4	26.7
Davao del Sur	40	34	40.0
Davao Oriental	50	10	16.7
Zamboanga del Norte	55	40	42.1
Overall	268	240	45.7

Table 13. Percentage of respondents perceived that youth in the family have equal access to MinPACT support

Province	No	Yes	% Yes
Bukidnon	41	43	48.31
Compostela Valley	86	20	18.87
Davao City	43	31	41.33
Davao del Norte	11	3	20.00
Davao del Sur	55	19	22.35
Davao Oriental	45	15	25.00
Zamboanga del Norte	55	40	42.11
Overall	336	171	32.57

Table 14. Change in Youth extent of participation in different areas

Items	In General				Relative change due to MinPACT			
	Never	Few Times	Most of the time	All the time	Same	Decrease	Increase	% Increase
Resource management and development planning	219	229	65	7	415	7	97	18.5
Budgeting	235	197	72	15	406	12	101	19.2
Participation in community development projects and activities	235	189	83	12	390	13	116	22.1
Formulation of ordinances related to agri and trade	279	171	65	4	418	12	89	17.0

Membership in committees	254	177	81	7	401	12	106	20.2
Revenue generation/livelihood engagement	248	178	87	6	410	12	97	18.5
Farm management	207	199	86	27	390	12	117	22.3
What to plant (Commodities to produce)	234	188	88	9	398	13	108	20.6
Allocation of size of land for each produce	246	191	76	6	405	13	101	19.2
How much price to sell product	256	187	71	5	404	12	103	19.6
Where and quantity to sell (selling decision)	249	195	69	6	417	9	93	17.7
What inputs to procure/purchase	251	181	83	4	405	8	106	20.2
Use of farming equipment	243	196	73	7	412	11	96	18.3
Choice of technology	244	194	76	5	402	16	101	19.2
Borrowing money for production	324	150	41	4	449	16	54	10.3
Used of borrowed funds	326	140	46	7	453	10	56	10.7
Whom to hire and how much labor to pay (labor sourcing)	267	177	70	5	423	13	83	15.8
Storage of products	277	177	57	8	410	13	96	18.3
How and Where to spend farm earnings	228	189	90	12	402	14	103	19.6

Table 15. Percentage of respondents perceived that youth are motivated to continue farming due to exposure/participation to MinPACT

Province	No	Yes	% Yes
Bukidnon	35	53	59.6
Compostela Valley	70	36	34.0
Davao City	48	27	36.0
Davao del Norte	9	5	33.3
Davao del Sur	56	26	30.6
Davao Oriental	53	7	11.7
Zamboanga del Norte	67	28	29.5
Overall	338	182	34.7

Overall, 57.7% of respondents perceived that MinPACT interventions address the needs of women (See Table 16) while 34.1% perceived that MinPACT interventions address the needs of youth. This implies that the interventions of the project are felt more by women than by the youth (See Table 17).

Table 16. Percentage of respondents perceived that MinPACT interventions address the needs of women

Province	No	Yes	% Yes
Bukidnon	19	69	77.5

Compostela Valley	44	62	58.5
Davao City	35	40	53.3
Davao del Norte	8	6	40.0
Davao del Sur	36	46	54.1
Davao Oriental	42	18	30.0
Zamboanga del Norte	33	62	65.3
Overall	217	303	57.7

Table 17. Percentage of respondents perceived that MinPACT interventions address the needs of youth

Province	No	Yes	% Yes
Bukidnon	37	50	56.2
Compostela Valley	61	45	42.5
Davao City	53	22	29.3
Davao del Norte	11	3	20.0
Davao del Sur	61	21	24.7
Davao Oriental	55	5	8.3
Zamboanga del Norte	62	33	34.7
Overall	340	179	34.1

Appendix L: Perception of Key Informants

Sixty-four (64) key informants were engaged by the study which includes 14 National Government Agencies (10 Regional and 4 Provincial), Local Government Units (12), Traders/Processors (9), MFI (6), BDS (5), FOG (3), POs/Coops (11), and Input Suppliers (4). Since the respondents had different levels of involvement and knowledge about MinPACT, not all provided ratings. For those who had direct participation in MinPACT, and gave ratings, the scores are summarized below.

Relevance

On a scale of 1 to 5, 5 being the highest, the government sector gave a high rating as regards relevance to the 3Cs crop sector (see Table 1). NGAs gave a rating of 4.8, which is reflective of MinPACT's alignment with development plans at the national and local levels and in terms of addressing the felt needs of the 3Cs industry. The PLGUs, on the other hand, gave a rating of 5 on addressing industry needs while they gave 4.4 and 4.6 as to alignment with local and national plans, respectively.

Table 1: Relevance to the crops sector

Items	RATING	
	NGA	PLGU
Felt needs of the crop industry (beneficiaries)	4.83	5
Local Development Plans (LGU/barangay)	4.83	4.4
National Agricultural Development Plan	4.83	4.6
Philippine Development Plan	4.83	4.6

As to influence on relevant stakeholders, NGAs gave MinPACT a rating of 4.5 across sectors. PLGUs gave a higher rating of 4.67 on the Project's influence to industry players and national government agencies, and slightly lower at 4.33 on influence to LGUs (see Table 2).

Table 2: Influence on stakeholders

Items	RATING	
	NGA	PLGU
LGUs	4.5	4.33
National government agencies	4.5	4.67
Industry players	4.5	4.67

The government sector sees high relevance on the different interventions made by MinPACT to the 3Cs sector with a rating of 4 to 4.8 (see Table 3). Generally, NGAs gave higher ratings from 4.5 to 4.8 while PLGUs gave a rating of 4 to 4.5.

Table 3: Relevance of interventions to the three crop sectors

Items	RATING	
	NGA	PLGU
Agri/Farm technology trainings	4.8	4.5

Organizational management trainings	4.75	4.5
Exposure trips	4.8	4.5
Participation to conferences, summits, market encounters	4.8	4.5
Grants and provisions of inputs and PHFs	4.8	4
Printed materials(brochures, techno guide, manuals)	4.8	4
Financial education, linking to formal lending institutions	4.5	4.5
Marketing assistance	4.5	4
Marketing services, technical advisory services	4.5	4

On the part of Traders/Processor, the influence of MinPACT to their sector reveals an average rating of 3.5 (see Table 4), which signals that more remains to be done on addressing the needs of this sector. MinPACT apparently did not extensively engage Traders/Processors except those that are members of the industry networks like CIDAMI and Cocolink.

Table 4: Influence of MinPACT to the changes in the Trader/Processor sector

Rating	Frequency
1	
2	
3	1
4	1
5	
Average	3.5

For the key informants that gave a rating on the level of satisfaction with MinPACT including its beneficiary organizations, the average score is 4 (see Table 5).

Table 5: Satisfaction with MinPACT, including its beneficiary organizations

Rating	Frequency
1	
2	
3	
4	2
5	
Average	4

Efficiency

As regards efficiency, the key informants gave MinPACT implementing partners a score of 2.5 (see Table 6), while they gave MinPACT varied ratings on direct implementation of project support and services (see Table 7). Input Suppliers (IS) and BDS respondents saw credit facilitation the

least efficient at 2.67 while the lone MFI respondent gave a score of 5. For other services, the MFI respondent gave a rating of 5 but the IS and BDS respondents gave a rating of 3.0 to 3.8.

Table 6: Efficiency of project partners in implementing the interventions

Items	Ratings					Average
	1	2	3	4	5	
Project Partners	1			1		2.50
Contractors, Suppliers	1			1		2.50
Other Service Providers	1			1		2.50

Table 7: Level of efficiency of MinPACT in the delivery of support and services

Items	RATING		
	MFI	INPUT SUPPLIER	BDS/FOG
Delivery of the Inputs, PHF, other goods, seedlings	5	3.33	3.50
Technical services, farm visits, meetings, consultations	5	3.33	3.80
Trainings, cross visits, exposure programs, (TOTs)	5	3.00	3.00
Referrals, Advisory Services, Marketing Service	5	3.33	3.80
Credit facilitation, loans	5	2.67	2.67

Effectiveness

As regards MinPACT influence on behavior and practices, the respondents gave a high rating of 4 to 5 in various indicators (see Table 8). On the level of satisfaction with MinPACT staff, the key informants gave a rating of 3.3 to 5 (see Table 9).

Table 8: Level of influence of MinPACT on behavior and practices of 3C industry and producer organizations

Items	RATING				
	NGA	PLG U	MFI	INPUT SUPPLIER	BDS/FOG
Adoption of new technology in production	4.5	3.8	5	4.67	4.25
Adoption of good agricultural practices	4.5	3.8	5	4.67	4.00
Application of quality standards	4.67	3.8	5	4.67	4.25
Use of volume & quality-based contracts	4.33	3.2		4.33	3.75
Use of product information/market segmentation	4.33	4		3.67	3.75
Use of inventory system	4.6	4	5	3.67	4.00

Items	RATING				
	NGA	PLGU	MFI	INPUT SUPPLIER	BDS/FOG
Clear and transparent governance system	4.67	3.8	5	3.67	4.50
Developed business plans and management systems that are functional	4.6	4	5	4.00	4.50
Improved financial literacy among beneficiary producers	4.67	4	5	4.00	4.25
Use of Formal Credit and Funding institutions	4.6	4	5	3.67	4.00
Improved & appropriate quality inputs, tools, planting materials and post-harvest facility to achieve national/international standards	4.83	4	5	4.00	4.75
Improved nursery/seedling quality standards to meet market demands	4.83	4	5	4.00	
Increased productivity (yields, sales, orders)	4.67	3.8	5	4.50	
Increased market shares, expand services	4.33	3.75	5	4.00	

Table 9. Satisfaction of stakeholders with ACIDI VOCA or MinPACT project officers/staff

Items	RATING				
	NGA	PLGU	MFI	INPUT SUPPLIER	BDS/FOG
Discuss clearly the objectives, targets, proposed activities, timelines and delineation of roles	3.8	4.67	5.00	3.75	5.00
Involve you in major decision-making points	3.8	3.5	5.00	3.25	4.50
Accommodate reasonable changes in schedule, arrangements, activities, priorities	3.8	4.33	5.00	3.75	4.50
Transfer knowledge and provide advice on improving organizational processes, systems, etc.	3.2	4.67	5.00	3.50	5.00
Communication/coordination, including frequency and quality	4	4.33	5.00	3.50	4.50
Debriefing or learning session (after each important activity)	4	4	5.00	3.75	4.50
Participation of women and youth	3.8	4.67	5.00	3.75	4.00

Sustainability

Technology Adoption

On a scale of 1 to 10, 10 being the highest, the key informants gave high ratings. For cacao production, the highest pertains to pruning at 9.48 and the lowest is on post-harvest techniques at 6.4 (see Table 10). For coffee, the scores are higher from 8.33 to 10 (see Table 11) and for coconut, the ratings given vary from 7.75 to 10 (see Table 12).

Table 10. Rating of Application of Technology on Cacao Production

Items	Ratings										Average
	1	2	3	4	5	6	7	8	9	10	
Pest Management					2		1	2		2	7.57
Disease management			1					3	1	2	8
Rehabilitation				1		1		1	1	2	7.83
Soil sampling			1	1			1			2	6.8
Mulching					1			3		2	8.17
Pruning					1		2	1	1	2	9.43
Farm planning				1			1		2	2	8.17
Application of fertilizer				1	1		1	1	1	2	7.57
Weed management				1			1	2	1	2	8
Farm diversification				1			1		1	3	8.33
Proper plant spacing				1			1	1	1	2	8
Proper harvesting		1				1		2		1	6.8
Post-harvest techniques/ practices		1			1		1	1		1	6.4

Table 11: Rating of Application of Technology on Coffee Production

Items	Ratings										Average
	1	2	3	4	5	6	7	8	9	10	
Pest Management							1		1	1	8.67
Disease management										2	10
Rehabilitation									1	1	9.5
Soil sampling						1	1			1	7.67
Mulching							1		1	1	8.33
Pruning							1		1	1	8.33
Farm planning							1			2	9
Application of fertilizer							1			2	9
Weed management							1		1	1	8.67
Farm diversification							1			2	9
Proper plant spacing							1			2	9
Proper harvesting							1			1	8.5

Post-harvest techniques/ practices							1			1	8.5
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Table 12. Rating of Application of Technology on Coconut Production

Items	Ratings										Average
	1	2	3	4	5	6	7	8	9	10	
Pest Management									1	3	9.75
Disease management									1	3	9.75
Rehabilitation							1			3	9.5
Soil sampling					1					3	8.75
Mulching					1		1	1		1	7.5
Pruning									1	1	9.5
Farm planning										4	10
Application of fertilizer								1		3	9.5
Weed management									1	3	9.75
Farm diversification					1					3	8.75
Proper plant spacing					1			1		2	8.25
Proper harvesting							1	1		2	8.75
Post-harvest techniques/ practices					1	1				2	7.75

Management Practices

Management practices are also critical factors to sustainability. The respondents gave a variable rating of 5.83 to 9.14 on the different areas of management (see Table 13). Further, decision-making in the family is another factor to consider, and majority of the respondents said they are involved most of the time and many are involved all the time (see Table 14).

Table 13. Rating on the Applied Management Practice

Items	Ratings										Average
	1	2	3	4	5	6	7	8	9	10	
Input, Output, and Labor Needs Computation					1	1		3		1	5.83
Business practices (related to the management of land, crops, equipment, facilities, transportation)						1		2	2	1	8.33
Use of Information Technology (including computers and GPS)					1		1	2	1	1	7.83
Financial planning, cash flow, balance sheet, income statements, variable and fixed agents								1	2	4	9
Record Keeping (including financial and production documents, receipts and									3	4	9.14

expenses, maintaining and using inventories, etc)												
Gender Equity/Equality/Development/mainstreaming					1			2			4	8.71

Table 14. Involvement of Respondent in Decision Making in the Family

Purpose	Extent of Decision Making			
	Never	Few Times	Most of the Time	All the Time
Resource management and development planning			6	1
Budgeting			3	4
Participation in community development projects and activities		1	4	2
Formulation of ordinances related to agri and trade		1	4	2
Membership in committees			3	4
Revenue generation/livelihood engagement		1	3	2
Participation in community meetings/events		1	4	2
Farm management				
- What to plant (Commodities to produce)			6	1
- Participating in technical trainings/meetings			5	2
- Allocation of size of land for each produce			5	1
- How much price to sell product			4	2
- Where and quantity to sell (selling decision)			4	2
- What inputs to procure/purchase			5	2
- What Farming equipments to buy			5	2
- Use of farming equipments			5	2
- Choice of technology			6	1
- Borrowing money for production			4	2
- Used of borrowed funds			3	3
- Whom to hire and how much labor to pay (labor sourcing)			5	2
- Storage of products			4	2
- How and Where to spend farm earnings			3	3

Appendix M: Overall Assessment

Relevance

In a scale of 1 to 5 where 5 is the highest, the respondents were asked to rate the relevance of the project in terms of productivity improvement and trade increase. The average rating given in terms of improved productivity is 3.55 while the average rating given in terms of increased trade is 3.46 (see Table 1). This is due to the fact that the expected additional yield and income from newly-planted 3Cs will yet be realized in the future, and it follows that market demand cannot yet be met at existing volume of production.

Majority of the respondents think that MinPACT contributed to the development efforts of the country. Around 77.2% of the respondents think that the project contributed to the local development (Barangay and Municipal level), 71.6% think that the project contributed towards the achievement of the Provincial, Regional and National Development Plans, while 58.2% said that the project contributed towards the achievement of the Philippine Medium-Term Plan. 74.1% of the respondents said that the project contributed to poverty reduction while 74.2% said the project contributed to the development of their organization (See Table 2).

Table 1. Ratings on the relevance of MinPACT in Increasing productivity and trade

Rating	Improved Productivity		Increased Trade	
	Freq.	%	Freq.	%
1	13	1.9	16	2.3
2	51	7.3	69	9.9
3	249	35.7	263	37.7
4	309	44.3	279	40.0
5	76	10.9	71	10.2
Average		3.55		3.46

Note: 1 is the lowest, 5 is the highest

Table 2. Perception on the contribution of MinPACT on development efforts

Items	Don't Know	No	Yes	% Yes
Local Development (Barangay/Municipal)	128	31	539	77.2
Regional/Provincial/National Development Plans	163	35	500	71.6
Philippine Medium-Term Plan	248	44	406	58.2
Poverty Reduction	151	30	517	74.1
Your organization	139	41	518	74.2

In a scale of 1 to 5 where 5 is the highest, the respondents gave the project an average of 3.44 in terms on its influence on different market players (See Table 3).

Table 3. Rate to what degree MinPACT intervention influenced the following:

Items	1	2	3	4	5	Average
Private sector participation	15	67	286	279	51	3.41
Local Government Units	10	55	294	272	67	3.47
Government Line Agencies (DA, DTI, etc.)	9	45	244	294	106	3.63
NGO's, other Non-Government Actors	12	63	286	278	59	3.44

Note: 1 is the lowest, 5 is the highest

Efficiency

Majority of the respondents (74.9%) said that based on their experience and participation with the MinPACT project, the overall results of the project implementation contributed to the development of their organization (See Table 4).

Table 4. In your experience and participation with the MinPACT project, did the overall results contribute to the development of your Peoples/Producer Organizations

Items	Freq.	%
Don't Know	135	19.3
No	40	5.7
Yes	523	74.9

In a scale of 1 to 5 where 5 is the highest, majority of the respondents gave a rating of 3 when it comes to the efficiency of MinPACT project support and services. On the delivery of inputs, PHF, other goods and seedlings, the respondents gave an average rating of 3.54 and an average of 3.46 on technical services, farm visits, meetings and consultations. On trainings, cross visits, exposure programs and Training of Trainers (TOTs), the respondents gave the project an average rating of 3.45. For referrals, advisory services and marketing services, the respondents gave the project an average rating of 3.24 and an average rating of 3.02 on credit facilitation and loans. For market information, the respondents gave the project an average rating of 3.24 and an average of 3.31 on information drives and promotions. For product development, the respondents gave the project an average rating of 3.4 (See Table 5).

Table 5. In the delivery of the Project Support & Services, please rate the efficiency of MiniPACT according to the following:

Items	Ratings					Average
	1	2	3	4	5	
Delivery of the Inputs, PHF, other goods, seedlings	10	64	245	295	84	3.54
Technical services, farm visits, meetings, consultations	15	75	255	281	72	3.46
Trainings, cross visits, exposure programs, (TOTs)	17	80	307	160	134	3.45
Referrals, Advisory Services, Marketing Service	16	108	300	237	37	3.24

Credit facilitation, loans	48	144	281	195	30	3.02
Market Information	19	122	274	237	46	3.24
Information drives, Promotion	14	94	301	239	50	3.31
Product development	13	78	291	251	65	3.40

Note: 1 is the lowest, 5 is the highest

Overall, 68.62% of the respondents said that the project was implemented in the most efficient way compared to other alternatives. Only 5.58% of the respondents said that the project was not implemented in the most efficient way while 25.79% said that they do not know if the project is flexible or not (See Table 6).

Table 6. Do you think that the project was implemented in the most efficient way compared to other alternatives?

Items	Freq.	%
Don't know	180	25.79
No	39	5.59
Yes	479	68.62

In terms of flexibility, 68.05% of the respondents said that project is flexible enough to accommodate local suggestions as possible delivery system alternative. Only 5.16% said that the project is not flexible while 26.79% said that they do not know if the project is flexible or not (See Table 7).

Table 7. Was the project flexible to accommodate local suggestions as possible delivery system alternative?

Items	Freq.	%
Don't know	187	26.79
No	36	5.16
Yes	475	68.05

In a scale of 1 to 5 where 5 is the highest, a large majority of the respondents rated the project as 3 (45.42%) and 4 (34.81%). Around 5.44% of the respondents gave rating of 5 while 2.15% gave a rating of 1 and 12.18% of the respondents gave a rating of 2 (see Table 8).

Table 8. Rate the efficiency of Project partners, contractors and other (stakeholders) in implementing interventions in the field

Items	Project Partners		Contractors, Suppliers	
	Freq.	%	Freq.	%
1	10	1.43	15	2.15
2	77	11.03	85	12.18
3	282	40.40	317	45.42
4	282	40.40	243	34.81
5	47	6.73	38	5.44
Average	3.40		3.29	

Note: 1 is the lowest, 5 is the highest

Effectiveness

Using a five-point scale where 5 is the highest and 1 as the lowest, the respondents were asked to rate the project on its level of influence the behavior (norms) and practices (rules and regulations) of the coconut, cocoa, coffee industry and its producer organizations and farmers. The average rating given by the respondents on the influence of the project on the adoption of new technology in production is 3.57, an average rating of 3.59 for influence on the adoption of good agricultural practices and an average of 3.48 on the its influence on the application of quality standards.

For the project's influence on the use of volume and quality-based contracts, the respondents gave the project an average rating of 3.27. The respondents also gave the project and average rating of 3.28 for its influence on the use of product information/market segmentation and an average rating of 3.17 on the use of inventory system.

On its influence on the adoption clear and transparent governance system, the respondents gave the project a rating of 3.27, an average of 3.20 on its influence on the development of business plans and management systems that are functional, an average of 3.28 on its influence on the improvement if financial literary among beneficiary producers and 3.02 on the use of formal credit and funding institutions.

On the aspect related to farm inputs, the respondents rated the influence of the project at an average of 3.25 for improved and appropriate quality inputs, tools, planting materials and post-harvest facility to achieve national/international standards, an average of 3.47 for improved nursery/seedling quality standards to meet market demands, an average rating of 3.45 for increase productivity (yields, sales, orders) and an average rating of 3.35 for increased market shares and expanded services. (See Table 9 for the ratings on influences on behavior and norms)

Table 9. To what level have MinPACT influenced the behavior (norms) and practices (rules and regulations) of the coconut, cocoa, coffee industry and its producer organizations and farmers

Items	Ratings					Average
	1	2	3	4	5	
Adoption of new technology in production	10	63	230	308	87	3.57
Adoption of good agricultural practices	9	65	231	289	104	3.59
Application of quality standards	14	65	267	275	77	3.48
Use of volume & quality based contracts	21	98	303	219	56	3.27
Use of product information/market segmentation	17	90	318	217	51	3.28
Use of inventory system	28	103	365	119	80	3.17
Clear and transparent governance system	16	101	304	231	46	3.27
Developed business plans and management systems that are functional	18	108	320	215	35	3.20
Improved financial literacy among beneficiary producers	18	98	302	226	50	3.28
Use of Formal Credit and Funding institutions	37	167	279	175	40	3.02
Improved & appropriate quality inputs, tools, planting materials and post-harvest facility to achieve national/international standards	23	102	293	230	46	3.25

Improved nursery/seedling quality standards to meet market demands	23	72	247	264	92	3.47
Increased productivity (yields, sales, orders)	13	72	268	277	68	3.45
Increased market shares, expand services	17	80	297	252	52	3.35

Note: 1 is the lowest, 5 is the highest

A large majority of the respondents or 70.77% said that they do not know/not aware of any signs of new cacao, coffee, coconut industry players that imitate program sponsored business models/interventions as a result of project facilitation while 20.06% said that there are now new players in the market which can be attributed as a result of project facilitation. Only 9.17% of the respondents said that they see signs of new cacao, coffee, coconut industry players that imitate program sponsored business models/interventions as a result of project facilitation (See Table 10).

Table 10: Are there signs of new cacao, coffee, coconut industry players that imitate program sponsored business models/interventions as a result of Project Facilitation?

Items	Freq.	%
Don't Know	494	70.77
No	140	20.06
Yes	64	9.17

A large majority or 73.64% of the respondents said that they do not know if there new services available to producers and other value chain actors while a9.91% said there is none. Only 6.45% of the respondents said that there are new services available to producers and other value chain actors (See Table 11).

Table 11. Are there new services available to producers and other value chain actors?

Items	Freq.	%
Don't Know	514	73.64
No	139	19.91
Yes	45	6.45

When asked to describe your relationship with ACIDI-VOCA or MinPACT project officers/staff, large majority of the respondents said that they are satisfied with the way the project officers/staff deal with them. 72.78% of the respondents said that they are satisfied with the way that the project officers/staff explained the objectives, targets, proposed activities, timelines and delineation of roles, 69.34% said that they are satisfied with the way that they were involved in the project decision-making and 70.06% said that they are satisfied with the way the project officers/staff accommodate reasonable changes in the schedules, arrangements, activities and priorities.

76.65% of the respondents said that they are satisfied with the way that the project officers/staff handled the transfer of knowledge include the advice given on improving organizational processes, systems, etc., said that they are satisfied with the way the project while 70.20% said that they are satisfied with the frequency and quality of communication/coordination between them and the project officers/staff. 71.06% of the respondents also said that they are satisfied

with how the project officers/staff handled the debriefing or learning sessions after each important activity. (See Table 12 for the satisfaction rating).

Table 12. Please describe your relationship with ACIDI-VOCA or MinPACT project officers/staff. Please rate your satisfaction level on how they do the following:

Item	Rating					% Satisfied
	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied	
Explaining the objectives, targets, proposed activities, timelines and delineation of roles		14	176	448	60	72.78
Involving you in decision-making points	1	15	198	444	40	69.34
Accommodate reasonable changes in schedule, arrangements, activities, priorities		12	197	443	46	70.06
Transfer knowledge and provide advice on improving, organizational processes, systems, etc.	1	20	142	479	56	76.65
Communication/coordination, including frequency and quality	1	15	192	458	32	70.20
Debriefing or learning session (after each important activity)	1	12	189	462	34	71.06

Impact

When asked about the impact of the project on their lives (see Table 13), 69.63% of the respondents said that the project facilitated the adoption of new norms and behaviors, 59.31% said that the project facilitated the adoption of new business practices and models, 42.55% said that the project facilitated new support functions (ICT, market finders, brokers), 45.70% said that it facilitated access to new financial products, insurance system and credit sources, 68.05% said that it facilitated new farming and processing system, 69.91% said that it helped foster environmental consciousness and standards and 65.90% said that it facilitated the inclusion of women, youth and marginalized groups (IPS etc.). On the processing of products, 61.75% said that the project helped them engage in value addition activities to increase income, 68.19% said that the project facilitated transfer of technologies and adoption of best practices, 57.74% said that the project facilitated the identification of new market opportunities, 55.01% said that it facilitated product referrals/inquiries and 61.46% said that the project helped them expand productivity and increase sales.

Table 13. In the crop sector you belong (cacao, coconut, coffee), has MinPACT caused any changes (intended, unintended) among the industry players?

Items	Don't Know	No	Yes	% Yes
Adoption of new norms and behaviors	159	53	486	69.63
New business practices/models	224	59	414	59.31

New support functions (ICT, market finders, brokers)	274	127	297	42.55
New financial products, insurance system, credit sources	258	121	319	45.70
Farming and processing system	169	54	475	68.05
Environmental consciousness and standards	166	44	488	69.91
Inclusion of women, youth, marginalized groups (IPS etc.)	181	57	460	65.90
Value addition activities	210	57	431	61.75
Transfer of technologies and best practices	170	52	476	68.19
New market opportunities	229	66	403	57.74
Increase in product referrals, inquiries, etc.	218	96	384	55.01
Expanded Sales, Productivity	205	64	429	61.46

Adoption of technologies, which is tantamount to a positive change in behavior, and changes in sales value and income are seen as a result of project intervention (see Table 14). 50.64% of the respondents said that members of their organization adopted new technologies, protocols, methods as a result of Project Intervention and 37.23% said that they notice an average real difference in the percentage of their organization's sales value and income due to the project's interventions. At the household level, 31.09% said that they experienced real difference % of their sales value and income due to the project's Intervention.

Table 14. % adoption of technologies and changes in sales value and income as a result of Project Intervention

Items	% Change
Average percentage members of your organization who have adopted new technologies, protocols, methods as a result of Project Intervention	50.64
Average real difference % has project Intervention made for your household in terms of sales value and Income	31.09
Average real difference % has project Intervention made for your organization/Cooperative in terms of sales value and Income	37.23

Sustainability

A good number of the respondents said that they intend to continue the good practices introduced by MinPACT even after the project ends (see Table 15). 61.60% said that they will continue to adopt new norms (like adherence high quality standards, hygiene, sanitation and waste management) and behaviors, 36.53% said that they will continue to practice new business practices and/models, 18.19% said that they will continue to engage ICT, market finders and brokers and 18.19% said that they will continue to access new financial products, insurance system and credit sources.

In terms of farming technology and standards, 37.54% of the respondents said that they will continue to adopt innovative farming and processing system introduced by the project while 70.92% said that they will continue to raise environmental consciousness and adhere to

standards. On the participation of women, youth and the marginalized groups (IPs etc), 30.52% of respondents that they will continue to advocate for the inclusion and participation of women, youth and marginalized groups.

In the areas of processing and marketing, 38.97% of the respondents said that they will continue the value addition activities introduced by the project while 40.83% said that they will continue to practice transfer of technology and adopt best practices. 40.83% of the respondents said that they will continue to seek new market opportunities, 25.64% said that they will continue to expand productivity and sales.

Table 15. After the MinPACT project, what practices does your household intend to continue and discontinue?

Items	Don't Know	Discontinue		Continue	
		Freq.	%	Freq.	%
Adoption of new norms and behaviors	134	134	19.2	430	61.60
New business practices/models	348	95	13.6	255	36.53
New support functions (ICT, market finders, brokers)	528	43	6.2	127	18.19
New financial products, insurance system, credit sources	474	46	6.6	178	25.50
Farming and processing system	358	78	11.2	262	37.54
Environmental consciousness and standards	70	133	19.1	495	70.92
Inclusion of women, youth, marginalized groups (IPS etc.)	438	47	6.7	213	30.52
Value addition activities	467	56	8.0	175	25.07
Transfer of technologies and best practices	342	84	12.0	272	38.97
New market opportunities	344	69	9.9	285	40.83
Increase in product referrals, inquiries, etc.	458	61	8.7	179	25.64
Expanded Sales, Productivity	417	50	7.2	231	33.09

Overall, 76.36% of the respondents said that MinPACT contributed to the attainment of their productivity and development aspirations (see Table 16).

Table 16. Do you think, MinPACT contributed to the attainment of these aspirations?

Items	Freq.	%
Don't Know	123	17.62
No	42	6.02
Yes	533	76.36