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Extent of Implementation and Implications of the Provincial Commodity Investment Plan of Negros Occidental

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Abstract

Aim: This study determined the extent of implementation and implications of the Provincial Commodity Investment Plan (PCIP) in Negros Occidental as assessed by farmer-beneficiaries. Likewise, the study identified the challenges encountered by farmer-beneficiaries and PCIP implementers.

Methodology: The study utilized descriptive and inferential statistics. Stratified random sampling was used to determine the number of farmer respondents with a total of 259. Meanwhile, total enumeration was utilized to determine the number of PCIP implementers. Mean was used to determine the extent of implementation and implications of PCIP interventions. Mann Whitney U test was used to determine the differences in the extent of implementation and implications of PCIP interventions between farmer-beneficiaries in Northern and Southern Negros Occidental. On the other hand, frequency and percentage were used on the challenges encountered by farmer-beneficiaries and PCIP implementers. The study utilized a descriptive-comparative research design using validated researcher-made survey questionnaires.

Results: The extent of implementation of PCIP interventions in Negros Occidental as a whole is great. When grouped according to geographical location, there is a difference in the extent of implementation between farmer-beneficiaries, with great extent in Northern Negros Occidental and moderate extent in Southern Negros Occidental. Meanwhile, the extent of implications of PCIP interventions in the province as a whole is great. When grouped according to geographical location, there is a difference between Northern and Southern Negros Occidental with great and moderate extents, respectively.

Conclusion: The implementation and implications of PCIP interventions in Negros Occidental are very satisfactory. The great extent of implementation and implications are attributable to the strong foundation in the planning stage. The active involvement of various stakeholders such as national government agencies, local government units, provincial government departments, private entities and farmer groups is crucial to ensure that all aspects for implementation are covered. The results of the study indicate the effective implementation of interventions based on the plan which result to significant contributions to the economic and social conditions of the farmer-beneficiaries. However, there are still gaps that need to be addressed especially the moderate extent of implementation in Southern Negros Occidental.

Keywords: commodity, economic conditions, enterprise support, implementation, implications, infrastructure support, investment plan, Negros Occidental, Provincial Commodity, social conditions, technical support

INTRODUCTION

Rural development, through investments in agricultural commodities, is one of the approaches by the World Bank (WB) to end poverty, promote inclusivity, and boost shared prosperity (WB, 2017). Agricultural commodity investment presents an opportunity to promote the agriculture sector (Smaller et al., 2015) through the attainment of social, economic, and environmental interventions (Brewin & Smaller, 2019). The United Nations (UN) 2030 Agenda, with its 17 Sustainable Development Goals (SDGs), provides a blueprint for governments (UN, 2020) to



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focus their investments on reaching the poorest of the poor, particularly those in agriculture and rural areas. Achieving the SDGs requires strengthening commodity investment plans, which include the interventions that would empower smallholder farmers to earn a living and sustain their livelihoods [Food and Agriculture Organization (FAO), 2014].

The Association of Southeast Asian Nations (ASEAN) continue their efforts in achieving progress towards poverty reduction, food security, health services, and better education (International Monetary Fund [IMF], 2018) through the inclusion of the UN SDGs in their respective national development plans (Chimhowu, Hulme, & Munro, 2019). Apparently, the development of the agriculture sector in Southeast Asia has contributed to the advancement in food security (Organization for Economic Cooperation and Development (OECD)/FAO, 2017). Notably, Thailand, Vietnam and China, have made significant progress in terms of reducing poverty in rural areas (OECD, 2016). A productive agriculture and dynamic rural economy are key factors for Asia to achieve inclusive development (ADB, 2020).

The Philippines is predominantly an agricultural country (Ortega et al., 2021) however, farmers, fishermen and foresters are still considered the poorest citizens in the country (Santiago & Roxas, 2015) and public and private interventions are crucial. The Mindanao Rural Development Program (MRDP), as one of the poverty reduction and food security programs in rural areas, provided opportunities for increased productivity and income from agriculture products to women farmers in Bukidnon (Aninayon & Intong, 2019). MRDP paved the way for the creation of the Philippine Rural Development Project (PRDP) as the largest agricultural venture of the country (PRDP, 2018) to increase income, productivity, and marketed outputs of target farmers and fisher folk (PRDP, 2016).

In order to implement the interventions under PRDP in the province of Negros Occidental, a Provincial Commodity Investment Plan (PCIP) is needed. This integrated planning approach serves as the basis for investments (Crismundo, 2019) in the interventions for the priority commodities (Estrada & Cacal, 2017) and for merging local priorities (WB, 2018). PCIP is seen to be a critical tool to address the needs of each segment in the value chain of the priority commodities and increase investments in the agriculture sector (FAO, 2017).

Previous studies have been conducted to examine the impacts of foreign agricultural investment on developing countries (Liu, 2014), the impact of large-scale agricultural investments (Zhan et al., 2016), the effectiveness of the Mindanao Rural Development Program in increasing income and achieving food security (Aninayon & Intong, 2019), and the effectiveness of rural development program (Aninayon & Intong, 2020). However, since the inception of PRDP, there was a dearth of studies on the extent of implementation and implications of the PCIP of Negros Occidental. Hence, this study was conducted to fill the gap in the literature.

This paper determined the extent of implementation and the extent of implications of the interventions included in PCIP of Negros Occidental as assessed by farmer-beneficiaries. Likewise, it seeks to identify the challenges in the PCIP implementation encountered by farmer-beneficiaries and implementers. The findings of the study will be utilized in designing a strategic plan for an enhanced PCIP implementation program. The strategic plan could serve as reference for the provincial government and PCIP implementers to improve the policies and strengthen the processes for efficient and effective implementation of the PCIP. Likewise, the study aimed to contribute to the dearth of studies on commodity investment plans in the Philippines. Future researchers may use this study to search for a more comprehensive study related to the implementation and implications of commodity investment plans.

Objectives

This study aimed to assess the extent of implementation of the interventions included in the Provincial Commodity Investment Plan (PCIP) of the Province of Negros Occidental in terms of infrastructure, enterprise, and technical support as assessed by the farmer-beneficiaries when they are taken as a whole and when grouped according to geographical location. Likewise, this study sought to determine the extent of economic and social implications of the implemented projects.

The study also identified the challenges in the PCIP implementation encountered by the farmer-beneficiaries and implementers.

Specifically, this study answered the following questions:

1. What is the demographic profile of the farmer-beneficiaries in terms of
 - 1.1. Location;
 - 1.2. City/Municipality; and,
 - 1.3. Availed Commodity?



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2. What is the extent of implementation of PCIP interventions when farmer-beneficiaries are grouped according to geographical location?
3. What is the extent of implications of PCIP interventions when farmer-beneficiaries are grouped according to geographical location?
4. Is there a significant difference in the extent of implementation of the PCIP interventions when farmer-beneficiaries are grouped according to geographical location?
5. Is there a significant difference in the extent of the social and economic implications of the PCIP interventions when farmer-beneficiaries are grouped according to geographical location?
6. What are the challenges encountered by farmer-beneficiaries?
7. What are the challenges encountered by PCIP implementers?

Hypotheses

1. There is no significant difference in the extent of the implementation of the PCIP interventions when farmer-beneficiaries are grouped according to geographical location.
2. There is no significant difference in the extent of the social and economic implications of the PCIP interventions when farmer-beneficiaries are grouped according to geographical location.

METHODS

Research Design

The study utilized a descriptive-comparative research design using researcher-made survey questionnaires to gather the primary data. Descriptive research design is a method used in data collection, analysis and presentation (Thakur, 2021). It aims to systematically describe the distribution of one or more variables (Aggarwal & Ranganathan, 2019). The descriptive approach was appropriate to describe the extent of implementation and implications of the PCIP interventions in Negros Occidental. On the other hand, the comparative research design is a method used to analyze the similarities and differences between units (Miri & Dehdashti Sharokh, 2019). The comparative approach was used to compare the differences in the implementation and implications of PCIP interventions between the respondents in Northern and Southern Negros Occidental. Further, the challenges encountered by the farmer-beneficiaries and PCIP implementers were explored in this study.

Population and Sampling

The respondents of this study were the 259 farmer-beneficiaries of PCIP interventions and twelve PCIP implementers. From the total population of 787 direct farmer-beneficiaries, the sample size was determined using Raosoft Sample Size Calculation Formula. The farmer-respondents were determined using stratified random sampling based on their availed commodity. Table 1A shows the distribution of farmer respondents, while Table 1B shows the distribution of the PCIP implementers by total enumeration.

Table 1A. Distribution of Farmer-beneficiaries per Commodity in Negros Occidental

Commodity	N	n	%
Muscovado	504	166	64
Swine	47	15	6
Native Chicken	236	78	30
Total	787	259	100

Table 1B. Distribution of PCIP Implementers

PCIP Implementers	N
National Government Agencies	2
Local Government Units	7
Farmer Proponent Groups	3
Total	12



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Instrument

Survey questionnaires were used to collect the necessary data in this study. The questionnaire was divided into three parts. Part 1 includes the profile of the respondent, while Part 2 includes the questionnaire proper, consisting of 5-point Likert-type statements to assess the extent of implementation and the extent of the implications of the PCIP interventions to the farmer-beneficiaries. Meanwhile, Part 3 includes the challenges encountered by farmers in the form of a checklist wherein the farmers can choose multiple answers. The researcher requested the aid of two veteran media practitioners in the province to translate the questionnaire for farmers into Hiligaynon for better understanding. Another questionnaire, which includes a checklist of the challenges encountered by the PCIP implementers, was also produced by the researcher. Said instruments were validated by subject matter experts in the field and were subjected to a reliability test.

Data Collection

The researchers wrote a letter to Local Government Units, agencies, and associations seeking their permission and informing them of the objectives and implementation of the study. The survey was administered by enumerators. The enumerators were briefed about the study and were instructed to orient and assist the respondents during the survey. The respondents were requested to read and sign the research participant's consent before answering the survey to indicate their willingness to participate in the study. The accomplished questionnaires were collected afterward to ensure that these were answered completely. The data were then encoded and submitted to the statistician for analysis and interpretation. Health and safety protocols were strictly observed due to the limitations brought by Coronavirus 2019 (COVID-19).

Treatment of Data

Data gathered were processed for analysis using appropriate descriptive and inferential statistics. For the descriptive approach, the extent of implementation of PCIP interventions in the areas of infrastructure support, enterprise support, and technical support was determined using the mean. Likewise, the mean was used to determine the extent of economic and social implications of PCIP interventions.

Mann Whitney U test was used to determine the significant differences in the extent of implementation and implications of PCIP interventions when farmer-beneficiaries are grouped according to geographical location. There were significant differences in the extent of implementation [$U=1870.500$, $p=0.002$] and the extent of the implications [$U=1258.000$, $p=0.000$] of PCIP interventions between Northern and Southern Negros Occidental as assessed by farmer-beneficiaries.

Frequency and percentage were used on the challenges encountered by the farmer-beneficiaries and PCIP implementers.

Ethical Considerations

The application of ethical principles is essential in any research study. To ensure the ethical soundness of this study, the researcher followed various ethical considerations.

The respondents were well-informed about the research process and the objectives of the study. They were requested to read and sign a research participant's consent, indicating their willingness to participate, and were given the freedom to participate or not in the study. The respondents had the right to withdraw and were not forced to continue if they felt uncomfortable in the process of gathering information.

Moreover, the literacy of the respondents is one of their vulnerabilities in participating in the study. With this, the survey questionnaire for farmer-beneficiaries was translated into Hiligaynon for clarity and better understanding.

Data collected for this study were dealt with utmost confidentiality in accordance with the Data Privacy Act of 2012. Any information about the identity of the respondents was not disclosed or published without proper consent. Similarly, the raw information gathered was stored properly, which can be accessed only by the researcher. The materials, which contain raw information derived from data gathering with the respondents, will be properly disposed of through shredding after these data are processed in a given period of time.



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RESULTS and DISCUSSION

Profile of the Respondents

Majority of the farmer-beneficiaries in the province were from Northern Negros Occidental ($p=90\%$), with the City/Municipality E having the highest number of beneficiaries ($p=55\%$) and muscovado as the highest availed commodity ($p=65\%$).

The data gathered indicate that the interventions for muscovado, being the first commodity with approved PCIP, had the most number of projects implemented, mostly on infrastructure like farm-to-market roads.

Infrastructure support or road developments provided the farmers with accessibility and better agricultural production, reducing costs and commodity spoilage (Greenstein, 2015). Additionally, infrastructures accelerate economic growth by raising income levels (Palei, 2015), especially in the agriculture and rural areas.

Table 2. Demographic Profile of the Respondents

Variable	n	%
Location		
Northern Neg Occ	234	90
Southern Neg Occ	25	10
Municipality/City		
City/Municipality A	35	14
City/Municipality B	25	10
City/Municipality C	16	6
City/Municipality D	41	16
City/Municipality E	142	55
Availed Commodity		
Muscovado	167	65
Swine	16	6
Native Chicken	76	29
Total	259	100.0

Extent of Implementation of PCIP Interventions

The extent of implementation of PCIP interventions in the province of Negros Occidental, when taken as a whole, is great ($M=3.69$, $SD=1.07$). The results revealed that farmer-beneficiaries find the implementation of PCIP interventions very satisfactory. When the respondents were grouped according to geographical location, the extent of implementation of PCIP interventions differs between Northern and Southern Negros Occidental. Northern Negros Occidental got great extent ($M=3.77$, $SD=1.07$), while Southern Negros Occidental got moderate extent ($M=2.95$, $SD=0.76$). Particularly, the infrastructure support got moderate extent ($M=3.21$, $SD=0.96$); with moderate extent ($M=3.33$, $SD=0.87$) in Northern Negros Occidental and poor extent ($M=2.07$, $SD=1.01$) in Southern Negros Occidental. On the other hand, the enterprise support got great extent ($M=3.80$, $SD=1.26$); with great extent ($M=3.88$, $SD=1.27$) in Northern Negros Occidental and moderate extent ($M=3.10$, $SD=0.89$) in Southern Negros Occidental. Meanwhile, the technical support got great extent ($M=3.94$, $SD=1.27$); with great extent ($M=3.98$, $SD=1.30$) in Northern Negros Occidental and great extent ($M=3.52$, $SD=0.84$) in Southern Negros Occidental.

The great extent of implementation of PCIP interventions as a whole reflects the visibility and completion of projects in the target locations and the awareness of farmer-beneficiaries of the implemented projects in their respective areas. The farmer-beneficiaries also felt the positive benefits of the projects in terms of infrastructure, enterprise, and technical developments. The moderate extent of implementation of infrastructure support is attributable to the still ongoing rehabilitation and construction of roads and facilities in the areas. Meanwhile, the great extent of implementation of enterprise and technical support to farmers is credited to the continuous provision of training and capability-building for the proponent groups and farmers. The implementation of interventions in Northern Negros Occidental is ahead of the South, hence the great and moderate extent of implementation in the said locations, respectively.



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Powell et al. (2019) indicated that implementation strategies are crucial in improving the implementation, maintenance, and scale-up of interventions in communities (Powell et al., 2019). Several aspects affect a country's economic growth and global competitiveness. Infrastructure development contributes to national competitiveness and accelerates economic growth by raising income levels (Palei, 2015). Infrastructure in agricultural and rural development contributes to growth by raising productivity and income, access to inputs and markets, and value-adding of farm produce (Ghosh, 2017). Strengthening farmers' skills through practice, learning, and networking is vital in their journey towards entrepreneurship and innovation (Fitz-Koch et al., 2018). Likewise, access to knowledge and information related to agriculture is vital to developing the abilities of farmers (Pratiwi & Suzuki, 2017).

Table 3. Extent of Implementation of PCIP Interventions

Variable	Infrastructure Support			Enterprise Support			Technical Support			Implementation		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Location												
North Neg	3.33	0.87	Moderate	3.88	1.27	Great	3.98	1.30	Great	3.77	1.07	Great
South Neg	2.07	1.01	Moderate	3.10	0.89	Moderate	3.52	0.84	Great	2.95	0.76	Moderate
Whole	3.21	0.96	Moderate	3.80	1.26	Great	3.94	1.27	Great	3.69	1.07	Great

Table 4. Interpretative Scale for the Extent of Implementation of PCIP Interventions

Scale	Mean Range	Description	Verbal Interpretation
5	4.50 – 5.00	Very Great Extent (VGE)	Excellent implementation of PCIP interventions in terms of infrastructure support, enterprise support, and technical support
4	3.50 – 4.49	Great Extent (GE)	Very satisfactory implementation of PCIP interventions in terms of infrastructure support, enterprise support, and technical support
3	2.50 – 3.49	Moderate Extent (ME)	Satisfactory implementation of PCIP interventions in terms of infrastructure support, enterprise support, and technical support
2	1.50 – 2.49	Poor Extent (PE)	Below is the satisfactory implementation of PCIP interventions in terms of infrastructure support, enterprise support, and technical support
1	1.00 – 1.49	Very Poor Extent (VPE)	Unsatisfactory implementation of PCIP interventions in terms of infrastructure support, enterprise support, and technical support

Extent of Implication of PCIP Interventions

The extent of implication of PCIP interventions, when taken as a whole, is great (M=4.12, SD=0.92). The result revealed that the implications of the PCIP interventions in the province is very satisfactory in terms of economic and social benefits. When the respondents were grouped according to geographical location, the extent of implications of implemented PCIP interventions in Northern Negros Occidental is great (M=4.21, SD=0.90), while the extent of implications in Southern Negros Occidental is moderate (M=3.34, SD=0.75). The economic implications of PCIP interventions got great extent (M=4.05, SD=1.05), wherein Northern Negros Occidental (M=4.10, SD=1.06) and Southern Negros Occidental (M=3.54, SD=0.82) both got great extent. On the other hand, the social implications got great extent (M=4.25, SD=0.95), with very great extent (M=4.39, SD=0.87) in Northern Negros Occidental and moderate extent (M=3.00, SD=0.78) in Southern Negros Occidental.

The great extent of implications of PCIP interventions in terms of their economic and social factors is attributable to the valuable contributions of the interventions to the overall well-being of the beneficiaries. Apparently, the great extent of economic implication is associated with the increase in income, decreased transport and hauling costs, reduced travel time, and enhanced access to support services which strengthened the competitiveness of farmers. On the other hand, the great extent of social implication is founded on the improved access of farmer-beneficiaries to social services like health centers, hospitals, schools, and government agencies through the PCIP interventions. The involvement of more women and Indigenous Peoples (IP) in project planning



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and implementation is also noteworthy. This has likely contributed to the success of the project by ensuring that the needs and perspectives of diverse groups are taken into account by promoting greater inclusion and participation in decision-making processes.

The extent of implication of a project depends on the project's objectives as included in its plan. This is because implemented projects were based on the detailed breakdown of all levels involved in the project cycle (Ocharo & Kimutai, 2018). The World Bank defines rural development as a strategy to improve the economic and social well-being of a specific group of people. Uddin et al. (2015), in their study on the impact of rural development programs on poverty alleviation, revealed that rural development programs bring significant and positive implications in terms of the economic and social capacities of the rural communities (Uddin et al., 2015). In essence, the growth of any country is dependent on the successful execution and implication of critical development projects (Igwe & Ude, 2018).

Table 5. Extent of Implications of PCIP Interventions

Variable	Economic			Social			Implications		
	M	SD	Int	M	SD	Int	M	SD	Int
Location									
Northern Neg Occ	4.10	1.06	Great	4.39	0.87	Very Great	4.21	0.90	Great
Southern Neg Occ	3.54	0.82	Great	3.00	0.78	Moderate	3.34	0.75	Moderate
Whole	4.05	1.05	Great	4.25	0.95	Very Great	4.12	0.92	Great

Table 6. Interpretative Scale for the Extent of Implications of PCIP Interventions

Scale	Mean Range	Description	Verbal Interpretation
5	4.50 – 5.00	Very Great Extent (VGE)	PCIP interventions contribute very significantly to farmer-beneficiaries in terms of their economic and social conditions.
4	3.50 – 4.49	Great Extent (GE)	PCIP interventions contribute significantly to farmer-beneficiaries in terms of their economic and social conditions.
3	2.50 – 3.49	Moderate Extent (ME)	PCIP interventions contribute fairly to farmer-beneficiaries in terms of their economic and social conditions.
2	1.50 – 2.49	Poor Extent (PE)	PCIP interventions contribute insignificantly to farmer-beneficiaries in terms of their economic and social conditions.
1	1.00 – 1.49	Very Poor Extent (VPE)	PCIP interventions contribute very insignificantly to farmer-beneficiaries in terms of their economic and social conditions.

Challenges Encountered by Farmer-Beneficiaries

A checklist of challenges encountered were pre-determined and the respondents were able to choose multiple answers. The respondents were also able to add other challenges they have encountered not included in the checklist. The top three most common constraints according to farmers were *lack of coordination between farmers and project implementers (p=70%)*, *difficulty of individual farmers in accessing credit from financial institutions (p=68%)*, and *lack of coordination among key players in the commodity chain (p=64%)*. These were followed by *rigorous documentary requirements to access or benefit from the projects (p=63%)*, *lack of accredited farmer associations (p=55%)*, *limited access of farmers to markets (p=55%)*, and *delays in the implementation of projects (p=39%)*. Other challenges specified by farmers are their *lack of knowledge about the projects and their limited involvement in the planning process (p=4%)*.

Coordination among the key players in the value chain is critical to overcoming market failures and government deficiencies. Market failures include constraints on access to credit, insurance, and information. Government deficiencies include a lack of infrastructure and quality recognition in markets. A multi-stakeholder approach is designed to address the gaps in coordination among the value chain players in a commodity (de Janvry



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et al., 2019). Some smallholder farmers who are trapped with poverty lack access to markets. Provision of assistance and leverage with the private sector should be prioritized by the government. Hence, infrastructure investment is critical in reducing hauling and transactional costs (Von Loeper et al., 2016).

Table 7. Challenges Encountered by Farmer-Beneficiaries

Challenges	f	%
Lack of coordination between farmers and project implementers	180	70
Difficulty of individual farmers in accessing credit from financial institutions	176	68
Lack of coordination among key players in the commodity chain	165	64
Rigorous documentary requirements to access or benefit from the projects	164	63
Lack of accredited farmer associations in the area	143	55
Limited access of farmers to markets	142	55
Delays in the implementation of projects	100	39
Others: Lack of knowledge about the projects; limited involvement in the planning process	10	4

Challenges Encountered by PCIP Implementers

The PCIP implementers who participated in this study were from the National Government Agencies, Provincial Government Departments/Offices, City/Municipal Government Units, and Farmer Groups/Associations. Table 5 shows the challenges encountered by PCIP implementers in the province as being: *difficulty in collaborating with concerned government agencies, private entities, and private groups (p=77%), low appreciation by the NGAs, LGUs, and private entities of the PCIP (p=69%), environmental or natural disasters (p=62%), PCIP interventions were given lower priority by NGAs, LGUs, and private institutions (p=54%), non-inclusion of PCIP interventions in annual programs and plans of NGAs and LGUs (p=46%), conflict of interest and insurgency (p=31%), and ineffective or unrealistic PCIP interventions (p=15%)*. Some of the implementers indicated additional concerns that they have encountered: *priority commodities included or to be included in the PCIP are not priorities of a certain office or agency of a local government unit, less participation in the planning and implementation stages, conflict in the prioritization of commodities (p=15%)*.

Previous studies show that coordination in value chains is a vital instrument for ensuring the competitiveness of commodities to sustain investments in interventions (de Janvry et al., 2019). The participation of various stakeholders (government agencies, private institutions, civil society entities, and farmer groups) is required to implement programs or projects. Its success is dependent on organizational capacities and a shared understanding of program objectives, consequently securing responsive projects and enough resources (Lang & Bruesch, 2020).

Table 8. Challenges Encountered by PCIP Implementers

Challenges	f	%
Difficulty in collaborating with concerned government agencies, private entities, and farmer groups	10	77
Low appreciation by the NGAs, LGUs, and private entities of the PCIP	9	69
Environmental or natural disasters	8	62
PCIP interventions are given lower priority by NGAs, LGUs, and private institutions	7	54
Non-inclusion of the PCIP interventions in the annual programs and plans of the NGAs or LGUs	6	46
Conflict of interest between implementers and farmers	4	31
Insurgency or peace and order situation affecting implementation	4	31
Ineffective or unrealistic PCIP interventions	2	15
Others: priority commodities included or to be included in the PCIP are not priorities of a certain office/agency; less participation in the planning and implementation stages; conflict in the prioritization of	2	15



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commodities

Differences in the Extent of Implementation and the Extent of Implication of PCIP Interventions

Mann Whitney U test was used to determine the differences in the extent of implementation and the extent of the implications of PCIP interventions among the farmer-beneficiaries in the province of Negros Occidental when grouped according to geographical location. There were significant differences in the extent of implementation [U=1870.500, p=0.002] and the extent of the implication [U=1258.000, p=0.000] of PCIP interventions between the farmer-beneficiaries in Northern and Southern Negros Occidental.

The result implies that the extent of implementation and implications of PCIP interventions in Northern Negros Occidental is higher than the extent of implementation and implications of PCIP interventions in Southern Negros Occidental. Most of the priority commodities with approved PCIP are produced in Northern Negros Occidental. Further, said geographical location has more number of farmers, interested proponent groups and associations, and production and plantation areas, among others. Since most of the interventions were first implemented in the North, a lot of farmers were already knowledgeable and had benefitted from the projects.

Table 9. Extent of Implementation and Extent of Implication of PCIP Interventions

Variable	U	z	p
Implementation	1870.500*	-3.064	0.002
Implication	1258.000*	-4.800	0.000

Note: *the difference is significant when $p \leq 0.05$

Table 10. Ranks on the Implementation of PCIP Interventions according to Geographical Location

Location	N	Mean Rank	Ranks
Northern Negros Occidental	234	134.51	31474.50
Southern Negros Occidental	25	87.82	2195.50
Total	259		

Table 11. Ranks on the Implications of PCIP Interventions according to Geographical Location

Location	N	Mean Rank	Ranks
Northern Negros Occidental	234	137.12	32087.00
Southern Negros Occidental	25	63.32	1583.00
Total	259		

The great extent of implementation of PCIP interventions in the province indicates that the projects were effectively implemented and have achieved the desired outcomes based on the plan. Necessary resources were allocated appropriately for the implementation of infrastructure, enterprise, and technical supports to farmer-beneficiaries. The great extent of implementation in Northern Negros Occidental is attributable to various factors such as availability of resources, strong partnerships, and active community involvement. Meanwhile, the moderate extent of implementation of interventions in Southern Negros Occidental emanates from the limited involvement of the community in the planning and implementation stages, insurgency, natural calamities, and rigorous documentary requirements which result to delays in the implementation of interventions.

On the other hand, the great extent of implication in the province reveals that the PCIP interventions have contributed to the economic and social well-being of the farmer-beneficiaries. Notably, improvements in income and access to social services were experienced by farmers. Moreover, the inclusive approach taken in planning and implementation has ensured that the needs and perspectives of diverse groups were taken into account. Northern Negros Occidental got great extent because most of the projects were implemented in the area first, thus the beneficiaries have already benefitted from them. In contrast, PCIP interventions in Southern Negros Occidental got moderate extent because projects were not yet fully implemented at the time of the survey, hence the farmer-beneficiaries have not yet experienced the intended benefits of the projects.



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Plan implementation is determined based on the perception of local planners (Rudolf & Gradinaru, 2017). Powell et al. (2019) suggested five priorities for enhancing the impact of implementation strategies: enhancing methods on design, specifying and testing mechanisms of change, conducting effectiveness research, increasing economic evaluations, and improving the tracking and reporting of strategies. However, the authors indicated that implementation strategies should also focus on the processes that lead to the effectiveness of the project or interventions rather than just establishing in the end that they were effective (Powell et al., 2019). The growth of developing countries is aligned with successful planning, funding, and implementation (Igwe & Ude, 2018).

Measuring the socio-economic impact of projects can aid the government, private sector, stakeholders, and communities in determining the benefits of the interventions and understanding the need to achieve more effective socio-economic projects (Buheji, 2020). In essence, the growth of any country is dependent on the successful execution and implication of critical development projects (Igwe & Ude, 2018).

Summary, Conclusion, and Recommendations

The implementation and implications of PCIP interventions in Negros Occidental are very satisfactory. The great extent in the implementation and implications are attributable to the strong foundation in the planning stage. This indicates that the interventions were effectively implemented and have contributed to the economic and social conditions of farmers. However, there are still gaps that need to be addressed, especially the moderate extent of implementation and implications in Southern Negros Occidental.

The findings of the study highlight the need for revisitation of projects through intensified monitoring and evaluation and strengthening of collaboration among key players in the commodity chain during planning and implementation stages. The inclusion of PCIP interventions in the annual plans and programs of concerned government agencies and the conduct of convergence initiatives to ensure the allocation of funds and sustainability of projects are crucial.

Based on the findings, the researcher proposes the following: revisit program implementation, strengthen partnerships, streamline documentary requirements and processes, mainstream/institutionalize PCIP interventions, strengthen existing mother organization for each priority commodity, and digitization of PCIP.

The study provides valuable data on the extent of implementation and implications of PCIP in Negros Occidental. This will serve as basis for improving the effectiveness and efficiency of the interventions to support the rural and agriculture sectors in the province. Moreover, the research contributes to the dearth of studies on commodity investment plans in the Philippines, particularly on its implementation and implications. Future researchers may utilize this study to explore a more comprehensive study related to PCIP. Likewise, researchers may analyze the impact of PCIP interventions to women and Indigenous Peoples. This could include a deeper exploration of the challenges and opportunities they face in accessing from the program, as well as identifying ways to improve their participation and contribution to planning and implementing stages. Additionally, future researchers may conduct an in-depth study on the effectiveness of PRDP in reducing poverty. Findings of the study may serve as basis for designing a strategic plan on enhanced PCIP implementation program.

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