



# OPTIMIZING THE UTILIZATION OF AGRICULTURAL SURVEY RESULTS OF THE PHILIPPINE STATISTICS AUTHORITY (PSA) BY LOCAL GOVERNMENT UNITS FOR POLICY DEVELOPMENT AND DECISION MAKING

**Carmela T. Arabis**

*Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines*

## ABSTRACT

*This study assesses the perceived awareness of Local Government Units (LGUs) regarding the Agricultural Statistics Survey (AGSTAT) of the Philippine Statistics Authority (PSA) and the extent of data utilization among employees of the Municipal Agriculture Office (MAO) and Municipal Planning and Development Office (MPDO). It evaluates policy implementation by LGUs based on PSA data, focusing on agricultural development policies, resource allocation, and policy evaluation. Conducted in Kalayaan, Pakil, Santa Maria, Siniloan, and San Pablo, Laguna, during 2025, the study emphasizes the role of statistical data in strengthening local agricultural governance.*

*The research examines the relationship among LGU awareness, data utilization, and policy implementation, testing null hypotheses of no significant relationship. A quantitative, correlational research design was employed, using a researcher-made survey distributed to 75 purposively selected MAO and MPDO respondents. Descriptive statistics (mean, standard deviation) and Pearson's correlation coefficient ( $r$ ) were used to analyze the data.*

*Findings show the highest awareness among LGUs was in crop production data, while awareness of livestock, poultry, and fishery was moderate. Diagnostic data was most frequently utilized, while prescriptive data was least applied. Agricultural development policies had the highest level of implementation, with resource allocation and policy evaluation only partially reflecting PSA insights.*

*There is a strong, significant correlation between data utilization and policy implementation, and a clear link between awareness and data use. The study concludes that greater awareness and utilization of PSA data lead to more effective policies. It recommends regular training, institutional use of AGSTAT data, and enhanced collaboration with stakeholders.*

## I. INTRODUCTION

Local Government Units (LGUs) play a vital role in translating national policies into effective local programs. The Philippine Statistics Authority (PSA) regularly conducts surveys, including the Agricultural Statistics Survey (AgStat), which provides essential data for policy formulation. Understanding how LGUs utilize this data is crucial for improving agricultural development and resource allocation.

This study assesses the extent to which LGUs use PSA data, particularly AgStat, by evaluating their level of awareness, data analysis (descriptive, diagnostic, predictive, prescriptive), and the policies implemented in response. It also explores the relationship between data utilization and policy execution.

Using a quantitative method, the study surveys MAO and MPDO personnel in selected municipalities. Based on findings, the study aims to recommend policy improvements that strengthen the use of statistical data in local planning and governance.

### 1.1 Statement of the Problem

Specifically, the study sought to answer the following questions:

1. What is the level of awareness among Local Government Units (LGUs) regarding the Agricultural Statistics Survey released by the Philippine Statistics Authority (PSA) in terms of:
  - a. Crops production;
  - b. Livestock and poultry production; and
  - c. Fishery production?
2. What is the level of utilization among the employees of MAO and MPDO with respect to:
  - a. Descriptive data;
  - b. Diagnostic data;
  - c. Predictive data; and
  - d. Prescriptive data?
3. What is the level of implementation of the policies implemented by LGU's in line with the results of PSA in terms of:
  - a. Agricultural Development Policies;
  - b. Resource Allocation; and
  - c. Policy Evaluation?



4. Is there a relationship between the level of awareness in Agricultural Statistics Survey data released by the Philippine Statistics Authority (PSA) and level of utilization among the employees of MAO and MPDO?
5. Is there a relationship between the level of awareness in Agricultural Statistics Survey data released by the Philippine Statistics Authority (PSA) and level of policies implemented by LGU's in line with the results of PSA?
6. Is there a relationship between the level of utilization among the employees of MAO and MPDO and level of policies implemented by LGU's in line with the results of PSA?
7. What policy can be developed by Local Government Units (LGUs) to promote the utilization of Agricultural Statistics Survey based on the results of the study?

## 2. METHODOLOGY

This study employed a quantitative-correlational research design to assess how Local Government Units (LGUs) utilize data from

the Philippine Statistics Authority (PSA), specifically the Agricultural Statistics Survey (AgStat), for policy development.

Structured survey questionnaires were administered to personnel from the Municipal Agriculture Office (MAO) and Municipal Planning and Development Office (MPDO) in selected LGUs. These instruments measured respondents' level of awareness, data utilization (descriptive, diagnostic, predictive, prescriptive), and the implementation of related policies.

The questionnaire was validated by subject experts and tested for reliability. Surveys were conducted either online or face-to-face depending on accessibility. Data were analyzed using descriptive statistics (mean and standard deviation) and Pearson correlation to determine the relationships among variables.

This method was chosen for its ability to systematically examine numerical data and reveal meaningful insights into how statistical information supports policy-making at the local level.

## 3. RESULTS AND DISCUSSION

This chapter provides a thorough analysis and explanation of the collected data. The data is carefully analyzed using statistical techniques and presented in a well-structured table style to effectively answer the research objectives.

**Table 1. Level of Awareness of LGU Regarding the Agricultural Statistics Survey Released by the PSA in Terms of Crop Production**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. LGU officials are informed about the crop statistics provided by the PSA.	3.84	0.84	Aware
2. PSA crop data is reviewed by the LGU for policy development.	3.44	0.89	Aware
3. LGU staff possess adequate knowledge of crop yield trends from PSA reports.	3.36	0.90	Neither Aware nor Not Aware
4. The LGU integrates PSA crop data into agricultural planning.	3.31	0.99	Neither Aware nor Not Aware
5. Annual crop production changes reported by the PSA are well-monitored by the LGU.	3.45	0.90	Aware
<b>Overall Mean</b>	<b>3.48</b>	<b>0.90</b>	<b>Aware</b>
<b>Overall Interpretation</b>			

**Legend:** 4.20-5.00 = Fully Aware; 3.40-4.19 = Aware; 2.60-3.39 = Neither Aware or Not Aware; 1.80-2.59 = Not Aware; 1.00-1.79 = Fully Not Aware

Table 1 shows that LGUs are generally **aware** of PSA crop production data, with an overall mean of **3.48**. The highest awareness is on knowing PSA crop statistics (Mean = 3.84), while the lowest is on integrating these data into planning (Mean = 3.31).

These results highlight the need for **training and capacity-building** to improve LGUs' ability to apply PSA data in agricultural planning. Improving data accessibility and providing **user-friendly formats** can further support evidence-based decision-making at the local level.



**Table 2. Level of Awareness of LGU Regarding the Agricultural Statistics Survey Released by the PSA in Terms of Livestock and Poultry Production**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. LGU staff are familiar with PSA statistics on livestock and poultry production.	3.45	0.86	Aware
2. PSA data is used by the LGU to adjust livestock development strategies.	3.44	0.99	Aware
3. Poultry production trends are actively monitored using PSA reports.	3.23	0.94	Neither Aware nor Not Aware
4. Local meat supply issues are addressed with PSA livestock data.	3.37	0.93	Neither Aware nor Not Aware
5. PSA reports on livestock and poultry are regularly referenced in LGU planning.	3.41	0.95	Aware
<b>Overall Mean</b>	<b>3.38</b>	<b>0.93</b>	<b>Neither Aware or Not Aware</b>
<b>Overall Interpretation</b>			

Table 2 presents the level of awareness of LGU regarding the Agricultural Statistics Survey released by the PSA in terms of livestock and poultry production. The highest mean score of 3.45 with SD of 0.86 indicates awareness of LGU staff with PSA statistics on livestock and poultry production. The lowest mean score of 3.23 with SD of 0.94 suggests that they are neither fully aware nor unaware of how poultry production trends are actively

monitored using PSA reports.

The standard deviation range of 0.93, with an overall weighted mean of 3.38, suggests that LGUs are generally **Neither Aware or Not Aware** of the agricultural survey results regarding livestock and poultry production.

**Table 3. Level of Awareness of LGU Regarding the Agricultural Statistics Survey Released by the PSA in Terms of Fishery Production**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. LGU officials stay updated on PSA fishery statistics.	3.45	0.79	Aware
2. PSA fishery data is utilized in LGU coastal resource management programs.	3.45	0.90	Aware
3. Trends in fishery production are well-understood through PSA reports.	3.36	0.92	Neither Aware nor Not Aware
4. PSA statistics inform the LGU's strategies for sustainable fishing practices.	3.31	0.96	Neither Aware nor Not Aware
5. Fishery data from PSA is incorporated into the LGU's development initiatives.	3.27	0.96	Neither Aware nor Not Aware
<b>Overall Mean</b>	<b>3.37</b>	<b>0.91</b>	<b>Neither Aware nor Not Aware</b>
<b>Overall Interpretation</b>			<b>Aware</b>

Table 3 presents the level of awareness of LGU regarding the Agricultural Statistics Survey released by the PSA in terms of fishery production. The highest mean score of 3.45 with SD = 0.79 indicates awareness among LGU officials regarding PSA fishery statistics. The lowest mean score of 3.27 with SD = 0.96 suggests that they are neither fully aware nor unaware of how fishery data from the PSA is incorporated into LGU development

initiatives.

The standard deviation range of 0.91, with an overall weighted mean of 3.37, suggests that LGUs are generally **neither fully aware nor unaware** of the agricultural survey results regarding fishery production.



**Table 4. Level of Utilization Among the Employees of MAO and MPDO with regards to Descriptive Data**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. The office consistently summarizes agricultural data to produce comprehensive reports.	3.61	0.87	Utilized
2. Historical data is effectively analyzed to identify trends in crop production.	3.64	0.83	Utilized
3. Statistical tools are applied to interpret basic agricultural data.	3.37	0.96	Neither Utilized nor Not Utilized
4. Descriptive analysis provides insights into the current state of agricultural activities.	3.36	0.92	Neither Utilized nor Not Utilized
5. Local government stakeholders regularly receive descriptive reports from the office.	3.36	0.94	Neither Utilized nor Not Utilized
<b>Overall Mean</b>	<b>3.47</b>	<b>0.90</b>	<b>Utilized</b>
<b>Overall Interpretation</b>			

**Legend:** 4.20-5.00 = Fully Utilized; 3.40-4.19 = Utilized; 2.60-3.39 = Neither Utilized or Not Utilized; 1.80-2.59 = Not Utilized; 1.00-1.79 = Fully Not Utilized

Table 4 presents the level of utilization of descriptive data among the employees of MAO (Municipal Agriculture Office) and MPDO (Municipal Planning and Development Office). The highest mean score of 3.64 (SD = 0.83) indicates that historical data is effectively analyzed to identify trends in crop production, showing that this aspect of descriptive data is well-utilized in understanding agricultural patterns and making informed decisions.

On the other hand, the lowest mean score of 3.36 with SD values of 0.92 to 0.94 suggests that descriptive analysis and report dissemination are neither fully utilized nor not utilized. Specifically, descriptive analysis providing insights into the

current state of agricultural activities and the regular dissemination of descriptive reports to local government stakeholders appear to be underutilized, pointing to a potential gap in the consistent application of these data-driven insights.

The overall weighted mean of 3.47 (SD = 0.90) falls within the "Utilized" category, indicating that LGUs make use of descriptive data in their agricultural planning and development initiatives. However, the variability in standard deviation highlights the inconsistent application of descriptive data, suggesting the need for strengthened data management practices and capacity-building efforts to maximize the value of statistical information in policy development and resource allocation.

**Table 5. Level of Utilization Among the Employees of MAO and MPDO with regards to Diagnostic Data**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. Past data is analyzed to uncover the causes of low agricultural productivity.	3.61	0.68	Utilized
2. Diagnostic analysis identifies the root causes of crop failures.	3.52	0.89	Utilized
3. The office evaluates changes in livestock and poultry production through diagnostic methods.	3.32	0.90	Neither Utilized nor Not Utilized
4. Factors affecting fishery output are identified through detailed assessments.	3.36	1.00	Neither Utilized nor Not Utilized
5. Diagnostic analysis is employed to evaluate agricultural practices for inefficiencies.	3.36	1.00	Neither Utilized nor Not Utilized
<b>Overall Mean</b>	<b>3.43</b>	<b>0.89</b>	<b>Utilized</b>
<b>Overall Interpretation</b>			

Table 5 presents the level of utilization among the employees of the Municipal Agriculture Office (MAO) and the Municipal Planning and Development Office (MPDO) regarding diagnostic data. The highest mean score of 3.61 with a standard deviation of 0.68 indicates that past data is effectively utilized and analyzed to uncover the causes of low agricultural productivity, suggesting that this practice is well established within the offices.

On the other hand, the lowest mean score of 3.32 with a standard deviation of 0.90 suggests that the use of diagnostic methods to evaluate changes in livestock and poultry production is inconsistent, falling under the category of "Neither Utilized nor Not Utilized." This highlights a potential gap in the application of



diagnostic data for monitoring and assessing trends in the livestock and poultry sector.

The overall weighted mean of 3.43 with a standard deviation of 0.89 indicates that diagnostic data is generally “Utilized” by the LGUs. However, the variation in standard deviations suggests differing levels of consistency in applying diagnostic practices

across different areas of agricultural analysis. Strengthening the use of diagnostic tools, particularly in evaluating livestock and poultry production and identifying factors affecting fishery output, could enhance the effectiveness of agricultural planning and decision-making processes.

**Table 6. Level of Utilization Among the Employees of MAO and MPDO with regards to Predictive Data**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. Predictive models are utilized to estimate future crop production.	3.48	0.95	Utilized
2. Forecasting methods are used to predict trends in livestock and poultry production.	3.47	0.93	Utilized
3. Predictive analysis supports decision-making in fishery management.	3.40	0.94	Utilized
4. Statistical tools forecast the impact of climate changes on agriculture.	3.28	0.94	Neither Utilized nor Not Utilized
5. Predictive analysis guides the allocation of resources for future agricultural needs.	3.39	0.96	Neither Utilized nor Not Utilized
<b>Overall Mean</b>	<b>3.40</b>	<b>0.94</b>	<b>Utilized</b>
<b>Overall Interpretation</b>			

Table 6 presents the level of utilization among the employees of the Municipal Agriculture Office (MAO) and the Municipal Planning and Development Office (MPDO) with regard to predictive data. The highest mean score of 3.48 with a standard deviation (SD) of 0.95 indicates that predictive models are utilized to estimate future crop production, showing that this practice is fairly established within these offices. Close to this is the use of forecasting methods to predict trends in livestock and poultry production, with a mean score of 3.47 and SD of 0.93, also interpreted as "Utilized."

On the other hand, the lowest mean score of 3.28 with an SD of 0.94 suggests that statistical tools for forecasting the impact of climate changes on agriculture fall under the category of “Neither

Utilized nor Not Utilized.” This highlights a gap in the consistent use of predictive data for climate-related agricultural planning. Similarly, the use of predictive analysis to guide the allocation of resources for future agricultural needs also falls in the same category, with a mean score of 3.39 and SD of 0.96.

The overall weighted mean of 3.40, with a standard deviation of 0.94, indicates that predictive data is generally “Utilized” by the LGUs. However, the variation in standard deviations suggests inconsistencies in applying predictive tools across different areas of agricultural analysis. Strengthening the use of statistical forecasting methods, particularly for climate change impact and resource allocation, could further improve agricultural planning and decision-making processes.

**Table 7. Level of Utilization Among the Employees of MAO and MPDO with regards to Prescriptive Data**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. Prescriptive analysis provides actionable recommendations for improving crop yield.	3.41	0.92	Utilized
2. The office develops livestock and poultry strategies using prescriptive models.	3.35	0.99	Neither Utilized nor Not Utilized
3. Sustainable fishery practices are suggested based on prescriptive analysis.	3.29	0.97	Neither Utilized nor Not Utilized
4. Prescriptive methods are applied to enhance overall agricultural productivity.	3.24	0.97	Neither Utilized nor Not Utilized
5. Actionable, data-driven recommendations are provided to address agricultural challenges.	3.36	0.88	Neither Utilized nor Not Utilized
<b>Overall Mean</b>	<b>3.33</b>	<b>0.95</b>	<b>Neither Utilized nor Not Utilized</b>
<b>Overall Interpretation</b>			



Table 7 presents the level of utilization among the employees of the Municipal Agriculture Office (MAO) and the Municipal Planning and Development Office (MPDO) with regard to prescriptive data. The highest mean score of 3.41 with a standard deviation of 0.92 indicates that prescriptive analysis is *utilized* to provide actionable recommendations for improving crop yield. This suggests that the use of data-driven recommendations for crop production is relatively established within the offices.

On the other hand, the lowest mean score of 3.24 with a standard deviation of 0.97 suggests that the application of prescriptive methods to enhance overall agricultural productivity is **neither utilized nor not utilized**. This reflects an inconsistency in how

prescriptive data is used to inform broader agricultural development strategies.

The overall weighted mean of 3.33, with a standard deviation of 0.95, further supports the interpretation that LGUs are *neither utilizing nor not utilizing* prescriptive data in their agricultural planning and decision-making processes. This indicates a moderate level of application, with room for improvement in fully integrating prescriptive analytics to address agricultural challenges, particularly in developing livestock, poultry, and fishery strategies. Strengthening the use of prescriptive data could lead to more effective, data-driven policymaking and resource management.

**Table 8. Level of Implementation of the Policies Implemented by LGU in Line with the Results of PSA with Regards to Agricultural Development Policies**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. The LGU formulates agricultural policies guided by PSA data.	3.57	0.82	Implemented
2. PSA statistics influence crop diversification strategies.	3.49	0.84	Implemented
3. Livestock productivity policies are shaped by PSA data insights.	3.33	0.96	<i>Neither Implemented nor Not Implemented</i>
4. Agricultural policies are reviewed and updated based on PSA findings.	3.16	0.90	<i>Neither Implemented nor Not Implemented</i>
5. The LGU aligns agricultural programs with statistical insights from PSA.	3.27	1.02	<i>Neither Implemented nor Not Implemented</i>
<b>Overall Mean</b>	<b>3.37</b>	<b>0.91</b>	<b><i>Neither Implemented nor Not Implemented</i></b>
<b>Overall Interpretation</b>			

**Legend:** 4.20-5.00 = Fully Implemented; 3.40-4.19 = Implemented; 2.60-3.39 = Neither Implemented or Not Implemented; 1.80-2.59 = Not Implemented; 1.00-1.79 = Fully Not Implemented

Table 8 presents the level of implementation of agricultural development policies by the LGU based on the results provided by the PSA. The highest mean score of 3.57 with a standard deviation of 0.82 indicates that the formulation of agricultural policies guided by PSA data is generally implemented. This suggests that the LGU recognizes the importance of PSA data in shaping well-informed and strategic agricultural policies.

On the other hand, the lowest mean score of 3.16 with a standard deviation of 0.90 shows that the review and updating of agricultural policies based on PSA findings are **neither implemented nor not implemented**. This result highlights a gap

in the consistent application of statistical insights in policy evaluation and adjustment, suggesting the need for more proactive efforts in policy review and enhancement.

The overall weighted mean of 3.37 with a standard deviation of 0.91 reflects that, on average, the implementation of agricultural development policies by the LGU is neither fully implemented nor not implemented. This indicates a moderate level of integration of PSA data in policymaking, pointing to opportunities for strengthening the alignment between statistical data and policy decisions. Addressing these gaps can lead to more effective agricultural programs and improved productivity.



**Table 9. Level of Implementation of the Policies Implemented by LGU in Line with the Results of PSA with Regards to Resource Allocation**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. Agricultural resource allocation is based on PSA data.	3.25	0.97	<i>Neither Implemented nor Not Implemented</i>
2. PSA statistics inform budget planning for agricultural initiatives.	3.21	1.03	<i>Neither Implemented nor Not Implemented</i>
3. Resource distribution for crops, livestock, and fishery programs is guided by PSA data.	3.17	0.96	<i>Neither Implemented nor Not Implemented</i>
4. PSA reports highlight priority areas for LGU funding allocation.	3.29	1.04	<i>Neither Implemented or Not Implemented</i>
5. Statistical data from PSA heavily impacts resource allocation decisions.	3.25	0.96	<i>Neither Implemented nor Not Implemented</i>
<b>Overall Mean</b>	<b>3.24</b>	<b>0.99</b>	<b><i>Neither Implemented nor Not Implemented</i></b>
<b>Overall Interpretation</b>			<b><i>Not Implemented</i></b>

Table 9 presents the level of implementation of the policies by the LGU in relation to resource allocation based on PSA data. The highest mean score of 3.29 with a standard deviation of 1.04 suggests that PSA reports highlighting priority areas for LGU funding allocation are neither fully implemented nor entirely disregarded. This indicates that while PSA data is recognized as a potential guide for identifying funding priorities, its application remains inconsistent.

On the other hand, the lowest mean score of 3.17 with a standard deviation of 0.96 reflects that resource distribution for crops, livestock, and fishery programs is also **neither fully implemented nor not implemented**. This suggests a lack of firm integration of PSA data in guiding the allocation of agricultural

resources, which could lead to inefficiencies in addressing sector-specific needs.

The overall weighted mean of 3.24 and a standard deviation of 0.99 further indicate that the LGU's resource allocation policies generally fall into the category of "neither implemented nor not implemented". This highlights a moderate and inconsistent use of PSA data in budget planning and resource distribution, suggesting that while the data is available and sometimes considered, it has not yet been fully institutionalized in the decision-making process. Strengthening the alignment between PSA data and resource allocation could enhance the effectiveness of agricultural initiatives and improve overall productivity.

**Table 10. Level of Implementation of the Policies Implemented by LGU in Line with the Results of PSA with Regards to Policy Evaluation**

Statement	MEAN	SD	VERBAL INTERPRETATION
1. PSA reports are used to evaluate the outcomes of agricultural policies.	3.33	0.92	<i>Neither Implemented nor Not Implemented</i>
2. The LGU uses structured processes to assess policy effectiveness through PSA data.	3.35	0.92	<i>Neither Implemented nor Not Implemented</i>
3. Policies are revised based on PSA data analysis.	3.16	0.97	<i>Neither Implemented nor Not Implemented</i>
4. Agricultural performance is assessed by analyzing PSA data trends.	3.32	1.05	<i>Neither Implemented nor Not Implemented</i>
5. Comprehensive PSA insights are used for regular policy evaluations.	3.33	1.06	<i>Neither Implemented nor Not Implemented</i>
<b>Overall Mean</b>	<b>3.30</b>	<b>0.99</b>	<b><i>Neither Implemented nor Not Implemented</i></b>
<b>Overall Interpretation</b>			<b><i>Not Implemented</i></b>

Table 10 presents the level of implementation of the policies by the LGU in line with the results of the PSA with regard to policy evaluation. The highest mean score of 3.35 with a standard deviation of 0.92 suggests that structured processes to assess policy effectiveness through PSA data are neither consistently

implemented nor entirely ignored. This indicates that while there is some recognition of the importance of using PSA data for policy assessment, its application remains inconsistent and lacks a standardized approach.



On the other hand, the lowest mean score of 3.16 with a standard deviation of 0.97 reflects that the revision of policies based on PSA data analysis is **neither fully implemented nor not implemented**. This result highlights the gap in utilizing statistical insights for policy adjustments, which could lead to missed opportunities for enhancing agricultural programs and outcomes.

The overall weighted mean of 3.30 with a standard deviation of 0.99 further supports the observation that the LGU's policy

evaluation processes are generally at a moderate level of implementation. This suggests that while PSA data is acknowledged as a valuable tool for evaluating agricultural policies, the extent of its integration remains limited. Strengthening the systematic use of statistical data for regular policy assessment and refinement could improve the quality and effectiveness of agricultural development initiatives.

**Table 11. Significant Relationship between Employees' Awareness on PSA Agricultural Statistics Survey Results and Employees' Level of Utilization**

Level of Awareness (Agricultural Statistics Survey)	Level of Utilization (MAO and MPDO Employees)			
	Descriptive	Diagnostic	Predictive	Prescriptive
Crop Production	$r = 0.767^{**}$ Strong $p < 0.001$	$r = 0.677^{**}$ Strong $p < 0.001$	$r = 0.669^{**}$ Strong $p < 0.001$	$r = 0.659^{**}$ Strong $p < 0.001$
Livestock and Poultry Production	$r = 0.770^{**}$ Strong $p < 0.001$	$r = 0.706^{**}$ Strong $p < 0.001$	$r = 0.690^{**}$ Strong $p < 0.001$	$r = 0.696^{**}$ Strong $p < 0.001$
Fishery Production	$r = 0.788^{**}$ Strong $p < 0.001$	$r = 0.772^{**}$ Strong $p < 0.001$	$r = 0.763^{**}$ Strong $p < 0.001$	$r = 0.742^{**}$ Strong $p < 0.001$

**Legend:** **\*\***highlight significant; **\*** significant;  $\pm 1$  = Perfect;  $\pm 0.80 - \pm 0.99$  = Very Strong;  $\pm 0.60 - \pm 0.79$  = Strong;  $\pm 0.40 - \pm 0.59$  = Moderate;  $\pm 0.20 - \pm 0.39$  = Weak;  $\pm 0.01 - \pm 0.19$  = Very Weak; 0.0 = No Relationship

Table 11 shows a **strong and highly significant positive relationship** between employees' awareness of PSA Agricultural Statistics Survey results and their utilization of the data. For all areas—**crops, livestock and poultry, and fisheries**—the computed correlation coefficients (r-values) range from **0.659 to 0.788**, with **p-values less than 0.001**, confirming statistical significance.

This implies that as LGU employees become more aware of PSA data, their use of descriptive, diagnostic, predictive, and prescriptive analyses also increases. The findings emphasize that **awareness is a key factor** in promoting effective, data-driven policy development at the local level.

**Table 12. Significant Relationship between Employees' Awareness on PSA Agricultural Statistics Survey Results and LGU Policy Implementation**

Level of Awareness (Agricultural Statistics Survey)	LGU Policy Implementation Based on PSA Results		
	Agricultural Development Policies	Resource Allocation	Policy Evaluation
Crop Production	$r = 0.766^{**}$ Strong $p < 0.001$	$r = 0.741^{**}$ Strong $p < 0.001$	$r = 0.754^{**}$ Strong $p < 0.001$
Livestock and Poultry Production	$r = 0.790^{**}$ Strong $p < 0.001$	$r = 0.744^{**}$ Strong $p < 0.001$	$r = 0.772^{**}$ Strong $p < 0.001$
Fishery Production	$r = 0.837^{**}$ Very Strong $p < 0.001$	$r = 0.797^{**}$ Strong $p < 0.001$	$r = 0.814^{**}$ Very Strong $p < 0.001$

Table 12 presents the significant relationship between employees' awareness of the PSA Agricultural Statistics Survey results and the implementation of local government unit (LGU) policies based on these results. The findings show a consistent and strong positive correlation between the two variables, with r-values ranging from 0.741 to 0.837, indicating a strong to very strong

relationship across different areas of agricultural production — crop production, livestock and poultry production, and fishery production.

Notably, the highest correlation was observed in fishery production, where the relationship between employees' awareness



and policy implementation was **very strong** in both agricultural development policies ( $r = 0.837$ ) and policy evaluation ( $r = 0.814$ ). In the areas of crop production and livestock and poultry production, the  $r$ -values also demonstrated **strong positive relationships**, with resource allocation and policy evaluation

showing consistently high correlations. Moreover, the  $p$ -values in all cases were less than 0.001, confirming that these results are **highly significant**.

**Table 13. Significant Relationship between Employees' Level of Utilization and LGU Policy Implementation**

Level of Utilization (MAO and MPDO Employees)	LGU Policy Implementation Based on PSA Results		
	Agricultural Development Policies	Resource Allocation	Policy Evaluation
Descriptive	$r = 0.833^{**}$ Very Strong $p < 0.001$	$r = 0.868^{**}$ Very Strong $p < 0.001$	$r = 0.857^{**}$ Very Strong $p < 0.001$
Diagnostic	$r = 0.833^{**}$ Very Strong $p < 0.001$	$r = 0.829^{**}$ Very Strong $p < 0.001$	$r = 0.822^{**}$ Very Strong $p < 0.001$
Predictive	$r = 0.829^{**}$ Very Strong $p < 0.001$	$r = 0.863^{**}$ Very Strong $p < 0.001$	$r = 0.857^{**}$ Very Strong $p < 0.001$
Prescriptive	$r = 0.845^{**}$ Very Strong $p < 0.001$	$r = 0.896^{**}$ Very Strong $p < 0.001$	$r = 0.889^{**}$ Very Strong $p < 0.001$

Table 13 presents the significant relationship between employees' level of utilization and LGU policy implementation. It was observed to have a **highly significant relationship** between these variables. This is based on the computed  $r$  values obtained from the tests with **very strong positive relationships**. Furthermore, the  $p$ -values obtained were less than the significance alpha 0.001, hence there is a highly significant result.

The significant relationship between employees' level of utilization and LGU policy implementation implies that the more

effectively employees utilize PSA Agricultural Statistics Survey results, the better the alignment and execution of local government policies. This finding highlights the importance of a high level of data utilization in ensuring well-informed decision making, strategic resource allocation, and comprehensive policy evaluation. By maximizing the use of statistical data, LGUs can create more responsive, evidence-based, and sustainable agricultural development programs.

**Table 14. Policy Recommendations on the Optimization of the Utilization of Agricultural Survey Results of PSA by LGUs**

Policy Recommendation	Description	Objective/Focus Area	Expected Outcome
<b>1. Institutionalization of an Annual PSA-LGU Agricultural Data Dissemination Forum</b>	Conduct a yearly forum between PSA and LGUs to present and explain the latest agricultural survey results.	Awareness and appreciation of PSA data	Increased awareness and understanding of PSA data among LGU personnel
<b>2. Implementation of Annual Capacity-Building Programs on Agricultural Data Analysis</b>	Train LGU staff on how to analyze and apply PSA data in planning and policy-making.	Utilization and capacity-building	Improved capability of LGUs to interpret and use data for local agricultural planning
<b>3. Creation of a Direct Data Delivery Mechanism to LGUs</b>	Ensure direct and official transmission of survey results to LGUs via email, physical copies, or LGU portals.	Timely access and awareness	LGUs receive updated data without relying solely on website postings
<b>4. Integration of PSA Agricultural Data in LGU Resource Allocation and Planning Systems</b>	Require LGUs to use PSA data in drafting AIPs, development plans, and agricultural investment programs.	Utilization and resource allocation	Data-driven budgeting and project prioritization in agriculture
<b>5. Strengthening PSA-LGU Collaboration through Memoranda of Agreement (MOA)</b>	Establish formal agreements between PSA offices and LGUs for continuous support, data sharing, and feedback.	Sustainable data use and cooperation	Strengthened institutional ties and consistent application of survey results

Table 14 presents five strategic policy recommendations aimed at enhancing how Local Government Units (LGUs) utilize agricultural survey results generated by the Philippine Statistics

Authority (PSA). These recommendations address key areas such as awareness, utilization, and resource allocation, with the goal of fostering data-informed decision-making at the local level.



The first recommendation highlights the institutionalization of an annual PSA-LGU dissemination forum, which serves as a platform for sharing and explaining agricultural data to local stakeholders. This aims to improve LGUs' awareness and understanding of current agricultural trends and conditions, especially beneficial given the frequent changes in LGU personnel.

The second recommendation focuses on the implementation of annual training programs that build LGU staff capacity in data analysis. Through these capacity-building efforts, LGUs are expected to gain the necessary skills to interpret and apply data for more effective planning and policy formulation in the agriculture sector.

The third policy calls for the creation of a direct data delivery mechanism to ensure LGUs receive timely and accurate survey results—not just through public postings on the PSA website but via official channels such as email or dedicated portals. This enhances data accessibility and prompt usage in local governance.

The fourth recommendation promotes the integration of PSA data in LGU planning and budgeting processes, such as in their Annual Investment Plans (AIPs). This ensures that resource allocation decisions are grounded in reliable statistical evidence, promoting efficient and targeted agricultural interventions.

Lastly, the fifth recommendation supports the strengthening of PSA-LGU collaboration through formal agreements like Memoranda of Agreement (MOA). These agreements will help institutionalize regular data sharing, technical assistance, and feedback mechanisms—paving the way for more sustainable and consistent data utilization at the local level.

Overall, these policy recommendations serve as a blueprint for ensuring that PSA's agricultural survey data are not only produced but also effectively translated into actionable insights for local agricultural development.

#### 4. CONCLUSION AND RECOMMENDATIONS

In interpretation of the aforementioned findings, the study has drawn the following conclusion:

The results show that among the three areas of the Agricultural Statistics Survey (AGSTAT) by the Philippine Statistics Authority (PSA), LGUs are most aware of crop production data, interpreted as "Aware," while their awareness of livestock, poultry, and fishery production remains neutral, thus this indicates a need for strengthened efforts in building LGU capacity to fully understand and utilize agricultural data for more effective policy development and local planning.

The findings reveal that among the four types of data utilization in the MAO and MPDO, diagnostic data is the most effectively used, demonstrating their capacity to analyze past data for addressing agricultural challenges. While descriptive and

predictive data are also utilized, the limited use of prescriptive data suggests a need for strengthening data-driven recommendations to develop more effective and actionable agricultural strategies.

The level of implementation of agricultural development policies, resource allocation, and policy evaluation by LGUs, in line with PSA data was neutral, thus reflecting the limited integration of statistical insights into policy formulation, budget planning, and policy assessment.

A very strong and highly significant relationship between the level of awareness among LGUs and the level of data utilization by MAO and MPDO employees. Highlighted that the more knowledgeable employees are about PSA data, the more likely they are to use it in planning, decision-making, and policy development.

A very strong and highly significant relationship between the level of awareness of PSA data and the extent of LGU policy implementation. Highlighted that awareness directly influences the quality and effectiveness of policy execution, reinforcing the importance of capacity-building initiatives for LGU personnel.

A very strong and highly significant relationship between the level of data utilization and the implementation of LGU policies. Demonstrated that effective use of statistical data leads to more informed, strategic, and impactful policy decisions, highlighting the importance of strengthening data literacy and analytical skills among local government employees.

Based on the findings and conclusions made, the following recommendations were forwarded

Firstly, to the Local Government Units (LGUs). Institutionalize the use of PSA Agricultural Statistics Survey (AGSTAT) data in formulating and evaluating agricultural policies. Conduct regular orientations, data briefings, and knowledge-sharing sessions to enhance awareness and ensure data-driven decision-making.

Secondly, to the Municipal Agriculture Office (MAO). Strengthen staff capacity through continuous training on the interpretation and application of PSA AGSTAT data for program development, resource allocation, and policy evaluation.

Thirdly, to the Municipal Planning and Development Office (MPDO). Integrate AGSTAT data into development planning and collaborate with MAO and LGUs to ensure agricultural programs are responsive and grounded in reliable statistics.

Lastly, to the Philippine Statistics Authority (PSA). Conduct regular dissemination forums and training sessions to support LGUs in analyzing and utilizing AGSTAT data, especially in light of frequent personnel changes. Provide simplified, user-friendly reports tailored to LGU needs and ensure timely release of survey results.



## REFERENCE

1. Adobe Communications Team (2022) Types of analytics explained – descriptive, predictive, prescriptive, and more. <https://business.adobe.com/blog/basics/descriptive-predictive-prescriptive-analytics-explained>
2. Department of Planning, Monitoring, and Evaluation (2014) Evidence-Based Policy-Making and Implementation. [https://www.dpme.gov.za/keyfocusareas/evaluationsSite/Evaluations/What%20EBPM%2014%2010%2013\\_mp.pdf](https://www.dpme.gov.za/keyfocusareas/evaluationsSite/Evaluations/What%20EBPM%2014%2010%2013_mp.pdf)
3. Devan Grant (2023) What is Data-Driven Decision Making? (And Why It's So Important) <https://www.driverresearch.com/market-research-company-blog/data-driven-decision-making-ddm/>
4. DLG (2018) DILG to LGUs: Monitor, regulate fishery activities in municipal waters. <https://www.dilg.gov.ph/news/DILG-to-LGUs-Monitor-regulate-fishery-activities-in-municipal-waters/NC-2018-1225>
5. Garcia, J.M., & Reyes, L.T. (2018). "Challenges in Disseminating Crop Statistics to LGUs." *Philippine Journal of Agricultural Economics*, 25(1), 78-91.
6. Insight Software (2023) Comparing Descriptive, Predictive, Prescriptive, and Diagnostic Analytics. <https://insightsoftware.com/blog/comparing-descriptive-predictive-prescriptive-and-diagnostic-analytics/>
7. Kevin Lobo (2024) What Are the Four Types of Analytics and How Do You Use Them? <https://www.analytics8.com/blog/what-are-the-four-types-of-analytics-and-how-do-you-use-them/>
8. Martinez, D.R., et al. (2017). "Impact of Crop Statistics Awareness on Crop Productivity." *Agricultural Economics Review*, 18(2), 145-158.
9. Patrick Gibson (2021) Types of Data Analysis. <https://chartio.com/learn/data-analytics/types-of-data-analysis/>
10. ProjectPro (2024) Four Types of Analytics with Example and Applications. <https://www.projectpro.io/article/types-of-analytics-descriptive-predictive-prescriptive-analytics/209>
11. Plurasight (2024) 4 levels of analytics you need for better decision making. <https://www.pluralsight.com/blog/data-professional/data-informed-decisions>
12. Reyes, A.B., et al. (2020). "Assessment of LGUs' Awareness of Crop Statistics." *Journal of Agricultural Statistics*, 15(2), 112-125.
13. Santos, C.D., & Lim, E.F. (2018). "Perception of LGUs on the Importance of Crop Statistics." *Philippine Journal of Agricultural Development*, 45(1), 35-47.
14. Santos, C., & Reyes, A. (2019). Awareness of agricultural statistics among Local Government Units (LGUs) in the Philippines. *Journal of Agricultural Statistics*, 16(2), 112-125.
15. Tan, G.H., & Cruz, M.L. (2020). "Factors Influencing LGUs' Awareness and Use of Crop Statistics." *Journal of Rural Development*, 37(2), 89-102.
16. Wubalem Seraw and Xinhai Lu (2020) Review on Concepts and Theoretical Approaches of Policy Implementation. *International Journal of Academic Multidisciplinary Research (IJAMR)* ISSN: 2643-9670 Vol. 4 Issue 11, November - 2020, Pages: 113-118. <http://ijeais.org/wp-content/uploads/2020/11/IJAMR201122.pdf>
17. Santos, C., & Reyes, A. (2019). Awareness of agricultural statistics among Local Government Units (LGUs) in the Philippines. *Journal of Agricultural Statistics*, 16(2), 112-125