Open Access
J. Glob. Innov. Agric. Sci., 2025, 13(x): xxx
ISSN (Online): 2788-4546; ISSN (Print):2788-4538
DOI: https://doi.org/10.22194/JGIAS/24.1446
http://www.jgiass.com

The Economic and Societal Impacts of Implementing Management Extension, Infrastructure Assistance, and Budget Allocation in Palopo City, Indonesia

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The agricultural production improvement program by the Palopo City Government focuses more on increasing agricultural production by introducing new technology by assisting farmers to increase crop yields with various types of assistance such as farm equipment and machinery, seeds and seeds of horticultural and plantation crops, livestock seeds, fertilizers, pesticides, and agricultural processing equipment. The study is vital to conduct research using structural equation modelling approaches concerning the management analysis of agricultural extension workers and the social and economic effect of infrastructure support. Research approach combined a quantitative analysis approach with descriptive research approaches and then analyzed using variance-based statistics, namely Structural Equation Modeling (SEM). Partial Least Squares (PLS). The study's findings, obtained by SEM analysis, revealed the impact of variables (X1), (X2), (X3), and (X4) together affects (Y) by 72.4%, which can be said to be a decisive criterion. For variables (X1), (X2), (X3), and (X4) affect (Z) by 90.9% can be said to be decisive criteria.

Keywords: Competitive, government, individual innovation, infrastructure, organizational, technology.

INTRODUCTION

The goal of national development carried out by the local government, especially by the Palopo City government, is essentially to improve the welfare of the people by providing various means to support social life (Harahap *et al*., 2023) The demands of the times in the era of globalization also encourage the development of various competitions, both in the field of technology and the social life of the community. One of them is economic development which is characterized by an increase income and a decrease in unemployment, showing developments that the Indonesian government should be proud of, especially in Palopo City.

The Palopo City government's policy in the development of the agriculture, livestock and plantation sectors is mainly aimed at increasing farmers' income and welfare so that they can reduce poverty in the agricultural sector, especially people left in rural areas. To overcome problems arising in the agricultural sector, the government through the Ministry of Agriculture and local governments, as well as the Palopo City Government, has launched various government assistance programs. Programs that have been launched by the government in the field of agriculture, livestock and plantations to farmers are agricultural production facilities assistance programs, increasing the livestock population, improving horticultural seeds and cocoa and coconut plant seeds and so on (Anas and Azwar, 2019).

Therefore, Palopo City Government policy in the last five years has assisted 577 Farmer Groups (data from the Palopo City Agriculture, Livestock and Plantation Office in 2022). The agricultural production improvement program by the Palopo City Government focuses more on increasing agricultural production by introducing new technology by assisting farmers to increase crop yields with various types of assistance such as farm equipment and machinery, seeds and seeds of horticultural and plantation crops, livestock seeds,

Harahap, B., W. Widodo, A. Sutanto, Sapar, M. Risal and M.Y. Qamaruddin. 2025. The economic and societal impacts of implementing management extension, infrastructure assistance, and budget allocation in Palopo City, Indonesia. Journal of Global Innovations in Agricultural Sciences 12: xxxxx.
[Received 3 Jul 2024; Accepted 31 Jul 2024; Published (online) 3 Sep 2024]

fertilizers, pesticides, and agricultural processing equipment. Socio-economic life is the interaction of the economic behaviour of the community, social behaviour related to income, and its utilization (Mansyah, 2013). Data on farmer groups for each sub-district in Palopo City are presented in Table 1, recipients of agricultural infrastructure facilities.

Given the context above, it is vital to conduct research using structural equation modelling approaches concerning the management analysis of agricultural extension workers and the social and economic effect of infrastructure support. Analysis of the impacts of farming, livestock, and plantation assistance on agricultural groups will be assessed, including the role of extension, group dynamics, aid characteristics, budget, organizational citizenship behaviour (OCB), and socio-economic impacts felt by farmers.The role of agricultural extension is closely related to industrial development, an important strategic initiative. Extension services play a crucial role in developing the farming sector by functioning as an intermediary between traditional farming practices and rapidly progressing techniques agricultural technology and research (Saputri *et al*., 2016). It will successfully execute extension operations, but extension workers must provide support. Compiling a work plan and providing extension services to meet community requirements is necessary for agricultural extension workers. They must also be competent and capable of doing their jobs well (Sunartomo, 2016).

The presence of impediments in the field may be clarified by shortcomings in management practices, namely the insufficient execution of Organizational Citizenship Behavior (OCB). Consequently, extension workers cannot fully use extension resources to their maximum potential cost-effectively, efficiently, and successfully. In addition, local administrations lack the necessary readiness to effectively address the presence of extension workers (Ningsih, 2018). OCB in various organizations can also help to improve performance and generate competitive advantages for members to do work that goes beyond the formal rules needed so that member relationships in the organization become productive (Farisi *et al*., 2021). According to the description, overtime compiling behaviour (OCB) is the desire to work overtime or perform work beyond the assigned task willingly and genuinely without following organizational directives (Nurjanah *et al*., 2020).

Effective leadership, managing people, and achieving corporate objectives through conflict resolution and management techniques (Lamm *et al*., 2018). Such agricultural groups are inseparable from the natural phenomenon of conflict due to a mismatch of tasks, processes, and status. This occurs as a result of specific tasks having corresponding objectives. Ultimately, they cannot decide which tasks are prioritized (task conflicts) or whether the final goals are related (process conflicts). Who is responsible for the target goal (status conflict) can create interpersonal conflict (relationship conflict) (Lamm *et al*., 2021).

Furthermore, the budget is necessary to ensure the effectiveness of government aid programs (Fajri, 2020). Budgeting is the most critical component of government financial management, and it's investigated from several perspectives, including political, economic, financial, and accounting. Several factors, including politics, economics, and technology, influence decisions about budgeting practices. However, it is hard to evaluate these effects until they are felt in society (Sitepu, 2016). Implementing the short-term budget periodization with yearly intervals should be adaptable and responsive while maintaining responsibility and control since it is considered a standard timeframe for government budgeting (Abdullah and Nazry, 2015).

MATERIALS AND METHODS

The study was conducted in Palopo City, Indonesia, from March to April 2024, with the following Research Certificate Nomor: 500.16.7.2/2024.0112/IP/DPMPTSP. This research

Table 1. Based on the kind of help received the percentage of samples.

Subdistrict	Types of Help							Sum
	N	B	T	BN	TN	TB	TBN	
Sendana	4	3	4	1	0	2	0	14
Mungkajang	3	1	4	0	0	2	0	10
Wara	0	0	5	0	0	0	0	5
Wara Selatan	1	0	6	0	2	0	0	9
Wara Barat	0	2	5	0	0	2	3	12
Wara Utara	1	4	0	0	2	0	0	7
Bara	1	1	0	0	0	0	0	2
Teluwanua	12	1	20	0	3	2	1	39
Wara Timur	2	0	5	0	0	0	0	7
Number of Samples	24	12	49	1	7	8	4	105

(source: Palopo City Agriculture, Livestock and Plantation Office in 2022)

Appendix: N (livestock), B (plantation), T (agriculture), BN (plantation and animal husbandry), TN (agriculture and animal husbandry), TB (agriculture and plantation), TBN (agriculture, plantation, and animal husbandry).

involved farmer groups receiving agricultural infrastructure assistance within five years. The research sample size was determined as much as 20% of the population. The determination of this sample is based on the opinion (Gay *et al*., 2012). In light of population representativeness and the descriptive study design using a quantitative method, 105 farmer groups, 20 % of the whole population is chosen as the sample size. The selection of farmer groups that will become respondents is determined by proportional stratified random sampling techniques because sampling from a population is done randomly without regard to the strata present in that population (Wiyanto *et al*., 2018). Table 1 displays the percentage of samples based on agricultural aid that farmer groups got.

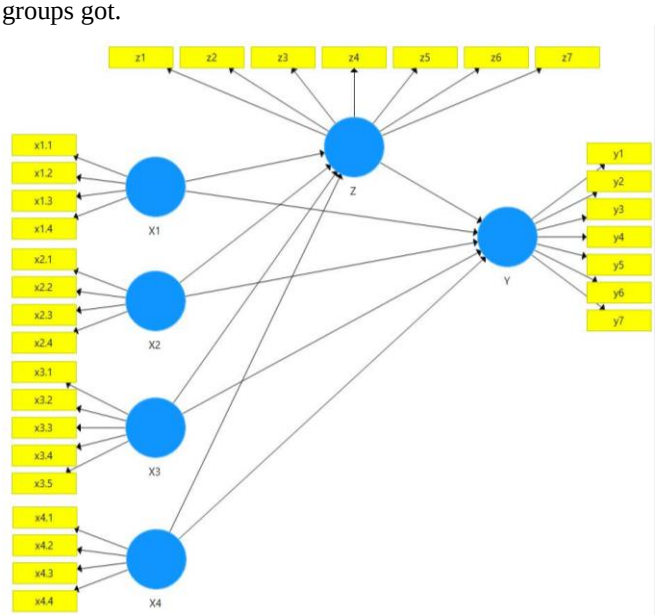

Figure 1. Conceptual framework of research.

The variables observed descriptively are examined in this research examines the link between independent and dependent variables is analyzed. Socio-economic impact (Y) is the dependent variable, whereas group dynamics (X2), budget (X4), aid characteristics (X3), extension (X1), and OCB (Z) are the independent factors. The conceptual framework of this investigation and the operational definitions and indicators of each variable are shown in Fig. 1. This study's data analysis methods include inferential statistical analysis, descriptive statistical methods using quantitative approaches, and explanatory statistical methods. Descriptive statistical analysis is a test to reveal the form of data in sensing whether there is a relationship between the values of a distributed variable. In contrast, inferential statistical analysis is used to infer the results derived from a sample concerning the population. A distinction is also made between the number of variables considered concerning each other (Agung and Yuesti, 2013). Data analysis uses descriptive analysis that includes frequency, percentage, and cross tab. In addition, qualitative data screening was carried out from open interview results to support quantitative data (Awang *et al*., 2015).

In this study, descriptive statistical analysis used the EXCEL and SPSS programs by making three categories of each variable: low, medium, and high, utilizing variance-based methods and inferential statistical analysis refers to the techniques used in structural equation modeling (SEM), Smart PLS 3.0 is an analytical tool. When there are particular issues with the data, such as a small study sample size, missing values, or multicollinearity, PLS is one of the variant-based SEM statistical approaches intended to address multiple regression (Citra *et al*., 2023).

RESULTS AND DISCUSSION

RESULTS

***Descriptive Analysis*:**

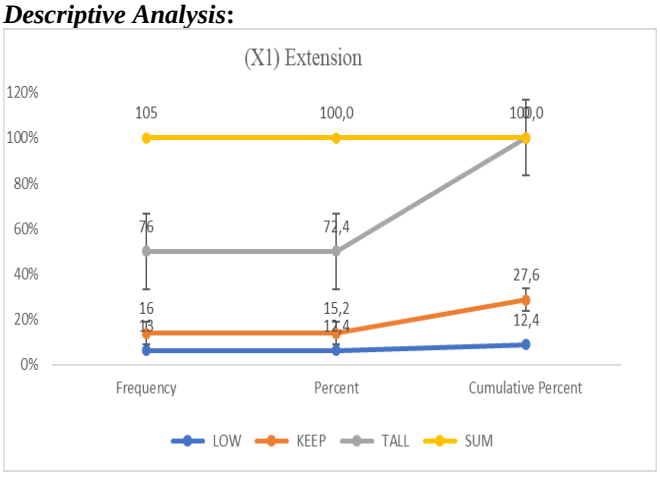

Figure 1. Dispersion of respondents based on extension variables (X1).

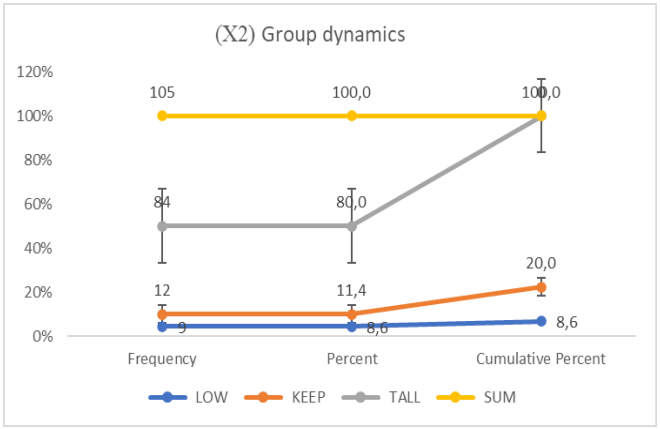

Figure 2. Dispersion of respondents based on group dynamics (X2).

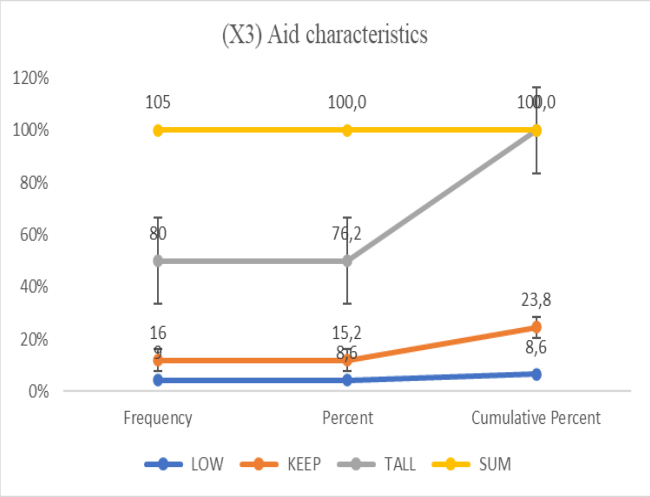

Figure 3. Dispersion of respondents by aid characteristics (X3).

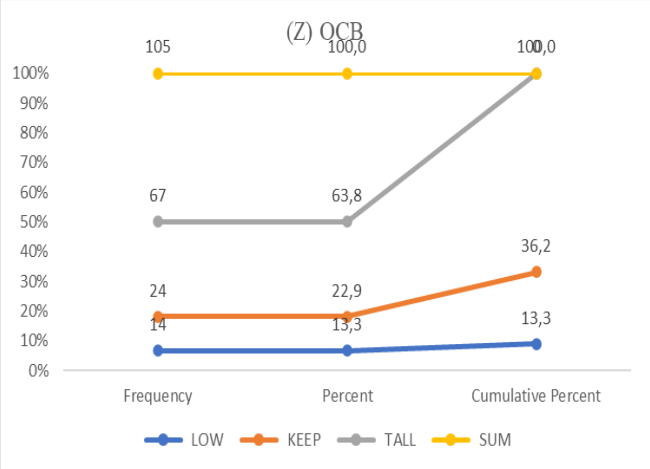

Figure 4. Dispersion of respondents by budget (X4).

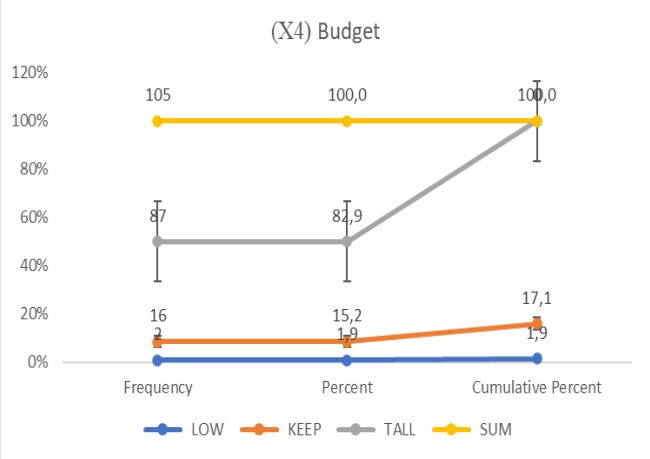

Figure 5. Dispersion of respondents based on OCB (Z).

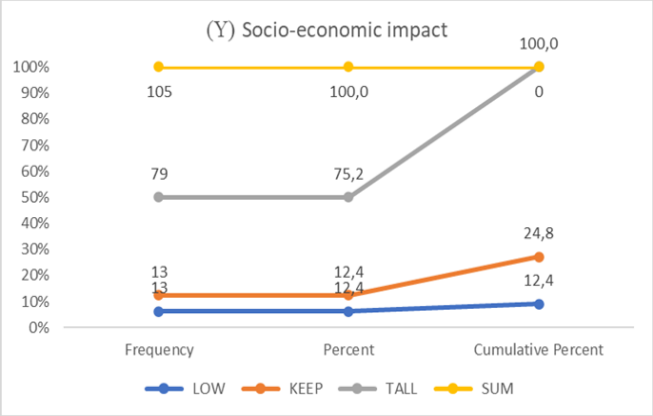

Figure 6. Dispersion of respondents on socio-economic impact (Y).

Based on respondents' perceptions of the majority of extension influence (X1), the descriptive analysis findings showed that the distribution of respondents fell into three categories: high (72.4%), medium (15.2%), and low (12.4%). According to Figure 2, the average extension impact is 2.6 on a scale of 1 to 5. Group dynamics (X2) has an overall strong effect of 80%, a medium category of 11.4%, and a low category of 8.6%. On a scale of 1 to 5, the average group dynamics was 2.71 overall, as seen in Figure 3. The effect of support qualities (X3) was categorized as strong in 76.2% of respondents' views, medium in 15.2%, and low in 8.6% of respondents' perceptions. According to Figure 4, the average aid features are 2.68 on a scale of 1 to 5. The majority of respondents, on the other hand, indicate that the effect of budget factors (X4) falls into three categories: high (26.7%), medium (63.3%), and low (10%). On a scale of 1 to 5, the average budget is 2.81 overall, as Figure 5 illustrates. According to the majority of respondents, OCB (Z) has a significant impact (63.8%), a medium influence (22.9%), and a low effect (13.3%). Figure 6 illustrates the average OCB of 2.50 on a scale of 1 to 5. That being said, the majority of respondents said that socio-economic impact factors (Y) had an influence that fell into three categories: high (75.2%), medium (12.4%), and low (12.4%). A scale from 1 to 5 representing the overall mean socio-economic effect is presented in Figure 7.

***Statistical Analysis*:**

Outer and Inner model test results:

A measuring model called a "model evaluation" determines a model's reliability and validity. (Setiaman, 2020). The following are the components of outer model testing. A measurement model is also known as an outside model or outer measurement. The objective of the outer model test is to establish the relationship between latent variables and their indicators. Test the outer model using PLS Algorithm methods *(*Budhiasa, 2016*)*. The inner model test is used to verify the earlier predicted link between external and

Table 2. Outer Loading Results for each indicator (Convergent Validity).

Indicator	(X1) Extension	(X2) Group Dynamics	(X3) Characteristics of aid	(X4) Budget	(Z) OCB	(Y) Socio-economic impact
(X1.1) Intensity	0,831					
(X1.2) Participation	0,878					
(X1.3) Material suitability	0,916					
(X1.4) Perceived benefits.	0,737					
(X2.1) Rule		0,720				
(X2.2) Interaksi		0,877				
(X2.3) Compactness		0,838				
(X2.4) Complex resolution		0,728				
(X3.3) Quality			0,875			
(X3.4) Innovation Level			0,926			
(X3.5) Capabilities innovate			0,726			
(X4.2) Benefits received				0,986		
(X4.3) Efficiency				0,969		
(X4.4) Target achieved				0,976		
(Z.3 Personal development					0,877	
(Z.4) Dedication within the organization					0,721	
(Z.5) Individual innovativeness					0,929	
(Z.6) The welfare of citizenship					0,801	
(Z.7) Self-satisfaction					0,793	
(Y.2) Changes in sources of livelihood						0,953
(Y.3) Economic capability						0,961
(Y.4) Ability to manage assets						0,983
(Y.5) Partnering ability						0,977
(Y.7) The ability to develop a business.						0,974

endogenous components. The Smart PLS stages are carried out via Bootstrapping to provide the inner model testing values. The structural test is another name for the Inner Model test (Awang *et al*., 2015).

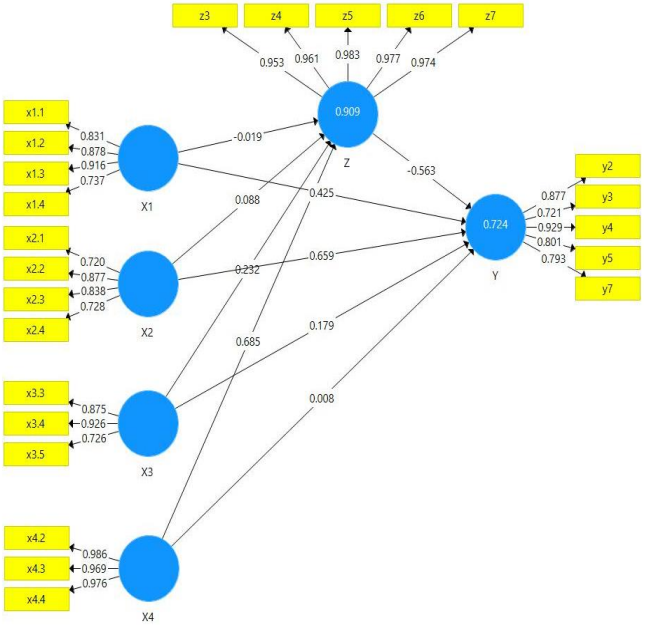

Figure 7. Outer model SEM (Output Smart-PLS).

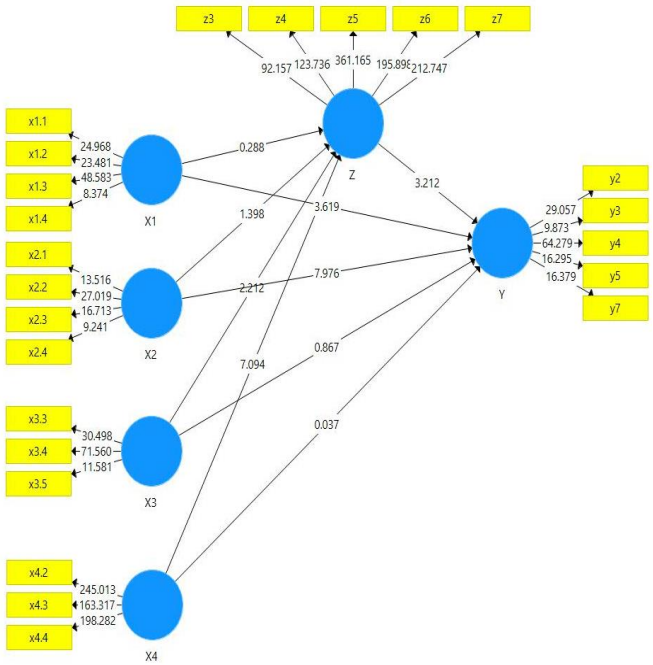

Figure 9. Inner Model SEM (Output Smart-PLS).

***Convergent validity (Loading Factor)*:** The objective of the convergent validity test is to determine the loading factor value in the latent variable and understand its implications. As

mentioned earlier, Table 2 illustrates calculation of the outer loading value for each variable indicator via the analysis of the outer model. It also shows how this value meets the required criteria. The validity value with a value of > 0.7. As a result, the model, as mentioned earlier, is valid.

Table 3. Nilai Average Variance Extracted (AVE).

Variable	Average Variance Extracted (AVE)
(X1)	0,711
(X2)	0,630
(X3)	0,717
(X4)	0,955
(Z)	0,685
(Y)	0,940

Table 4. Values of Cronbach Alpha and Composite Reliability.

Variable	Cronbach's Alpha	Composite Reliability
(X1)	0,887	0,907
(X2)	0,813	0,871
(X3)	0,825	0,883
(X4)	0,978	0,985
(Z)	0,896	0,915
(Y)	0,985	0,987

***Average variance extracted (AVE)*:** The objective of this model test is to assess the degree of validity of the indicators of the reflective model. The Average Variance Extracted (AVE) value is calculated with an expected value of > 0.5 is the value that is converted into a measure. Table 3 indicates that all research variables have an AVE value greater than 0.5, indicating that all variables in the SEM model analysis are valid.

***Model reliability*:** Cronbach Alpha and Composite dependability ratings are used to assess the SEM model's degree of dependability. This sort of reliability determines the degree of internal dependability of variable indicators. The Cronbach's Alpha variable has a standard value of >0.6, and the Composite Reliability variable has a standard value of >0.7 when reliability is indicated. It may be concluded that the examined SEM model is trustworthy based on the findings of Table 4 above, which show that all variables have values of Composite Reliability > 0.7 and Cronbach's Alpha > 0.6.

***Statistical T analysis*:** Statistical T analysis aims to ascertain how much each variable influences the other. The influence of positive and significant factors with P Values < 0.05 is displayed in the statistical T Statistics > T Table. The statistical T and P values, which also indicate the degree of the independent variable's effect on the dependent variable, are determined by the SEM model's internal analysis, as shown in Table 5.

Table 5. The value of the T Variable is independent of the dependent variables.

Variable	t-Statistics	t- Table	P Values	Cut off P Value	Information
X1 -> Y	3,460	1,983	0,001	0,05	Accepted
X1 -> Z	0,288	1,983	0,774	0,05	Rejected
X2 -> Y	6,855	1,983	0,000	0,05	Accepted
X2 -> Z	1,398	1,983	0,163	0,05	Rejected
X3 -> Y	0,221	1,983	0,826	0,05	Rejected
X3 -> Z	2,212	1,983	0,027	0,05	Accepted
X4 -> Y	2,001	1,983	0,046	0,05	Accepted
X4 -> Z	7,094	1,983	0,000	0,05	Accepted
Z -> Y	3,212	1,983	0,001	0,05	Accepted
X1 -> Z -> Y	0,265	1,983	0,791	0,05	Rejected
X2 -> Z -> Y	1,137	1,983	0,256	0,05	Rejected
X3 -> Z -> Y	1,696	1,983	0,091	0,05	Rejected
X4 -> Z -> Y	2,990	1,983	0,003	0,05	Accepted

Table 6. Results of determinant analysis of independent variables.

Variable	R^2	R^2 adjusted
(Y) Economic improvement of the community	0,724	0,710
(Z) Poultry assistance programs	0,909	0,905

***Results of Determinant Analysis (R Square)*:** According to (Awang *et al*., 2015), the R square value of 0.75 falls into the strong category, the R square value of 0.50 falls into the moderate category, and the R square value of 0.25 falls into the weak category. The goal of determinant analysis (R Square) aims to determine the extent to which independent variables affect dependent variables together. The following Table 6 displays the findings of the determinant analysis in the SEM Model: illustrates how the factors (X1), (X2), (X3), and (X4) collectively impact (Y) by 72.4%, making this a crucial criterion. A 90.9% effect (Z) on variables (X1), (X2), (X3), and (X4) might be considered a critical criterion.

DISCUSSION

***Extension's (X1), Group dynamics (X2), and budget (X4) influence on socio-economic impact (Y); the findings of this study are accepted*:** With a significance value of P Values < 0.05 and T Statistics > T Table shown in Table 5. The analysis of respondents' replies reveals that, on average, respondents offer high responses to extension, group dynamics, and budget, which positively and substantially influences socio-economic impact. This is consistent with a research paper titled Socio-economic Factors Affecting Smallholder Farmers' Willingness to Adopt Biodigester Technology in South Africa (Bonokwane and Ololade, 2022). The study's results stated that all farmer respondents stated that extension services carried out by agricultural extension workers were essential for practicing farm activities. Agricultural extension workers provide extension services following their duties and

are reliable motivators in encouraging agrarian production in their work areas (Ramjattan *et al*., 2020).

The research findings are consistent with the work presented by (Rustamova *et al*., 2021). The study conducted by (Wahyuni *et al*., 2018) is consistent with the research paper "Agricultural Sector Budget Allocation Strategy to Accelerate Regional Development in Pandeglang District, Banten Province." The study's conclusions align with studies conducted by (Mansyah, 2013), which asserts that collaboration in group containers is necessary to achieve village independence through agriculture. According to a different study by (Ruiu *et al*., 2017) Re-Staging La Rasgioni: Lessons Learned from Transforming a Traditional Form of Conflict Resolution to Engage Stakeholders in Agricultural Water Governance, the La Rasgioni practice of traditional agricultural irrigation management is capable of handling complex resolutions.

***Effect of extension (X1) and (X2) influence on OCB (Z) The findings of this study are rejected*:** With a significance value of P values > 0.05 and T Statistics < T Table shown in Table 5. The study of respondents' replies reveals that, on average, respondents reply to extensions group dynamics with low significance levels, indicating that they do not positively or significantly influence OCB. Contrary to research (Usadolo, 2020) titled The Influence of Participative Leadership on Agricultural Extension Officers' Engagement, which claims that OCB's voluntary-minded leadership practices significantly and positively impact the effectiveness of agricultural extension workers' activities, this study contradicts that finding. Although OCB happens at the individual level, it has a cumulative influence on the group. OCB actions will generally affect the organization without impairing performance (Solomon and Igweh, 2023).

***Effect of aid characteristics (X3) and budget (X4) on OCB (Z) The findings of this study are accepted*:** With a significance value of P values < = 0.05 and T Statistics > T Table shown in Table 5. The analysis of the responses provided by the participants revealed that respondents gave high responses to the function of aid characteristics and budget, which positively and significantly influenced OCB. This indicates that the qualities of aid the effectiveness of support programs offered to communities via self-management, complete willingness, and accountability.

The study results align with the research presented (Ladebo *et al*., 2011). It asserts that employees who take full responsibility and freely contribute significantly to enhancing corporate success. This demonstrates that the government's "rock" program requires various assistance features, namely that agricultural extension workers willingly and responsibly accompany all assistance that community groups receive in line with their roles and responsibilities.

***Effect of OCB (Z) on socio-economic impact (Y) The findings of this study are accepted*:** With a significance value of 0.001 < of the value of α = 0.05, the analysis of the respondents' replies revealed that the respondents supplied high responses to the OCB variable, where the findings obtained had a positive and significant influence on socio-economic consequences. The findings are consistent with the study that was turned in by (Oliveira and Wander, 2022). The SEM analysis revealed that the primary factor influencing the distribution of OCB was the Z.7 indicator (Self-satisfaction), which accounted for 212.747 %. In comparison, the lowest indicator contributing was Z.3 (Personal development) of 92.157 %.

This research demonstrates that the management of OCB has a significant impact on farmers' work ethic, self-satisfaction, and personal development. The government must provide substantial support to facilitate socio-economic changes that prioritize cooperation and mutual assistance in Palopo City, ultimately leading to maximum welfare for farmers.

***The influence of extension (X1) as an intervening variable on socio-economic impact (Y) using OCB (Z) The findings of this study are rejected*:** Using OCB as an intervening variable, the study of respondents' replies reveals that respondents responded poorly to extension, which did not have a positive and significant influence on socio-economic consequences with a significance value of 0.791 > a value of α = 0.05. This indicates that the socio-economic effects of extension are unaffected by OCB.

The study's findings conflict with research published by (Sunartomo, 2016), which claim that consistent agricultural extension workers' extension services directly boost local economies. This study demonstrated that OCB practices that successfully enhance organizational performance have not been able to influence the performance of agricultural extension workers in providing socio-economic impacts from Palopo City government assistance. Instead, OCB as an intervening variable had a negative effect and significantly weakened the function of extension workers.

***Group dynamics (X2) and their impact on socio-economic impact (Y) with OCB (Z) as an intervening variable. The findings of this study are rejected*:** OCB is an intervening variability with a significance value of 0.256 > a value of α = 0.05. Examining respondents' replies reveals that respondents offer low responses to group dynamics, which do not positively and significantly influence socio-economic consequences. This indicates that OCB has no discernible, beneficial effect as an intervening variable.

The research (Owen *et al*., 2000) claims that group dynamics with complicated resolution in groups positively and substantially influence socio-economic repercussions; the study's results do not support this claim. This demonstrates that OCB has not been able to enhance the use of rock revenue so that farmer groups may manage it more skillfully and alter its socio-economic effects.

***The influence of assistance qualities (X3) as an intervening variable on socio-economic impact (Y) using OCB (Z) The findings of this study are rejected*:** With OCB acting as an

intervening variable and a significance value of 0.091 > a value of α = 0.05, the analysis of the respondents' responses reveals that the characteristics of assistance received low reactions from the respondents and that these characteristics do not exert a beneficial and substantial impact on socio-economic factors. This indicates that the socio-economic impact through OCB is unaffected by the aid's features. According to this study, the effect of assistance features on socio-economic consequences is lessened when OCB is included as an intervening variable.

The research (Knickel *et al*., 2009) titled "Towards a Better Conceptual Framework for Innovation Processes in Agriculture and Rural Development: From Linear Models to Systemic Approaches" does not support the study's findings. The findings demonstrated that innovation, as a distinctive type of agricultural support, simultaneously has a significant and favourable direct impact on agricultural growth.

***Impact of Budget (X4) using OCB (Z) as an intervening variable on socio-economic impact (Y) The findings of this study are accepted*:** Using OCB as an intervening variable, the study of respondents' replies reveals that respondents had high opinions about the budget, which has a positive and substantial impact on socio-economic repercussions with a significance value of 0.003 < a value of α = 0.05. This indicates that through OCB, budgets have an impact on socio-economic effects. This study demonstrated that OCB positively impacted the socio-economic consequences as an intervening variable. The findings are consistent with the survey Linking Environmental Management Practices and Organizational Citizenship Behavior for the Environment: A Social Exchange Perspective (Paillé *et al*., 2013). The SEM analysis revealed that the primary factor influencing the distribution of socio-economic impact was the Y.4 indicator (Ability to manage assets), which accounted for 64.279 %. In comparison, the lowest indicator contributing was Y.3 (Economic capability) of 9.873 %.

This study shows that by adding budget variables given by the government involved in this particular issue is the Palopo City government. Through related agencies, then managed by considering management aspects using aspects of OCB theory has a significant impact on the work ethic, self-satisfaction, and personal development of farmers. The government must provide substantial support to facilitate socio-economic change that prioritizes cooperation and mutual assistance in Palopo City, ultimately leading to maximum welfare for farmers.

***Conclusion*:** The study's data suggest that the variables (X1), (X2), (X3), and (X4) together influence (Y) by 72.4%, making them potentially significant criteria. A 90.9% effect (Z) on variables (X1), (X2), (X3), and (X4) might be considered a critical criterion. Agricultural extension workers require intense assistance by innovating to conduct extension services using fungi-functions management that supports the creation of OCB culture in many companies. The government, through the relevant agencies, in this case, the Palopo City Agriculture, Livestock and Plantation Office, should pay more attention to the assistance program for livestock agricultural facilities and facilities by improving the optimal fencing system to get good results in terms of providing economic improvement impacts.

***Authors' Contributions*:** BH: Conceptualization of ideas, data collection, formal analysis, writing, review, and editing preparation; WW and AS: Conceptualization of ideas, advisers**,** supervisors of data collection and analysis as well as reviewed the manuscript: S, MR, MYQ: Advisers, supervisors of the process of gathering information and examining the written document was conducted.

***Conflict of interest*:** The authors declare no conflict of interest.

***Acknowledgment*:** We are thankful to all my promotors WW and AS.

***Funding*:** N/A

Ethical statement: This article does not contain any studies regarding human or

Animal.

***Availability of data and material*:** We declare that the submitted manuscript is our work, which has not been published before and is not currently being considered for publication elsewhere.

***Code availability*:** Not applicable.

Consent to participate: All authors participated in this research study.

***Consent for publication*:** All authors submitted consent to publish this research.

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REFERENCES

Abdullah, S. and R. Nazry. 2015. Analisis Varian Anggaran Pemerintah Daerah : Penjelasan Empiris dari Perspektif Keagenan. Jurnal Samudra Ekonomi Dan Bisnis 6:272-283.

Agung, A.A.P. and A. Yuesti. 2013. Metode Penelitian Bisnis Kuantitatif Dan Kualitatif (I Nengah Suardhika (ed.); 1st ed.). CV. Noah Aletheia.

Anas and Azwar. 2019. Sistem Pendukung Keputusan Seleksi Penerimaan Bantuan Ternak Sapi Menggunakan Metode Profile Matching Pada Desa Buntulia Utara Kabupaten Pohuwato. Teknosains: Media Informasi Sains Dan Teknologi 13:33-44.

Awang, Z., A. Afthanorhan and M.A.M. Asri. 2015. Parametric and Non Parametric Approach in Structural Equation Modeling (SEM): The Application of Bootstrapping. Modern Applied Science 9:58-67.

Bonokwane, L.P. and O.O. Ololade. 2022. Socio-economic factors affecting smallholder farmers' willingness to adopt biodigester technology in South Africa. Journal of Energy in Southern Africa 33:10-20.

Budhiasa, S. 2016. Analisis Statistik Multivariate Dengan Aplikasi SEM PLS SMARTPLS 3.2.6. In Udayana University Press.

Citra Irawan, N., I. Irham, J.H. Mulyo and A. Suryantini 2023. Unleashing the Power of Digital Farming: Local Young Farmers' Perspectives on Sustainable Value Creation. AGRARIS: Journal of Agribusiness and Rural Development Research 9:316-333.

Fajri, M. 2020. Analisis Kebijakan Pembiayaan Sektor Pertanian.

Farisi, S., M.A. Prayogi and E. Juliana. 2021. The Influence Of Work Motivation And Work Environment On Organizational Citizenship Behavior With Job Satisfaction As An Intervening Variable At The Youth And Sports Office Of North Sumatra Province. International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration 1:257-268.

Gay, L.R., G.E. Mills and P. Airasian. 2012. EDUCATIONAL RESEARCH Competencies for Analysis and Applications (J. W. Johnston (ed.); 10th ed.). Pearson Education, Inc.

Harahap, B., W. Widodo, M. Risal and L. Zalizar. 2023. Factors Affecting The Economic Impact of Livestock Assistance in Palopo City , Indonesia. BIO Web of Conferences 04004:1-9.

Knickel, K., G. Brunori, S. Rand and J. Proost. 2009. Towards a Better Conceptual Framework for Innovation Processes in Agriculture and Rural Development: From Linear Models to Systemic Approaches. The Journal of Agricultural Education and Extension 15:131-146.

Ladebo, O.J., B.Z. Abubakar, C.O. Adamu and U. Danfodiyo. 2011. Nigerian agriculture workers outcomes from perceived organisational support and protestant work ethics : Job satisfaction as a mediator 1-8.

Lamm, K.W., L.R. Sapp and A.J. Lamm. 2018. A Longitudinal Evaluation of Change Leadership within a Leadership Development Program Context. Journal of Leadership Education 17:121-134.

Lamm, K.W., L.R. Sapp, A.J. Lamm and N. Randall. 2021. Exploring Relationships Between Goal Orientation and Conflict Management Capacity Development in Agricultural Leadership Development Program Participants. Journal of Agricultural Education 62:1-12.

Mansyah, N. 2013. Studi Tentang Dampak Pertambangan Batu Bara Bagi Kehidupan Sosial Ekonomi Masyarakat Di Kelurahan Jawa Kecamatan Sangasanga. Administrasi Negara 1:843-857.

Ningsih, N.K.S. and D.S. dan. 2018. Peran Penyuluh Pertanian Dalam Pemberdayaan Kelompok Tani (Studi Kasus Kelompok Tani Subur Di Desa Karang Agung Kabupaten Bulungan). Jurnal Borneo Humaniora 1:1-6.

Nurjanah, S., V. Pebianti and A.W. Handaru. 2020. The influence of transformational leadership, job satisfaction, and organizational commitments on Organizational Citizenship Behavior (OCB) in the inspectorate general of the Ministry of Education and Culture. Cogent Business and Management 7.

Oliveira Junior, O. de P. and A.E. Wander. 2022. Agricultural cooperative system: management challenges and feasible solutions. Revista de Administração Da UFSM 15:411-433.

Owen, L., W. Howard and M. Waldron. 2000. Conflicts over farming practices in Canada: The role of interactive conflict resolution approaches. Journal of Rural Studies 16:475-483.

Paillé, P., O. Boiral and Y. Chen. 2013. Linking environmental management practices and organizational citizenship behaviour for the environment: A social exchange perspective. International Journal of Human Resource Management 24:3552-3575.

Ramjattan, J., A. Chowdhury and W. Ganpat. 2020. Agricultural extension agents' use of learning-based extension methods in Trinidad and Tobago. Journal of Learning for Developmen 7:142-160.

Ruiu, M.L., S. Maurizi, S. Sassu, G. Seddaiu, O. Zuin, C. Blackmore and P.P. Roggero. 2017. Re-staging La Rasgioni: Lessons learned from transforming a traditional form of conflict resolution to engage stakeholders in agricultural water governance. Water (Switzerland) 9.

Rustamova, I., F. Galimova, N. Dekhkanova and M. Usmanova. 2021. Model development for the selection of the optimal form of information and consulting service in the agricultural sector of Uzbekistan. E3S Web of Conferences 284.

Saputri, R.D., S. Anantanyu and A. Wjianto. 2016. Perkembangan Kelompok Tani Di Kabupaten Sukoharjo. Jurnal Agrista 4:341-352.

Setiaman, S. 2020. Analisa parsial model persamaan struktural dengan software SMART-PLS Versi 3. Tutorial 1-95.

Sitepu, B. 2016. Analisis Anggaran Pemerintah (APBN dan APBN-P) dalam Perspektif Demokrasi Multipartai dan Koalisi Government Budget Analysis in Perspective Democracy Multiparty and Coalition. Jurnal Ekonomi Dan Pembangunan Indonesia 17:28-43.

Solomon, E.A.C. and F.K. Igweh. 2023. Social Intelligence and Organizational Citizenship Behavior of Selected Oil

and Gas Firms in the South-South, Nigeria. Nigerian Academy of Management, 18:122-138.

Sunartomo, A.F. 2016. Agricultural Extension Capacity In Efforts To Increase Agricultural Productivity In East Java. Jurnal Sosial Ekonomi Dan Kebijakan Pertanian 5:126-136.

Usadolo, S.E. 2020. The Influence of Participative Leadership on Agricultural Extension Officers' Engagement. SAGE Open 10.

Wahyuni, E.S., M. Firdaus and L.M. Baga. 2018. Strategi Alokasi Anggaran Sektor Pertanian Untuk Mempercepat Pembangunan Daerah Di Kabupaten Pandeglang Provinsi Banten. Jurnal Manajemen Pembangunan Daerah 10:14-23.

Wiyanto, T., M. Samani and S. Sugiyono. 201. The developing teaching practice model as an effort to improve the quality of mechanical engineering vocational school teachers. Jurnal Pendidikan Vokasi 7:349.