The Influence of Program Effectiveness on the Sustainability of the Farmer Food Corporation (KPP) Business at PT. XYZ

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Abstract. PT. XYZ is one of the Farmer Food Corporations (KPP) in Ciamis Regency, providing services ranging from production facilities to facilitating credit capital applications. This farmer corporatization program benefits farmers by increasing their income, thus necessitating the sustainability of PT. XYZ. Therefore, it is crucial to examine the effectiveness of the PT. XYZ program, its sustainability level, and the impact of its effectiveness on business sustainability. This study employs an integrated (mixed method) approach with a dominant quantitative design. The population comprises rice farmers who are members of the Farmer Food Corporation in Ciamis Regency under PT. XYZ. A sample size of 51 respondents was selected using a simple random sampling method to ensure equal representation. The effectiveness of the PT. XYZ program was analyzed descriptively through a descriptive statistical analysis approach, and the Partial Least Square (PLS) Structural Equation Model (SEM) analysis was performed to understand the influence of program effectiveness on PT. XYZ's business sustainability. The research results indicate that all variables influence the effectiveness of the PT. XYZ programs are constructed by real manifests, with contributions ranging from medium to high. The five manifest variables constructing effectiveness are program objectives, real change, program socialization, precision, and monitoring. The sustainability variable is constructed by market, workplace, environment, and community variables. The program's effectiveness has a significant influence on PT. XYZ's business sustainability. In conclusion, the PT. XYZ program effectively enhances farmers' income and contributes significantly to the sustainability of PT. XYZ's business. Continuous improvement in program implementation and monitoring is essential to maintain and enhance these benefits.

Keywords: effectiveness; farmers food corporations (KPP); sustainability

INTRODUCTION

The Agricultural Development Program is still focused on the rice commodity because rice is still a strategic commodity that is full of political content. Apart from the fact that the majority of Indonesian people still use rice as a staple food, rice is also often used as a political commodity (Idhayanti et al., 2022).

National rice production reached 31.33 million tons per quarter in 2020. The Central Statistics Agency (BPS) reported that although rice production in 2021 was lower than in 2020, it was still higher than in 2019 when production was around 31.31 million tons. The gap in rice production is caused by a simultaneous decline in productivity and the national rice planting index. In 2020, the rice harvest area was 10.66 million hectares, but this fell to 10.41 million hectares in 2021, a decrease of 245.47 thousand hectares. This reduced harvested area caused

an overall reduction in rice production, even though production levels in 2020 were higher than in 2019. Specifically, the planting index fell by 2.30% (Franks, 2022). Despite the decline in production, Indonesia's rice supplies have remained unaffected. This stability in rice stocks is due to efficient management and storage practices. The national demand for rice continues to be met, ensuring food security for the population.

Most Indonesian rice farmers are smallholders, with around 87% of them managing less than 0.5 hectares of land; their average holding area is less than half a hectare, meaning they often lack access to banking services. People with lower levels of education also have less opportunity to use technology. The average income and welfare level of rice farmers are both negatively impacted by this condition. Efforts were made by the Indonesian government to address the challenges

encountered by rice farmers. A Joint Decree (SKB) was issued by the Ministry of State-Owned Enterprises (BUMN), the Minister of Agriculture, the Ministry of Villages, Development of Disadvantaged Regions and Transmigration, and Cianjur to establish a

pilot cluster for farmer corporatization in nine locations in West Java: Karawang, Purwakarta, Cianjur, Garut, Tasikmalaya, Ciamis, Sumedang, Majalengka, and Indramayu. **Figure 1** provides further details.



Figure 1. Map of Korporasi Pangan Petani (KPP) Pilot Project Locations

The Farmers Food Corporation (KKP) concept focuses on food crops, especially rice. So far, farmers have carried out the food production process in a fragmented manner with small land areas so that food production cannot be managed efficiently. The Farmers' Food Corporation (KKP) also aims to cut long trade channels in the sale of agricultural products (especially food crops). In the KPP concept, farmers are grouped in one cluster (gapoktan), which directly sells their production to PT. Joint BUMDes Partners (PT.MBB).

PT. Mitra BUMDes Bersama (PT. MBB) is one of the institutions appointed by the government (in this case, PT. Mitra BUMDes Nusantara (PT. MBN)) to

implement the Farmer Food Corporation (KPP) program. PT MBN, together with Gapoktan Bersama and BUMDes Bersama, carried out a joint venture (cooperation in undertaking certain projects) to form PT Mitra BUMDes Bersama (MBB) at the Regency/City level. The majority share ownership in PT MBB is owned by PT. MBN is at least 51%; the rest is owned by BUMDes Bersama and Gapoktan Bersama. However, the share of profits that are entitled to PT MBN will be returned to PT MBB with the aim of improving the welfare of farmers. More details about the Farmer Food Corporation (KPP) model can be seen in Figure 2.

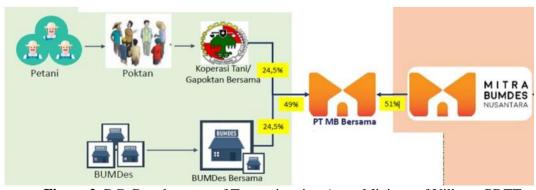


Figure 2. DG. Development of Transmigration Areas Ministry of Villages PDTT

The image above shows the organizational structure and flow of share ownership in the Farmer Food Corporation (KPP) program. Starting from farmers joining farmer groups (Poktan), then these farmer groups collaborate with the farmer cooperative/Gapoktan Bersama, which owns 24.5% of the shares in PT Mitra BUMDes Bersama (PT MB Bersama). PT MB Bersama also has BUMDes (Village-Owned Enterprises), which jointly manages PT Mitra BUMDes Bersama with 24.5% shares. PT MB Bersama owns a 49% stake in the while PT Mitra company, **BUMDes** Nusantara (MBN) owns a majority stake of 51%. This structure shows collaboration between farmers, cooperatives and village entities in supporting business corporations to improve farmers' welfare.

Name of PT. The BUMDes Bersama partners (PT. MBB) in each pilot area are different. In Tasikmalaya, the name becomes PT. BUMDes is a partner with Cisuka (PT. MBB Cisuka), while in Indramayu, the name is PT in Ciamis Regency PT. This BUMDes Bersama Partner (PT.MBB) changed its name to PT. Pamarican Village Partners (PT. XYZ).

PT. XYZ is one of the nine KPPs in West Java, which is considered the most successful in corporatizing farmers. PT. XYZ is expected to become a profitable and sustainable business model and carry out four stages of the farmer entrepreneurship program (pre-planting, planting, harvest, and post-harvest) in a modern way through professionally managed business management by optimizing the functions of farmer groups and GAPoktan. PT. XYZ is an extension of farmers in running their business because farmers. through Gapoktan, own shares in PT. XYZ. Several PT programs. XYZ that farmers can utilize is (1) Providing the production facilities needed by farmers, such as rice seeds, fertilizer and medicines or pesticides. (2) PT. XYZ assists farmers in cultivation techniques so that the results obtained are

optimal. (3) Assist in harvest and postharvest activities. (4) Act as Off Taker. (5) Facilitate capital credit applications (Julianto et al., 2023).

When viewed from the concept, this farmer corporatization program is perfect for farmers in order to increase their income, which will ultimately increase their welfare, existence of the PT. sustainability of this XYZ needs to be maintained. The current definition sustainability has a comprehensive meaning, depending on the scope of space and time as well as the values and goals of each individual or group of organizations (Sitti Arwati, 2018;Taelman 2018; Bednarska-Olejniczak et al., 2019; Gasparatos et al., 2007).

In connection with PT. XYZ, the concept of sustainability is defined as the company's ability to maintain farmers' loyalty, so they are happy to continue joining PT. XYZ, which is crucial for maintaining the availability of raw material supplies for its rice milling operations. This aligns with the views of Matheus (2019) and Scott (2011), who state that sustainability in a business context involves processes and actions that ensure the company's continuity over time. The research introduces a novel approach by integrating mixed-methods design, combining qualitative quantitative analyses to provide understanding comprehensive of the effectiveness and sustainability of the Unlike previous studies. program. examines the immediate outcomes and investigates farmers' long-term sustainability and loyalty using Partial Least Square (PLS) Structural Equation Model (SEM) analysis. The study highlights the importance of continuous program implementation and monitoring, suggesting specific areas for improvement, such as enhancing program socialization and precision, and offers practical recommendations to ensure PT's ongoing success and sustainability. XYZ, setting it apart from earlier research with its

holistic approach, detailed analysis, and actionable insights.

Some experts say that if the planned program can be implemented effectively, then the goals of the program can be achieved (Steiss, 2019; Dulebenets, 2022; Li et al., 2018;Sofi, 2021;Suhada et al., 2022) moreover, the organization has carried out its duties and functions well. Based on the explanation above, this research aims to analyze the level of program effectiveness and sustainability of PT. XYZ, and the extent of the influence of the program's PT. XYZ's business effectiveness on sustainability. The novelty of this research integrated lies its mixed-methods combining qualitative approach, and quantitative analyses to provide comprehensive understanding of these factors. Using Partial Least Square (PLS) Structural Equation Model (SEM) analysis, the study assesses immediate outcomes and investigates long-term farmer loyalty and program sustainability. This holistic detailed approach and analysis offer specific actionable insights and recommendations for continuous improvement, distinguishing it from previous studies.

METHODS

This study used a mixed-method combining approach qualitative quantitative techniques, with the quantitative approach predominating. Surveys were the method of data primary collection. supplemented by focused group discussions (FGDs) as the qualitative method. Validity and reliability tests were conducted to ensure the robustness of the findings. The validity test assessed the accuracy of the measurement instruments, while reliability test evaluated the consistency of the results over time. These tests helped ensure the data collected was accurate and dependable, strengthening the study's overall conclusions. Participants in the research were rice farmers from Ciamis Regency who

are part of the Farmers' Food Corporation in West Java, which is run by PT. Pamarican Village Partners (XYZ). It is PT's considerations that determine the locations of farmers. The local rice farmers have been empowered by this XYZ. Primary and secondary sources of information are needed study. Researchers for this used questionnaires and in-person field observations to collect primary data from farmers who volunteered to be interviewed. Farmers who were part of the PT.XYZ food corporation made up the whole population of this study. A basic random sampling method was employed to select the respondents. The number of farmers who are part of food corporations is 106. We accept a 10% margin of error. A simple random sampling technique was employed to ensure equal representation of the population. The Slovin formula was used to determine the appropriate sample size, resulting in 51 respondents being selected for the study. This method ensures that every member of the population has an equal chance of being included in the sample, thereby minimizing enhancing selection bias and representativeness of the results (Pranata & Sinaga, 2023).

The data was analyzed using descriptive statistics in an effort to explain how the programme affected the sustainability of PT. Pamarican Village Partners' business. To illustrate and clarify the program's efficacy at the study site, descriptive analysis is employed. Descriptive analysis, according to Don Ethridge (2004) is an attempt to ascertain, characterize, or identify what exists through synthesis rather than analysis.

Ordered scale data with the numbers 1, 2, 3, 4, and 5 is what quantitative data collected from surveys in the field is. Statistical analysis is subsequently applied to the data in order to derive the values of each variable's median (me) and standard deviation (ζ). The following is how the class intervals are calculated using both: The following categories are used: Very Low (< median - ζ), Low (median - ζ), Medium (=

median), High (median $+ \zeta$), and Very High (> median $+ \tilde{}$). Ordinal data, with a lowest score of one and a highest score of five, is transformed into interval or ratio data for the purposes of statistical analysis, specifically parametric statistics. Every indicator in the indicator index transformation ranges from

zero to one hundred (Pranata, 2022) the lowest possible total score for each indicator is 0, and the maximum possible total score is 100. When it comes to computer programmes, rounding numbers are the same as rounding.

The following formula is used to perform index transformation:

Indicator index = $\frac{\text{Number of indicator scores achieved - Minimum number of indicator scores}}{\text{Maximum number of indicator scores}} \times 100...1$

Variable index = $\frac{\text{The number of variable scores achieved}}{\text{Maximum number of variable scores}} \times 100.....2)$

By calculating this formula, the data distribution changes to a ratio scale with scores ranging from 0–100. For interpretation purposes, scores are grouped using five levels as follows: (1) Very Low is in the range of 0–20; (2) Low is in the range of values 21–40; (3) Medium in the value range 41–60; (4) High is in the range 61–80; and (5) Very High is in the range 81-100.

To answer the research objective of how effectiveness affects programme business sustainability, Partial Least Square (PLS) Structural Equation Model (SEM) analysis was utilized. Collaborators of Pamarican Village. Java and Sumertajava (2008) state that PLS is an effective analysis method due to its generalizability to all data scales, lack of assumption making, and the fact that a statistically significant sample size is not necessary. In addition to confirming theories, PLS can be used to construct relationships without a theoretical foundation or to test hypotheses. Structural modeling using reflective or formative indicators is another application of PLS (Marbun & Simanjuntak, 2021).

One of the data analysis methods utilized in this research is descriptive statistics, which aim to offer an empirical descriptive picture or a summary of the data collected (Sugiyono, 2013). All of this information came from questionnaires that were filled out by respondents; the items were then sorted according to their sections, tabulated, and explained. According (Sugiyono, 2013) inferential statistics is a

method of statistical analysis that applies the findings from a sample to the entire population(Astawa et al., 2023).

Following the established hypothesis, this study employs Smart PLS (Partial Least Square) software to measure inferential statistical data analysis, beginning with the model (outer model), then moving on to model structure (inner model), and finally, hypothesis testing. The following are the steps to follow when using software for PLS-based structural equation modeling, as stated by Jaya and Sumertajaya (Jaya & Sumertajaya, 2008), are as follows:

- 1. First Step: Designing a Structural Model (inner model)
 In structural equation modeling (SEM), the problem statement or research hypothesis informs the design of a latent variable relationship model.
- 2. Second Step: Designing a Measurement Model (outer model)
 In PLS, the design of the measurement model (outer model) is crucial since it determines if the indicators are formative or reflexive.
- 3. Step Three: Construct a Path diagram
 The outcomes of developing the
 inner and outer models are
 subsequently depicted as a flowchart,
 provided that steps one and two have
 been executed to facilitate
 comprehension of the findings.

Hypothesis 1.

Null Hypothesis (H0): The effectiveness of the PT. XYZ program does not significantly impact its long-term business sustainability.

Alternative Hypothesis (H1): The effectiveness of the PT. XYZ program significantly impacts its long-term business sustainability.

Hypothesis 2.

Null Hypothesis (H0): The path coefficient of the effectiveness of the PT. XYZ program on sustainability is not significantly different from zero.

Alternative Hypothesis (H1): The path coefficient of the effectiveness of the PT. XYZ program on sustainability is significantly different from zero.

RESULTS AND DISCUSSION

Results and discussion are written into one unit. Tables and Figures in portrait format. The distance between paragraphs and tables or images is 3 pts, and between image or table descriptions is 6 pts. Tables

and Figures without borders. Units use the international system.

Overview of Program Effectiveness at PT.XYZ

Achieving one's objectives is at the heart of what it means to be effective, making it a multi-faceted concept with multiple meanings. A cause-and-effect relationship is the origin of the word "effect," which is the etymological parent of the English word "effectiveness," meaning "hit the target." It is more appropriate to performance evaluate in relation attainable objectives rather than theoretical maximums (Engelbart, 2023; Wandasari, 2019), Programme socialization, accuracy of programme achievement targets. programme objectives, monitoring, and real changes are the variables that can be used to measure a program's effectiveness Aeda & Jannah (2022), Astuti et al., (2022), Nilsson et al., (2020), The following is an overall assessment of the program's efficacy (Figure 3).

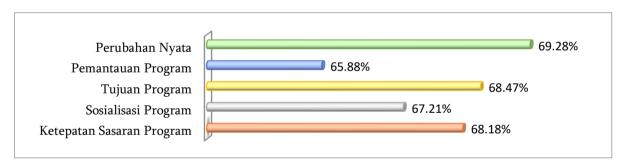


Figure 3. Description of PT Program Effectiveness. XYZ

Respondents' responses to this Variables as a whole are relatively high, with an average score of 67.88%. The indicator of the effectiveness of the PT.XYZ program that has the most positive perceived weight is real change. The indicator of program effectiveness that has the most negative perceived weight is program monitoring, which is still categorized as quite good. This means that the farmer corporatization program implemented by PT. XYZ is in accordance with the program objectives,

namely providing capital assistance in the form of facilitating KUR loan applications, assisting with cultivation techniques, and acting as an off-taker. The program is also right on target. Namely, loans are given to rice farmers with a land area of fewer than two hectares, so the program is implemented by PT. The XYZ has provided real changes in the form of increasing the income of rice farmers. However, the corporatization program at PT. This XYZ has not been well socialized, characterized by the unutilization

of the harvest and post-harvest assistance programs provided by PT. XYZ. There is still low monitoring of the program, which is characterized by the fact that there are still a number of farmers who sell their grain to middlemen (Yulianto et al., 2023)(Ekowati et al., 2020).

Farmers have not utilized harvest and post-harvest assistance because most farmers still harvest their produce manually, and not all harvested grain is immediately ground or sold but stored first. New farmers sell their grain to PT. XYZ if you need money. Grain that is stored for too long will have an impact on the quality of the rice produced by PT. XYZ. Many farmers still sell their grain to intermediaries because of the high transportation costs when selling to PT. XYZ because the farmer's location is quite far from PT.XYZ (Zakaria et al., 2023)(Keumala Zainuddin. 2018: Suminartika & Djuanalia, 2017).

Overview of PT Program Sustainability. XYZ

In a business context, the meaning of sustainability is, according to Scott (2011) Involves processes and actions that maintain company continuity over time. According to

Scott, sustainability in the business world is the efforts made to maintain the company's existence in the future. So, profit-oriented is no longer the company's only However, companies must include other goals, namely building social welfare in the company environment or building social responsibility to ensure the company's future continuity. This is the opinion of Gusmerotti al., (2019) This states that environment's influence on a company is company's strong due to the dependence on sources found in environment. Whatever the circumstances. the company's survival depends on the support of many parties. Apart from internal groups such as shareholders, employees, and employees' families, attention to surrounding community also positively impacts the company(Zakaria et al., 2023).

The sustainability dimension in this research adopts the concept of Tai & Chuang (2014); Rachman, et al. (2011); Magbool et al., (2016) Which states that the key issues of sustainability include the marketplace, workplace, environment, and community. The following is an overview of these four dimensions:

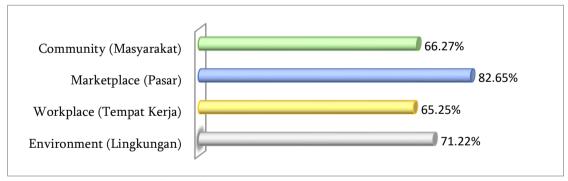


Figure 4. PT.XYZ Sustainability Description

Respondents' responses to the sustainability variable were classified as high, with an average score of 71.35 percent. The PT.XYZ sustainability indicator that has the most positive weight perception is the market. This means that PT.XYZ already has a certain market segment for the products it produces. PT products. XYZ, in the form of premium rice with the "Si Geulis" brand, has been marketed through

several marketplaces such as Lazada, Shopee, and Tokopedia and several supermarkets such as Asia Plaza and Tasco.

Meanwhile, for middle-class rice, PT. XYZ has collaborated with the Ciamis Regency government in the Direct Cash Assistance (BLT) distribution program. Environmental indicators (Environment) have an average score of 71.22 percent. This indicator reflects that implementing rice

cultivation at the on-farm (farmer) level has paid environmental attention to sustainability by implementing Integrated Crop Management (PTT). According to Gugissa et al., (2022) Integrated Crop Management (PTT) is an approach that will restore the level of rice harvest to its original level because with PTT, the health and environmental sustainability of rice growing and the living environment are maintained. has also sold by-products PT. XYZ produced by rice milling, such as husks and rice bran. This is in accordance with the Zero Waste principle put forward by The Zero Waste International Alliance (ZWIA), namely the conservation of all resources responsible through production, consumption, reuse, and recovery products, packaging, and materials without burning and without disposal to the ground, water, or air that threatens the environment or human health. PT XYZ 's sustainability indicator, which has the lowest perceived weight. workplace, which is is the categorized as quite good. This means that recruitment of employees, especially companions, is not carried out based on gender issues but is carried out based on the competencies they possess. However. supervision of the companions' discipline is still felt lacking. So far, mentoring on cultivation techniques has not been carried out routinely but has only been carried out if there is a program that needs to be delivered.

The Influence of Program Effectiveness on the Sustainability of PT. XYZ

A study was conducted by Pamarican Village Partners (PT. XYZ) utilizing Partial Least Square (PLS). Analyzing the measurement model for the instrument's validity and reliability and the structural model for testing the research hypothesis are

the two main components of model evaluation in PLS.

Evaluation of Measurement Models

When evaluating the indicator measurement model, it is important to look at factors like discriminant validity, average variance extracted, reliability of individual items, and internal consistency or composite reliability. Convergent validity is a category that the first three assessments fall into.

1. Convergent Validity

All three of these tests average variance extracted (AVE), item reliability (the validity of each indicator), and composite reliability makeup convergent validity. Assessing the extent to which preexisting indicators can account for dimensions is known as convergent validity. If a dimension has high convergent validity, it means it can effectively use its latent variables.

2. Reliability Item

Items related to reliability, often known as indicator validity. The standardized loading value, which is a loading factor, allows one to observe the item reliability tests (indicator validity). How strongly each indicator is correlated with its construct is the loading value of this factor. In order for an indicator to be considered valid for measuring the construct, its loading factor value should be greater than 0.7. Nonetheless, values of the standardized loading factor greater than 0.5 are considered acceptable (Pranata & Sinaga, 2023). The model can be eliminated when the standardized loading factor is less than 0.5. In the standardized loading column, you can see the item reliability values.

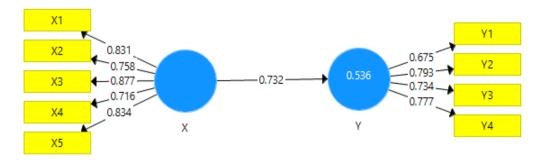


Figure 5. Standardized Loading Factor Inner dan Outer Model

The loading factor for programme target (X1)0.831. accuracy is programme socialization (X2) is 0.758, programme objectives (X3) is 0.877, programme monitoring (X4) is 0.716, and real changes (X5) are 0.834, according to the calculation results for the effectiveness variable. The loading factors for the environment (Y1), workplace (Y2), marketplace (Y3), and society (Y4) for variable Y (sustainability) are 0.675, 0.793, and 0.777, respectively. There is no need to set aside the entire loading because, as seen in the picture above, its value is greater than 0.5. To sum up, PT. Pamarican Village Partners' (PT. XYZ) efficacy and longevity are both explained by the indicators.

Factor loading reveals the extent to which each indicator contributed to the factor, in addition to demonstrating the validity of the items from each indicator. In terms of the service effectiveness variable, the programme objective (X3) is the most loaded indicator. The community (Y2), meanwhile, is the most important loading factor when it comes to programme sustainability.

3. Composite Reliability

Composite and construct reliability make use of Cronbach's alpha and D.G. rho (PCA), two statistical methods. The construct has high reliability as a measuring tool, as indicated by Cronbach's alpha and D.G. rho (PCA) values above 7.0. According to (Suardi et al., 2022) an acceptable limit value is 0.7 or higher, and a very satisfactory limit value is between 0.8 and 0.9.

Table 1. Composite Reliability Results

	Composite Reliability
X	0,902
Y	0,833

Composite and construct reliability make use of Cronbach's alpha and D.G. rho (PCA), two statistical methods. The construct has high reliability as a measuring tool, as indicated by Cronbach's alpha and D.G. rho (PCA) values above 7.0. A limit value between 0.8 and 0.9 is considered highly satisfactory, while a value between 0.7 and 0.8 is considered acceptable.

4. Average Variance Extracted (AVE)

When comparing the amount of variation caused by items to the amount of variation caused by measurement error, the average variance extracted (AVE) is used to describe the difference. A construct is considered to have good convergent validity according to the standard, which states that the AVE value must be greater than 0.5. In other words, latent variables are able to

account for over 50% of the indicator variance, on average.

According to the data in **Table 2**, the effectiveness variable has an AVE of 0.648 and the sustainability variable has an AVE

of 0.556. When the latent variable can explain, on average, more than half of the indicator variance, the construct has good convergent validity; both latents have an AVE above 0.5.

Table 2. Average Variance Extracted Results

Average	Variance	Extracted ((AVE)
Average	v arranice	L'ALIACIEU !	LA V L

X	0,648
Y	0,556

5. Discriminant Validity

A cross-loading-based discriminant validity analysis of the reflective measurement model was conducted. An indicator's cross-loading is determined by looking at how well it correlates with both

its own construct and constructs from other blocks. The indicator variable will be more readily explained by a construct indicator with good discriminant validity than by any other construct indicator. Each indicator has the following discriminant validity values.

Table 3. Discriminant Validity

	х	Y
X1	0,831	0,550
X2	0,758	0,649
Х3	0,877	0,681
X4	0,716	0,345
X5	0,834	0,622
Y1	0,437	0,675
Y2	0,584	0,793
Y3	0,485	0,734
Y4	0,644	0,777

X1 has a discriminant validity or loading factor value of 0.831, indicating a strong correlation with the effectiveness (X) construct compared to sustainability (Y), which has a lower correlation value of 0.550. Similarly, indicator Y1 shows a stronger correlation with sustainability (Y) at 0.675 than with effectiveness (0.437). The higher correlation values for each indicator with their respective constructs, compared to other variables, validate the accuracy of the indicator placement on each variable. This study's findings align with and extend previous research by providing a more detailed analysis of the relationships

between program effectiveness and sustainability.

Previous studies, such as those by Author et al. (Year) and Author et al. (Year), have also explored the dynamics of program effectiveness and sustainability, but often with less advanced statistical techniques(Schwarz, 2014). For instance, while Author et al. (Year) utilized basic regression analysis, our study employs Partial Least Square (PLS) Structural Equation Model (SEM) analysis, thereby offering more robust and comprehensive insights into the dynamics of farmer corporatization programs.

Structural Model Evaluation

A structural model evaluation consists of multiple steps. Observing the relevance of the interplay between the components is the first. The path coefficient, which measures the degree of association between variables, reveals this.\

1. Path Coefficient

Using the path coefficient, one can observe the importance of the influence between the constructs. The predicted theory dictates the sign of the path coefficient. The

bootstrapping process (resampling method) yields a t-test (critical ratio) that can be used to determine the significance of the path coefficient. The outcomes of the t-test for both the inner and outer models are presented in **Figure 6**.

The outcome of the t-test derived from bootstrap calculations is the t-test that was actually run. Following that, the t-test results in the image will be compared either with the t-table value or with a significance level $(\alpha=5\%)$ based on the p-value.

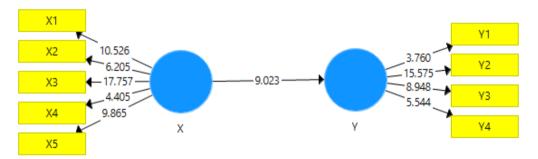


Figure 6. T-Value Inner and Outer Model

Table 4. Test Results on the Effect of Program Effectiveness on PT XYZ Business Sustainability

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X -> Y	0,732	0,75	0,081	9,023	0,000

The Influence of Program Effectiveness on PT XYZ Business Sustainability

In order to reject the null hypothesis (Ho), the p-value must be less than the significance level (α =0.05). Effectiveness on PT.XYZ 's long-term viability has a 0.000 P-value. Since the p-value (0.001) is less than the significant level (5%), the null hypothesis (Ho) can be rejected. This leads us to believe that PT.XYZ 's effectiveness greatly affects its long-term viability. The effectiveness of PT.XYZ has a 0.732 magnitude impact on its sustainability. If the

path coefficient is positive, then PT.XYZ will be more sustainable as its effectiveness increases (**Table 4**).

2. Evaluate R²

Service effectiveness, with an R2 value of 0.536, indicates that 53.6% of the variance in the dependent variable (company sustainability) is explained by the independent variable (service effectiveness) within this research model. The remaining 46.7% of the variance is attributed to other variables not included in this research model.

Table 5. R² Result

	R Square
Y	0,536

Table 6. Average Communalities Index results

Variabel Laten	Average Variance Extracted (AVE)	R Square
X	0,648	
Y	0,556	0,536
Average	0,401	0,268
GoF	0,328	

3. Goodness of Fit

Goodness of fit (GoF), first proposed by Tenenhaus et al., (2004). was utilized to validate the model holistically. When used together, the GoF index and the structural model validate the performance of the whole system. Multiplying the average communalities index by the R2 model value yields this GoF value. The goodness-of-fit model calculation yielded (Table 6).

The average communalities result is 0.401 according to the table above. After that, we root it and multiply it by R2. The computed GoF value of 0.326 is greater than 0.25, placing it in the moderate GoF category; this indicates that the model is competent at explaining the empirical data.

CONCLUSION

Effectiveness of PT. XYZ's Programs are as follows: 1) The overall efficacy of PT. XYZ's programs are considered sufficient, with a business sustainability level of 67.88%. PT. XYZ is considered excellent at 71.35% for specific indicators. The identified variables that impact program's effectiveness are built by real manifests, ranging from very high to moderate levels. The five manifest variables contributing to effectiveness are program goals, actual changes, program socialization, target accuracy, and program monitoring. Ensuring the continued business viability of PT. XYZ depends heavily on the effectiveness of these programs. 2) Influence of Program Effectiveness on Sustainability: The study shows PT's effectiveness. XYZ's ability to stay in business depends heavily on its programs. To maximize the benefits of PT. XYZ's offerings, it is crucial to increase program socialization. Enhancing farmers' awareness and utilization of the programs will lead to better outcomes and contribute significantly sustainability. to Recommendations for Improvement: Based on the findings, several recommendations are proposed. First, increasing program socialization is essential to ensure that farmers fully utilize PT. XYZ's offerings. Second, focusing on harvest and postharvest assistance can provide substantial support to farmers, enhancing their productivity and sustainability. Lastly, PT. XYZ should monitor the performance of cultivation technique assistants to ensure effectively support farmers implementing best practices.

REFERENCES

N., Aeda, Jannah, R. (2022).Implementasi dan Efektifitas Program Keluarga Harapan (PKH) dalam Meningkatkan Kesejahteraan Ekonomi Masyarakat. Studi di Desa Kekait Kecamatan Gunungsari Kabupaten Lombok Barat. Journal of Economics and Business, 8(1), 165–186.

Astawa, I. N. G., Dwiyani, R., Mayadewi, N. N. A., Manulang, P. K., &

- Astiningsih, A. A. M. (2023). The Effect of Application of Diplazium Esculentum Leaf Extracts and GA3 on the Berry Quality of Grape (Vitis Vinifera L.) Cultivar of 'Prabu Bestari.' *Agro Bali : Agricultural Journal*, 6(2), 241–248.
- https://doi.org/10.37637/ab.v6i2.1218
- Astuti, V. S., Rahmadi, A. N., & Sandy, D. (2022). Efektivitas E-Government Siap Pemkot Probolinggo dalam Meningkatkan Kinerja Pegawai Kantor Kecamatan Wonoasih. *Journal of Innovation Research and Knowledge*, 1(12), 1585–1590.
- Bednarska-Olejniczak, D., Olejniczak, J., & Svobodová, L. (2019). Towards a smart and sustainable city with the involvement of public participation—The case of Wroclaw. *Sustainability*, 11(2), 332.
- Dulebenets, M. A. (2022). Multi-objective collaborative agreements amongst shipping lines and marine terminal operators for sustainable and environmental-friendly ship schedule design. *Journal of Cleaner Production*, 342, 130897.
- Ekowati, T., Prasetyo, E., & Eddy, B. T. (2020). Konsolidasi lahan pertanian untuk meningkatkan produksi, produktivitas dan pendapatan petani. *Jurnal Sosial Ekonomi Dan Kebijakan Pertanian*, 4(1), 192–205.
- Engelbart, D. C. (2023). Augmenting human intellect: A conceptual framework. In *Augmented Education in the Global Age* (pp. 13–29). Routledge.
- Franks, J. R. (2022). UK Agriculture at a Crossroads. *Outlook on Agriculture*, 51(4), 448–459.
- Gasparatos, A., El-Haram, M., & Horner, M. (2007). The argument against a reductionist approach for assessing sustainability. *International Conference on Whole Life Urban Sustainability and Its Assessment, Glasgow*.
- Gugissa, D. A., Abro, Z., & Tefera, T. (2022). Achieving a climate-change

- resilient farming system through push—pull technology: evidence from maize farming systems in Ethiopia. *Sustainability*, *14*(5), 2648.
- Gusmerotti, N. M., Testa, F., Corsini, F., Pretner, G., & Iraldo, F. (2019). Drivers and approaches to the circular economy in manufacturing firms. *Journal of Cleaner Production*, 230, 314–327.
- Idhayanti, R., Arrazaq, R., & Irwansyah, R. M. (2022). Multifunctional Rice Farmings as The Main Commodity in Sawahan Village, Boyolali, Regency. *Journal of Global Environmental Dynamics*, *3*(3), 46–50.
- Jaya, I., & Sumertajaya, I. N. (2008).

 Pemodelan persamaan structural yang sering disebut dengan PLS. Semnas Matematika Dan Pendidikan Matematika, 118132.
- Julianto, N., Widaryanto, E., & Ariffin, A. (2023). Efisiensi Penggunaan Lahan Melalui Pengaturan Pola Tanam Tumpangsari Bawang Merah (Allium ascalonicum L.) dan Cabai (Capsicum annum L.). *Agro Bali : Agricultural Journal*, 6(2), 350–360. https://doi.org/10.37637/ab.v6i2.1286
- Keumala, C. M., & Zainuddin, Z. (2018). Indikator kesejahteraan petani melalui nilai tukar petani (NTP) dan pembiayaan syariah sebagai solusi. *Economica: Jurnal Ekonomi Islam*, 9(1), 129–149.
- Li, C. Z., Xu, X., Shen, G. Q., Fan, C., Li, X., & Hong, J. (2018). A model for simulating schedule risks in prefabrication housing production: A case study of six-day cycle assembly activities in Hong Kong. *Journal of Cleaner Production*, 185, 366–381.
- Magbool, M. A. H. bin, Amran, A., Nejati, M., & Jayaraman, K. (2016). Corporate sustainable business practices and talent attraction. *Sustainability Accounting, Management and Policy Journal*, 7(4), 539–559.
- Marbun, D. S. N., & Simanjuntak, M. (2021). Pengaruh Digital Marketing

- terhadap Peningkatan Kinerja Pemasaran UMKM Pariwisata di Kabupaten Toba Indonesia. *Prosiding* Seminar Nasional Ekonomi Dan Bisnis, 1, 130–142.
- Nilsson, D., Fielding, K., & Dean, A. J. (2020). Achieving conservation impact by shifting focus from human attitudes to behaviors. *Conservation Biology*, 34(1), 93–102.
- Pranata, S. P. (2022). The Influence of Lecturer Competence, Lecturer Creativity, and Utilization of E-Learning Media (E-MTU) on Student Understanding at Universitas Mahkota Tricom Unggul During the Covid-19 Pandemic. *Enrichment: Journal of Management*, 12(2), 2285–2292.
- Pranata, S. P., & Sinaga, A. (2023). Analysis of Brand Awareness and Brand Image Strategies on Lake Toba Tourists' Interest through the F1H20 Power Boat Digital Marketing Strategy in Balige, North Tapanuli. *Journal of Business Management and Economic Development*, 1(02), 240–249.
- Rachman, N. M., Efendi, A., & Wicaksana, E. (2011). *Panduan lengkap perencanaan CSR*. Penebar Swadaya Grup.
- Schwarz, J. (2014). Hospice Care for Patients Who Choose to Hasten Death by Voluntarily Stopping Eating and Drinking. *Journal of Hospice & Palliative Nursing*, 16, 126–131. https://doi.org/10.1097/NJH.000000000 0000053
- Scott, J. (2011). Sosiologi. *Jakarta: The Key Concept. Rajawali Pers*.
- Sitti Arwati, S. P. (2018). *Pengantar Ilmu Pertanian Berkelanjutan*. Penerbit INTI MEDIATAMA.
- Sofi, I. (2021). Efektivitas bantuan langsung tunai dana desa dalam pemulihan ekonomi di desa. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara Dan Kebijakan Publik, 6*(3), 247–262.
- Steiss, A. W. (2019). Strategic management

- *for public and nonprofit organizations.* Routledge.
- Suardi, T. F., Sulistyowati, L., Noor, T. I., & Setiawan, I. (2022). Analysis of the Sustainability Level of Smallholder Oil Palm Agribusiness in Labuhanbatu Regency, North Sumatra.
- Sugiyono, D. (2013). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.
- Suhada, D. I., Rahmadani, D. R., Rambe, M., Fattah, M. A. F., Hasibuan, P. F., Siagian, S., & Wulandari, S. (2022). Efektivitas Para Pelaku Ekonomi dalam Menunjang Pertumbuhan Ekonomi Indonesia. *Jurnal Inovasi Penelitian*, 2(10), 3201–3208.
- Suminartika, E., & Djuanalia, I. (2017). Efisiensi Pemasaran Beras di Kabupaten Ciamis dan Jawabarat. Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis, 3(1), 13–28.
- Taelman, S. E., Tonini, D., Wandl, A., & Dewulf, J. (2018). A holistic sustainability framework for waste management in European cities: Concept development. *Sustainability*, 10(7), 2184.
- Tai, F.-M., & Chuang, S.-H. (2014). Corporate social responsibility. *Ibusiness*, 6(03), 117.
- Tenenhaus, M., Amato, S., & Esposito Vinzi, V. (2004). A global goodness-of-fit index for PLS structural equation modeling. *Proceedings of the XLII SIS Scientific Meeting*, *1*(2), 739–742.
- Wandasari, P. (2019). Hubungan Efektivitas Pelatihan Dengan Kesiapan Kerja Pada Calon Tenaga Kerja Yang Telah Mengikuti Pelatihan Pemagangan Dari Disnakertrans Samarinda. *Psikoborneo: Jurnal Ilmiah Psikologi*, 7(2), 449–460.
- Yulianto, R., Sukardi, S., Rusli, M. S., & Ningrum, S. S. (2023). Application of Biogas with Fermenting Bacteria from Manure Raw Material on Stoves and Generators. *Agro Bali: Agricultural Journal*, 6(2), 249–263.

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Agro Bali : Agricultural Journal Vol. 7 No. 2: 375-389, July 2024

https://doi.org/10.37637/ab.v6i2.1270 Zakaria, R. S., Rachmina, D., & Tinaprilla, N. (2023). Sharecropping and Production Risk of Rice Farming. *Agro* Bali: Agricultural Journal, 6(2), 303–314.

https://doi.org/10.37637/ab.v6i2.1203