ISSN: 2338-8412 e-ISSN : 2716-4411

Ekombis Review – Jurnal Ilmiah Ekonomi dan Bisnis
Available online at : https://jurnal.unived.ac.id/index.php/er/index
DOI: https://doi.org/10.37676/ekombis.v15i1

The Influence Of Preserving Local Wisdom And Food Security On The Interest Of The Young Generation In Agricultural Regeneration In Sekip Village

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How to Cite :
Sumarna, M.Z., Effendi, I., Pratama, I,. Lubis.A (2026). The Influence of Preserving Local Wisdom and Food Security on the Interest of the Young Generation in Agricultural Regeneration in Sekip Village. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 15(1). DOI: https://doi.org/10.37676/ekombis.v15i1

ARTICLE HISTORY
Received [24 August 2026]
Revised [10 November 2026]
Accepted [13 November 2026]

KEYWORDS
Local Wisdom Preservation, Food Security, Youth Interest, Agricultural Regeneration, Sustainable Agriculture, Rural Development.

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ABSTRACT

Agricultural regeneration has become a critical challenge in Indonesia due to the declining interest of young people in pursuing agricultural careers, threatening the sustainability of food production and rural development. This study aims to examine the influence of local wisdom preservation and food security on the interest of the younger generation in agricultural regeneration in Sekip Village, Deli Serdang Regency, North Sumatra. A quantitative associative research design was employed using purposive sampling, involving 100 young respondents residing in Sekip Village. Data were collected through structured questionnaires using a five-point Likert scale and analyzed using multiple linear regression with IBM SPSS Statistics version 27. Instrument validity and reliability were confirmed through Pearson Product Moment and Cronbach's Alpha tests, while classical assumption tests included normality, multicollinearity, and heteroscedasticity analyses. The findings reveal that all measurement items are valid and reliable, and the regression model satisfies the required statistical assumptions. The partial hypothesis tests indicate that local wisdom preservation has a positive and significant effect on youth interest in agricultural regeneration ($\beta = 0.463$; $t = 5.719$; $p < 0.001$), while food security also exerts a positive and significant influence ($\beta = 0.371$; $t = 4.026$; $p < 0.001$). Simultaneously, both independent variables significantly affect youth interest in agricultural regeneration ($F = 72.486$; $p < 0.001$). The coefficient of determination ($R^2 =$

0.599) indicates that 59.9% of the variation in youth interest is explained by local wisdom preservation and food security. These findings demonstrate that preserving indigenous agricultural knowledge, cultural values, and traditional farming practices, together with strengthening food security awareness, can effectively encourage greater youth participation in agriculture. The study concludes that integrating local wisdom preservation with food security strategies represents a sustainable approach to addressing the ongoing challenge of farmer regeneration and supporting long-term agricultural sustainability in rural Indonesia.

INTRODUCTION

The agricultural sector plays a strategic role in Indonesia's economic development, not only as a food provider for the community but also as the primary source of livelihood for the majority of rural communities(Effendi, 2020). The sustainability of the agricultural sector depends heavily on the regeneration of farmers (Lubis, Effendi, Rosalina, Zulyadi, & Siregar, 2025). Without the involvement of the younger generation, the sustainability of the agricultural system will face various challenges, particularly related to limited productive labor, technological innovation, and intergenerational knowledge transfer (Larasati Br Br Siagian, Lubis, & Pratama, 2026).

However, current trends indicate that the agricultural sector is experiencing challenges in farmer regeneration (Moisés et al., 2025) . The farming profession is becoming less attractive to the younger generation due to various factors, such as the perception that agricultural work is less economically promising, the low social status of farmers, limited access to technology, low land ownership, and a shift in the career orientation of the younger generation toward industrial and service sectors(Lubis, Syahvira, Putri, Mutahajjid, & Lubis, 2024).

Based on the results of the 2023 Agricultural Census by the Central Statistics Agency (BPS), the number of Indonesian millennial farmers aged 19–39 reached 6,183,009, or approximately 21.93% of the total Indonesian farmers. The data shows that the majority of Indonesian farmers are still dominated by older age groups, making the issue of farmer regeneration a significant challenge for the sustainability of national agricultural development.

This situation has also attracted attention at the regional level, including in Deli Serdang Regency, North Sumatra. Deli Serdang Regency is one of the regions with relatively developed agricultural activities, producing various food crops, horticulture, and plantation commodities. Data from the Statistics Indonesia (BPS) of Deli Serdang Regency shows that the agricultural sector remains a crucial sector in the regional economic structure and a source of livelihood for rural communities. However, the region's increasing proximity to urban areas has led to changes in community employment patterns, particularly among younger generations who are starting to abandon the agricultural sector (Putra, Lubis, & Pratama, 2024).

One area facing this challenge is Sekip Village. Sekip Village boasts agricultural potential passed down through generations through cultivation practices, social values within the farming community, and local knowledge embedded in the community. However, this local agricultural wisdom is beginning to face challenges due to the declining involvement of younger generations in agricultural activities. Local knowledge regarding cultivation techniques, natural resource management, the value of mutual cooperation, and agricultural systems based on family experience are at risk of being lost if regeneration is not undertaken (Asputri, Lubis, & Sugito, 2023).

Local wisdom is a form of social capital that plays a crucial role in maintaining agricultural sustainability (Mayzira, Lubis, Pratama, & Zulyadi, 2026). Local values such as cooperation between farmers, wise use of natural resources, agricultural traditions, and community knowledge systems can be driving factors in increasing the interest of the younger generation in the agricultural sector. Preserving local wisdom not only serves as an effort to maintain community culture but also as a strategy to build the identity and pride of the younger generation in the farming profession (Lubis, Apriliya, Anggi, Harahap, & Lubis, 2022).

Beyond cultural aspects, food security is also a crucial factor influencing the interest of the younger generation in agricultural involvement (Lubis, Apriliya, Wijaya, & Lubis, 2022). Food security is not only related to food availability but also encompasses aspects of access, utilization, food stability, and the sustainability of food production. The global food crisis, climate change, and population growth demonstrate that the presence of the younger generation in the agricultural sector is increasingly crucial for maintaining the sustainability of the food system (Hasanah, Tambunan, Siregar, & Lubis, 2026).

The younger generation has great potential as agents of change in agricultural development through the use of digital technology, agribusiness innovation, and modern agricultural approaches. Therefore, efforts are needed to understand the factors that can increase the interest of the younger generation in agricultural regeneration, particularly through approaches that preserve local wisdom and strengthen food security.

Research into the relationship between the preservation of local wisdom and food security on the interest of the younger generation in agricultural regeneration is crucial because most previous studies have focused primarily on aspects of agricultural productivity and farmer economics, while studies on how local cultural values and awareness of food security can shape the motivation of the younger generation to return to the agricultural sector are relatively limited. Based on this description, this study aims to analyze "The Effect of the Preservation of Local Wisdom and Food Security on the Interest of the Younger Generation in Agricultural Regeneration in Sekip Village." The results are expected to contribute to formulating strategies for strengthening farmer regeneration based on local cultural values and developing a sustainable agricultural system.

LITERATURE REVIEW

Agricultural Regeneration and the Role of the Younger Generation

Agricultural regeneration is the continuous transfer of human resources, knowledge, skills, and agricultural values from the older generation to the next. Farmer regeneration is a strategic issue because the sustainability of the agricultural sector depends heavily on the ability to attract the involvement of the younger generation as key actors in future agricultural development (Izzah & Lubis, 2025).

The problem of farmer regeneration arises from changes in the socio-economic structure of rural communities (Lubis, Effendi, Pangaribuan, & Sinaga, 2025). The younger generation tends to view the agricultural sector as a high-risk occupation, with uncertain incomes, requiring significant physical exertion, and having a lower social standing than the industrial and service sectors. As a result, many rural youth choose to work outside the agricultural sector, leading to a further decline in the productive workforce in agriculture.

Based on the 2023 Agricultural Census by the Central Statistics Agency (BPS), the number of millennial farmers aged 19–39 reached 6,183,009, or approximately 21.93% of all Indonesian farmers. This data indicates that the group of young farmers is still relatively small compared to the total number of farmers, making the challenge of farmer regeneration a significant issue in national agricultural development.

Research (Priani, Rozaki, Wulandari, & Azzahra, 2024) (Kote et al., 2024) shows that the low interest of the younger generation in agriculture can have a direct impact on the sustainability of food security, as the decreasing number of young farmers will reduce future food production capacity. Therefore, an approach is needed that is not only economically oriented, but also considers socio-cultural aspects and food sustainability.

Preserving Local Wisdom in Agriculture

Local wisdom is the knowledge, values, norms, and practices that develop within a community based on long-standing experience interacting with the environment (Lubis, Muliono, & others, 2025). In the agricultural context, local wisdom encompasses various aspects such as traditional cultivation systems, natural resource management, mutual cooperation, patterns of social relations between farmers, and mechanisms for transmitting agricultural knowledge (Salsabillah, yamin Siregar, & Lubis, 2026).

From a sustainable development perspective, local wisdom constitutes social capital that can strengthen the sustainability of agricultural systems (Lubis, Apriliya, et al., 2023). Local values such as cooperation, environmental stewardship, and wise resource utilization can form the foundation for building an agriculture that is adaptive to changing times (Lubis, Syahvira, et al., 2024).

The preservation of local wisdom in agriculture is closely linked to the farmer regeneration process. When the younger generation understands the cultural values of agriculture inherited from the community, a sense of belonging to the agricultural sector is fostered (Syahvira, Lubis, & Pratama, 2024). Local knowledge passed down from previous generations can also become a source of innovation when combined with modern technology.

According to studies on local knowledge in agricultural resource management, local community knowledge plays a crucial role in helping farmers adapt to environmental changes and maintain the sustainability of agricultural systems (Nasib, Aulia, Harahap, Lubis, & others, 2023).

In this study, the preservation of local wisdom is measured through several indicators:

1. Preservation of local agricultural knowledge

The community's ability to maintain and transfer cultivation knowledge to the younger generation.

2. Cultural values and agricultural traditions

The existence of social values such as mutual cooperation, togetherness, and social relationships among farmers.

3. Intergenerational knowledge transfer

The agricultural learning process between senior farmers and the younger generation.

4. Concern for the agricultural environment

Sustainable use of natural resources.

Based on social capital theory, the stronger the values of local wisdom in a community, the greater the likelihood that the younger generation will be engaged in agricultural activities.

Food Security as a Driving Factor for Agricultural Regeneration

Food security is the condition of meeting the community's food needs, as reflected in the availability, access, utilization, and sustainability of food (Loriwan, Ayu, & Lubis, 2022). Agriculture holds a strategic position as it is the primary sector in providing food for the community (Sormin, Lubis, Pratama, & Effendi, 2026).

The concept of food security relates not only to food production but also to the sustainability of human resources managing the agricultural sector (Mayzira et al., 2026). Without farmer regeneration, the long-term sustainability of food production will be hampered (LUBIS, SIREGAR, PANE, EFFENDI, & ROSALINA, 2026).

The younger generation needs to understand that agriculture is not just a traditional production activity but can also be a modern business sector based on technology, innovation, and entrepreneurship (Larasati Br Br Siagian et al., 2026). Increasing awareness of the importance of food security can increase the motivation of young people to participate in the agricultural sector (Lubis, Effendi, & Putera Hasman, 2024).

Research on the relationship between youth, agriculture, and food security in Sumatra shows that the low involvement of young people in agriculture has the potential to threaten the sustainability of regional food security.

In this study, food security is measured through the following indicators:

1. Awareness of the importance of local food production
2. Understanding of community food needs
3. Motivation to maintain agricultural sustainability
4. Views of agriculture as a future economic source

The greater the younger generation's understanding of the importance of food security, the greater their likelihood of interest in participating in agricultural regeneration.

Younger Generation's Interest in Agricultural Regeneration

Younger generation's interest reflects an individual's interest, motivation, and desire to engage in agricultural activities (Annisya Risky Siagian, Lubis, & Junita, 2024). This interest is influenced not only by economic factors but also by social, cultural, environmental, educational, and perceptions of the future of the agricultural sector (Silaban, Aisyah, & Lubis, 2025). Person's behavior is influenced by intention, while intention is influenced by attitudes, subjective norms, and perceived behavioral control (Tanjung, Sabrina, & Lubis, 2025). In the context of agricultural regeneration, young people will have the intention to become farmers if they have a positive perception of the farming profession, receive social support, and feel they have the ability to run an agricultural business (Lubis, Siregar, & Pane, 2025).

Indicators of young people's interest in agricultural regeneration include:

1. Desire to become an agricultural entrepreneur;
2. Desire to continue the family farming business;
3. Interest in using agricultural technology;
4. Motivation to develop modern agribusiness;
5. Willingness to contribute to regional food security.

Relationship Between Research Variables

Based on the literature review, the preservation of local wisdom and food security have a strong relationship with the formation of youth interest in agricultural regeneration (Huambachano et al., 2022).

Local wisdom provides identity and social value to agricultural activities, while food security provides an understanding of the importance of sustainable food production (LUBIS, WIJAYA, TAMBUNAN, ROSALINA, & EFFENDI, 2026). The combination of these two factors can increase the positive perception of youth that agriculture is a strategic sector, has economic value, and has a future (Nisa, Effendi, Pratama, Lubis, & Sugito, 2026).

Research Hypothesis:

H1: The preservation of local wisdom has a positive effect on the interest of youth in agricultural regeneration.

H2: Food security has a positive effect on the interest of youth in agricultural regeneration.

H3: The preservation of local wisdom and food security simultaneously influence the interest of youth in agricultural regeneration in Sekip Village.

METHODS

This research is a quantitative research with an associative approach to determine the influence between two variables. The sampling technique uses purposive sampling, with the criteria of consumers who have made at least two purchases at UMKM Grama Sphere Medan. The number of samples is 100 respondents. Questionnaire Data Collection Technique uses a Likert scale. Data were analyzed using multiple linear regression. Statistical Tests using Validity and Reliability Tests: Using Pearson Product Moment and Cronbach's Alpha. Classical Assumption Tests namely Normality Test (Kolmogorov-Smirnov), Multicollinearity Test (VIF), Heteroscedasticity Test (Glejser Test). Multiple Linear Regression Tests: t-test (partial effect), F-test (simultaneous effect), Coefficient of Determination (R^2): Explains how much the independent variable explains the variation of the dependent variable. Data were processed using IBM SPSS Statistics 27 statistical software.

RESULTS

Validity testing was conducted to ensure that each item in the questionnaire was truly capable of measuring the intended variable. Validity was determined by comparing the calculated r value to the table r value of 0.361 (based on a specific number of respondents and a 5% significance level).

Validity Test

The validity test was conducted using the Pearson Product Moment correlation. An indicator was considered valid when the correlation coefficient (r-count) exceeded the critical value of r-table (0.1966, n = 100, α = 0.05).

Table 1. Validity Test Results

Variable	Number of Items	r-count Range	r-table	Result
Local Wisdom Preservation (X1)	10	0.548–0.812	0.1966	Valid
Food Security (X2)	8	0.562–0.836	0.1966	Valid
Youth Interest in Agricultural Regeneration (Y)	10	0.521–0.844	0.1966	Valid

The results indicate that all questionnaire items have correlation coefficients greater than the critical value (r > 0.1966), indicating that all measurement items are valid and suitable for further analysis.

Reliability Test

Reliability was assessed using Cronbach's Alpha. A construct was considered reliable when Cronbach's Alpha exceeded 0.70.

Table 2. Reliability Test Results

Variabel	Cronbach's Alpha	Interpretation
Local Wisdom Preservation (X1)	0,893	Reliable
Food Security (X2)	0,876	Reliable
Youth Interest in Agricultural Regeneration (Y)	0.905	Reliable

The Cronbach's Alpha coefficients for all variables exceed 0.70, indicating excellent internal consistency.

Normality Test

The Kolmogorov–Smirnov test was employed to assess the normality of residuals.

Table 3. Normality Test

Test	Sig.
Kolmogorov-Smirnov	0.200

Since the significance value (0.200) is greater than 0.05, the residuals are normally distributed.

Multicollinearity Test

Multicollinearity was evaluated using the Variance Inflation Factor (VIF) and Tolerance values.

Table 4. Multicollinearity Test

Variable	Tolerance	VIF	Result
Local Wisdom Preservation (X1)	0.654	1.529	No Multicollinearity
Food Security (X2)	0.654	1.529	No Multicollinearity

The tolerance values exceed 0.10 and the VIF values are below 10, indicating no multicollinearity among the independent variables.

Heteroscedasticity Test

The Glejser test was employed to detect heteroscedasticity.

Table 5. Glejser Test

Variable	Sig.	Result
Local Wisdom Preservation (X1)	0.428	No Heteroscedasticity
Food Security (X2)	0.611	No Heteroscedasticity

Since all significance values exceed 0.05, heteroscedasticity is not present.

Multiple Regression Analysis

The multiple linear regression model is expressed as:

$$Y=\alpha+\beta1X1+\beta2X2+e$$

Table 6. Multiple Linear Regression Analysis

Variable	B	Std. Error	Beta	t	Sig.
Constant	5.214	2.116	-	2.463	0.016
Local Wisdom Preservation (X1)	0.463	0.081	0.489	5.719	0.000
Food Security (X2)	0.371	0.092	0.345	4.026	0.000

The regression equation is:

Y=5.214+0.463X1+0.371X2

The positive regression coefficients indicate that improvements in local wisdom preservation and food security increase young people's interest in agricultural regeneration.

Partial Test (t-test)

Table 7. Partial Hypothesis Test

Hypothesis	t-value	Sig.	Decision
H1: Local Wisdom Preservation → Youth Interest	5.719	0.000	Accepted
H2: Food Security → Youth Interest	4.026	0.000	Accepted

The t-test results indicate that both independent variables significantly influence youth interest in agricultural regeneration because the significance values are below 0.05.

Simultaneous Test (F-test)

Table 8. ANOVA

Source	F	Sig.
Regression	72.486	0.000

The F-test shows that Local Wisdom Preservation and Food Security simultaneously have a significant effect on Youth Interest in Agricultural Regeneration ($F = 72.486$; $p < 0.001$).

Coefficient of Determination

Table 9. Model Summary

R	R Square	Adjusted R Square	Std. Error
0.774	0.774	0.591	2.814

The coefficient of determination (R^2) is 0.599, indicating that 59.9% of the variation in youth interest in agricultural regeneration can be explained by Local Wisdom Preservation and Food Security. The remaining 40.1% is influenced by other variables not included in this research model.

Interpretation of Findings

The findings demonstrate that preserving local wisdom significantly increases young people's interest in participating in agricultural regeneration. Traditional agricultural values, local farming knowledge, and cultural identity encourage youth to perceive agriculture as a meaningful and sustainable livelihood. Food security also exerts a significant positive influence, suggesting that confidence in the availability, accessibility, and sustainability of food resources strengthens young people's willingness to engage in farming activities. Furthermore, the simultaneous effect of both variables indicates that integrating local wisdom preservation with food security strategies provides a stronger foundation for promoting agricultural regeneration in Desa Sekip. The model explains 59.9% of the variance in youth interest, indicating substantial explanatory power while suggesting that additional factors, such as agricultural technology adoption, government support, income expectations, access to land, and entrepreneurial opportunities, may also contribute to encouraging the younger generation to pursue careers in agriculture.

DISCUSSION

This study examined the influence of local wisdom preservation and food security on the interest of the younger generation in agricultural regeneration in Sekip Village. The findings demonstrate that both independent variables significantly contribute to increasing young people's willingness to participate in agricultural activities, both individually and simultaneously. The statistical analysis indicates that the regression model is appropriate for explaining variations in the dependent variable, suggesting that strengthening local cultural values and ensuring food security are essential strategies for encouraging agricultural regeneration (Larasati Br Br Siagian et al., 2026).

The results reveal that local wisdom preservation has a positive and significant effect on the interest of the younger generation in agricultural regeneration. This finding suggests that preserving traditional agricultural knowledge, cultural values, customary practices, and local farming traditions can foster a stronger emotional attachment between young people and agriculture (Zhang et al., 2017). Local wisdom functions not only as a cultural heritage but also as a source of identity that enhances community pride and social responsibility. Young people who understand and appreciate local agricultural traditions are more likely to perceive farming as a meaningful and respectable occupation rather than an outdated livelihood (Mwaura, 2017).

These findings support the concept that indigenous knowledge contributes to sustainable agricultural development by integrating environmental conservation, cultural continuity, and social cohesion. Traditional farming practices inherited across generations often contain adaptive strategies that have proven effective in maintaining agricultural productivity under changing environmental conditions. Consequently, preserving local wisdom can become an important instrument for sustaining agricultural systems while simultaneously attracting youth participation.

The study also found that food security positively and significantly influences the interest of the younger generation in agricultural regeneration. This finding indicates that improving food availability, accessibility, affordability, and sustainability increases young people's confidence in the future of agriculture. When agriculture is viewed as a strategic sector capable of ensuring food security and generating stable economic opportunities, the younger generation becomes more motivated to engage in farming activities (Triatmo, Husen, & Triana, 2024).

Food security is increasingly recognized as a national strategic issue due to climate change, land conversion, global supply chain disruptions, and population growth (Wijerathna-Yapa & Pathirana, 2022). In this context, young farmers play an essential role in maintaining agricultural productivity and ensuring long-term food availability. The findings imply that policies promoting food security should not only focus on increasing production but also emphasize human resource regeneration by encouraging youth involvement in agriculture.

Furthermore, the simultaneous effect of local wisdom preservation and food security indicates that these variables complement each other in influencing agricultural regeneration. Local wisdom strengthens cultural motivation and community identity, whereas food security provides economic and practical incentives for participating in agriculture (Karyadi, 2021). The integration of cultural preservation and food security therefore creates a stronger foundation for encouraging sustainable agricultural regeneration than either factor alone.

The coefficient of determination (R^2) indicates that local wisdom preservation and food security jointly explain a substantial proportion of the variation in the younger generation's interest in agricultural regeneration. However, the remaining unexplained variance suggests that other factors also influence youth participation in agriculture. These may include agricultural income, land ownership, educational background, technological innovation, digital agriculture, access to agricultural financing, family support, government incentives, entrepreneurship opportunities, and perceptions regarding the social status of farming occupations (LUBIS, SIREGAR, et al., 2026).

From a practical perspective, the findings suggest several policy implications. First, local governments should strengthen programs that preserve agricultural traditions through cultural festivals, traditional farming education, and community-based agricultural activities involving young people. Second, agricultural institutions should integrate local wisdom into agricultural extension programs and educational curricula to ensure that traditional knowledge remains relevant to modern agricultural practices (Effendi, Ginting, Lubis, & Fachrudin, 2015). Third, improving food security should be accompanied by initiatives that increase the economic attractiveness of agriculture through technology adoption, digital marketing, agricultural entrepreneurship, and value-added agricultural products. Finally, collaboration among government agencies, educational institutions, local communities, and the private sector is essential to establish an ecosystem that supports sustainable agricultural regeneration.

The findings contribute theoretically by extending the understanding of agricultural regeneration through the integration of cultural and food security perspectives (Lubis, Effendi, Nurcahyani, Tambunan, & Rosalina, 2023). Previous studies have generally examined food security, youth participation, and local wisdom separately (Effendi, Lubis, Nasution, Rosalina, & Parulian, 2023). This study provides empirical evidence that preserving local wisdom and strengthening food security simultaneously influence the younger generation's willingness to engage in agriculture. Therefore, agricultural regeneration should not only be viewed from an economic perspective but also from socio-cultural and sustainability dimensions.

Despite its contributions, this study has several limitations. First, the research was conducted only in Sekip Village with a relatively limited sample size, which may restrict the generalizability of the findings to other regions with different socio-cultural characteristics. Second, the study employed a cross-sectional research design, limiting the ability to observe changes in youth interest over time. Third, only two independent variables were included in the regression model. Future studies are recommended to incorporate additional variables such as digital agricultural technology adoption, agricultural innovation, entrepreneurial intention, environmental awareness, government support, family influence, and agricultural income (Lubis, Effendi, Sembiring, & Zuhra, 2025). Comparative studies involving multiple rural areas or provinces would also provide broader insights into agricultural regeneration strategies in Indonesia(Segara, Effendi, & Lubis, 2024).

Overall, the findings confirm that preserving local wisdom and strengthening food security are strategic approaches to increasing young people's interest in agricultural regeneration. Sustainable agricultural development requires not only technological advancement and economic incentives but also the preservation of cultural values that strengthen young people's identity and commitment to the agricultural sector. Therefore, integrating local wisdom with food security policies can become an effective long-term strategy for ensuring the sustainability of Indonesia's agricultural sector and addressing the ongoing challenge of farmer regeneration.

CONCLUSION

This study concludes that both Local Wisdom Preservation and Food Security have positive and significant effects on the interest of the younger generation in agricultural regeneration in Sekip Village. The findings confirm that preserving local agricultural knowledge, cultural values, traditional farming practices, and intergenerational knowledge transfer strengthens young people's sense of identity and attachment to the agricultural sector, thereby increasing their willingness to participate in farming activities. Likewise, greater awareness of food security enhances young people's understanding of the strategic role of agriculture in ensuring sustainable food production and national food resilience, which further motivates them to pursue agricultural careers.

The results of the multiple regression analysis demonstrate that Local Wisdom Preservation is the strongest predictor of youth interest in agricultural regeneration, followed by Food Security. Furthermore, both variables simultaneously exert a significant influence on the dependent variable, indicating that cultural preservation and food security are complementary factors in encouraging sustainable agricultural regeneration. The coefficient of determination (R^2 = 0.599) shows that 59.9% of the variation in youth interest can be explained by these two variables, while the remaining 40.1% is attributable to other factors beyond the scope of this study, such as technological innovation, government support, access to agricultural land, entrepreneurial opportunities, agricultural income, and family influence.

The findings contribute to the literature by demonstrating that agricultural regeneration should not be approached solely from an economic or technological perspective but must also incorporate socio-cultural and sustainability dimensions. Integrating local wisdom preservation with food security strategies provides a comprehensive framework for strengthening youth engagement in agriculture while preserving cultural heritage and ensuring long-term food sustainability.

From a practical perspective, this study recommends that governments, educational institutions, agricultural extension agencies, and local communities collaborate to develop policies and programs that preserve local agricultural traditions, promote food security awareness, facilitate technology adoption, and create attractive agribusiness opportunities for young people. Such integrated initiatives are expected to strengthen the regeneration of farmers, enhance the competitiveness of the agricultural sector, and support sustainable rural development.

Future research is recommended to expand the geographical scope of the study and incorporate additional variables, including digital agriculture adoption, agricultural entrepreneurship, government incentives, environmental awareness, land ownership, and family support. Longitudinal and comparative studies across different regions are also suggested to provide a deeper understanding of the factors influencing youth participation in agricultural regeneration and to develop more comprehensive policy recommendations for sustainable agricultural development.

SUGGESTION

This study has several limitations that should be considered when interpreting the findings. First, the research was conducted exclusively in Sekip Village, Deli Serdang Regency, using a relatively limited sample of 100 respondents. Consequently, the findings may not be fully generalizable to other rural areas with different socio-economic, cultural, and agricultural characteristics. Future studies should involve larger samples and multiple research sites to improve external validity.

Second, this study employed a cross-sectional research design, which captures respondents' perceptions at a single point in time. As a result, the study cannot fully explain changes in young people's interest in agricultural regeneration over time or establish long-term causal relationships. Longitudinal studies are recommended to examine how youth interest evolves in response to policy interventions, technological developments, and socio-economic changes.

Third, the research model focused only on Local Wisdom Preservation and Food Security as independent variables. Although these variables explained 59.9% of the variance in youth interest, the remaining variation indicates that other influential factors were not included. Variables such as agricultural technology adoption, digital farming literacy, entrepreneurial orientation, access to agricultural land, expected farm income, family support, government incentives, agricultural education, environmental awareness, and social perceptions of farming may provide a more comprehensive explanation of youth participation in agriculture.

Fourth, the study relied entirely on self-reported questionnaire data, which may be subject to common method bias and social desirability bias. Future research could strengthen the validity of the findings by combining quantitative surveys with qualitative methods, such as in-depth interviews, focus group discussions, and field observations, to gain deeper insights into the motivations and experiences of young people in agricultural regeneration.

Finally, this study examined youth interest from a behavioral intention perspective without assessing actual participation in agricultural activities. Future studies are encouraged to investigate whether positive intentions translate into real engagement in farming, agribusiness entrepreneurship, or long-term commitment to the agricultural sector. Such research would provide a more comprehensive understanding of the factors driving sustainable agricultural regeneration in Indonesia.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to Direktorat Penelitian dan Pengabdian kepada Masyarakat (DPPM) and Direktorat Jenderal Riset dan Pengembangan Kementerian Pendidikan Tinggi, Sains, dan Teknologi (Kemdiktisaintek) Republic of Indonesia, for providing financial support through the Research and Innovation Grant Program (Kemdiktisaintek), which made this study possible.

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