

The Importance Of Agricultural Instructors In Sharing Millennial Farmers' Interest With The Intervening Variable Of Agriculture Technology Modernization In The Sawit Seberang Prosperous Farmer Group

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Article Info	ABSTRACT
Keywords: Several instructions, educators, information/innovation, dissemination, and the interests of millennial farmers	The waning enthusiasm of the younger generation towards pursuing careers in the agriculture industry is a cause for concern. This situation poses a significant risk to Indonesia's agricultural future, particularly in the realms of economic and food security. We need a plan that utilizes the knowledge and skills of agricultural teachers to gain a deep understanding of the urgent demands of the agriculture industry. Various instructor positions have considerable potential to increase the millennial generation's enthusiasm for agriculture, both as instructors and in spreading knowledge and advancements. Hence, it is imperative to prioritize these positions as a means to foster the millennial generation's enthusiasm for agriculture. The Makmur farmer group in Sawit Seberang actively took part in this study endeavor. A total of 120 samples were utilized. The researchWe employed a quantitative research methodology, employing primary data acquired through the dissemination of pre-designed study questionnaires. The findings indicate that the involvement of extension workers has a beneficial effect on the interests of the millennial cohort of farmers.
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INTRODUCTION

The waning enthusiasm of the younger generation to pursue careers in the agricultural industry is causing apprehension on the future of Indonesian agriculture. Research suggests that the present younger generation is harboring a feeling of skepticism when it comes to choosing a profession in agriculture. The expression of this has been conveyed. Losvitasari et al. (2017) reported a decline in the level of interest among young individuals in pursuing a profession in agriculture. Nevertheless, when agricultural operations are conducted, the younger generation exhibits a higher level of enthusiasm for the agricultural sector in comparison to other sectors such as tourism. The research conducted by Salamah et al. (2021) provides more support to this claim. The data collected from 2014 to 2019 shows a decrease in the interest of young workers in the agricultural industry. Furthermore, the study predicts that this trend will continue in the future year. In addition, Susilowati (2016) verified

that the findings demonstrated a prevailing trend of aging among farmers, with those aged 40 and above being the majority. This information illustrates that the working age of Indonesian farmers is presently predominantly occupied by individuals who are not young, creating a void that cannot be filled by young farmers. This disease poses a significant risk to the future of Indonesia's agriculture, particularly in the realms of economic and food security. The agricultural contribution will diminish over time as a result of the limited number of young individuals in their prime productive years who are engaging in the cultivation of agricultural land.

In the immediate term, imports might provide a temporary solution to the existing requirement for food security. Food imports are not sustainable enough to ensure long-term prosperity. Aside from importing, there are other options available, such as decreasing rice consumption and replacing it with locally sourced products that have been prepared using current methods. Hence, the agriculture industry urgently need young workers who possess creativity and innovation in order to guarantee sustainable food security in the long run. The lack of generational succession among young farmers is a notable source of strain, placing considerable pressure on the agricultural sector. Consistent with Zapico et al.'s research, Rodríguez et al. (2018) also discussed the decline of values associated with local traditions among farmers, the waning interest of younger generations in agricultural activities, and various social factors that can impact the socio-ecological resilience of farming households. In their study, Gulo et al. (2018) discovered that the youth exhibit reduced inclination towards agricultural careers due to their preference for higher-paying professions situated in metropolitan regions, which are perceived as more progressive. Additionally, they perceive agriculture as an unsuitable field for employment. Unstable, characterized by an erratic revenue. Makabori et al. (2019) revealed that internal variables have an impact on the younger generation's inclination towards pursuing a career in farming, as indicated by study findings. The present phenomenon of the younger generation's preference for working in the formal sector is a clear indication of their diminishing interest in pursuing careers as farmers, civil servants, or office workers. This trend is particularly appealing to those with a bachelor's degree education.

To tackle this issue, we should use the influence of agricultural instructors to impart a thorough comprehension of the pressing necessity for a sustainable agriculture sector in bolstering the economy and ensuring food security. Formal education and experience play a crucial role in endeavors to enhance the enthusiasm of young farmers towards farming. Hamdani, C. (2020). Young farmers will acquire the necessary skills and knowledge to establish and grow agricultural companies by receiving formal education, mastering the curriculum, utilizing modern technologies, and gaining practical farming experience. Instructors have a crucial role in developing the interest of the millennial generation in agriculture. They have the capacity to serve as educators and effectively spread information and innovation. Thus, it is crucial to prioritize these responsibilities in order to cultivate the millennial generation's enthusiasm for the agriculture industry.

Furthermore, the modernization of agricultural technology is an additional influential factor that motivates the millennial generation to engage in agriculture. This factor plays a significant role in shaping the mindset of young individuals towards pursuing a career in farming. Millennial farmers, who belong to the younger generation, are noted for their propensity to accept knowledge and contemporary technologies, which makes them more innovative. Ali and Purwandi (2017) argue that the millennial generation is a highly productive group in the age of the Industrial Revolution 4.0, also known as the global village. They are accustomed to using information technology devices and gadgets that are connected to social media in their everyday lives. This condition is a defining feature of the millennial generation's lifestyle. The rapid advancement of technology and easy availability of information might shape the perspective and interest of the millennial generation toward employment in the agriculture industry. The issue in advancing the agricultural industry, which is defined by interconnectivity, innovation, and self-assurance, comes in how the millennial generation will acquire knowledge in farm management.

The emergence of millennial farmers is closely intertwined with the advancement of technology. It becomes particularly intriguing when agricultural extension services can effectively align with the demands of the agricultural industry, with the younger generation, who are well-versed in technological advancements, taking the lead. The research project will investigate the significance of agricultural extension in enhancing the interest of millennial farmers, with a focus on the intervening variable of agricultural technology modernization in the Seberang Palm Oil Prosperous Farmer Group.

Literature Review

Counseling

Extension refers to the dissemination of information on attempts to enhance and advance the sector in order to obtain higher quality, productivity, and revenue for farmers. Extension serves as a catalyst for disseminating information on agricultural advancement. We anticipate that the extension will function as an instructor for farmer collectives, providing guidance in their educational journey and assisting them in adopting favorable attitudes towards the utilization of contemporary agricultural technology, as specified in government program regulations. S. Ginting and Andari (2020). Agricultural instructors serve as intermediaries that facilitate effective communication and provide essential knowledge to farmers, enabling them to develop accurate perceptions and make informed decisions (Ban & Hawkins, 1999). Agricultural instructors, as catalysts for development, consistently offer guidance that can enhance the consciousness of agricultural entrepreneurs (Nur Jaya, 2018). Extension workers offer farmers informal education by providing support to enhance agricultural output. Agricultural instructors, extension goals, implementation techniques, media, resources, time, and place are all crucial components for effectively carrying out agricultural extension programs (Ibrahim et al., 2003). The extension of success is in the capacity to devise and execute educational initiatives, resources, and approaches tailored to the specific circumstances and traits of farmers. Agricultural educators must have expertise in leadership, communication, technology distribution, and the specific technical subjects they

will teach (Sapar, 2017). The agricultural teachers' activities are designed to promote a shift in farmers' mindset, work practices, and adoption of modern agricultural techniques that align with current advancements and the progress of sophisticated agricultural technology (Hafsah, 2009).

An teacher is often expected to fulfill two significant duties. Kartasapoetra (1994) states that the teacher, in their role as an educator, should possess the ability to impart information and provide innovative methods to enhance the capabilities of farmer groups. Engage farmers to enhance their involvement in current initiatives. Mardikanto (2009) as cited in Ridwan (2013) identifies three indicators of the role of extension workers in disseminating information and innovation. These indicators include: firstly, providing assistance and technical guidance to farmers who receive support; secondly, introducing existing programs; and thirdly, conveying the most recent information on innovations to the general public.

The millennial generation's interest in agriculture

Interest is a powerful inclination that can drive an individual to take action (Ramadhan, Suharyono, and Kumadji 2015). Various environmental factors, including social institutions like family, playgroup, and school, can also impact the development of an individual's interests. According to Hamalik (1990), Crow, and Crow, there are three components that contribute to the generation of interest: "factors that originate from the individual, social motives, and emotional factors" (Killis, 1988). Sudarsono (1980) shared a comparable viewpoint, categorizing the components that produce interest in the following manner:

Factors related to internal needs. These demands may encompass both bodily and psychological aspects. Factors related to social motivation The growth of interest in a person might be driven by social incentives, particularly the desire to earn respect and praise from their surroundings. The emotional element refers to an individual's level of focus and interest in a specific activity or item (Agung and Sumaryanto, 2015).

In addition, Crow and Crow (1984) further categorize it into three distinct factors: (1) An inner drive is an innate want that arises within in humans and is connected to both bodily and mental components. (2) Social motivation is the stimulus that emerges from the influence of social factors. (3) Emotional aspects include the motivation that arises from a triumphant event, whether it is personally experienced or witnessed by others. Youth is a phase of life that occurs between infancy and maturity. It is characterized by a sense of independence and an awareness of one's role in society (Mukhlis, 2007).

The millennial generation's inclination to abandon the agricultural business is stimulated by the pace of urbanization and migration (BPS, 2014). The primary catalyst is the migration of young farmers from rural to urban regions, driven by the aspiration to work overseas in response to unfavorable socio-economic living circumstances and restricted educational opportunities (Chotib, 2007). Due to the inability of families to satisfy their basic living requirements, there is a proclivity for them to relocate to urban areas and engage in migratory labor. Consequently, the labor of young farmers has transitioned towards the non-agricultural industry, such as working in factories or the service sector. Lack of interest in agriculture might

impede economic growth due to the fact that income in other sectors is greater and more reliable compared to working in the agricultural sector (Arsyad, 1999). (Kuncoro, 2005).

Modernization of Agricultural Technology

Technology is the practical application of scientific concepts in engineering, resulting in human creations. According to Prayitno in Ilyas (2001), technology is a wide-ranging assortment of concepts, methodologies, practices, and physical items that are employed in certain circumstances and places to meet the requirements of human beings. According to Mardikanto (1993), technology is the result of behavior, information, and new practices that are not widely known, accepted, or used by some members of a community in a specific location. Its purpose is to promote change for individuals and/or all members of the community. Agricultural technology is the practical use of mathematics and natural science principles to efficiently utilize agricultural and natural resources for the benefit of humans. Mangunwidjaja and Sailah (2009) provide a concise definition of agricultural technology as a means or technique that transforms agricultural inputs into productive and prosperous agricultural outputs, including raw materials, partially processed goods, or finished products. Miarso (2007).

Agricultural modernization is demonstrated by the shift from traditional to more sophisticated farming practices facilitated by the use of new technologies. Modernization refers to a comprehensive transformation or alteration that encompasses not only exterior changes, but also fundamental changes in the form, function, structure, or features of a community's economic business operations (Pranadji in Hadriana 2019). Agricultural modernization encompasses the economic expansion and population increase occurring within the constraints of limited agricultural land resources. This process is accompanied by the use of advanced technology, which not only conserves land but also necessitates labor, namely through the utilization of high-quality seeds and industrial fertilizers. This development is accompanied by changes in village institutions pertaining to land ownership rights and contractual relationships among farmers, agricultural laborers, and other individuals in both rural and urban areas (Hayami in Rifkian, 2019).

METHOD

This study employs a form of quantitative research that relies on primary data collected through the distribution of research questionnaires. These questionnaires are designed based on indicators for each independent variable of counseling, namely education (X1) and dissemination (X2), millennial interest (z), and technological modernization. agriculture (Y) The target demographic and research sample consist of 120 individuals who are members of farmer organizations, are under the age of 40, and possess a significant understanding of the research concerns being investigated in this study. Data analysis employs a structural equation model (SEM) that relies on partial least squares (PLS). Sholihin & Ratmono (2013) state that SEM-PLS is effective in handling tiny sample sizes and intricate models. Furthermore, the data distribution assumptions in SEM-PLS are more flexible in comparison to CB-SEM. SEM-PLS is a nonparametric method that is effective even for data that deviates

from the typical distribution in extreme cases. The subsequent approach to be discussed is the partial least squares (PLS) method. The objective is to facilitate the process of acquiring and applying knowledge, which includes: 1) The initial step involves evaluating the measurement model (outer model), specifically assessing the construct validity and reliability of each indicator. The second phase involves evaluating the structural model, specifically examining the presence of any effect between the correlated variables.

RESULT AND DISCUSSION

Outer Model

Table 1. Validity (Outer Loading) Test Result

	Modernization of agricultural technology (Z)	Role of Information Dissemination/innov ation (X2)	Role of Educator (X1)	Increased interest in millennial farmers (Y)
RE.1			0,874	
RE.2			0,873	
RE.3			0,824	
RE.4			0,854	
RE.5			0,850	
ID.1		0,846		
ID.2		0,820		
ID.3		0,815		
ID.4		0,861		
ID.5		0,813		
ID.6		0,778		
IM.1				0,988
IM.2				0,928
IM.3				0,857
IM.4				0,842
IM.5				0,813
IM.6				0,852
MA.1	0,847			
MA.2	0,816			
MA.3	0,847			
MA.4	0,858			
MA.5	0,840			
MA.6	0,810			

According to the table provided, it is evident that all indicators satisfy the loading factor of 0.5, indicating that the indicators used in this study are legitimate.

Tabel 2. Construct Reliability and Validity

	Cronbach's Alpha	rho _A	Composite Reliability	Average Variance Extracted (AVE)
Millennial Generation's Interests (Z)	0,968	0,969	0,966	0,846
The Role of Information Dissemination/Innovation (X2)	0,833	0,917	0,865	0,519
The Role of the Educator (X1)	0,976	0,976	0,980	0,901
Increased Milineal Interest (Y)	0,941	0,941	0,954	0,776

From the provided data table, it is evident that every variable possesses a Cronbach's alpha and composite reliability value more than 0.6. This indicates that each variable utilized in the study is deemed trustworthy.

Inner Model (Patch Coefficient)

Table 3. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Result
(X2) -> (Z)	0,817	0,825	0,134	5,153	0,000	Supported
(X2) -> (Y)	0,325	0,313	0,087	4,272	0,000	supported
(X1) -> (Z)	0,420	0,421	0,053	2,517	0,000	supported
(X1) -> (Y)	0,253	0,258	0,033	3,587	0,000	Supported
(Z) -> (Y)	0,472	0,481	0,204	3,628	0,000	Supported
(X2) -> (Z) -> (Y)	0,512	0,524	0,098	6,236	0,000	Supported
(X1) -> (Z) -> (Y)	0,027	0,036	0,024	5,492	0,000	Supported

The Influence of extension workers as educators on Increasing the interest of Millennial Farmers

The research directly confirms the first hypothesis, which suggests that the role of an educator piques the interest of millennial farmers. The role of instructors is one of the factors that has contributed to an increase in interest among millennial groups in the agricultural industry. Carrying out the role of instructor If instructors perform their role effectively, they will eventually transition into educators, defined as non-formal educators with innovative ideas for overcoming obstacles within the learning community. role is to guide and provide assistance to students in solving the problems they face. In dealing with the non-formal

millennial generation, instructors must understand their students' characteristics. The learning community requires assistance that aligns with its needs. Based on research results, Teuku Adian Makmur Rizqullah (2021) shows how farmer group members perceive extension workers as educators as playing a very important role in improving farmer groups' performance.

The influence of extension workers in their role in the dissemination of information/innovation has an effect on increasing the interest of millennial farmers

The research results directly accept the second hypothesis, which posits that disseminating information and innovation enhances the interest of millennial farmers. Efforts to increase the interest of millennial farmers require competent extension workers, clear mechanisms and work procedures, including effective supervision, monitoring, and evaluation, and adequate financing. This is a real manifestation of the responsibility of extension workers, who are not only responsible for success in terms of quantity of harvest but also for building the attitude and integrity of millennial farmers towards the agricultural industry. Extension workers' roles as motivators, innovators, facilitators, and communicators have played a significant role in increasing farmer participation. Angela Apriliany (2021). This explains why a good extension agent must consistently involve farmers in order to build effective communication. Success in conveying messages will occur if there is participation from both parties, namely the communicant and the communicator (Soekartawi, 1988). The ability of instructors to fulfill their role as educators will attract farmers, particularly the millennial generation, to participate in this industry. Jarmie says in Sundari (2015) that instructors can influence targets in their roles as motivators, educators, dynamists, organizers, communicators, and advisors to farmers.

The influence of extension workers in their role as educators influences the modernization of agricultural technology

The research results show that the third hypothesis is directly accepted, namely that the role of an educator can encourage changes in the use of modern technology in agriculture. In order to succeed in the agricultural sector, there is a pressing need to utilize technology. This modernization of agriculture not only generates job opportunities but also boosts farmers' income through the selection of superior seeds, proper fertilization, and the use of machine power for harvesting processes. This allows for a decrease in expenses, a reduction in labor expenses, and a boost in output without the need for drastic system modifications. Bayu Enggal Rifkian (2017), next: Extension workers emphasize three factors that drive the adoption of innovation at the farmer level: the characteristics of farmers, the nature of technology, and the competence of extension agents. The nature of the innovation can influence farmers' decisions about adopting it. These innovations possess characteristics such as relative advantage, compatibility, complexity, tryability, and observability. Sofia (2022).

The influence of extension workers plays a role in disseminating information/innovation which influences the modernization of agricultural technology

The research results directly accept the fourth hypothesis, which holds that an educator's role can promote changes in the application of modern technology in agriculture. Hayami, (1980). Agricultural modernization refers to the process of expanding the economy and population on limited agricultural land resources, while also introducing new technology that conserves land and requires labor, particularly in the form of superior seeds and factory fertilizers for Changes in village institutions, including land ownership rights and contractual ties between farmers, farm workers, and other actors in villages and cities, accompany this process. According to research findings by Bayu Enggal Rifkian (2017), technological advancements benefit tractor operators by increasing their employment opportunities due to their enhanced efficiency and effectiveness. Meanwhile, traditional plow owners will lose their jobs This is in addition to the introduction of pest control tanks, which were initially operated manually but now utilize machines. . The harvesting process has undergone many changes, from ani-ani, which involves hitting rice trees with a jaguar (bamboo tool), to pedaled dores, then machine-powered drones, and now with a combination that has had an impact on reducing labor in the harvesting sector This, in turn, has led to a reduction in agricultural costs and an increase in the yields of farmers. . In other studies, the combination of land area and technology variables had a positive and significant effect on income through production. Bahrul Ulum Rusydi (2022) proves that the use of technological modernization in agriculture will have a significant impact on agriculture.

The influence of modernization of agricultural technology on increasing the interest of millennial farmers

The research's results directly accept the fourth hypothesis, which holds that advances in science and technology have a significant impact on human life at every stage of development. According to Lubis (2021), Nicholas Marpaung's research (2023) confirms this. Farmers' regeneration is the key to encouraging technology-based agriculture. To attract the younger generation to the agricultural sector, it is important to make agriculture a promising and profitable profession. One of the main benefits of agricultural modernization is that it increases people's ability to obtain a better education, especially for young people. As livestock owners have adopted agricultural technology, they are now better able to perform farming-related tasks. Yudha et al. (2023) also contributed to the harvest.

Implications

This study has practical implications, namely how the agricultural industry can maximize the role of extension workers in stimulating the interest of the millennial generation to get involved in the agricultural sector, whose numbers are decreasing over time. This is, of course, risky if it continues to happen, considering that food needs are very dependent on farmers. Of course, if the decline in interest among the millennial generation continues, it will have an impact on our ability to maintain food stability in general. Here, the role of the extension agent is very important because the extension agent plays the role of educator and the role of disseminating information and innovation. Through these two roles, the instructor has the responsibility to increase the interest of millennial farmers.

CONCLUSION

The aim of this research is to determine the influence of the variable modernization of agricultural technology in mediating the role of instructors as educators and the role of instructors as disseminators of information and innovation. Research findings reveal that it directly influences the millennial generation's interest in pursuing agriculture. Indirectly, extension workers' role as educators and information/innovation dissemination does not mediate the millennial generation's interest in being involved in agriculture. Given that these two variables positively influence the millennial generation in the Tani Makmur group in Sawit Seberang, these results suggest an increase in efforts to promote agricultural extension.

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