

The role of personal and social norms in shaping agricultural students' willingness to pursue a career in agriculture

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World Journal of Advanced Research and Reviews, 2026, 29(03), 1750-1757

Publication history: Received on 17 February 2026; revised on 23 March 2026; accepted on 26 March 2026

Article DOI: <https://doi.org/10.30574/wjarr.2026.29.3.0733>

Abstract

This study addresses the decline in young people choosing agriculture as a career, particularly in Indonesia, amid numerous alternative career options perceived as more attractive or prestigious. The research focuses specifically on students currently enrolled in agricultural programs at higher education institutions. Using a quantitative approach, data was collected through an online questionnaire to examine the influence of personal norms and social norms on the willingness to pursue a career in agriculture. The analysis, conducted using PLS-SEM, demonstrates that both personal and social norms have a significant positive effect on students' willingness to engage in agricultural careers. These findings emphasize the role of normative factors, including internalized personal values and social influences such as family and peer support, in shaping career intentions. The study suggests that supporting positive attitudes toward agriculture and providing adequate social support can encourage students to maintain long-term interest in agricultural professions.

Keywords: Career willingness; Personal norm; PLS-SEM; Social norm; Young student

1. Introduction

In an increasingly diverse job market, young students are faced with numerous career options, many of which are considered more attractive or prestigious than other traditional fields. Nowadays, there are many schools using advanced technological approaches such as robotics and AI as learning materials which can influence students' career decisions (1; 2). Meanwhile, medicine is still one of the most popular careers for students in Asia and Turkey (3; 4). Career choices by the younger generation are still dominated by reasons such as whether the job is suitable for the modern world, prestigious, and has a high salary level. Consequently, interest in pursuing agriculture as a profession is declining among young people because this job still has a traditional image and is full of uncertainty. The decreasing interest of young people in agricultural careers has become a common phenomenon in many countries (5; 6).

Agriculture is a crucial sector because it plays a direct role in meeting basic human needs. Therefore, the presence of a workforce in the agricultural sector is crucial for maintaining food security and supporting sustainable development. Data shows that the average age of farmers is increasing, indicating a decline in the number of young people choosing agriculture as a career, especially in Indonesia. According to Statistics Indonesia 2023, the number of elderly farmers has increased while the number of young farmers has decreased, where the age range of 43-58 years dominates the agricultural business by 42.39%, while young people in the age range of 11-26 years only account for 2.14% (7). This shift indicates that agriculture is becoming less attractive to younger generations in Indonesia, which could ultimately

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threaten the stability of food production in the future. It is ironic because Indonesia is one of the countries with extensive agricultural land and great potential.

Developments in technology and innovative practices provide new opportunities to re-engage younger generations in agriculture. Technologies such as remote fertilization systems, drone-assisted irrigation, and urban farming initiatives show that modern agriculture can appeal to young students (8; 9). These innovations are reshaping the image of agriculture, making it more relevant to a younger generation familiar with technology. By combining modern technology with traditional agricultural practices, the agricultural sector can be seen as a dynamic and promising profession. Although careers in agriculture have received less attention due to technological innovation, some young people are also beginning to develop an environmental awareness that influences their career decisions. Many young people feel a responsibility to protect the earth and want to make a positive contribution to environmental sustainability (10; 11). Issues such as climate change, biodiversity loss, and the depletion of natural resources have made them increasingly understand the importance of agriculture's role in maintaining ecosystem balance and food security. This awareness encourages them to choose careers that not only provide personal satisfaction but also benefit society (12; 13).

Personal norm plays a crucial role in determining the career choices of students and young people (11), particularly in agriculture. This personal norm encompasses a person's values, beliefs, and perspectives. If a young person holds a positive view of the importance of agriculture, they are more likely to view a career in this field as meaningful and fulfilling. Furthermore, social norms also significantly influence career choices. Social norm is the expectations and values prevailing in society (14; 15). If agriculture is valued and considered an important profession within a community, young people are more likely to be interested in pursuing it. This social support can encourage them to choose education and careers in the agricultural sector. Conversely, if agriculture is perceived as unattractive or looked down upon, they are more likely to avoid the field, even if they are genuinely interested. Furthermore, media and culture also contribute to shaping public perceptions of agriculture. Activities such as community events, campaigns, and educational programs can also reinforce this positive view.

Due to the declining interest in agricultural careers, it is crucial to maintain the motivation of students currently studying agriculture to pursue similar careers. Therefore, research aimed at understanding how to support and encourage students to choose a career in agriculture is crucial. Personal and social norms are factors that can be used to analyze what motivates their willingness to pursue a career in agriculture. The results of this research can provide insights into governments and educational institutions in designing appropriate programs and policies to prepare future generations of farmers and food producers.

2. Material and methods

2.1. Personal Norm

Personal norm is an individual's values, beliefs, and perspectives that influence their attitudes and decisions (11). Personal norms play a significant role in shaping an individual's willingness to engage in various behaviors, such as waste collection (16), sustainable travel (17), and green consumption (18). This means that personal norms can be used to determine how an individual's willingness can shape their career. When choosing a career, this norm helps a person determine what work they consider important and meaningful. If a student has a positive view of agriculture, they are more likely to see the field as a valuable career, making them more interested in pursuing it. Personal norm also helps a person align career choices with their life goals (19; 20). For example, students who care about the environment and social contribution will be more interested in agriculture. Thus, personal norm is an important factor in shaping interest in and satisfaction with a chosen career.

2.2. Social Norm

Social norm is unwritten rules of expectations, values, and behaviors considered normal in society (14; 15). These norms influence how a person views various options, including career choices, as individuals tend to conform to what is accepted by their surroundings. When choosing a career, social norm shape views about which jobs are considered good, prestigious, or worthwhile (21; 22). If a job is valued by society, especially by family, friends, and the community, young people are more likely to choose it (15; 23). Conversely, if a job is viewed as inferior, they tend to avoid it even if they are interested. For example, if agriculture is considered an important and honorable profession, students will be more interested in pursuing that field. Thus, social norm is external factors that can encourage or hinder a person's career choice.

2.3. Willingness to Pursue a Career

Willingness to pursue a career refers to individual's readiness and drive to choose and pursue a particular occupation (24; 25). This willingness is influenced by various factors, such as personal values and beliefs, environmental support, and the perceived benefits of work. In the agricultural sector, motivation is shaped by students' perceptions of whether agriculture is meaningful, socially accepted, and has a positive future. Factors such as personal norm and social norm also influence their decisions. Therefore, to increase career motivation, support from within and within the community is needed to increase confidence and motivation in choosing a career path.

2.4. Research Methodology

2.4.1. Sampling and Data Collection

The data sample consisted of students currently studying agriculture, collected online through a questionnaire. This study specifically examined agricultural students who had not yet graduated to determine their desire to pursue a career in agriculture. Sample responses were measured using a 5-point Likert scale: "strongly agree (5)", "agree (4)", "uncertain (3)", "disagree (2)", "strongly disagree (1)".

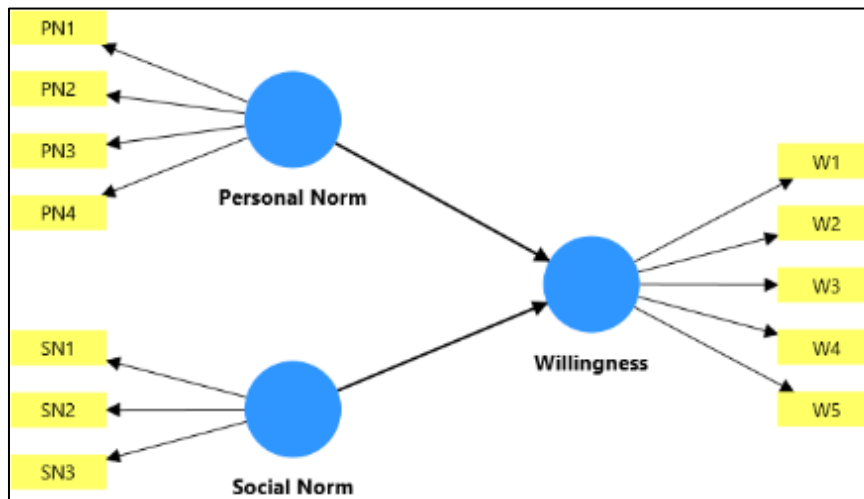
2.4.2. Hypothesis

The hypotheses of this research are formulated as follows:

- H1: Personal norm significantly affects students' willingness to pursue a career in agriculture
- H2: Social norm significantly affects students' willingness to pursue a career in agriculture

2.4.3. Data Analysis and Path Model

This study uses a quantitative method by analyzing the influence between variables where the personal and social norm variables are independent variables, while the willingness to pursue a career in agriculture is the dependent variable. Analysis using PLS-SEM begins with evaluating the loading factors of each indicator to ensure that all values exceed 0.6. In the measurement model, two types of validity are assessed: convergent validity and discriminant validity. Convergent validity is established when the Average Variance Extracted (AVE) for each construct is greater than 0.5. Discriminant validity is confirmed using the Fornell-Larcker criterion, where the square root of each construct's AVE must be higher than its correlations with other constructs. Reliability is evaluated through composite reliability, with a recommended threshold value above 0.7 for all constructs. In the structural model, hypothesis testing is conducted to determine the significance of relationships between variables. A variable is considered significant at the 5% level if the T-statistic exceeds 1.96 and the p-value is below 0.05. Finally, the R-square value is examined to assess the extent to which the independent variables explain the variance in the dependent variable. Figure 1 presents the path model of this study.



Source: processed field data

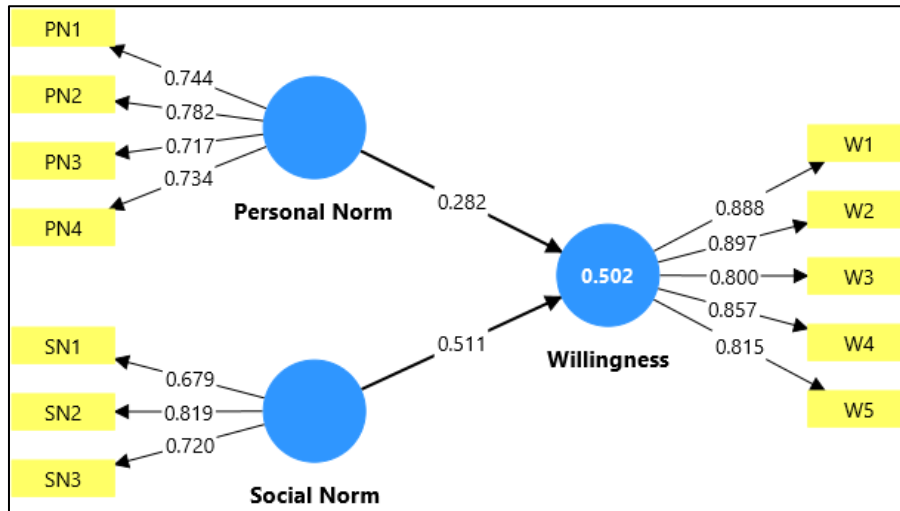
Figure 1 Research Path Model

3. Results and discussion

3.1. Measurement Model

3.1.1. Loading Factor Evaluation

The loading factor assessment demonstrates that all indicators meet the required threshold of 0.6. Figure 2 illustrates the final path model.



Source: processed field data

Figure 2 Path Model with Indicator Loadings Factor

3.1.2. Convergent Validity

Convergent validity is confirmed as all AVE values surpass the 0.50 threshold. Table 1 summarizes the AVE values for each variable.

Table 1 AVE Value

Variables	Average Variance Extracted (AVE)
Personal Norm	0.555
Social Norm	0.550
Willingness	0.726

Source: processed field data

3.1.3. Discriminant Validity

The Fornell–Larcker approach was applied to evaluate discriminant validity. The findings show that the square root of the AVE for each variable is higher than its inter-construct correlations, indicating satisfactory discriminant validity. Detailed results are shown in Table 2.

Table 2 Square root of AVE (Fornell–Larcker)

	Personal Norm	Social Norm	Willingness
Personal Norm	0.745		
Social Norm	0.564	0.742	
Willingness	0.569	0.669	0.852

Source: processed field data

3.1.4. Composite Reliability

The results show that all constructs have composite reliability values exceeding 0.70, indicating that the indicators consistently and reliably measure the variables. The full results are presented in Table 3.

Table 3 Composite Reliability

Variables	Composite Reliability (rho_c)
Personal Norm	0.833
Social Norm	0.785
Willingness	0.930

Source: processed field data

3.2. Structural Model

3.2.1. Hypothesis Testing

The purpose of hypothesis testing is to evaluate the strength and significance of the relationships between the Personal Norm and Social Norm variables and the willingness to pursue a career in agriculture. The results of the analysis are presented in Table 4. At the 5% significance level, both Personal Norm and Social Norm have significant effects on the willingness to pursue a career in agriculture. This is indicated by the T-statistic and p-value for Personal Norm ($T = 5.826 > 1.96$; $p < 0.05$) and Social Norm ($T = 10.555 > 1.96$; $p < 0.05$).

Table 4 Path Analysis Results

Path Coefficients	Original Sample (O)	T-Statistics (O/STDEV)	P-values	Conclusion
Personal Norm -> Willingness	0.282	5.826	0.000	Significant
Social Norm -> Willingness	0.511	10.555	0.000	Significant

Source: processed field data

3.2.2. R-square

With an R-square value of 0.502, the model suggests that Personal Norm and Social Norm together account for 50.2% of the variation in the Willingness to pursue a career in agriculture, while 49.8% is explained by other unobserved factors.

Table 5 R-square

	R-square
Willingness	0.502

Source: processed field data

4. Discussion

The analysis results aligned with previous research, which found that personal norms have a positive effect on the willingness to pursue a career (16; 17; 18). Individuals who hold personal values related to agriculture are more likely to decide to pursue a career in this field. The indicator values measuring the personal norm variable were generally similar, although the indicator regarding a career as a farmer being in line with one's personal values received the highest score (0.782). This suggests that the aspect of personal norm that most strongly influences students' willingness to pursue a career in agriculture is the internalization of values associated with this profession. Students generally have sufficient knowledge to help them identify their personal values, so when choosing a career, they tend to select one that aligns with these values. Moreover, the respondents in this study were members of Generation Z (aged 17–23), who typically prioritize decisions that reflect their own values (26; 27; 28).

Social norms have a significant and positive effect on students' willingness to pursue a career in agriculture. This indicates that the stronger the social influence related to agriculture, the greater the students' willingness to enter this field. These results are consistent with previous studies showing that social norms can shape individuals' behavioral intentions (26; 29; 30). Among the indicators of social norms, family support is the most influential. Students often consider their responsibilities to their families, so their career choices are affected by family approval. Additionally, many respondents come from families with agricultural backgrounds, which may also explain the high scores for this indicator.

5. Conclusion

The conclusion of this study is that Personal Norm and Social Norm have a significant effect on the willingness to pursue a career in agriculture. This suggests that students are motivated to continue in the field they are studying in higher education due to their personal values and social influences. It is important for both academic institutions and the government to support students' passion for agricultural careers, as this field plays a vital role in the country, particularly in producing quality food for the community. By fostering positive values toward agricultural careers, it becomes easier to strengthen students' motivation through campaigns and media, helping to sustain their passion in the long term.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Each participant gave informed consent to take part in this research.

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