

THE ATTITUDE OF FULL-TIME EXTENSION WORKERS TOWARDS SUPERVISING THE WORK OF PRIVATE AGRICULTURAL PROJECTS IN SULAYMANI GOVERNORATE

D. A. Kalhory  T. M. L. Hasan*  M. O. Sakinaa 

University of Sulaimani - College of Agriculture Engineering Sciences

*Correspondence to: Tahir Mohamad Layeeq Hassan, College of Agriculture Engineering Sciences, Sulaimani University, Iraq.

Email: tahir.layeeq@univsul.edu.iq

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Abstract

The purpose of the study is to determine the attitude levels of full-time extension workers towards overseeing private agricultural projects. Data was gathered through personal interviews and questionnaires from a simple random sample of 127 full-time extension workers, representing 33.24% of the total research population. The study revealed that a substantial majority, specifically 86% of the respondents, display notably favorable attitudes towards supervisory roles within private agricultural projects in the study region. Additionally, the analysis elucidates statistically significant disparities between respondents' attitudes regarding supervisory positions and various key variables, including gender, professional title, marital status, place of residence, vocational interest, post-graduation work tenure, and exposure to agricultural resources. At the same time, the results indicate a lack of statistically significant distinctions between respondents' attitudes and the variables of age and profession title. The research recommends engaging agricultural extension directorates and professional associations, particularly those comprising agricultural engineers, in enhancing employment prospects for graduates specializing in administration and agricultural extension. This involves deploying these graduates in supervisory capacities within agricultural projects across private and public sectors.

Keywords: Attitude, Full-time extension workers, Supervising of the work, Agricultural projects.

اتجاه المرشدين المتفرغين نحو الإشراف على عمل المشاريع الزراعية الخاصة في محافظة السليمانية

دارا عبدالرحمن صالح  طاهر محمد لائق حسن*  محمد عمر سكيينة 

جامعة السليمانية - كلية الهندسة للعلوم الزراعية

*المراسلة الى: أ.د. طاهر محمد لائق حسن، كلية هندسة العلوم الزراعية، جامعة السليمانية، العراق.

البريد الإلكتروني: tahir.layeeq@univsul.edu.iq

الخلاصة

استهدف البحث تحديد اتجاهات المرشدين المتفرغين على عمل المشاريع الزراعية الخاصة في محافظة السليمانية، ولتحقيق هذا الهدف اختيرت عينة عشوائية نسبية شملت 127 متفرغا من المرشدين المتفرغين الزراعيين في المحافظة يمثلون 33.24% من حجم مجتمع البحث، وتم تحصيل البيانات من خلال استمارة استبيان والمقابلة الشخصية، اتبع البحث المنهج الوصفي في تحليل البيانات واستخراج نتائج المطلوبة. اظهرت النتائج بان غالبية المستجيبين لديهم اتجاهات إيجابية كبيرة نحو العمل الاشرافي في مشاريع زراعية الخاصة في منطقة الدراسة. كما اوضحت بان هنا فروقات معنوية بين درجة اتجاهات المستجيبين نحو العمل الاشرافي وكل من المتغيرات الاتية: الجنس، عنوان المهني، الحالة الاجتماعية، محل الإقامة، الاهتمام بالمهنة، مدة العمل بعد التخرج والتعرض للمصادر الزراعية واظهرت النتائج بان لا توجد فروقات معنوية بين درجة اتجاهات المستجيبين والمتغيران العمر وعنوان المهنة. اوصى البحث بضرورة تفعيل دور مديريات الارشاد الزراعي والجمعيات المهنية والمهندسين الزراعيين في توفير مزيد من فرص العمل لخريجي اقسام الادارة والارشاد الزراعي وتوظيفهم كمشرفين على المشاريع الزراعية في قطاعي الخاص والعام.

كلمات مفتاحية: الاتجاه، المرشدين المتفرغين، العمل الاشرافي، المشاريع الزراعية.

Introduction

The agricultural sector assumes a pivotal strategic role, bearing a significant responsibility in attaining food security, providing essential inputs for other economic domains, and fulfilling domestic food demand while simultaneously generating surpluses that can be exported to bolster foreign exchange reserves (8). Private-sector agricultural project initiatives represent a fundamental constituent within the framework of economic and social development endeavors, bearing pivotal significance in sustainable development, the mitigation of unemployment, and the provisioning of essential goods and services (2).

Despite the importance of small projects in creating economic balance and the efforts previously made by the Kurdistan Regional Government of Iraq, especially the Sulaymani Governorate. After the enactment of legislative measures, specifically Law No. 10 of 2018 and No. 20 in 2021, which pertain to the oversight of

agricultural endeavors within the private sector and their mandate to supervise all agricultural projects with the requisite endorsement from the competent administrative authorities. It was stipulated that such supervisors should not be concurrently employed within the public sector. The overarching objective of these legal provisions is the reinvigoration of plant and animal production within the designated region. However, examining the actual performance of small-scale agricultural projects within this region reveals their limited efficacy in mitigating poverty and unemployment (9).

The establishment of communal entities, encompassing recently graduated individuals and cultivating their competencies, are deemed fundamental components of agricultural extension efforts, constituting a pivotal cornerstone of agricultural advancement (15). Consequently, the function of agricultural extension services becomes particularly crucial in fostering the evolution of agricultural initiatives. This involves the assimilation of innovative agricultural methodologies and techniques and the provision of scientific and technical oversight of agricultural projects, all aimed at enhancing both the quantitative and qualitative aspects of productivity and enhancing the competitive standing of domestically produced commodities vis-à-vis imports (16). The extension process in agriculture extends to agricultural extension workers, who are the basic basis for achieving the goals of the agricultural institution. The importance of these extension workers is evident in their vital role in guiding and training peasants and farmers and providing support, technical advice, and agricultural consultations; these extension workers can play a fundamental and influential role in developing and strengthening the agricultural sector and improving the level of productivity and quality in agriculture (12).

As an educational process, agricultural extension encompasses various objectives, notably cultivating specific inclinations and dispositions among farmers about adopting scientifically developed practices across all domains (5). This process aims to engender shifts in farmers' attitudes, intending to elicit responses that may manifest as either endorsement or resistance, contingent upon their prior experiences (10). In the context of this educational endeavor, (6) characterizes "attitude" as the individual's response to the immediate surroundings, shaped by their antecedent encounters. Additionally, (18) conceptualizes an "attitude" as an emotional inclination molded by preceding life experiences, influencing an individual's positive or negative disposition towards specific situations or individuals. The multifaceted construct of an "attitude" encompasses three interrelated components. The cognitive aspect comprises an individual's knowledge and beliefs about a given issue, while the affective aspect deals with the emotions and feelings associated with the topic. Finally, the behavioral component relates to the willingness to perform specific actions in response to the topic (7).

The Kurdistan region's agricultural extension organization faced numerous administrative and technical issues, such as inadequate job descriptions for all employees. Moreover, certain departments that offered crucial extension services—like program planning, methods and means, rural women and youth, rural areas, follow-up, evaluation, and coordination were missing, and there were not enough employees to staff the extension units. Additionally, the extension organization

lacked several fundamental positions at all levels, such as the extension supervisor's job on agricultural projects (3). In order to achieve food security and meet the community's needs for agricultural products, it is crucial to address risks and their effects on agricultural development strategies, develop a clear plan to strengthen the agricultural sector in the Kurdistan Region, and investigate new mechanisms to confront these risks (13). The ability and attitudes of full-time extension workers toward supervising are crucial to the development and success of agricultural projects because they offer the knowledge, support, and assistance needed to ensure that farmers meet their objectives and maximize productivity and profitability. Furthermore, full-time extension workers supervising are a critical component of agricultural project success. Due to the factors above, as well as the lack of prior studies on full-time extension workers' views regarding overseeing agricultural projects in the Sulaymani Governorate, this study set out to address the following two questions:

1. How do full-time extension workers in the Sulaymani Governorate feel about overseeing the operation of private agricultural projects?
2. Do the independent variables being examined differ from the viewpoints of the sample members concerning their supervision of agricultural projects in the Sulaymani Governorate?.

The aim of the study:

1. Identifying full-time extension workers' attitudes toward supervising private agricultural enterprises' work in Sulaymani Governorate.
2. Finding the difference between the respondents' attitudes toward overseeing the work of private agricultural projects in Sulaymani Governorate and the studied independent variables (age, gender, profession title, marital status, place of residence, vocational interest, post-graduation work tenure, and exposure to agricultural sources).

Research Hypotheses:

There is a discrepancy between the attitudes of full-time extension workers toward overseeing the work of private agricultural projects in Sulaymani Governorate and the independent variables (age, gender, profession title, marital status, place of residence, vocational interest, post-graduation, and exposure to agricultural sources).

Materials and Methods

In order to meet the goals of the study, the descriptive approach was selected as the research method. This choice was made because it is consistent with the need for comprehensive information and empirical support regarding the views of full-time extension workers regarding managing the supervision of private agricultural projects in the Sulaymani Governorate.

Research area: The Sulaymani Governorate was chosen as the principal research region because of the numerous agricultural activities there, which sustain the livelihoods of a substantial percentage of the indigenous population by providing a strong economic base.

Research population and sample: All full-time guides in the Sulaymani Governorate were included in the research population. A cohort of 382 respondents was scattered throughout several geographical locations of the governorate. A simple random selection procedure was used to choose a subset of 127 full-time guides, accounting for about 33.24% of the total guide population. This selection approach was used to represent the larger research population.

Data collecting tool: According to (17), the questionnaire is a valuable tool for obtaining objective data, factual insights, and information supporting the research objectives. To accomplish these goals, a custom-built questionnaire with two distinct sections was laboriously created. After the researcher had studied pertinent scholarly and literary works about agricultural extension, it was laboriously developed. Subject matter experts and a field consultant were contacted to guarantee the document's orderly construction further. The independent factors (age, gender, marital status, professional title, place of residence, occupational interest, length of post-graduate work), exposure to agricultural sources, and post-graduate work tenure) are listed in the first section.

The second portion of the questionnaire was designed to assess full-time extension workers' attitudes toward supervising the work of private agricultural projects in Sulaymani Governorate. To verify (face validity and content validity), The questionnaire was given to a panel of experts from Sulaymaniyah University's College of Agriculture's Department of Agricultural Business and Rural Development, who were told to add or remove paragraphs. On May 9, 2023, the questionnaire was pre-tested on 20 agricultural extension workers from Sulaymani Governorate who were not part of the research sample. The reliability was measured using the split-half method with the Pearson equation, whose value was 0.74. The validity was extracted at 0.92, and the form was thus characterized by high liability and validity. The Spearman-Brown formula was used to correct for the scale as a whole. The questionnaire thus showed noteworthy degrees of validity and reliability.

One of the most essential characteristics of research instruments is reliability, which is considered good and acceptable when its coefficient reaches a value of 0.70 or more, as explained by (4). As stated by (14), this criterion highlights the questionnaire's ability to produce reliable and approximate findings when given to the same individuals, in comparable situations, and at a different period. Following the finalization of the questionnaire, data collection from the respondents took place between January 6, 2023, and January 7, 2023.

Measuring search variables: Measuring full-time extension workers' attitudes towards supervising the work of private agricultural projects (dependent variable):

The attitudes of the full-time extension workers toward supervising the work were assessed using the following techniques: readings from the organization and administration literature and models, expert observations and insights from educators and researchers, and participation from the governorate's agricultural departments and divisions. The first formula for measuring the attitude was developed, consisting of 24 components. The scale was modified into a collection of twenty items, ten positive and ten negative, to identify attitudes after initially being distributed to a group of experts and specialists in agricultural extension and management.

On a three-point Likert scale, the responses of the participants were rated as follows: "agree," "neutral," and "disagree." Positive items on the scale had weights of 1 for "disagree," 2 for "neutral," and 3 for "agree." Conversely, negative items had weights of 1 for "agree," 2 for "neutral," and 3 for "disagree." The grading system for this scale yielded values ranging from 20 to 60 degrees.

After the data was gathered, opened, and tabulated, statistical analysis software (SPSS) for the social sciences was used to examine it. The study utilized many statistical techniques such as range, frequencies, percentages, arithmetic mean, t-test, weighted mean, standard deviation, simple correlation coefficient for Pearson and coefficient of correlation for Spearman, and analysis of variance.

Results and Discussion

Identifying the attitude of full-time extension workers toward supervising the work of private agricultural enterprises in Sulaymani Governorate: The survey results showed that, with an arithmetic average of 45.86 degrees and a standard deviation of 7.51 degrees, the respondents obtained the highest numerical value, 59 out of 60 degrees, and the lowest numerical value, 27 degrees. As indicated in Table 1, the degrees of the attitudes were separated into three categories (low, medium, and high) after one standard deviation degree was added to and subtracted from the arithmetic mean.

Table 1: Distribution Attitudes Towards Supervising Work in Sulaymani Governorate.

Categories of Attitudes	Frequency	% Percent	Mean of Attitude	Std. Deviation
(27 – 37) Negative	17	13.40	33.41	7.51
(38 – 48) Neutral	59	46.40	42.95	
More than(48) Positive	51	40.20	53.37	
Total	127	100	45.86	

Table 1. shows that most respondents 46.40% were in the Neutral category, followed by 40.20% in the Positive category, indicating that 86.6% of the participants were in the Neutral and Positive categories. This result indicates that the respondents strongly desire to supervise agricultural projects in the private sector in the future, as their professional specialties are related to work in this field.

Finding the difference between the respondents' attitudes toward overseeing the work of private agricultural projects in Sulaymani Governorate and the studied independent variables (age, gender, profession title, marital status, place of residence, vocational interest, post-graduation work tenure, and exposure to agricultural sources):

Age: The age range of the research participants was 21–37 years, with a standard deviation of 7.51 and a mean of 27.72 years. Participants were divided into four different age divisions. Notably, the plurality of responders (44.1% of the sample) was between 25 and 28. The average attitude score was 46.29 degrees. In contrast, respondents over 32 made up the smallest fraction, accounting for 7.9% of the total, with an average attitude score of 49.20 degrees. To find variations in the mean attitude levels among respondents of various ages, an analysis of variance (ANOVA)

was employed. The calculated F-value (estimated ANOVA statistic) was 1.29, less than the crucial limit, so the research hypothesis was rejected. This finding shows no significant differences in views about agricultural project supervision across the various age groups studied, Table 2.

Gender: According to the research findings, female participants comprised 64.57% of the total respondent pool across all demographic categories, with male participants accounting for the remaining 35.43%. To evaluate differences in the arithmetic means of respondents' views toward their gender, a t-test was applied, yielding a value of 2.56. At a significance level of 0.01, this value beat the basic tabular t-value. Consequently, the research hypothesis is confirmed, demonstrating that respondents' attitudes toward managing agricultural projects differ significantly by gender. This observation is related to the assumption that directing agricultural projects in the private sector is mainly perceived as more suitable for men. This perception assumes that males possess the requisite abilities for performing supervisory duties and are always available on agricultural holdings Table 2.

Profession Title: According to the study's findings, 52.76% of respondents across all demographic categories identified as agricultural technicians, with agronomists accounting for the remaining 47.24%. The arithmetic means of the respondents' attitudes were compared according to their professional titles using a t-test, and the result was 0.88. At the 0.05 significance level, this value was less than the critical tabular t-value. The research hypothesis is thus rejected, as demonstrated by Table 2, which also shows that there are no appreciable variations in respondents' opinions regarding their readiness to supervise agricultural projects when respondents are categorized according to their professional titles.

Marital Status: The married category had the greatest number of respondents (59.85%), followed by the single category (40.15%), according to the research data. To assess differences in the arithmetic means of respondents' views about their marital status, a t-test was used, obtaining a result of 2.57, which, at a significance level of 0.01 over the critical tabular t-value. Consequently, the study hypothesis has been supported, indicating that respondents' perspectives of their inclination to oversee agricultural projects vary based on their marital status.

This observation may be attributed to married individuals' heightened responsiveness and commitment towards their work compared to their unmarried counterparts, Table 2.

Place of residence: The research findings indicate that the largest proportion of respondents is associated with the categories of Districts and sub-districts, constituting 39.38%, while the lowest percentage is attributed to the City Center category, which stands at 28.34%. To assess discrepancies in the arithmetic means of respondents' attitudes about their place of residence, after an analysis of variance (ANOVA), 11.92 was the result. At a significance level of 0.01, this result is more than the essential tabular F-value. Thus, the study hypothesis is supported, showing that respondents have observable differences in their opinions about whether or not they would like to oversee agricultural projects depending on where they live. This finding implies that people living in rural areas are more likely to be open to working as supervisors on agricultural projects. This tendency can be explained by their

experience in agriculture and their increased understanding of the value of project management in the agricultural industry, Table 2.

Vocational interest: The research outcomes revealed that the largest proportion of respondents pertained to the "Interested" category, encompassing 74.03% of the sample, while the "Not Interested" category exhibited the lowest representation, accounting for a mere 1.57%. To investigate variances in the arithmetic means of respondents' attitudes concerning their professional interest, after using an analysis of variance (ANOVA), a computed value of 5.44 was obtained. At the significance level of 0.01, this value is more than the critical calculated F-value. Consequently, the research hypothesis is supported, indicating that participants had differing opinions regarding their preference to oversee agricultural projects depending on their expertise. This difference can be explained by the proactive involvement of full-time agricultural agents who are eager to improve their professional skills and, as a result, encourage a more positive shift in their attitudes in comparison to their peers, especially when it comes to supervisory positions in agricultural projects in the Iraqi Kurdistan region (Table 2).

Post-graduation work tenure: the research findings revealed that the most substantial proportions of respondents were affiliated with the "1 and less" category, constituting 32.28% of the sample, while the "Unemployment" category exhibited the lowest representation, accounting for 20.48%. To examine disparities in the arithmetic means of respondents' attitudes about their post-graduation work tenure, after using an analysis of variance (ANOVA), a computed value of 6.32 was obtained. At the significance level of 0.01, this value is more than the critical computed F-value. As a result, the research hypothesis is supported, showing that respondents had differing opinions about whether or not they would prefer to oversee agricultural projects depending on how long they have worked after graduation. This result can be explained by the beneficial impact of post-graduation professional experience, which increases respondents' inclination to stay in their specialization and take on supervisory jobs in the private agriculture industry (Table 2).

Exposed to Agricultural sources: Based on the research findings, the respondents' degree of exposure to agricultural resources had a mean value of 18.86 degrees. A recorded degree of 11 degrees was the lowest, and the highest significant numerical number was 25 degrees. The respondents were split into three groups according to the frequency of their interactions with agricultural resources. Table 2 indicates that the majority of respondents (40.90%) belonged to the "Medium" group, while the lowest percentage 26.0% was classified as "High" in the same category. To assess variations in the arithmetic means of respondents' perceptions of their exposure to agricultural resources, an analysis of variance (ANOVA) was conducted. The final value of 8.61 was higher than the crucial computed F-value at a significance level 0.01. Thus, the study's hypothesis is supported. This indicates how respondents' opinions regarding how much they would like to supervise farming initiatives differ based on their access to agricultural resources. This result could be explained by the fact that most full-time mentors and professionals finish their university coursework and agricultural degrees using primary sources or methodological books.

Table 2: Distribution and differences in the attitude of full-time extension workers according to variables.

Variables	Frequency	%	Average of attitude	F	Sig.
Age					
21-24	21	16.5	46.00	1.29	N.S
25-28	56	44.1	46.29		
29-32	40	31.5	44.35		
More than (32)	10	7.9	49.20		
Place of Residence					
City Center	36	28.34	45.67	11.92	S
Districts and sub-district	50	39.38	42.72		
Villages	41	32.28	49.85		
Vocational interest					
Not Interested	2	1.57	40.00	5.44	S
Medium	31	24.40	42.45		
Interested	94	74.03	47.11		
Post-graduation work tenure/ Years					
1 and less	41	32.28	42.73	6.32	S
2	31	24.41	45.03		
3	29	22.83	47.38		
Unemployment	26	20.48	50.08		
Exposure to agricultural sources					
Low (11-15)	42	33.10	43.10	8.61	S
Medium (16 - 20)	52	40.90	45.52		
High (21 - 25)	33	26.00	49.91		
Variables	Frequency	%	Average of attitude	t-test	Sig.
Gender					
Male	45	35.43	48.11	2.56	S
Female	82	64.57	44.62		
Profession Title					
Agronomists	60	47.24	46.48	0.88	NS
Agricultural technicians	67	52.76	45.30		
Marital Status					
Single	51	40.15	43.80	2.57	S
Married	76	59.85	47.24		
Total	127	100			

* S = Significant

NS =Not Significant.

Conclusions

1. The study's findings revealed that the overall inclination toward supervisory roles within private agricultural projects falls within the moderate to high range. This suggests that the respondents acknowledge the significance of the agricultural sector as a conducive domain for employment and investment, with its diverse activities offering substantial opportunities for enhanced income and a more favorable economic outlook.
2. The research variables covering gender, marital status, place of residence, professional interest, length of employment after graduation, and exposure to agricultural sources show a significant difference in the respondents' attitudes

toward participation in private agricultural projects in the Sulaymani Governorate, it can be concluding that:

- Men are more likely than women to be present in agricultural settings and possess the necessary abilities to carry out their supervisory roles.
 - There is a link between an individual's marital status and a higher proclivity to take administrative and supervisory positions. This attitude is sometimes attributed to their heightened sense of duty and a genuine yearning to engage sincerely in administrative and supervisory duties.
 - Respondents residing in rural areas exhibit a more favorable perspective than their urban counterparts. This divergence can be attributed to the rural respondents' agricultural background or prior involvement in agricultural pursuits, rendering them better equipped to comprehend and oversee agriculture's intricacies, challenges, and advantages.
 - There is a strong interest in the profession on the part of a group of respondents, in their belief that it increases the individual's performance and productivity, unlike another group, who said that interest in the profession does not affect the performance of the supervisory process.
 - The post-graduation work tenure gives individuals a deeper understanding of agricultural operations and their technical and administrative details and helps them make better, more data-based, and analytical agricultural decisions.
 - Respondents' exposure to agricultural resources can increase their direct agricultural experience and enable them to understand farmers' challenges better. Therefore, they can have a more attentive and sympathetic view of agricultural issues.
3. There is a notable uniformity in the respondents' viewpoints concerning their engagement in private agricultural projects within the Sulaymani Governorate, as evidenced by the congruence across various research variables, such as age and professional title. This consistency results from the significant agreement that respondents from all categories have shown in how they perceive these characteristics.

Recommendations and suggestions:

1. Activating the role of agricultural extension directorates and associations of agricultural professionals and engineers in providing more job opportunities for agricultural management and extension department graduates and employing them as supervisors of agricultural projects in the public and private sectors.
2. To address the training needs of full-time agricultural extension workers and advance their knowledge and abilities, specifically in agricultural business management and agricultural extension, it is imperative to establish specialized training programs.
3. Increasing the number of agricultural supervisors by opening the door for appointment so that the extension staff can carry out the required role by disseminating and adopting modern technologies in agricultural projects.
4. Conduct additional studies of a similar nature to identify supervisory agricultural issues that may impede the advancement of agricultural initiatives within the governorate.

Supplementary Materials:

There are no Supplementary Materials.

Author Contributions:

Author D. A. Kalhory: methodology, writing—original draft preparation, Author T. M. L. Hasan and Author M. O. Sakinaa writing—review and editing. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement:

The study was based on primary data collected from a random sample of cotton farmers in Baghdad Governorate.

Conflicts of Interest:

The authors assert that the absence of any conflicts of interest during the information-gathering phase is essential to completing this research endeavor.

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