

Exploring Factors Influencing Organizational Commitment Among Extension Agents

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This study explored factors influencing organizational commitment among extension agents in the United States, utilizing a national sample and multiple established scales. The research examines the relationships between job satisfaction, supervisor relationship, personal well-being, and organizational commitment, while also considering salary satisfaction, job loyalty, and demographic variables. The study employed Principal Component Analysis and Ordinary Least Squares regression to analyze the relationships between independent variables and organizational commitment.

Keywords: job loyalty, salary satisfaction, job satisfaction, gender, supervisor relationship, personal well-being, salary

Introduction

Extension systems face persistent challenges in developing and retaining professionals despite decades of research (Arnold & Place 2010a; Bengé & Harder, 2017; Clegg, 1967; Lopez-Escobar et al., 2024; Raju et al., 2024; Siegelin, 2023; Simon, 2025). Prior studies have examined job satisfaction (Arnold & Place, 2010a; Siegelin et al., 2021; Simon, 2025), supervisory relationships (Benge & Harder, 2017; Siegelin et al., 2021), and employee retention (Forstadt & Fortune, 2016; Safrit & Owen, 2010). U.S. Extension leaders have also identified retention as a priority issue (ECOP, 2002). Most research has focused on single institutions or limited variables. This study addresses these gaps by analyzing a national sample of U.S. Extension and Advisory Services (EAS) professionals using Herzberg's Motivation-Hygiene Theory (Herzberg et al., 1959/1993). By integrating measures of *Job Satisfaction* (Smerek & Peterson, 2007), *Supervisor Relationship*, *LMX* 7 (Graen & Uhl-Bien, 1995), *Personal Wellbeing*, *GHQ-12* (Goldberg & Williams, 1988), and attitudinal factors such as *salary satisfaction* and *job loyalty*, this research provides a comprehensive understanding of predictors of *Organizational Commitment*, OCQ (Mowday et al., 1979).

Literature Review

Perspectives on EAS Professionals' Motivation

Several scholars have studied the motivation of EAS professionals to understand or improve employee success. Raju et al. (2024) explored the motivations of Indian extension professionals, finding that financial incentives alone were insufficient for long-term commitment and emphasizing the need for professional development opportunities. They observed that a satisfied workforce is better equipped to perform effectively, which in turn contributes to the overall success of the organization. Such a satisfied workforce is more likely to be engaged and productive, making *Job Satisfaction* a critical element in achieving organizational success (Herzberg et al., 1959/1993; Smerek & Peterson, 2007).

Similarly, Lopez-Escobar et al. (2024) discovered that perceived career stagnation led to higher turnover intentions among female Latin American university graduates working in the agricultural industry. These findings align with broader global trends in extension systems, where intrinsic factors such as recognition and career mobility play a crucial role in workforce retention. Albert et al. (2017) explored competency and career stage models and found “in Haiti's case, extension agencies could use inexpensive positive influences to help mitigate the effects of negative influences on career development” (p. 118). Sloan's (2017) findings suggest that gender dynamics and supportive coworker relationships may enhance *Organizational Commitment*, a consideration explored in our model. She also noted that there tended to be less gender bias and clearer promotional pathways for women in public jobs than in the private sector.

Collectively, these studies demonstrate that employee attitudes, professional growth, recognition, and workplace relationships matter for retention-related outcomes; however, the literature reviewed to this point does not clearly show how these factors have been examined

together among United States EAS professionals using an integrated model that includes organizational commitment, personal wellbeing, and willingness to seek other employment.

Yirsaw et al. (2025) found that Ethiopian health extension workers suffer from considerable burnout stemming from long working hours, insufficient resources, and high community expectations, which contribute to elevated attrition rates. These results correspond with broader international trends, where work-life balance and institutional support are crucial in alleviating burnout and turnover among extension professionals (Chambel & Carvalho, 2022).

Although these studies suggest that well-being may influence work attitudes and retention-related outcomes, the present literature review provides limited evidence that personal wellbeing has been explicitly incorporated alongside organizational commitment in studies of United States EAS professionals. This omission may be important because decisions are not only shaped by organizational conditions but also by how individuals experience their own wellness and capacity to continue in their roles (Forstadt & Fortune, 2016).

Supervisor Relationships

The role of supervisor relationships with county and regional supervisors has been well studied in the U.S. Benge and Harder (2017) utilized a leader-member exchange scale, *Supervisor Relationship* (Graen & Uhl-Bien, 1995) to document the quality of the relationships between local extension professionals in the U.S. and their supervisors from the perspective of the extension professionals. They found that, in general, these relationships were of high quality once established. Siegelin et al. (2021) found that there was a weak relationship when considering the quality of supervisory relationships and career intentions for early career EAS professionals in Montana, U.S.

This literature suggests that supervisory relationships are relevant to understanding employee experience, but it also indicates that the quality of these relationships alone may not fully explain career intentions. This reinforces the need to examine additional explanatory variables, particularly the relationships between organizational commitment and personal wellbeing, job satisfaction, and supervisor relationships.

Structural Factors

Many authors have encouraged structural and professional development changes that focus on the motivators or hygiene factors identified in Motivation-Hygiene theory (Amend, 1970; Clegg, 1967; Fourman & Jones, 1997; Herzberg et al., 1959/1993; Siegelin, 2023; Simon, 2025). Arnold and Place (2010b) identified hiring the right people in the right place, career support, recognition, merit-based salary increases, professional development, addressing salary compression, and exercising care not to overload senior extension professionals with service to the organization as strategies to address and reduce burnout and turnover. Siegelin (2023) found excessive bureaucratic or policy structures were a consistent and persistent source of dissatisfaction for EAS professionals in the U.S. Interpersonal conflict, when present, was the only factor that surpassed bureaucracy and policy as a source of dissatisfaction in both the

intensity and the rate at which the dissatisfaction developed. The level of dissatisfaction was mirrored by the satisfaction that EAS professionals found in serving their communities, helping others become more successful, and the positive relationships they had with clientele and peers.

Taken together, the literature shows that EAS professionals' experiences are influenced by motivational, relational, and structural factors. Siegelin et al. (2021) identified a correlation between job satisfaction (Smerek & Peterson, 2007) and the ratio of an EAS's prediction of their time in that role and their entire career. The addition of an established organizational commitment scale (Mowday et al., 1979) moves beyond the predictions of an uncertain career path. Many studies explore the concept of burnout among EAS professionals; no studies were found that considered personal wellbeing or general mental health considerations. This study allowed for consideration of personal wellbeing, job satisfaction, and supervisor relationship and their relationships to organizational commitment. Additional demographic or attitudinal factors were also included. This multifactor study was designed to help elucidate the complexities of EAS professionals' organizational commitment.

Theoretical Framework

Herzberg's (1959/1993) Motivation-Hygiene Theory underpins this study, positing that intrinsic motivators (e.g., achievement, recognition) drive satisfaction, while unaddressed hygiene factors (e.g., salary, supervision, conflict) result in dissatisfaction. Applying this framework, we hypothesize that *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing*, along with demographic and attitudinal variables, predict *Organizational Commitment* among EAS professionals. This approach extends prior research by examining multiple factors simultaneously in a national context.

In this framework, *Organizational Commitment* (Mowday et al., 1979) served as the primary dependent variable. *Job Satisfaction* (Smerek & Peterson, 2007), *Supervisor Relationship* (Graen & Uhl-Bien, 1995), and *Personal Wellbeing*, (Goldberg & Williams, 1988) served as the independent variables. *Gender*, *salary*, *salary satisfaction*, and *job loyalty* serve as additional variables of interest (Figure 1).

Figure 1*Organizational Commitment Research Model.*

Note: Blue and green circles represent established scales; purple circles represent characteristics or attitudes of respondents.

Purpose

The purpose of this study was to provide a comprehensive understanding of relationships between EAS professionals' *Organizational Commitment* and *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing*, with additional consideration of demographic and attitudinal factors. While existing studies have focused on partial dimensions of contributing factors to *Organizational Commitment*, this study expands the understanding of career commitment among extension professionals by exploring the relationships between multiple factors based on a sample of extension professionals across the U.S..

To achieve this goal, the study examines how aggregate scores for *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing* relate to *Organizational Commitment*, while controlling for other variables and demographic factors. Specifically, the study tests the following null hypotheses:

- H₀₁: *Job Satisfaction* has no significant relationship with *Organizational Commitment*.
- H₀₂: *Supervisor Relationship* has no significant relationship with *Organizational Commitment*.

- H₀₃: *Personal Wellbeing* has no significant relationship with *Organizational Commitment*.
- H₀₄: *Age* has no significant relationship with *Organizational Commitment*.
- H₀₅: *Career intention* rate has no significant relationship with *Organizational Commitment*.
- H₀₆: *Salary* has no significant relationship with *Organizational Commitment*.
- H₀₇: *Salary satisfaction* has no significant relationship with *Organizational Commitment*.
- H₀₈: *Gender* has no significant relationship with *Organizational Commitment*.
- H₀₉: *Job loyalty* has no significant relationship with *Organizational Commitment*.

Finally, we expect that the research findings of this study will provide implications for policymakers and extension organizational leaders in enhancing extension agents' commitment through targeted interventions in *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing*.

Research Procedures and Methods

A nationwide survey was distributed in the U.S. via Qualtrics. Data were analyzed using OLS regression to assess relationships between predictors and *Organizational Commitment*. Utilizing four well-established scales, allowed for consideration of all four factors within the same sample. To our knowledge, the *Organizational Commitment* and *Personal Wellbeing* scales have not previously been applied within the U.S. Extension context.

Organizational Commitment (Mowday et al., 1979) was the primary dependent variable to assess its relationships with motivation/hygiene factors ($\alpha=.82$ to $.92$, Mowday, 1982). Smerek and Peterson's (2007) questionnaire was developed as an overall measure of satisfaction as it relates to the Motivation-Hygiene theory. The *Supervisor Relationship* scale (Graen and Uhl-Bien, 1995) was used to measure the hygiene factor of supervision ($\alpha=.83$ to $.90$, Davis & Bryant, 2010; Zhang et al., 2012). The *Personal Wellbeing* scale (Goldberg & Williams, 1988) measured potential overall attitudes and mental health ($\alpha=.82$ to $.92$, Wojujutari, 2024). In addition to these established scales, we gathered information on the respondents' *age*, *gender*, *salary*, *career intention*, *salary satisfaction*—whether they could make more or less money outside extension, and what percentage of their remaining career would be spent working for extension. Salary related questions were addressed as a hygiene factor. The remaining questions gathered information about future intent or demographic characteristics.

We had Extension evaluation faculty with extensive and diverse experience in research methodologies review the proposed questionnaire. Modifications to the questionnaire were made according to the advice provided through an iterative process. No changes were made to the *Job Satisfaction*, *Supervisor Relationship*, *Personal Wellbeing*, or *Organizational Commitment* scales.

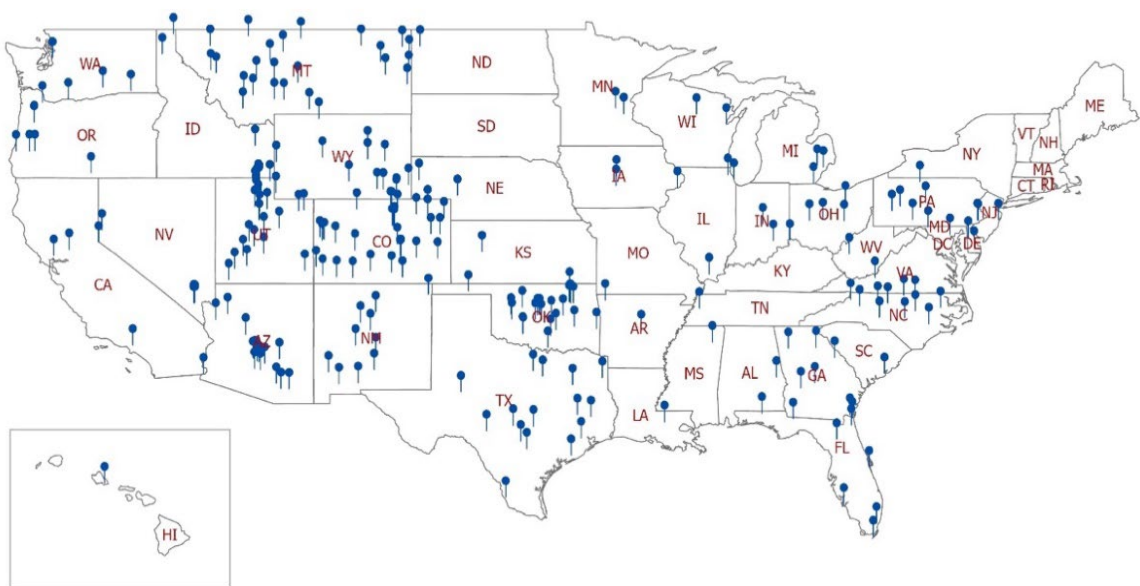
The survey was distributed using a snowball sampling methodology via Qualtrics. Snowball sampling was selected for three reasons. Snowball sampling is a non-probability, network-based approach in which initial participants recruit additional participants from their

professional or social ties, making it particularly useful for accessing hard-to-reach or hidden populations (Hazari, 2024; Heckathorn, 2011; Noy, 2008). Scholars note that network-based recruitment can facilitate participation when the topic is sensitive, because it reduces reliance on organizational gatekeepers and can enhance respondents' perception of anonymity and voluntariness (Hazari, 2024; Noy, 2008). This method of sampling allows for efficient data collection (Marshall, 2019) through professional and peer networks. In this study, identifying and contacting all United States EAS professionals through a complete sampling frame and formal administrative approach was possible, but logistically cumbersome and resource-intensive; using participants' professional and peer networks enabled more efficient data collection (Marshall, 2019). Taken together, these considerations led us to treat United States EAS professionals as a practically hard-to-reach population for this study and to conclude that snowball sampling was an appropriate sampling technique (Hazari, 2024; Heckathorn, 2011; Marshall, 2019; Noy, 2008).

To maximize participation, the research team leveraged their networks, including the National Association of Extension Professionals, Staff Development, the Joint Council of Extension Professionals member organizations, and the Extension Foundation, to share the questionnaire through email and social media. The nationwide survey was conducted in 2023. In accordance with IRB requirements, participants were screened by asking for their age and educator role; confirming that they were at least 18 years old, extension educators, and consented to participate in the research. Ultimately, 357 valid responses were obtained out of 532 total responses (Figure 2).

Figure 2

U.S. Geographic Distribution of Valid Survey Respondents (n = 357)



For the statistical analysis, all Likert scale questions related to *Job Satisfaction* (4 levels, 3 questions), *Supervisor Relationship* (5 levels, 7 questions), *Personal Wellbeing* (4 levels, 12 questions), and *Organizational Commitment* (5 levels, 15 questions) have been re-organized with a positive ordinal scale (where higher values indicate more positive outcomes) and standardized to ensure equal comparisons. Lastly, all missing values were addressed using Multiple Imputation (MI) with seven simulations, as approximately 7% of the observations for Question 51 (Amount of Salary) were missing (Von Hippel, 2009) (Table 1).

Table 1*Multiple Imputation Results for Missing Values*

Question numbers that have missing values	Complete	Incomplete	Imputed	Total
<i>Job Satisfaction</i> (Q6_1)	353	4	4	357
<i>Job Satisfaction</i> (Q6_2)	356	1	1	357
<i>Job Satisfaction</i> (Q6_3)	355	2	2	357
<i>Supervisor Relationship</i> (Q9)	356	1	1	357
<i>Personal Wellbeing</i> (Q18)	356	1	1	357
<i>Personal Wellbeing</i> (Q19)	355	2	2	357
<i>Personal Wellbeing</i> (Q20)	355	2	2	357
<i>Personal Wellbeing</i> (Q22)	355	2	2	357
<i>Personal Wellbeing</i> (Q25)	356	1	1	357
<i>Personal Wellbeing</i> (Q27)	356	1	1	357
<i>Organizational Commitment</i> (Q31)	356	1	1	357
<i>Organizational Commitment</i> (Q32)	356	1	1	357
<i>Organizational Commitment</i> (Q34)	356	1	1	357
<i>Organizational Commitment</i> (Q36)	356	1	1	357
<i>Organizational Commitment</i> (Q40)	356	1	1	357
<i>Organizational Commitment</i> (Q41)	356	1	1	357
<i>Organizational Commitment</i> (Q43)	356	1	1	357
<i>Career Intention rate</i> (Q45/47*100)	348	9	9	357
<i>Amount of Salary</i> (Q51)	333	24	24	357

In addition, we conducted a reliability test to ensure that the internal consistency of the scales was adequate for the study population, particularly those used primarily in international contexts (Table 2). The index of reliability alpha scores for the scales used in this study ranged from 0.846 to 0.910, indicating an acceptable level of internal consistency. A Cronbach's alpha coefficient greater than .7 is considered to have acceptable reliability (Tavakol & Dennick, 2011). Other researchers have determined that Cronbach's alpha values ranging from 0.70 to 0.95 are acceptable (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVellis, 2003), and , values greater than 0.90 are excellent (Taber, 2018). Reliability coefficients were comparable to or exceeded those reported in prior applications of these scales.

Table 2*Reliability Scores of the Selected Scales/Constructs*

Constructs/variables	Number of items	Cronbach's Alpha
<i>Supervisor Relationship</i>	7	0.910
<i>Personal Wellbeing</i>	12	0.903
<i>Organizational Commitment</i>	15	0.894
<i>Job Satisfaction</i>	3	0.846

Next, Principal Component Analyses were conducted on each standardized variable related to Job Satisfaction, Supervisor Relationship, Personal Wellbeing, and Organizational Commitment to reduce the dimensionality of the original data set (Table 2). These four Principal Components (PCs) are expressed as follows:

$$PC_i = a_{i1}X_1 + a_{i2}X_2 + \cdots + a_{in}X_p = \sum_{j=1}^n a_{ij}X_j$$

where $i = 1, 2, \dots, p$ and $j = 1, 2, \dots, n$. PC_i represents four PC variables: *Organizational Commitment*, *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing*. X_j refers to the standardized original variables that are correlated with each PC variable. The coefficient a_{ij} are the components of eigenvectors, which are derived from the correlation matrix of the X s.

Finally, our Ordinary Least Squares (OLS) model comprises four standardized PC variables, three non-PA continuous variables, and seven dummy variables as follows (Table 2),

$$Y_i = \alpha + \beta_1 PC_i + \beta_2 X_i + \beta_3 \delta_i + \varepsilon_i$$

where i denotes the number of observations ($i = 1, \dots, n$), Y_i refers to the *Organizational Commitment* PC dependent variable for the i -th observation, α represents the intercept, PC_i and X_i represent the PC and non-PC independent variables for the i -th observation, respectively, δ_i stands for the dummy variables for the i -th observation, β is the coefficient of each variable, and ε_i is the error term for the i -th observation. To be more specific, PC_i consists of three PC variables: *Job Satisfaction*, *Supervisor Relationship*, and *Personal Wellbeing*. X_i comprises three non-PC continuous variables: *age*, *career intention rate*, and *Amount of Salary*. δ_i includes four variables for *job loyalty* (baseline: "I am actively seeking new employment"), one variable for *gender* (baseline: male), and two variables for *salary satisfaction* (baseline: "I am paid less than I could earn working for other organizations in my profession").

Table 3*Overview of Variables in the Research Model*

Variable names (Question numbers)	Descriptions
<i>Organizational Commitment</i> (Q29-43)	PC variables
<i>Job Satisfaction</i> (Q6: 1-3)	
<i>Supervisor Relationship</i> (Q8-14)	
<i>Personal Wellbeing</i> (Q16-27)	
<i>Age</i> (Q3)	Non-PC continuous variables
<i>Career Intention rate</i> (= Q45/Q47*100)	
<i>Amount of Salary</i> (Q51)	
<i>Job Loyalty</i> (Q44)	Dummy variables (1 if yes, 0 otherwise)
<i>Gender</i> (Q49)	
<i>Salary Satisfaction</i> (Q50)	

Results

Table 4 presents selected descriptive statistics of survey respondents without applying MI.

Table 4

Selected Descriptive Statistics of the Survey Respondents without Multiple Imputation

Variables	bs.	Mean	Std. Dev.	Min	Max
<i>Age</i> (Q3)	57	44.8	11.887	18	72
<i>Amount of Salary</i> (Q51)	33	66,250	22,972	6,000	200,000
<i>Gender</i> (Q49)	Male: 102 (29%) Female: 234 (66%) Prefer not to say: 16 (5%)				

Note. A complete table of descriptive statistics is available in Table A1 in the Appendix.

Tables 5 and 6 present the results of the OLS analysis and model fit statistics. With seven multiple imputations, the analysis yields a mean adjusted R^2 of 0.518, reflecting a reasonable level of explanatory power for a behavioral study model (Ozili, 2022). The mean Variance Inflation Factor (VIF) of 1.76 indicates low multicollinearity, suggesting that the regression coefficients are likely to be stable. Overall, the model is statistically significant (Prob > F = 0.0000), demonstrating that the predictors collectively account for a substantial portion of the variance in the dependent variable.

Table 5*Ordinary Least Squares Results*

Variables	Coeff.	Std. err.	t	P > t	[95% conf. interval]	
<i>Job Satisfaction</i> ***	0.801	0.083	9.630	0.000	0.637	0.964
<i>Supervisor Relationship</i> **	0.132	0.052	2.550	0.011	0.030	0.233
<i>Personal Wellbeing</i> **	0.114	0.048	2.360	0.019	0.019	0.208
<i>Age</i>	0.002	0.010	0.220	0.828	- 0.017	0.022
<i>Career Intention rate</i>	0.000	0.001	0.650	0.514	- 0.001	0.001
<i>Amount of Salary</i>	- 0.000	0.000	- 1.240	0.216	- 0.000	0.000
<i>Job Loyalty</i> (baseline is actively seeking employment)						
Preparing to leave soon	0.026	0.374	0.070	0.945	- 0.710	0.762
Content *	0.608	0.328	1.850	0.065	- 0.037	1.253
Retire from position ***	0.936	0.357	2.620	0.009	0.233	1.639
Retire from organization **	0.900	0.366	2.460	0.015	0.179	1.621
<i>Gender</i> * (baseline is male)	0.350	0.206	1.690	0.091	- 0.056	0.756
<i>Salary Satisfaction</i> (baseline is paid less than elsewhere)						
Paid the same somewhere else ***	0.558	0.206	2.710	0.007	0.154	0.963
Paid more than somewhere else **	0.913	0.407	2.240	0.025	0.113	1.713
Intercept	- 0.779	0.556	1.400	0.162	- 1.873	0.316

Note. Number of obs. = 357 Imputations = 7 Complete DF = 343 (min = 249.33, avg = 329.03, max = 340.91)

Average RVI = 0.0104 Mean VIF: 1.76 F (13, 340.8) = 30.10 Prob > F = 0.0000 Largest FMI = 0.0731

*** $p < .01$, ** $p < .05$, * $p < .10$

Table 6*Standardized Coefficients and R-squared Summary Statistics over 7 imputations*

Variables	Mean	Min	p25	Median	p75	Max
<i>Job Satisfaction</i>	0.486	0.481	0.483	0.486	0.490	0.491
<i>Supervisor Relationship</i>	0.113	0.112	0.112	0.113	0.113	0.114
<i>Personal Wellbeing</i>	0.110	0.108	0.108	0.110	0.112	0.114
<i>Age</i>	0.010	0.005	0.007	0.009	0.013	0.018
<i>Career Intention rate</i>	0.025	0.017	0.018	0.023	0.032	0.037
<i>Amount of Salary</i>	- 0.056	-0.073	- 0.065	- 0.056	- 0.049	- 0.040
<i>Job Loyalty</i> (baseline is actively seeking employment)						
Preparing to leave soon	0.003	0.000	0.001	0.004	0.005	0.006
Content	0.110	0.108	0.109	0.110	0.112	0.113
Retire from position	0.168	0.162	0.167	0.169	0.170	0.171
Retire from organization	0.138	0.134	0.137	0.139	0.140	0.141
<i>Gender</i> (baseline is male)	0.067	0.062	0.063	0.066	0.070	0.072
<i>Salary Satisfaction</i> (baseline is paid less than elsewhere)						
Paid the same somewhere else	0.105	0.103	0.104	0.105	0.106	0.107
Paid more than somewhere else	0.088	0.086	0.088	0.088	0.089	0.090
R-square	0.536	0.534	0.535	0.535	0.536	0.538
Adj R-square	0.518	0.517	0.518	0.518	0.518	0.521

H₀₁: Job Satisfaction has no significant relationship with Organizational Commitment.

We rejected the null hypothesis. The test result shows that *Job Satisfaction* is a strong predictor of *Organizational Commitment* across all scales in the model. Specifically, a one standard deviation increase in *Job Satisfaction* corresponds to a 0.801 standard deviation increase in *Organizational Commitment* ($p < 0.001$), holding other variables constant. This suggests that employees who report higher satisfaction with their job environment are substantially more committed to their organization.

H₀₂: Supervisor Relationship has no significant relationship with Organizational Commitment.

We rejected the null hypothesis. A one standard deviation increase results in a 0.132 standard deviation increase in *Organizational Commitment* ($p = 0.011$), holding other variables constant. While the magnitude is smaller than for *Job Satisfaction*, the relationship remains statistically significant, indicating that supportive supervisory relationships are positively associated with greater commitment.

H₀₃: Personal Wellbeing has no significant relationship with Organizational Commitment.

We rejected the null hypothesis. A one standard deviation increase in *Personal Wellbeing* is associated with a 0.114 standard deviation increase in *Organizational Commitment* ($p = 0.019$), holding other variables constant. Although the effect size is moderate, the result emphasizes the importance of employee mental health and wellness in fostering *Organizational Commitment*.

H₀₄: Age has no significant relationship with Organizational Commitment.

We failed to reject the null hypothesis. *Age* does not show a statistically significant relationship with *Organizational Commitment* ($p = 0.828$). This suggests that, across the sample, age alone does not differentiate levels of commitment once other factors are accounted for.

H₀₅: Career Intention rate has no significant relationship with Organizational Commitment.

We failed to reject the null hypothesis. *Career Intention* rate is not significantly associated with *Organizational Commitment* ($p = 0.514$). Although this variable reflects long-term career planning, it does not independently predict *Organizational Commitment* beyond the attitudinal and relational variables included in the model.

H₀₆: Salary has no significant relationship with Organizational Commitment.

We failed to reject the null hypothesis. The actual *Amount of Salary* is not significantly associated with *Organizational Commitment* ($p = 0.216$), suggesting that absolute income level alone is not a key driver of commitment in this study.

H₀₇: Salary Satisfaction has no significant relationship with Organizational Commitment.

We rejected the null hypothesis. *Salary Satisfaction* significantly predicts *Organizational Commitment*. Respondents who indicate they are paid “about the same as if I worked for another organization in my profession” report 0.558 standard deviation higher *Organizational*

Commitment ($p = 0.007$), and those who indicate being “paid more than I could earn working for other organizations in my profession” report an even larger effect ($\beta = 0.913$, $p = 0.025$), compared to those who report being paid less than they could earn elsewhere. These findings suggest that perceived fairness and competitiveness in pay are more important than the actual amount of income in predicting employee commitment.

H₀₈: Gender has no significant relationship with Organizational Commitment.

We failed to reject the null hypothesis, finding that *Gender* did not have a statistically significant relationship to *Organizational Commitment* ($p = 0.091$). The p-value may indicate a potential trend worth further investigation. Female respondents exhibit 0.350 standard deviation higher *Organizational Commitment* compared to male respondents, holding other factors constant. This difference may reflect broader trends in motivation and relational engagement, which warrant exploration.

H₀₉: Job Loyalty has no significant relationship with Organizational Commitment.

We partially reject the null hypothesis. The effect of *Job Loyalty* on *Organizational Commitment* depends on the specific category reported by respondents. Compared to the baseline group (“I am actively seeking new employment”):

- Respondents who indicate “I hope to find a new position with a different employer in the next few years” do not report a statistically significant difference in *Organizational Commitment* ($\beta = 0.026$, $p = 0.945$). We failed to reject the null hypothesis for this category.
- Respondents who indicate “I am content in my current position” report 0.608 standard deviation higher *Organizational Commitment* ($p = 0.065$). We failed to reject the null hypothesis for this category.
- Respondents who indicate “I plan to retire from my current employer, I may be in a different role by then” report 0.900 standard deviation higher *Organizational Commitment* ($p = 0.015$). We reject the null hypothesis.
- Respondents who indicate “I plan to retire from my current position” report 0.936 standard deviation higher *Organizational Commitment* ($p = 0.009$). We reject the null hypothesis.

These results suggest that employees with retirement intentions—especially those who plan to remain in their current role—demonstrate stronger *Organizational Commitment*. In contrast, those preparing to leave soon do not differ significantly from those actively seeking new employment. These findings underscore the value of internal retention pathways and career support for long-serving staff.

Overall, the hypothesis test results revealed that, in descending order of impact, *Job Loyalty_4* (“I plan to retire from my current position”), *Salary Satisfaction_3* (“I am paid more than I could earn working for other organizations in my profession”), *Job Loyalty_5* (“I plan to retire from my current employer, though I may be in a different role by then”), and *Job Satisfaction* variables are the key factors driving increased *Organizational Commitment*. These

results highlight that creating an environment where employees are encouraged to retire from their current positions, along with enhancing *Salary Satisfaction*, plays a crucial role in boosting *Organizational Commitment*.

Discussion

Organizational Commitment among U.S. Extension professionals in this study was most strongly shaped by *Job Satisfaction*, *job loyalty* intentions, and perceived salary competitiveness, with *Personal Wellbeing* and *Supervisory Relationship* playing secondary but meaningful roles. These findings largely affirm prior Extension retention research while extending it by foregrounding perceived pay fairness and long-term intentions to retire within the organization as particularly potent antecedents of commitment.

The predominance of global *Job Satisfaction* as a predictor of commitment is consistent with Martin and Kaufman's (2013) work with Southern U.S. Extension agents, where job satisfaction and organizational commitment were tightly linked to intent to quit. In our study, a one standard deviation increase in *Job Satisfaction* corresponded to a large increase in organizational commitment, reinforcing the idea that affective reactions to the job environment—rather than demographic characteristics or absolute *salary*—anchor employees' willingness to remain with Extension. *Salary satisfaction*, especially perceptions of being paid the same as or more than comparable positions elsewhere, also significantly boosted commitment, while the actual amount of salary did not. This echoes findings from India, where Raju et al. (2024) reported that EAS professionals were most dissatisfied with pay, incentives, and promotion, despite higher satisfaction with relationships and the nature of their work. Across these contexts, perceived fairness and competitiveness of compensation appear more critical than salary levels.

Job loyalty emerged as another key dimension: respondents who planned to retire from their current position or from the organization reported substantially higher *Organizational Commitment* than those actively seeking new employment or preparing to leave soon. This future-oriented pattern supports Safrit and Owen's (2010) conceptual model that positions long-term professional fit, clear career pathways, and supportive environments as central to retaining county EAS professionals. The present study adds empirical specificity by showing that retirement-oriented intentions, rather than generic stability, are among the strongest predictors of commitment. This aligns with international work by Albert et al. (2017) in Haiti, where career development opportunities and perceived prospects within agricultural advisory systems shaped employees' sense of long-term attachment.

Supervisor Relationships and *Personal Wellbeing* also contributed significantly to commitment, though with smaller standardized effects than *Job Satisfaction* and *Salary Satisfaction*. These findings refine earlier work on leader–member exchange in Extension: Benge and Harder (2017) documented generally high-quality relationships between Florida agents and county directors but also noted ongoing turnover concerns. The current study suggests that positive supervisory relationships enhance commitment but cannot compensate for weak salary perceptions or limited long-term prospects, pointing to the need for integrated

retention strategies. The inclusion of wellbeing corroborates broader organizational research: Chambel and Carvalho (2022) found that affective organizational commitment and wellbeing are reciprocally linked in a sample from a Portuguese contact center, with commitment buffering strain and promoting engagement over time. Together, these studies indicate that Extension systems should treat mental health and stress management as strategic levers for sustaining commitment, not only as individual concerns.

Recommendations for Extension Leadership

For Extension leaders, these results suggest several priorities. First, systematic assessment of job satisfaction, pay perceptions, and wellbeing—using validated measures similar to those applied in this and related studies—can help identify units or regions where commitment may be at risk. Second, compensation systems should emphasize transparency and external equity, with clear salary bands, documented progression criteria, and mechanisms to address compression and perceived inequities across roles and regions. Third, building visible, credible career pathways that allow staff to envision retiring from Extension—through tiered roles, leadership opportunities, and intentional mid-career development—may be as important as recruitment for long-term stability, paralleling recommendations from U.S. and international work on career influences in EAS (Albert et al., 2017; Arnold & Place, 2010a; Safrit & Owen, 2010). Finally, investments in supervisory training and wellbeing supports should be embedded within a broader organizational strategy that simultaneously addresses workload, recognition, and procedural justice in pay and promotion decisions.

Limitations

This study's limitations should be acknowledged when applying its findings. The non-random sampling strategy, concentration of respondents in particular U.S. regions, and reliance on self-report data limit generalizability and raise the possibility of selection and common-method biases, even though psychometric checks were conducted. Nonetheless, the convergence between these U.S. results and evidence from Haiti, Latin America, Ethiopia, and India suggests that a common constellation of factors—satisfying work, fair and competitive pay, supportive supervision, wellbeing, and believable long-term career pathways—underpins organizational commitment among agricultural extension and advisory professionals in diverse international contexts.

References

- Albert, B., Roberts, G., & Harder, A. (2017). Career development influences of employees working in Haiti's agriculture extension and advisory services. *Journal of International Agriculture and Extension Education*, 24(2), 107-121.
<https://doi.org/10.5191/jiaee.2017.24208>
- Amend, E. H. (1970). Supervision: Motivating not controlling. *Journal of Extension*, 8(4), Article 5. <https://commons.joe.org/joe/vol8/iss4/5/>.
- Arnold, S., & Place, N. (2010a). Career influences of agriculture extension agents. *Journal of Agricultural Education*, 51(1), 11-21. <https://doi.org/10.5032/jae.2010.01011>.
- Arnold, S. & Place, N. (2010b). What influences agents to pursue a career in extension? *Journal of Extension*, 48(1), Article 9. <https://commons.joe.org/joe/vol48/iss1/9>.
- Benge, M., & Harder, A. (2017). The effects of leader-member exchanges on the relationships between extension agents and county extension directors in Florida. *Journal of Human Sciences and Extension*, 5(1), 35-49. <https://doi.org/10.54718/IKOP9350>.
- Bland J, Altman D. Statistics notes: Cronbach's alpha. *BMJ*. 1997; 314:275.
<https://doi.org/10.1136/bmj.314.7080.572>.
- Chambel, M. J., & Carvalho, V. S. (2022). Commitment and wellbeing: The relationship dilemma in a two-wave study. *Frontiers in Psychology*, 13, 816240–816240.
<https://doi.org/10.3389/fpsyg.2022.816240>.
- Clegg, D. O. (1967). Motivation theory in practice. *Journal of Extension*, 5(1), 23-29.
<https://commons.joe.org/joe/vol5/iss1/8/>.
- Davis, D. D., & Bryant, J. L. (2010). Leader-member exchange, trust, and performance in national science foundation industry/university cooperative research centers. *Journal of Technology Transfer*, 35(5), 511-526. <https://doi.org/10.1007/s10961-009-9144-0>.
- DeVellis R. (2003). *Scale development: Theory and applications*. Thousand Oaks, CA: Sage.
- Extension Committee on Organization and Policy [ECOP]. (2002). *The Extension system: A vision for the 21st century*. National Association of State Universities and Land-Grant Colleges.
- Forstadt, L., & Fortune, A. (2016). Personal sustainability: Listening to extension staff and observing organizational culture. *Journal of Extension*, 54(2). <https://doi.org/10.34068/joe.54.02.15>
- Fourman, L. S., & Jones, J. (1997). Job enrichment in extension. *Journal of Extension*, 35(5). <https://commons.joe.org/joe/vol35/iss5/10/>.
- Goldberg, D., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. Windsor: Berks.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-domain perspective. *The Leadership Quarterly*, 6(2), 219-247.
[https://doi.org/10.1016/1048-9843\(95\)90036-5](https://doi.org/10.1016/1048-9843(95)90036-5).

- Hazari, A. (2024). *Research methodology for allied health professionals: A comprehensive guide to thesis and dissertation (1st ed.)*. Singapore: Springer. <https://doi.org/10.1007/978-981-99-8925-6>.
- Heckathorn D.D. (2011). Comment: Snowball versus respondent-driven sampling. *Sociological Methodology*, 41(1), 355–366. <https://doi.org/10.1111/j.1467-9531.2011.01244.x>.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959/1993). *Motivation to work*. Taylor and Francis. Kindle Edition.
- Lopez-Escobar, M., Morales, S., Sandoval, L., & Soto, R. (2024). Perception of the glass ceiling and job satisfaction among women in the agricultural industry of Latin America. *Journal of International Agricultural and Extension Education*, 31(1), 92–108. <https://doi.org/10.4148/2831-5960.1085>.
- Marshall, F. (2019). A multisite case study: Processes small business use to capture, convert, and integrate survival knowledge. *SAGE Research methods cases, part 2*. SAGE Publications Ltd. <https://doi.org/10.4135/9781526485052>.
- Martin, P. D., & Kaufman, E. K. (2017). Double play: The need for 4-H to partner in youth sports. *Journal of Extension*, 55(5). <https://doi.org/10.34068/joe.55.05.20>.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). Employee-organization linkages: The psychology of commitment, absenteeism, and turnover. Academic Press. <https://doi.org/10.1016/C2013-0-11207-X>
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224–247. [https://doi.org/10.1016/0001-8791\(79\)90072-1](https://doi.org/10.1016/0001-8791(79)90072-1).
- Noy, C. (2008). Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *International Journal of Social Research Methodology*, 11(4), 327–344. <https://doi.org/10.1080/13645570701401305>.
- Nunnally J. & Bernstein L. (1993). *Psychometric theory*. New York: McGraw-Hill.
- Ozili, P. K. (2022). The acceptable R-Square in empirical modeling for social science research. In C. Saliya (Ed.), *Social research methodology and publishing results: A guide to non-native English speakers (pp. 134 – 143)*. IGI Global Scientific Publishing. <https://doi.org/10.4018/978-1-6684-6859-3.ch009>.
- Raju, M. S., Devarani, L., Singh, R., Singh, R., & Hemochandra, L. (2024). Job satisfaction of extension and advisory service providers of Meghalaya. *International Journal of Agriculture Extension and Social Development*, 7(8), 134–138. <https://doi.org/10.33545/26180723.2024.v7.i8b.886>.
- Safrit, R. D., & Owen, M. B. (2010). A conceptual model for retaining county extension program professionals. *Journal of Extension*, 48(2). <https://commons.joe.org/joe/vol48/iss2/2/>.
- Siegelin, S. D. (2023). *Calling, experiences, and attitudes and their influence on career commitment of extension agents and Protestant missionaries* (Publication No.

- 30529622). [Doctoral dissertation, Purdue University]. ProQuest Dissertations and Theses Global.
- Siegelin, S. D., Lee, D., & Stone, C. (2021). The influence of extension professionals' job satisfaction and the quality of relationship with department heads on field faculty career commitment to Montana State University Extension. *Advancements in Agriculture Development*, 2(3), 25-38. <https://doi.org/10.37433/aad.v2i3.137>.
- Simon, R. M. (2025). Exploring retention and satisfaction among Arkansas county-level cooperative extension employees: A job embeddedness perspective. Graduate theses and dissertations retrieved from <https://scholarworks.uark.edu/etd/6017>.
- Sloan, M. M. (2017). Gender differences in commitment to state employment: The role of coworker relationships. *Public Personnel Management*, 46(2), 170–187. <https://doi.org/10.1177/0091026017702612>
- Smerek, R. E., & Peterson, M. (2007). Examining Herzberg's theory: Improving job satisfaction among non-academic employees at a university. *Research in Higher Education*, 48(2), 229-250. <https://doi.org/10.1007/s11162-006-9042-3>.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>.
- Von Hippel, P. T. (2009). How to impute interactions, squares, and other transformed variables. *Sociological Methodology*, 39(1), 265-291. <https://doi.org/10.1111/j.1467-9531.2009.01215.x>.
- Wojujutari, A. K., Idemudia, E. S., Ugwu, L. E. (2024). The evaluation of the General Health Questionnaire (GHQ-12) reliability generalization: A meta-analysis. *PloS One*, 19(7). <https://doi.org/10.1371/journal.pone.0304182>.
- Yirsaw, A. N., Lakew, G., Getachew, E., Kasaye, M. D., Enyew, E. B., Getachew, D., & Tareke, 1967A. A. (2025). Health extension workers' job satisfaction and associated factors in Ethiopia: A systematic review and meta-analysis. *BMC Health Services Research*, 25(1), 144–10. <https://doi.org/10.1186/s12913-025-12298-4>.
- Zhang, Z., Wang, M., & Shi, J. (2012). Leader-follower congruence in proactive personality and work outcomes: The mediating role of leader-member exchange. *Academy of Management Journal*, 55(1), 111–130. <https://doi.org/10.5465/amj.2009.0865>

Appendix

Table A1*Descriptive Statistics of the Survey Respondents without Multiple Imputation*

Variables	bs.	Mean	Std. Dev.	Min	Max
<i>Job Satisfaction</i> 1-3 (Q6: 1-3):	53	3.224	0.698	1	4
Likert 4-point Scale	56	3.115	0.809	1	4
	55	2.656	0.847	1	4
<i>Supervisor Relationship</i> 1-7 (Q8-14): 5-point Scale	57	3.241	1.293	1	5
	56	3.596	1.226	1	5
	57	4.045	1.131	1	5
	57	4.112	1.182	1	5
	57	3.585	1.147	1	5
	57	3.930	1.138	1	5
	57	3.908	1.057	1	5
<i>GHQ-12</i> 1 – 12 (Q16-27): Likert 4-point Scale	57	2.613	0.736	1	4
	57	2.580	0.812	1	4
	56	2.949	0.738	1	4
	55	2.983	0.633	1	4
	55	2.383	0.781	1	4
	57	2.868	0.791	1	4
	55	2.687	0.722	1	4
	57	2.933	0.520	1	4
	57	2.849	0.841	1	4
	56	3.003	0.902	1	4
	57	3.473	0.806	1	4
	56	2.860	0.630	1	4
<i>ORGANIZATIONAL COMMITMENT</i> 1-15 (Q29-43): 5-point Likert Scale (Do you want this category in all caps?)	57	3.966	1.096	1	5
	57	3.745	1.168	1	5
	56	3.792	1.227	1	5
	56	2.317	1.216	1	5
	57	3.588	1.117	1	5
	56	4.208	0.920	1	5
	57	2.591	1.130	1	5
	56	3.329	1.119	1	5
	57	3.468	1.212	1	5
	57	3.927	1.017	1	5
	57	3.440	1.305	1	5
	56	3.014	1.218	1	5
	56	4.247	0.932	1	5
	57	3.359	1.117	1	5

	56	4.475	0.927	1	5
Age (Q3): continuous variable	57	44.804	11.887	0	72
Career Intention rate (=Q45/Q47*100)	48	77.045	185.885	0	3200
Amount of Salary (Q51): continuous variable	33	66,250.072	22,971.828	6,000	200,000
Job Loyalty (Q44): 6 categories of nominal variable	55	1. I am actively seeking new employment: 20 (Seeking a new job) 2. I hope to find a new position with a different employer in the next few years: 44 (Preparing to leave soon) 3. I am content in my current position: 103 (Content) 4. I plan to retire from my current position: 99 (Retire from position) 5. I plan to retire from current employer, I may be in a different role by then: 64 (Retire from organization) 6. Other: 25			
Gender (Q49): 4 categories of nominal variable	52	·	Male: 102 · Female: 234 · Prefer not to say: 16		
Salary Satisfaction (Q50): 3 categories of nominal variable	52	1. I am paid less than I could earn working for other organizations in my profession: 214 2. I am paid about the same as if I worked for another organization in my profession: 116 3. I am paid more than I could earn working for other organizations in my profession: 22			