Research Article:

DETERMINANTS OF ACCESS TO AGRICULTURAL SUBSIDY AND PERCEIVED SUBSIDY UTILIZATION BEHAVIOR IN SINDHULI DISTRICT, NEPAL

Narayan Prasad Tiwari*
College of Natural Resource Management, Agriculture and Forestry University, Kapilakot, Sindhuli, Nepal

*Corresponding author: nptiwari@afu.edu.np

DOI: https://doi.org/10.3126/jafu.v7i1.95429

Received date: 27 Feb 2026; **Revised date**: 24 May 2026; **Accepted date**: 27 May 2026; **Published date**: 10 Jun 2026

ABSTRACT

Agricultural input subsidies (AIS) are considered an important tool for improving farm productivity and enhancing food security. Farmers' perception influences participation, adoption behavior, and overall program outcomes. To identify the determinants of access to subsidy and the perceived subsidy utilization index, cross-sectional research was conducted at three local levels of Sindhuli Marin, Kamalmai, and Hariharpur Gadhi from September to December 2025. A total of 20 AIS beneficiaries and 20 non-beneficiaries were surveyed using a pretested interview schedule from each local level to comprise the total randomly selected sample of 120 households. Data analysis was done using a probit model to identify the determinants of access to subsidy and utilization behavior, and EFA, CFA, and regression techniques. Socio-demographic characteristics like the gender (β= -1.227, p=0.022) of the household head and family type (β=1.098, p=0.011) have a significant influence on access to subsidy. Institutional variables such as farmer visits to the extension office (β=-1.423, p=0.000), membership in cooperatives (β=0.852, p=0.032), and membership in farmers' groups (β=0.639, p=0.092) have a positive and significant influence on receiving subsidies. Behavioral variables derived from the Theory of Planned Behavior (TPB), such as attitude and subjective norms, have a positive and significant influence on receiving a subsidy. The explanatory variable, attitude toward subsidy effectiveness and governance, and perceived internal control, was a statistically significant determinant of subsidy utilization behavior. This study concludes that farmers' perception of subsidy differs among the subsidy receivers and non-receivers, and behavioral factors also determine the subsidy use. Policymakers should focus on easing the subsidy-receiving process and information dissemination, reducing complex paperwork to make the subsidy system more effective and ensure wider participation.

Keywords: Agriculture subsidy, OLS regression, perception towards subsidy, theory of planned behavior

INTRODUCTION

The agriculture input subsidy system has been considered an important means to enhance the production and productivity of agriculture. Agriculture is the major driver of Nepal's economy, contributing one-fourth to the national GDP, employment, and rural livelihood (MoALD, 2025). Agriculture employs a larger proportion of Nepal's labor force, particularly in rural areas where farm-based income is the primary source of livelihood (World Bank, 2023). The Ministry of Agriculture and Livestock Development (MoALD) has prioritized agricultural transformation through subsidy programs to improve productivity, promote commercialization, ensure food security, and improve farmers' incomes (Bhandari, 2023). Agricultural subsidies in Nepal

typically include support for seeds, fertilizers, irrigation, mechanization, crop insurance, and concessional credit facilities.

Subsidy schemes for farmers started in the late 1970s in Nepal and had stagnated growth, but after the formation of the federal government in 2018, the budget allocation in agricultural subsidies reached around NRs. 18 billion and had an annual growth of around 15% in the last three years, with much of the increment in copay subsidies (Nepali Times, 2025). However, the average annual growth rate of the agricultural sector has remained only 3.2% in the last two decades (World Bank, 2023), and the effectiveness of the AIS has been a matter of considerable debate. The unfair distribution of AIS to affluent sections of the community and its spill mostly in the urban areas has rendered the programs unable to promote self-sustaining production and maintain food security (Kyle et al., 2017). Although the government introduced "The Subsidy Management Procedure-2019" with the aim of making effective distribution of subsidies, the effectiveness and efficiency of the AIS in the academic realm remain unknown.

Farmers' perception of the effectiveness of agricultural subsidies is important because perception influences participation, adoption behavior, and overall program outcomes. Farmers' attitudes toward subsidy adequacy, fairness, accessibility, and impact on productivity can significantly determine the success of such government interventions (Alawode, 2025). Furthermore, analyzing the determinants of access to agricultural subsidies, such as farm size, education level, access to extension services, membership in cooperatives, and geographic location, helps in identifying structural barriers and policy gaps (Bharati et al., 2024; Feder et al., 1985; Thapa et al., 2023).

A limited study has been carried out to measure the determinants of subsidy access in Nepal, which shows mixed results. Beneficiaries' perceptions of farmers' views on the effectiveness, accessibility, fairness, and transparency of agricultural subsidies significantly influence their participation, technology adoption, and the sustainability of these government initiatives. Previous studies have emphasized that policy interventions in agriculture are more successful when they align with farmers' needs, expectations, and socio-economic realities (Birner & Resnick, 2010; Dorward & Chirwa, 2011). The findings of this study help bridge the gap between farm-level realities and policy intentions toward more inclusive, equitable, and effective agricultural subsidy systems in Nepal.

RESEARCH METHODS

Study area and sample size

This study was carried out at three local levels of Sindhuli Marin, Kamalmai and Hariharpur Gadhi, consultations with policy makers and extension officials from AKC, Sindhuli. These local levels were purposefully selected based on AIS interventions. The population was divided into two strata: AIS beneficiaries and non-beneficiaries. A total of 215 AIS beneficiaries were obtained from the official beneficiary list of each local level. The study employed a disproportionate stratified random sampling technique. Beneficiary and non-beneficiary farmers were considered as two separate strata. From each local level, 20 AIS beneficiary farmers were selected using simple random sampling from the official beneficiary lists. Similarly, 20 non-beneficiary farmers who had not received AIS support but had similar farming backgrounds and operated within the same or nearby locations were randomly selected to minimize comparison bias. The total sample of 120 households from September to December 2025 was collected. Local levels with similar socio-economic dynamics, and similar intervention of agricultural programs within the district were selected to maximize the homogeneity to the possible extent for minimizing cofounding variable biases.

Methods of data collection

Household survey

Before the household survey, an exploratory survey was done to obtain preliminary information about community members, clusters of households, AIS programs, and farmers' participation, organizations providing AIS, etc. This was useful to design the interview schedule and sampling procedure. Then the interview schedule was prepared in line with the objective of the study. Pre-testing was done to test the validity of the interview schedule. Based on the learnings from the pre-testing, necessary modifications were made before administering it to the actual respondents. Finally, all the randomly selected households were visited for the collection of data.

Focus Group Discussions (FGDs)

Three FGDs were conducted in each of the selected municipalities of the district. Both men and women took part in the focus group discussions. The FGDs were conducted to collect the qualitative and location-specific information related to the agriculture subsidy, institutional support, farmers' perception, challenges, and attitude toward the AIS. Based on the information obtained from the focus group discussion, the quantitative findings of the research were examined in more depth and cross-verified with the data obtained from the survey questionnaire. A checklist was prepared and used to collect the information during FGD.

Key Informants Interview (KII)

Key informants are a crucial resource for gathering accurate data. Agriculture technical officers for the local level and provincial level were selected for the key informant survey. The information about AIS beneficiaries, the type of AIS program conducted at the local and provincial levels, the present status, and the challenges of such an AIS program. For the key informant interview, a semi-structured checklist was prepared and used to collect the information.

Observation

The fundamental sociological/anthropological tool for data collection methods is observation. The researcher used this technique to gather data on various aspects of vegetable farms, cattle sheds, tunnels, mulching, etc.

Data analysis techniques

Data collected was entered in SPSS, and descriptive analysis was done using SPSS; inferential analysis was done using STATA. Means and standard deviations were used to compare the socio-economic status of the respondents (with and without AIS). Probit regression models were used for the identification of determinants of agricultural input subsidies.

Probit regression model

In the case of a binary response of a qualitative dependent variable, the probit or logit model is found generally used in econometric modelling. The choice of the model depends on the availability of software and ease of interpretation. Both models yield similar results. In this study, the probit regression model was used to estimate or determine the determinants of agriculture subsidy.

In the probit model, let us suppose Y_i is the binary response of the farmer $Y_i = 1$, if the farmer received a subsidy, and $Y_i=0$ if the farmer didn't receive a subsidy.

If $Y_i = 1$; Pr $(Y_i =1) =P_i$

$Y_i = 0$; Pr $(Y_i =0) = 1- P_i$

Where, $P_i = E (Y= 1/x)$ represent the conditional mean of Y given certain value of X.

There might be several factors determining agriculture subsidy. The determinants of the

receiving subsidy could be socio-economic, demographic and social capital conditions.
Pr (Y=1) = (X_i) where, X_i are independent variables.
Model Specification:
$Pr(Y=1) = f(b_0+b_1X_1+ b_2X_2+ b_3X_3 +b_4X_4 +b_5X_5 +b_6X_6 +b_7X_7 +b_8X_8 +b_9X_9 +b_{10}X_{10}$
Where,
Pr(Y=1) = Probability of receiving subsidy
X_1=Visit extension office (Yes =1 otherwise 0)
X_2= Gender of HHH (Male =1 other wise 0)
X_3 = Dependency ratio
X_4 = Agriculture loan (Taken =1 otherwise 0)
X_5 = Total agricultural land
X_6 = Visit of extension worker (Yes =1 otherwise 0)
X_7= Family type (Nuclear=1 otherwise 0)
X_8= Livestock holding (LSU)
X_9 = Receive training (Yes =1 otherwise 0)
X_{10} = Log return (return from agriculture production)
X_{11} = Attitude
X_{12} = Subjective norms
X_{13}= Perceived control behavior
X_{14}= Agriculture income (NRs.)

Factors affecting participation in AIS

SEM (system of equations modeling) was utilized to comprehend the many relationships between factors impacting participation in agricultural subsidies. A group of statistical multivariate tests corresponds to SEM (Weston & Gore, 2006). SEM is a hybrid statistical tool that combines the characteristics of factor analysis and structural analysis. SEM is predicated on statistical methods, including correlation analysis, analysis of variance, and linear regression. To gather the most pertinent data affecting farmers' choices regarding agricultural subsidies. Five components make up the questionnaire framework. Questions about farmers' (i) attitudes, (ii) social norms, (iii) perceived behavioral control (PBC), and (iv) intentions about the agriculture subsidies are included in the second, third, fourth, and fifth parts. A five-point Likert scale was used to measure each item. This format's accompanying scale was:

Totally disagree	Disagree	Neutral	Agree	Totally agree
1	2	3	4	5

We followed all the suggestions clearly in every statement as stated by the Theory of Planned Behavior to develop the questions (Ajzen, 1991; Ajzen, 2010). Several items were included in each construct, for eg we have 19 items to measure the attitude. EFA was conducted to identify the factor structure of observed variables using principal axis factoring (PAF). The number of factors in each construct was identified using an eigenvalue greater than one. Varimax rotation was applied to identify an interpretable factor structure, and items with cross-loading greater than 0.40 were only kept. CFA was performed to validate the measurement model identified by EFA. CFA was conducted using structural equation modeling techniques. Each behavioral construct was divided into factors, and OLS regression was conducted to identify the participation in the agriculture subsidy.
The OLS regression model was specified as:
Subsidy use behavior(perceived)=
β0+β1attitude+β2SubjectiveNormi+β3PerceivedControlbehavior+β4intension

RESULTS AND DISCUSSION

The majority of household heads were male (85.83%), and the proportion of male- and female-headed households was similar across both subsidy groups. In terms of ethnicity, most household heads belonged to the Janajati group (77.50%), followed by Brahmin and other ethnic categories, with a similar distribution among receivers and non-receivers. Religion-wise, Hindu (63.33%) household heads constituted the largest share, followed by Buddhist and other religions. Regarding family structure, slightly more than half of the household heads were from nuclear families, while the remainder belonged to joint families, with equal representation in both groups. Agriculture was the primary occupation for the vast majority of household heads, and its dominance was also similar among both subsidy recipients and non-recipients. Overall, the findings suggest that key socio-demographic characteristics of agricultural subsidy receivers and non-receivers were almost similar.

Table 1. Sociodemographic characteristics of the household

		Subsidy			
Variable	**Overall**	**Receiver**	**Non-Receiver**	**Chi-square**	**p-value**
Gender					
Male	103(85.83)	50(83.33)	53(88.33)		
Female	17(14.17)	10(16.67)	7(11.67)	0.617	0.432
Ethnicity					
Brahmin/Chhetri	19(15.83)	10(16.67)	9(15.00)		
Janajati	93(77.50)	47(78.33)	46(76.67)		
Other	8(6.67)	3(5.00)	5(8.33)	0.563	0.755
Religion					
Hindu	76(63.33)	36(60.00)	40(66.67)		
Buddhist	26(21.67)	13(21.67)	13(21.67)		
Other	18(15.00)	11(18.33)	7(11.67)	1.099	0.577
Family type					
Nuclear	66(55.00)	32(53.33)	34(56.67)		
Joint	54(45.00)	28(46.67)	26(43.33)	0.135	0.714
Major Occupation					
Agriculture	112(93.33)	58(96.67)	54(90.00)		
Other	8(6.67)	2(3.33)	6(10.00)	2.142	0.143

The mean age of household heads does not differ between the two groups, indicating that age is not a determining factor in accessing agricultural subsidies in the study area. Similarly, dependency ratio and total landholding show no statistical difference between receivers and non-receivers, suggesting that household labor burden and farm size alone do not significantly influence participation in subsidy programs.

In contrast, years of schooling show a significant difference, with subsidy receivers (6.68 years) having higher average years of education compared to non-receivers (4.43). This shows that education has an important role in access to agricultural subsidies. Farmers with higher education are likely to have better access to information, improved understanding of administrative procedures, and stronger engagement with extension services, which enhances their ability to benefit from government programs. Livestock holding also differs significantly between the two groups, with subsidy recipients owning higher (2.10 LSU) livestock on average. This indicates that relatively better-resourced or commercially oriented farmers are more capable of meeting eligibility criteria. Similarly, the average household income of subsidy receivers was

NRs. 261700 and non-receiver was 126900, the difference is statistically significant. This result suggests that economically stronger households have greater institutional linkages, financial liquidity, and social networks that improve their access to subsidies.

Table 2. Socio-demographic characteristics of the household

Variable	Overall	Subsidy		Mean diff	t-value	p-value
		Receiver	Non-Receiver			
Age	49.88(11.06)	49.18(10.38)	50.56(11.73)	1.38	0.684	0.496
Year of Schooling	5.81(4.61)	6.68(4.74)	4.95(4.34)	-1.73**	-2.090	0.039
Dependency Ratio	62.71(79.35)	59.84(70.63)	65.(87.72)	5.75	0.395	0.694
Total Own Land	19.90(17.09)	19.25(12.32)	20.55(20.89)	1.30	0.415	0.678
Livestock Holding	4.52(5.28)	5.52(6.60)	3.51(3.15)	-2.01**	-2.211	0.037
HH income (Agriculture)	194300 (265875.30)	261700 (318922.50)	126900 (177838.20)	-134800	-2.859	0.005

The probit model is statistically robust, as indicated by a likelihood ratio chi-square of 78.06 ($p < 0.001$), a pseudo-R^2 of 0.477, and a high Area Under the ROC Curve (AUC = 0.916), suggesting excellent predictive power. The model correctly classifies 82.2% of cases, with balanced sensitivity (82.76%) and specificity (81.67%).

Socio-demographic characteristics like the gender of the household head and family type have a significant influence on receiving a subsidy. The gender of the household head has a significant negative relationship, showing that female-headed households are less likely to receive a subsidy. In the context of Nepal, gender plays an important role in resource control, and access to institutional services and decision-making is limited, even though women contribute significantly to agricultural labor. Also, cultural norms restrict women's participation and interaction with extension workers or participation in training (Doss & Morris, 2001; Quisumbing & Pandofelli, 2010). Family type shows a positive and significant relationship, showing households with a joint family structure have a higher probability of receiving a subsidy. Joint families possess larger family labor and have diversified farming, which increases the probability of receiving a subsidy. Moreover, a higher size of family member have stronger social network, increasing access to information, connections with extension workers, and cooperatives increase probability of receiving government support (Meinzen-Dick et al., 2011).

Total own land holding shows a significant and negative relationship, indicates household with smaller holdings are more likely to receive subsidies. This result indicates a local-level subsidy scheme targeting smaller farmers with limited resources. Local-level subsidies were mainly focused on inputs like seeds, tunnel plastics, etc. Livestock holding has a positive and significant relationship with receiving subsidies. A higher number of livestock reflects the engagement in commercial or semi-commercial farming, and as such, it is considered a productive asset that increases income, improves access to credits, and increases farmers' institutional linkage (Guja, 2022). The study by Mogues and Benin (2012) shows that assets rich household more likely to participate in support programs due to better access to information.

Institutional variables such as farmer visits to the extension office, membership in cooperatives, and membership in farmers' groups have a positive and significant influence on receiving subsidies. Farmers who frequently visit and interact with extension workers are more likely to get timely information, knowledge about eligibility criteria, document requirements, and application procedures, which increases the probability of participation. The study by Thapa

et al. (2023) found that membership in groups and cooperatives has a significant and positive impact on subsidy access, as farmers in cooperatives have higher accessibility to inputs, subsidies, and technical information. Agriculture extension bridges the gap between farmer and public programs, and also increases institutional trust (Anderson & Feder, 2004; Anderson & Feder, 2007). Group engagement helps in information sharing, collective application, and increases the bargaining power (Meinze-Dick et al, 2011; Morris et al, 2007).

Behavioral variables derived from the Theory of Planned Behavior (TPB), such as attitude and subjective norms, have a positive and significant influence on receiving a subsidy. This result revealed that psychological factors play an important role in participation in the subsidy program. Individuals are more likely to engage in a behavior when they have a positive attitude towards it and perceive social pressure from family and reference group (Ajzen, 1991; Bhujel & Joshi, 2024). The study by Armitage and Conner (2001) and Sapkota et al. (2025) shows that farmers with a positive attitude and strong social influence significantly increase farmers' adoption of agricultural innovations and participation in government programs.

Table 3. Probit regression estimates of determinants of access to subsidy

Variable	Coefficient	dy/dx	Std. Error	z-value	p-value
Gender of household head	−1.227**	−1.227***	0.536	−2.29	0.022
Years of schooling	−0.002	−0.002	0.042	−0.04	0.969
Family type	1.098**	1.098**	0.43	2.55	0.011
Dependency ratio	−0.001	−0.001	0.002	−0.29	0.769
Total land owned (Kattha)	−0.040***	−0.040***	0.014	−2.87	0.004
Livestock units (LSU)	0.123*	0.123*	0.063	1.95	0.051
Agricultural income (Nrs)	0.000001	0.000001	0.000001	1.24	0.213
Received training #	0.031	0.031	0.370	0.08	0.932
Visit to the extension office #	1.423***	1.423***	0.380	3.74	0.000
Extension worker visit #	0.641	0.641	0.421	1.52	0.128
Agricultural loan #	0.504	0.504	0.410	1.23	0.219
Cooperative membership #	0.852**	0.852**	0.396	2.15	0.032
Farmers' group membership #	0.639*	0.639*	0.380	1.68	0.092
Attitude	0.399*	0.399*	0.230	1.73	0.084
Subjective norms factor #	0.781*	0.781*	0.408	1.92	0.055
Perceived behavioral control #	0.07	0.07	0.458	0.15	0.879
Constant	−2.436***	−2.436***	0.820	−2.97	0.0030
Diagnostic					
Number of observations	120				
Log likelihood	−46.74				
LR χ^2 (16)	78.06				
Prob > χ^2	0.000				
Pseudo R^2	0.477				
Correctly classified	82.20%				
Sensitivity	82.76%				
Specificity	81.67%				
Area under ROC curve	0.916				

The regression model was statistically significant, showing that the explanatory variable predicts perceived subsidy use behavior. The adjusted R-squared of 0.29 suggests that 29% of the variation was explained after adjusting for the number of dependent variables. The mean VIF of 1.67 indicates no multicollinearity, and all VIF values were below the critical threshold.

Among the explanatory variables, attitude toward subsidy management and targeting, subjective norms, fair distribution, and perceived control behavior, internal control was a statistically significant determinant of perceived subsidy use behavior. A positive and significant coefficient of attitude suggests that farmers who have a positive attitude toward subsidy management and targeting were more likely to use the subsidy. This finding aligns with Ajzen's (1991), Sapkota et al. (2025), and Bhujel and Joshi (2024). TPB, which shows a positive attitude, significantly influences perceived behavior. Similarly, farmers who feel that the subsidy allocation process is fair and equitable are more likely to use the subsidy. Farmers who believe they have the necessary knowledge, skills, and confidence to utilize the subsidy were more likely to have higher perceived use behavior.

Table 4. Determinants of subsidy use behavior(perceived) among the subsidy-receiving farmers

Use Behavior (perceived)	Coef.	Std. Err.	t-value	p-value	VIF
Intention of Subsidy Utilization	0.024	0.183	0.13	0.895	1.30
Attitude Effectiveness	0.022	0.175	0.12	0.903	1.84
Attitude Management	0.286***	0.096	2.96	0.005	1.80
Attitude Governance	-0.159	0.127	-1.26	0.215	2.25
SN Family and Social Engagement	0.073	0.228	0.32	0.750	1.48
SN Extension influence	0.108	0.154	0.7	0.485	1.79
SN community pressure	-0.022	0.130	-0.17	0.869	1.67
SN fair distribution	0.155*	0.088	1.76	0.085	1.51
PBC internal control	0.171*	0.093	1.83	0.073	1.48
PBC external control	-0.036	0.138	-0.26	0.798	1.93
Constant	1.302	1.520	0.86	0.396	
Number of obs		60			
F (10, 49)		3.39			
Prob > F		0.002			
R-squared		0.41			
Adj R-squared		0.29			
Root MSE		0.59			
Mean VIF		1.67			

The regression model was statistically significant, showing that the explanatory variable predicts perceived subsidy use behavior. The adjusted R-squared of 0.36 suggests that 36% of the variation was explained after adjusting for the number of dependent variables. The mean VIF of 1.64 indicates no multicollinearity, and all VIF values were below the critical threshold.

Among the explanatory variables, attitude toward subsidy effectiveness and governance, and perceived control behavior, internal control was a statistically significant determinant of perceived subsidy use behavior. A positive and significant coefficient of attitude toward governance suggests that farmers who have a positive attitude toward governance and effectiveness were more likely to use the subsidy (Birner & Resnick, 2010). This finding aligns with Ajzen's (1991) and Festinger's (1957), which shows positive attitude significantly influences perceived behavior. This finding shows that institutional trust plays an important role in subsidy use among non-receivers. The results align with Vigoda-Gadot (2007); Ba (2026), institutional trust significantly influences the use behavior of those who are outside the system. Similarly, farmers who believe they have the necessary knowledge, skills, and confidence to utilize the subsidy were more likely to have higher perceived use behavior. Perceived control

behavior directly influences behavior when individuals feel competent to perform the behavior (Ajzen, 2011; Amritage & Conner, 2001).

Table 5. Determinants of subsidy use behavior (perceived) among the subsidy non-receiver farmers

Use Behavior (perceived)	Coef.	Std. Err.	t-value	p-value	VIF
Intention of Subsidy Utilization	-0.076	0.103	-0.740	0.465	1.19
Attitude Effectiveness	0.164*	0.095	1.720	0.091	1.29
Attitude Management	0.004	0.107	0.040	0.972	1.79
Attitude Governance	0.538***	0.155	3.480	0.001	1.96
SN Family and Social Engagement	0.061	0.139	0.440	0.662	1.51
SN Extension influence	-0.057	0.113	-0.510	0.613	2.21
SN community pressure	-0.006	0.112	-0.050	0.959	1.17
SN fair distribution	0.142	0.112	1.270	0.210	2.37
PBC internal control	0.318***	0.078	4.070	0.000	1.30
PBC external control	0.120	0.157	0.760	0.448	1.60
Constant	2.710	0.914	2.960	0.005	
Number of obs		60			
F(10, 49)		4.33			
Prob > F		0.000			
R-squared		0.47			
Adj R-squared		0.36			
Root MSE		0.543			
Mean VIF		1.64			

CONCLUSION

This study concludes that farmers' perception on subsidy differs among the subsidy receivers and non-receivers. Subsidy recipients were influenced by gender, family structure, landholding, livestock holding, contact with extension workers, membership in cooperatives, and membership in farmers' groups, as well as behavioral factors, showing the importance of institutional linkage and social capital in program participation. Farmers who are better connected to the extension network and frequently visit and interact with extension workers are more likely to get timely information, knowledge about eligibility criteria, document requirements, and application procedures, which increases their participation in subsidy programs. Moreover, behavioral factors such as attitude toward effectiveness and their perceived ability to access and utilize the subsidy play a decisive role in participation. Governments should focus on information dissemination, easing paperwork, and reducing bureaucratic hurdles to increase farmers' participation in subsidy programs.

ACKNOWLEDGEMENTS

The author acknowledges the farmers of Sindhuli district and all enumerators for their valuable time and cooperation during data collection. The author also acknowledges DoREX, Agriculture and Forestry University, for funding this research.

CONFLICT OF INTEREST

The author declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ETHICAL APPROVAL AND PERMITS

Before data collection, respondents were informed, and consent was obtained from all respondents. Participants were informed about the purpose of the study, and participation was voluntary. Confidentiality was strictly maintained, and no personal identifiers were included in the analysis

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology & Health, 26*(9), 1113–1127. https://doi.org/10.1080/08870446.2011.613995

Alawode, A. (2025). Evaluating agricultural subsidy reforms and their effects on smallholder farmer income and efficiency. *International Journal of Advance Research Publication and Reviews, 2*(5), 180–201.

Anderson, J. R., & Feder, G. (2004). Agricultural extension: Good intentions and hard realities. *The World Bank Research Observer, 19*(1), 41–60. https://doi.org/10.1093/wbro/lkh013

Anderson, J. R., & Feder, G. (2007). Agricultural extension. In R. Evenson & P. Pingali (Eds.), *Handbook of agricultural economics 3*, 2343–2378). Elsevier.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471–499. https://doi.org/10.1348/014466601164939

Ba, A. (2026). Institutionalizing evaluation as a governance capability: Evidence from agriculture and economic policy in Africa. *Journal of Public Policy and Administration, 10*(1), 1–17. https://doi.org/10.11648/j.jppa.20261001.11

Bhandari, T. (2023). Assessment of government policies, farm subsidies, and agriculture growth. *State, Society and Development: PMPD Perspectives, 1*(1), 125–136. https://doi.org/10.3126/ssd.v1i1.58475

Bharati, S., Bhandari, T., Panta, H. K., & Thapa, B. (2024). Understanding allocation and farmers' access to varied level of agricultural input subsidies from different tiers of government: A case study in Kavrepalanchowk district, Nepal. *Agriculture Development Journal, 17*(1), 23–36. https://doi.org/10.3126/adj.v17i1.66445

Bhujel, R. R., & Joshi, H. G. (2024). Unveiling sustainable agriculture dynamics: A socio-psychological exploration among smallholder farmers in Sikkim, India. *Cogent Social Sciences, 10*(1). https://doi.org/10.1080/23311886.2024.2350118

Dorward, A., & Chirwa, E. (2011). The Malawi agricultural input subsidy programme: 2005–6 to 2008–9. *International Journal of Agricultural Sustainability, 9*(1), 232–247.

Doss, C. R., & Morris, M. L. (2001). How does gender affect the adoption of agricultural innovations? *Agricultural Economics, 25*(1), 27–39. https://doi.org/10.1111/j.1574-0862.2001.tb00233.x

Feder, G., Just, R. E., & Zilberman, D. (1985). Adoption of agricultural innovations in developing countries: A survey. *Economic Development and Cultural Change, 33*(2), 255–298.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

Guja, M. M. (2022). The role of financial institutions in smallholder agriculture development: Ethiopian context. *European Journal of Business and Management, 14*(1), 31–54.

Jayne, T., & Rashid, S. (2013). Input subsidy programs in sub-Saharan Africa: A synthesis of recent evidence. *Agricultural Economics, 44*(6), 547–562. https://doi.org/10.1111/agec.12073

Kyle, J., Resnick, D., & Karkee, M. (2017). *Improving the equity and effectiveness of Nepal's fertilizer subsidy program*. International Food Policy Research Institute. http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131527/filename/131739.pdf

Meinzen-Dick, R., Di Gregorio, M., & McCarthy, N. (2004). Methods for studying collective action in rural development. *Agricultural Systems, 82*(3), 197–214. https://doi.org/10.1016/j.agsy.2004.07.006

Ministry of Agriculture and Livestock Development. (2025). *Statistical information on Nepalese agriculture 2024/25*.

Morris, M., Kelly, V. A., Kopicki, R. J., & Byerlee, D. (2007). *Fertilizer use in African agriculture: Lessons learned and good practice guidelines*. World Bank.

Nepali Times. (2025). *Farm subsidies: Money down the drain?* https://nepalitimes.com/here-now/farm-subsidies-money-down-the-drain

Quisumbing, A. R., & Pandolfelli, L. (2010). Promising approaches to address the needs of poor female farmers: Resources, constraints, and interventions. *World Development, 38*(4), 581–592. https://doi.org/10.1016/j.worlddev.2009.10.006

Sapkota, U., Bhandari, G., Sapkota, M., Khanal, S., Poudel, A., Khanal, D., et al. (2025). Modeling vegetable farmers' intention to use pesticides in central Nepal: An extended version of the planned behavior theory. *Environmental Challenges, 18*, 101084. https://doi.org/10.1016/j.envc.2025.101084

Thapa, S., Panta, H. K., Poudel, S., GC, A., Regmi, K., & Basnet, M. (2023). Factors affecting farmers' access to agricultural subsidy in Makwanpur and Dhading districts of Nepal. *SAARC Journal of Agriculture, 21*(2), 263–276. https://doi.org/10.3329/sja.v21i2.68550

Vigoda-Gadot, E. (2007). Citizens' perceptions of politics and ethics in public administration: A five-year national study of their relationship to satisfaction with services, trust in governance, and voice orientations. *Journal of Public Administration Research and Theory, 17*(2), 285–305. https://doi.org/10.1093/jopart/muj018

Weston, R., & Gore, P. A., Jr. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist, 34*(5), 719–751.

World Bank. (2023). *Nepal agricultural public expenditure review*. World Bank.