RESEARCH ARTICLE

Voluntary External Audit and Internal Control in Romanian Agricultural Entities: Survey Evidence

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Abstract

Most Romanian agricultural entities fall below the size criteria that trigger a statutory audit, so any audit they engage is one they chose to engage. This paper asks which entities make that choice and tests two explanations, one based on the monitoring needs of external financiers and one based on the entity's own governance apparatus. The evidence comes from a questionnaire administered between 4 May and 26 June 2026, screened so that every entity retained is below the statutory audit obligation; 146 valid responses from 35 counties were obtained. Among them, 18.5 per cent report an external audit performed by an authorised firm and 15.8 per cent report a formal internal control structure. Voluntary audit is strongly associated with size, legal form, a formal internal control function and sustainability reporting, and not at all with having accessed public funds or bank credit. A logistic regression confirms the pattern: having ten or more employees multiplies the odds of audit by 7.36, a formal internal control function by 5.30 and sustainability reporting by 3.71, while access to external finance carries no significant coefficient. Legal form is examined bivariately only, because audited individual undertakings are too rare for a multivariate estimate. The findings suggest that voluntary audit in this sector is bought as part of an internal governance package rather than to satisfy an outside financier, with consequences for how the profession markets assurance to farms and how regulators might raise assurance quality without extending audit obligations.

Keywords: assurance demand; governance practices; sustainability reporting; cooperatives; logistic regression
JEL Classification: M42; M41; Q13; G34

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1. INTRODUCTION

The Romanian agricultural sector is populated by entities that are, for the most part, too small to be audited by law. The size criteria that trigger a statutory audit under the national accounting regulations (Ministry of Public Finance, 2014) exclude the majority of family farms, individual undertakings and cooperatives, and the structural statistics confirm how small the typical holding is: the 2020 farm structure survey records close to 2.9 million holdings in Romania, the largest number in the European Union, with an average area well below the Union mean (Eurostat, 2023). A minority of these entities

nonetheless engages an authorised audit firm. Because the obligation is absent, the engagement is a decision, and decisions can be explained.

Two families of explanation are available in the literature on voluntary audit demand. The agency account, which goes back to Jensen and Meckling (1976) and was first tested on firms outside the audit obligation by Chow (1982), holds that audit is purchased to reduce the monitoring cost borne by outside capital providers, whether lenders or non-managing owners. On this view, entities with external finance should be more likely to buy an audit, and larger entities should be more likely to buy one as well, since size raises the total agency cost at stake. The governance account holds that external audit is one element of an internal control apparatus adopted for reasons of managerial control, and that its adoption should therefore track other elements of that apparatus, such as a formal internal control function or the production of non-financial reports, rather than the presence of external financiers.

These accounts overlap on size and diverge on external finance, and Romanian agriculture is an unusually good place to observe the divergence. Access to public support through the paying agencies is close to universal in the sector, and bank credit is typically secured on land or equipment that the lender values directly. The agency account's key variable therefore has little room to operate. If audit demand nonetheless varies across entities that are all exempt from the obligation, something other than the demands of an outside financier must explain the variation.

This paper reports the results of an original survey administered in the spring of 2026 and finds for the governance account. The predictor that carries the substantive result is the presence of a formal internal control function, alongside size and sustainability reporting; access to public funds or bank credit predicts nothing at all. The paper complements a companion study by the same author, which used a hand-collected panel of firms above and around the size thresholds to examine what changes when the obligation switches on (Oncea, 2026). The present study looks at the other side of the threshold: entities that will never be obliged and buy an audit anyway.

Three features of the design deserve mention at the outset. Every entity retained in the analysis was screened against the statutory criteria, so the dependent variable is voluntary by construction rather than by assumption. Legal form, which the bivariate results show to matter, is not carried into the multivariate model, because audited individual undertakings are too few to estimate a stable coefficient; the paper reports the bivariate association and says so plainly. And the attitudinal battery included in the instrument proved unusable, a fact reported in Section 5 rather than omitted. Section 2 reviews the literature and states the hypotheses. Section 3 describes the setting, the instrument, the screening, the coding and the estimation. Section 4 reports the associations and the model. Section 5 interprets the pattern and Section 6 concludes with the limitations and the questions that remain open.

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2. LITERATURE REVIEW

2.1 Agency Explanations of Voluntary Audit Demand

The theoretical starting point is the observation of Jensen and Meckling (1976) that when ownership and control separate, or when a firm borrows, the parties who bear the residual risk have an incentive to monitor those who manage, and that some of the monitoring cost will be borne by the managers themselves through bonding arrangements. An audit is the canonical bonding device. Chow (1982) turned the argument into a testable proposition on a sample of firms not required to be audited and found that leverage, size and the dispersion of ownership all raised the probability of engaging an auditor. Size enters this account because the total agency cost to be controlled grows with the firm, so that the fixed cost of an audit is more easily justified; it is not a competing explanation but part of the same one.

Later European studies refined the picture. Collis et al. (2004), working with a survey of small companies in the United Kingdom shortly after the exemption threshold was raised, found that directors' perception of the audit as a check on records and systems was the strongest driver, followed by turnover and by the presence of lenders and non-managing shareholders. Niemi et al. (2012) examined Finnish companies below the exemption limit and reported that the demand for a voluntary audit rose with the use of external accountants, with the weight of tax considerations and with owner-manager beliefs about the audit's value to outsiders. A follow-up on micro-companies by Ojala et al. (2016) confirmed that even at the very bottom of the size distribution the decision responds to relationships with lenders and to the expected quality of the accounting function, though the effects are weaker than in larger firms.

The largest recent study of the demand side is Dedman et al. (2014), who followed the population of private companies in the United Kingdom through the 2004 threshold change and found that companies retaining a voluntary audit were larger, more leveraged, more likely to have non-managing owners and more likely to be subsidiaries. Their evidence sits squarely within the agency framework. Vanstraelen and Schelleman (2017), reviewing what is known about auditing in private companies, note that agency variables explain a consistent but modest share of the variation and that institutional context matters a great deal: the same variable can predict audit strongly in one country and not at all in another, depending on how lenders, tax authorities and business partners actually use the accounts.

2.2 Evidence on the Consequences of Voluntary Audit

If the demand for a voluntary audit is rational, the audit must produce something that someone values. The literature on the consequences supplies the missing link. Minnis (2011) showed that privately held firms in the United States with audited statements obtain debt at lower interest rates, and that lenders weight audited accounting numbers more heavily in setting terms. Kim et al. (2011), using Korean

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data where the obligation depends on size, found the same pattern: voluntary audit reduces the cost of debt, and the reduction is larger for firms whose accounts would otherwise be harder to verify. Lennox and Pittman (2011) added a signalling twist by showing that companies which retained an audit after the obligation was removed enjoyed better credit ratings than companies which dropped it, because the choice itself reveals information that a mandatory audit cannot.

The regulatory literature extends the argument to the design of thresholds. Breuer (2021) examined the industry-wide consequences of size-based reporting and audit requirements across European countries and found that mandatory regimes redistribute resources across firms in ways that voluntary adoption does not, which is one reason to study the voluntary margin separately. Eierle et al. (2022), in a systematic review of the audit pricing literature, document how strongly the cost side of the audit decision depends on the legal, economic and technological environment of the entity, so that the same demand-side variables can lead to different observed adoption rates once the price of assurance is allowed to vary.

What unites this work is that the demand for voluntary audit has been studied almost entirely in settings where lenders and outside owners are the relevant users of the accounts. A sector in which external finance flows through channels that do not rely on audited statements offers a different test, and that is the gap this paper addresses.

2.3 Internal Control in Small Entities and Agricultural Cooperatives

A second strand treats external audit as complementary to internal control rather than as a substitute for it. The Internal Control: Integrated Framework of the Committee of Sponsoring Organizations of the Treadway Commission (2013) defines internal control in terms of five components, control environment, risk assessment, control activities, information and communication, and monitoring, that apply in principle to entities of any size, though the framework acknowledges that smaller entities implement them less formally. The Global Internal Audit Standards of The Institute of Internal Auditors (2024) take a similar position, treating the internal audit function as scalable and admitting that in a small organisation the function may consist of a single person or be outsourced entirely.

Chalmers et al. (2019), reviewing the accounting research on internal control, note that the great majority of the evidence concerns listed companies subject to disclosure requirements and that small private entities are underexplored, largely because their control structures are rarely observable. Where an entity has already built a formal control function, two things follow for the audit decision. The marginal cost of an external audit is lower, because the documentation, the reconciliations and the segregation of duties that an auditor needs are already in place. And the marginal benefit is higher, because management already uses control information in running the business and is therefore able to act on what an auditor reports. On this account, audit adoption should track internal control adoption whether or not an outside financier is present.

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Agricultural cooperatives complicate the picture in an instructive way. Grashuis and Su (2019), reviewing the empirical literature on farmer cooperatives, find that governance in these organisations is shaped by member heterogeneity and by the difficulty of monitoring a management that is accountable to many small owners with unequal stakes. That description resembles the diffuse ownership of Chow (1982), which on the agency account should raise audit demand. In practice, cooperative members monitor through the general assembly and the elected board rather than through the accounts, and the sector's financing runs largely through public support and supplier credit. The prediction for cooperatives is therefore ambiguous, which is one reason to examine legal form descriptively before attempting to model it.

2.4 Public Support, Bank Credit and the Verification Channel

The agency account assumes that the external financier relies on audited figures. In European agriculture this assumption is weaker than it looks. Direct payments and rural development support under the common agricultural policy are disbursed by accredited paying agencies against administrative and on-the-spot checks on the physical eligibility of land, animals and investments (European Parliament and Council of the European Union, 2021a, 2021b). The European Court of Auditors (2022) has criticised the Commission's response to fraud in the policy precisely because the control framework is built around eligibility checks rather than around the financial statements of beneficiaries, and its most recent annual report continues to locate the residual error in agricultural spending in eligibility conditions rather than in accounting (European Court of Auditors, 2024). Bank lending to small firms in the Union remains heavily collateralised and, for agriculture in particular, is secured on land and equipment (OECD, 2024). Neither channel generates the demand for a third-party opinion on the accounts that the agency account requires.

2.5 Sustainability Reporting as Revealed Investment in Information

Entities that produce non-financial reports reveal, by that choice, a willingness to invest in information beyond the statutory minimum. Christensen et al. (2021) review the economics of mandatory sustainability reporting and stress that the voluntary adopters who precede a mandate are systematically different from the rest of the population, typically larger and better governed. Fiechter et al. (2022) find that the Union's first non-financial reporting directive had real effects on the corporate behaviour of the firms it covered, which implies that the reporting is not purely cosmetic. The Corporate Sustainability Reporting Directive extended these obligations (European Parliament and Council of the European Union, 2022), and the subsequent postponement of its application to smaller undertakings (European Parliament and Council of the European Union, 2025) means that any Romanian agricultural entity reporting on sustainability during the survey period was doing so voluntarily, usually at the request of a buyer or a support scheme. On the governance account such entities should also be more likely to buy assurance on the financial statements.

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2.6 Hypotheses

Five hypotheses follow. H1 states that voluntary audit is more likely in larger entities; this prediction is shared by the agency account, in which size scales the agency cost (Chow, 1982), and by the governance account, in which size raises the need for formal control, so it does not discriminate between them and serves mainly as a validity check. H2 states that voluntary audit is more likely in entities organised as companies than in cooperatives or individual undertakings; it is tested bivariately for the reason given in Section 3.5. H3 states that voluntary audit is more likely where a formal internal control function exists. H4 states that voluntary audit is more likely where the entity has accessed public funds or bank credit in the previous three years. H5 states that voluntary audit is more likely where the entity produces a sustainability report. H3 and H5 follow from the governance account; H4 is the agency account's distinctive prediction in this setting.

3. METHODOLOGY

3.1 Institutional Setting and the Audit Threshold

Romanian accounting regulation, in transposition of the Accounting Directive, makes the statutory audit of annual financial statements conditional on size. Under the Order of the Minister of Public Finance No. 1802/2014, an entity exceeding at least two of three criteria, total assets of 16 million lei, net turnover of 32 million lei and an average of 50 employees, in two consecutive financial years becomes subject to audit, and an entity falling below them for two consecutive years ceases to be (Ministry of Public Finance, 2014). The Union-level criteria were adjusted for inflation at the end of 2023 (European Commission, 2023b), but the national thresholds cited here were the ones in force for the financial years to which respondents referred. The rule is a deterministic function of accounting quantities, and the companion study documents how often agricultural firms cross it in both directions (Oncea, 2026). The present paper is concerned only with entities that stay below it.

Two features of Romanian agriculture matter for the reading of the results. Individual undertakings, whether authorised natural persons or individual enterprises, keep simplified records and are not subject to the audit obligation at any size; when such an entity reports an audit, it can only have been engaged by choice. Agricultural cooperatives are companies in the sense of the accounting regulation and are treated by it in the same way as commercial companies, so the obligation applies to them if they exceed the criteria, which very few do.

3.2 Instrument and Administration

The questionnaire was pre-tested on six practitioners and administered electronically between 4 May and 26 June 2026. It was distributed through professional networks in the agricultural and accounting professions: county-level associations of farmers, the regional structures of the professional accounting body, and the alumni network of the author's faculty. Respondents were accountants,

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financial managers or owner-managers answering on behalf of one agricultural entity each. The timing coincided with the spring agricultural season, when field work and the submission of area-based support applications compete for the attention of exactly the people the survey addressed; the implications of this timing are discussed in Section 5.3.

Four blocks make up the instrument. A screening block records the respondent's role, the legal form of the entity, its county, its average number of employees, and whether it exceeds the statutory size criteria. A block on organisation and governance records whether the entity's bylaws or constitutive act have been updated in the last five years, whether it has accessed public agricultural funds or bank credit in the previous three years, and whether it has an internal control structure and of what kind. A block on reporting and assurance records whether the entity produces a sustainability or non-financial report and whether its financial statements are audited by an authorised firm. A seven-item attitudinal battery on the perceived value of audit and sustainability assurance closes the instrument. The analysis reported here uses the factual items only; the reason is given in Section 5.3.

3.3 Screening and Sample

Respondents were asked at the screening item to state whether the entity exceeded two of the three statutory thresholds (total assets 16 million lei, net turnover 32 million lei, 50 employees) in each of the two preceding financial years. Any respondent answering yes was directed out of the questionnaire, because an entity above the criteria is subject to audit by law and its audit status carries no information about voluntary demand. This step is the one that gives the paper its subject: without it, the strong association between size and audit reported below could reflect nothing more than the obligation itself.

Of 150 raw responses, 2 were excluded as ineligible on the screening item and 2 as declared duplicates, leaving 146 valid responses from 35 of the 41 counties and the capital. The 2 ineligible responses were precisely cases of entities reported to exceed two of the three thresholds; both described commercial companies with more than 50 employees and turnover above the limit, and both reported an audit, as they must. All 146 entities retained are therefore below the statutory obligation, and every audit reported among them is voluntary. The employee band item confirms the screening: 45 entities report ten or more employees, and none reports more than 50.

The sample is not probabilistic and no claim of national representativeness is made. The distribution across legal forms, with companies the largest group, followed by individual undertakings and then cooperatives, is skewed towards companies relative to the structural statistics, which record individual holdings as the overwhelming majority of Romanian farms (Eurostat, 2024). This is a consequence of recruiting through accounting networks, which reach entities that keep formal accounts, and it means that the prevalence figures describe the respondents rather than the sector.

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3.4 Variables and Coding

External audit (voluntary), the dependent variable, takes the value one when the respondent reports that the entity's financial statements are audited by an authorised firm. Size is dichotomised at ten employees, which separates 101 micro entities from 45 larger ones and corresponds to the first size band of the instrument; the ten-employee cut-off is the boundary between micro and small enterprises in the Union definition and is the one the European Commission (2023a) uses in its annual monitoring of the sector. Legal form has three categories: companies, agricultural cooperatives and individual undertakings. Internal control is coded as formal when the respondent reports an official and periodic structure, and as informal or absent otherwise; the original item distinguished three states, and the informal category is collapsed with absence because an arrangement without a mandate or a schedule is conceptually closer to no control function than to one. External finance records access to public agricultural funds or bank credit in the previous three years. Sustainability reporting records whether the entity produces a non-financial report of any kind. Updated bylaws records whether the entity's constitutive documents have been revised in the last five years and enters the model as a control for general governance activity.

Coding follows exactly the definitions used in the doctoral research report from which this paper is drawn, so that the figures reported here and those submitted to the doctoral supervisory committee are the same numbers. Table 1 reports the prevalence of each practice among the 146 valid respondents, and Figure 1 displays the same shares graphically. Updated bylaws and access to public funds or credit are near universal; audit, formal internal control and sustainability reporting are minority practices, each reported by fewer than one respondent in five.

Table 1.
Prevalence of governance and assurance practices in the sample

Practice	Share of valid respondents (%)
Updated bylaws (I.4)	78.1
Public funds or credit (I.7)	77.4
10 or more employees (I.2)	30.8
External audit (voluntary) (II.3)	18.5
Formal internal control (I.12)	15.8
Sustainability reporting (II.1)	15.8

Note: N = 146 valid respondents, all below the statutory audit thresholds. Items are reported as coded in Section 3.4.

Source: Author's own survey, 4 May to 26 June 2026.

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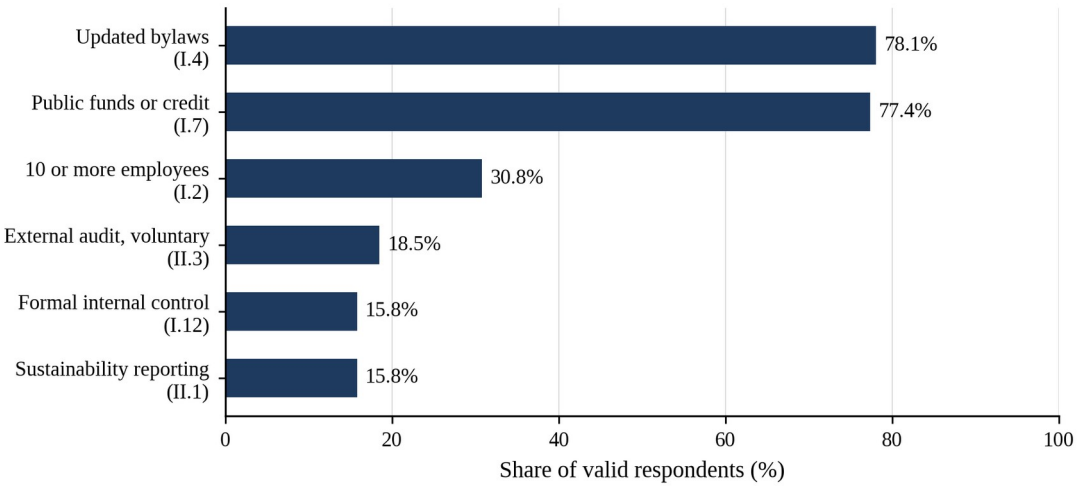


Figure 1. Prevalence of governance and assurance practices among the surveyed entities. Bars show the share of valid respondents reporting each practice.

Source: Author's own elaboration on survey data.

3.5 Estimation

Bivariate associations are tested with the chi-square statistic, with Yates's continuity correction applied to two-by-two tables, and effect size is reported as Cramér's V. Where an expected cell frequency in a two-by-two table falls below five, Fisher's exact test is reported alongside; for the three-category legal form table the minimum expected frequency is only marginally below five and the corrected chi-square is retained.

The multivariate model is the logistic regression in Equation (1), where p is the probability that the entity is audited, SIZE indicates ten or more employees, IC a formal internal control function, SR sustainability reporting, FIN access to public funds or bank credit and BYLAWS updated constitutive documents:

$$\ln(p \,/\, (1 - p)) = \beta_0 + \beta_1\,\mathrm{SIZE} + \beta_2\,\mathrm{IC} + \beta_3\,\mathrm{SR} + \beta_4\,\mathrm{FIN} + \beta_5\,\mathrm{BYLAWS} \qquad (1)$$

Average marginal effects are reported alongside the odds ratios because logit coefficients are not directly comparable across specifications. Legal form is not included in Equation (1). Audited individual undertakings are rare in the sample, and a categorical regressor whose cells are that sparse produces an unstable maximum-likelihood estimate and inflates the standard errors of everything else in the model; the association between legal form and audit is therefore reported bivariately only, and H2 is assessed on that basis. With 27 audited entities, the model already has 5.4 events per variable, below the ten that Peduzzi et al. (1996) proposed as a working minimum, and adding two further dummies would push it lower still. Fit is assessed by McFadden's pseudo R-squared, the likelihood ratio test, the area under the receiver operating characteristic curve and the Hosmer–Lemeshow statistic, and the stability of the coefficients is checked by dropping each regressor in turn.

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4. RESULTS

4.1 Bivariate Associations

Table 2 reports six association tests. Five test the association between voluntary audit and one of the hypothesised predictors: size, legal form, internal control, sustainability reporting and external finance. The sixth tests the association between updated bylaws and internal control, and is included because it bears on whether the two governance items measure the same underlying disposition. Four of the five audit tests are significant and one is not, and the division follows the hypotheses. Size, legal form, internal control and sustainability reporting are all associated with voluntary audit at conventional levels. Access to public funds or bank credit is not, with a chi-square of 0.00 and p = 1.000: in this sample the association is literally absent, not merely weak.

The null on external finance needs care. With 146 valid responses and an audit rate of 18.5 per cent, the test can only detect a large association; the ninety-five per cent confidence interval on the odds ratio is wide enough to include a near-doubling of the odds. The correct statement is that this sample provides no evidence of an association, not that the association is absent. That said, a Cramér's V of exactly zero is not what one expects from a variable that the agency account places at the centre of the decision, and the multivariate estimate below points the same way.

Size shows the strongest association (V = 0.427), which is expected under both accounts and serves mainly as a check that the instrument is measuring what it claims to measure. Legal form is next after internal control (V = 0.324, chi-square 15.31 on two degrees of freedom, p = 0.0005): audited entities are concentrated among companies, cooperatives fall in between, and audited individual undertakings are so few that the corresponding cell drives the minimum expected frequency of 4.62. The substantively interesting association is with internal control (V = 0.399, chi-square 23.28, p < 0.001, Fisher's exact p < 0.001), because it is the one the governance account predicts and the agency account does not. Sustainability reporting is associated with audit at V = 0.302. The sixth test shows that updated bylaws and internal control are not associated (V = 0.070, p = 0.397), which indicates that the bylaws item captures routine legal housekeeping rather than governance investment and justifies keeping it as a separate control in the model.

Table 2.
Bivariate associations with voluntary external audit and between governance items

Association	χ^2	df	p	Cramér's V	Min. expected	Fisher exact p
Size (0–9 vs 10+) × external audit (voluntary)	26.63	1	0.0000	0.427	8.32	n/a
Legal form × external audit (voluntary)	15.31	2	0.0005	0.324	4.62	n/a
Internal control (formal vs informal or none) × external audit (voluntary)	23.28	1	0.0000	0.399	4.25	0.0000
External audit (voluntary) × sustainability reporting	13.36	1	0.0003	0.302	4.25	0.0004
Public funds or bank credit × external audit (voluntary)	0.00	1	1.0000	0.000	6.10	n/a

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Association	χ^2	df	p	Cramér's V	Min. expected	Fisher exact p
Updated bylaws × internal control	0.72	1	0.3974	0.070	5.04	n/a

Note: N = 146. Yates's continuity correction applied to two-by-two tables. Fisher's exact test reported for two-by-two tables where the minimum expected cell frequency is below five; not applicable (n/a) otherwise.

Source: Author's own calculations on survey data, 4 May to 26 June 2026.

Figure 2 plots the effect sizes from Table 2 and makes the contrast visible: four bars of comparable height for the significant associations with audit, and two lighter bars, one of them of zero length, for the associations that are not distinguishable from chance.

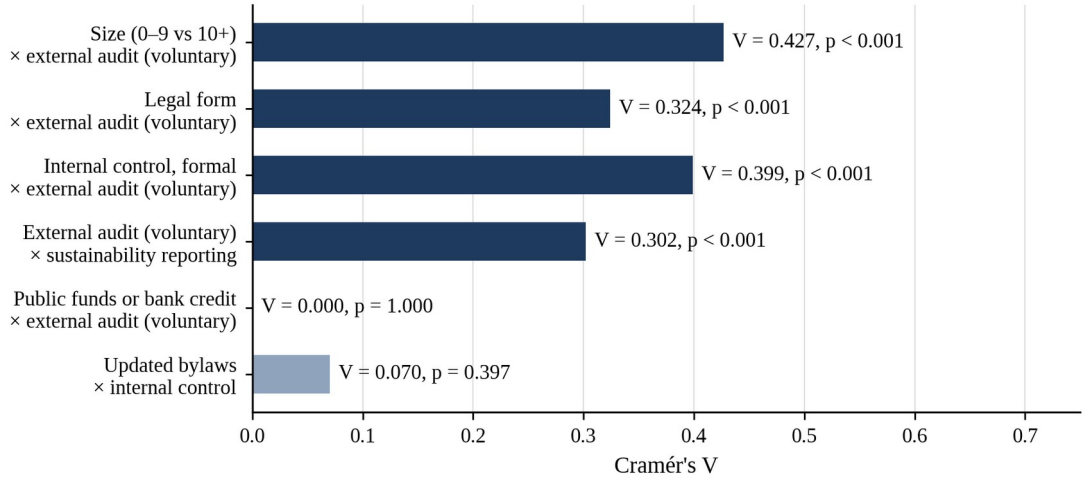


Figure 2. Effect sizes for the six association tests. Darker bars mark associations significant at the five per cent level; the lighter bars mark non-significant associations.

Source: Author's own elaboration on survey data.

4.2 Multivariate Model

Table 3 reports the logistic regression of Equation (1) and confirms the bivariate pattern under mutual control. Size enters at 1.996 ($p < 0.001$), an odds ratio of 7.36; formal internal control at 1.668 ($p = 0.004$), an odds ratio of 5.30; and sustainability reporting at 1.311 ($p = 0.039$), an odds ratio of 3.71. Access to external finance carries a coefficient of −0.542 ($p = 0.410$) and updated bylaws 0.439 ($p = 0.545$); neither is distinguishable from zero. The average marginal effects are 19.9 percentage points for size, 16.6 for internal control and 13.1 for sustainability reporting, against a base rate of 18.5 per cent. H1, H3 and H5 are supported; H4 is not.

The model fits acceptably. McFadden's pseudo R-squared is 0.310, the likelihood ratio test rejects the null of no explanatory power ($p < 0.001$), the area under the receiver operating characteristic curve is 0.845 and the Hosmer–Lemeshow statistic of 2.05 on six degrees of freedom does not reject calibration ($p = 0.915$). Classification accuracy is 87.0 per cent against a base rate of 18.5 per cent, which is a modest improvement and should be read as such: with an outcome this rare, accuracy is a weak diagnostic and the area under the curve is the more informative statistic.

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An earlier version of this analysis excluded sustainability reporting from the model on the ground that too few respondents report it. That justification does not survive inspection and is recorded here rather than quietly dropped. The two-by-two table of audit against sustainability reporting has cell counts of 107, 12, 16 and 11: no cell is empty, the smallest holds 11 observations, and quasi-complete separation cannot arise. The model including the variable converges normally, the largest standard error is 0.86, and the pseudo R-squared rises from 0.280 to 0.310. The variable belongs in the model and is reported in it.

One caution applies to the model as a whole. With 27 audited entities and five predictors there are 5.4 events per variable, below the conventional minimum of ten (Peduzzi et al., 1996), and the coefficients should be read as descriptive of this sample rather than as precise population parameters. The two strong predictors, size and internal control, retain their sign and significance when any single other regressor is dropped; the coefficient on sustainability reporting is the least stable of the three, its p-value moving above five per cent in one of the four reduced specifications. Figure 3 plots the coefficients with their confidence intervals and shows the two null predictors straddling the reference line.

Table 3.
Logistic regression: determinants of voluntary external audit

Variable	Coefficient	Std. error	p	Odds ratio	Average marginal effect
Ten or more employees	1.996	0.577	0.0005	7.36	0.199
Formal internal control	1.668	0.585	0.0044	5.30	0.166
Sustainability reporting	1.311	0.636	0.0392	3.71	0.131
Public funds or bank credit	−0.542	0.657	0.4098	0.58	−0.054
Updated bylaws	0.439	0.726	0.5449	1.55	0.044
Constant	−3.047	0.862	0.0004	n/a	n/a
Observations	146				
Pseudo R^2 (McFadden)	0.310				
Log-likelihood	−48.23				
Area under ROC curve	0.845				

Note: Dependent variable: external audit (voluntary), equal to 1 when the entity's financial statements are audited by an authorised firm. All 146 entities are below the statutory thresholds. Average marginal effects computed over the sample rather than at the mean. Legal form is not included for the reason given in Section 3.5. The largest standard error in the model is 0.86, which indicates that no separation problem is present.

Source: Author's own calculations on survey data, 4 May to 26 June 2026.

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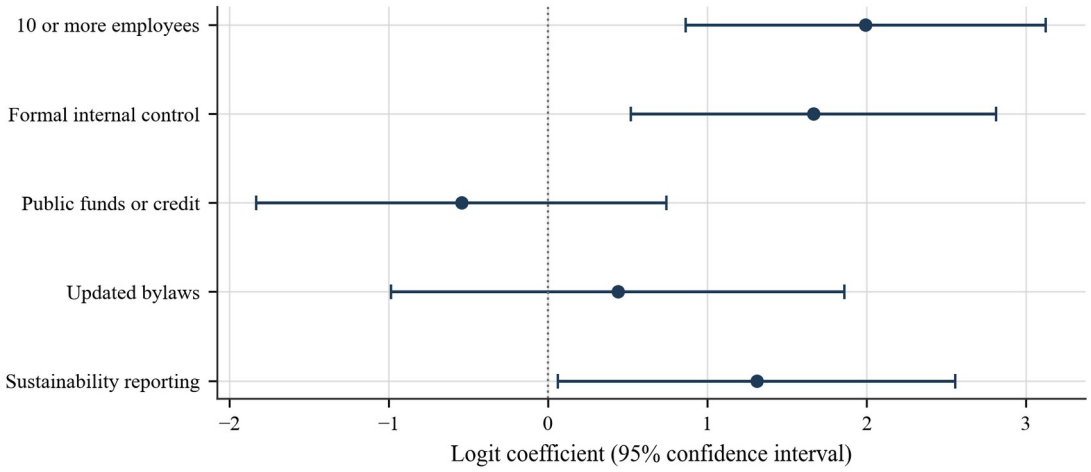


Figure 3. Logit coefficients with 95 per cent confidence intervals. Intervals that cross the vertical reference line indicate coefficients not distinguishable from zero.

Source: Author's own elaboration on survey data.

5. DISCUSSION

5.1 Audit as Part of a Governance Package

The central result is the pairing of a significant internal control coefficient with a null coefficient on external finance. In this sector, an entity that has built a formal control function is roughly five times as likely to engage an external auditor, controlling for size, while an entity that has drawn on public funds or bank credit is no more likely to do so than one that has not. Since every entity in the sample is below the statutory threshold, the audits in question were bought rather than imposed, and the pattern of who buys them is the finding.

A natural interpretation is that audit is bought as part of an internal governance package rather than to satisfy an outside financier. The institutional setting reviewed in Section 2.4 makes this plausible. Public agricultural support is disbursed against physical eligibility checks and administrative controls performed by the paying agencies themselves, as the Union's financing regulation requires (European Parliament and Council of the European Union, 2021b), not against audited financial statements, and the Court of Auditors' repeated observation that the control framework focuses on eligibility rather than on accounts (European Court of Auditors, 2022, 2024) confirms that the beneficiaries have no reason to expect the agencies to ask for an auditor's opinion. A borrower's collateral in this sector is typically land or equipment, which a lender values directly (OECD, 2024). Neither channel generates the demand for a third-party opinion that the agency account assumes, and in a sample where 77.4 per cent of entities have used one channel or the other, the absence of any association is what one would predict if the channels do not care about audited accounts.

This does not contradict the agency literature so much as delimit it. Chow (1982), Dedman et al. (2014) and Minnis (2011) all study settings in which lenders read and price audited statements. Vanstraelen and Schelleman (2017) anticipated that the same variables would behave differently

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where the users of the accounts differ, and the present result is a case in point. The size effect, which both accounts predict, is present and large; the finance effect, which only the agency account predicts, is absent; and the internal control and sustainability reporting effects, which only the governance account predicts, are present. The pattern is not a refutation of the agency account in general but a demonstration that its distinctive prediction fails where its precondition, a user of audited accounts, is not met.

The bivariate association with legal form deserves a separate comment because it is not carried into the model. Audited entities are concentrated among companies, and audited individual undertakings are close to non-existent. The most likely reason is not that individual undertakings have less need of assurance but that their simplified records give an auditor little to audit, so that the fixed cost of an engagement buys less. Cooperatives sit between the two, which is consistent with the ambiguous prediction drawn from Grashuis and Su (2019): member monitoring substitutes in part for external verification, but the larger cooperatives resemble companies in their accounting and behave like them. Whether legal form has an effect independent of size cannot be determined from these data, and the paper does not claim that it does.

5.2 Implications

Two implications follow. For the profession, the marketable proposition in this sector is not assurance for external users but the control-system work that surrounds it. The entities that buy audits are those that have already invested in internal control and in non-financial reporting, which suggests that an audit firm approaching an agricultural client is more likely to succeed by offering to build or review the control function than by pointing to the bank or the paying agency. This is consistent with the emphasis of the Global Internal Audit Standards (The Institute of Internal Auditors, 2024) on the scalability of the internal audit function and with the view of Collis et al. (2004) that directors of small companies value the audit mainly as a check on their own systems.

For policy, any attempt to raise assurance quality in agriculture by extending audit obligations downwards would work against the observed adoption logic. Breuer (2021) shows that size-based mandates redistribute resources across firms in ways voluntary adoption does not, and the companion study documents that in this sector the obligation already switches on and off as firms cross the thresholds (Oncea, 2026). The channel the present data point to is different: strengthening the internal control requirements attached to public support, for instance by making a documented control function a condition for the larger investment grants, would reach the entities that are in any case the ones that go on to buy an audit. The sustainability reporting result points the same way. The postponement of the reporting mandate for smaller undertakings (European Parliament and Council of the European Union, 2025) leaves this reporting voluntary for the foreseeable future, and the entities that do it are, on this evidence, the ones most likely to seek financial assurance as well.

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5.3 A Limitation the Instrument Imposes

The questionnaire included a seven-item attitudinal battery on the perceived value of audit and sustainability assurance. That battery is not used in this paper because it does not measure a single construct. Cronbach's alpha (Cronbach, 1951) is 0.062 and the inter-item correlations range from −0.134 to 0.101, against the range of roughly 0.4 to 0.7 expected for items of this kind on genuine attitudinal data. A battery with an alpha of this magnitude carries no information that can be aggregated, and any scale built from it would be an artefact of the scoring rather than a measure of anything.

This value is reported because a reader who requests the internal consistency statistic will compute the same number, and because the finding is itself informative about survey administration in this population. Responses collected through professional networks during the spring agricultural season, when the people asked to answer are in the field or preparing support applications and a manager may delegate the questionnaire to whoever is at a desk, are vulnerable in exactly this way: the factual items are answered from records or from knowledge of the entity, while the opinion items are answered hastily or by someone whose opinion was not sought. The factual items are not affected by the same mechanism, since they record verifiable characteristics rather than attitudes, and the associations reported above are reproducible from the response database. A future wave will place the attitudinal items at the start of the instrument, administer them outside the peak season and include an attention check.

6. CONCLUSIONS

Among Romanian agricultural entities that are not obliged to be audited, the demand for an external audit is explained by size, by the presence of a formal internal control function and by sustainability reporting, and not by access to public funds or bank credit. Legal form is associated with audit bivariately, with audited entities concentrated among companies, but its independent contribution could not be estimated and is not claimed. The pattern favours a governance account of voluntary audit over an agency account, at least in a sector where public support is disbursed against administrative rather than financial verification and where bank lending is secured on physical assets. Because every entity in the sample was screened against the statutory thresholds, the audits studied are voluntary by construction, and the size effect cannot be an artefact of the obligation.

The limitations are those of the design. The sample is not probabilistic and was recruited through accounting networks, so the prevalence figures describe the respondents and not the sector, and the under-representation of individual holdings relative to the structural statistics is a known bias in the direction of entities that keep formal accounts. The dependent variable and every predictor are self-reported, and although the screening item removes entities above the thresholds, it does so on the respondent's word. The design is cross-sectional, which means the internal control association cannot

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be given a direction: entities may buy audits because they have control functions, or build control functions because an auditor asked them to. With 27 audited entities the multivariate estimates rest on fewer events per variable than the applied literature recommends, and the coefficient on sustainability reporting in particular should be treated as suggestive. The attitudinal part of the instrument did not work, and the study therefore says nothing about what respondents believe an audit is for.

Three lines of further work follow directly. Distinguishing the two directions of the internal control association requires either a panel that observes the sequence in which entities adopt control functions and audits, or interviews with the owner-managers of audited entities about why the engagement was first made; the second of these is under way. Linking the survey responses to the filed financial statements would replace self-reported size and audit status with verified values and would allow the analysis to be repeated on the population of entities near the thresholds studied in the companion paper. And a larger wave, with a corrected attitudinal battery, would allow the governance account to be tested against the perceptions that are supposed to drive it rather than only against the practices that are supposed to accompany it. What the present evidence establishes is narrower but secure: in this sector, an entity buys an audit when it has already decided to govern itself formally, not when someone outside asks it to.

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AUTHOR CONTRIBUTIONS

Conceptualisation, B.-R.O.K.; methodology, B.-R.O.K.; software, B.-R.O.K.; formal analysis, B.-R.O.K.; data curation, B.-R.O.K.; writing, original draft, B.-R.O.K.; writing, review and editing, B.-R.O.K. The author has read and agreed to the published version of the manuscript.

DATA AVAILABILITY

The anonymised response database of the survey administered between 4 May and 26 June 2026 (146 valid responses) and the analysis script are available from the author on reasonable request. No personal data are included.

DECLARATION OF INTEREST

The survey data were collected by the author for her doctoral research; respondents participated voluntarily and anonymously. The author declares no competing interests.

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