

## Non-Audit Assurance Services in Albania: A Logistic Regression Analysis of the Supply-Side Factors



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**Abstract:** This research examines the provision of non-audit assurance service provision in Albania through a study covering two time periods: 2010–2012 and 2022–2024. This two-period design captures changes in market development and professional practice over time. It allows for a comparison of the factors influencing non-audit assurance service provision at an early stage and at a more mature stage of the Albanian assurance market. Using survey data from certified auditors and applying principal component analysis (PCA) followed by binary logistic regression, the study investigates how professional knowledge, fees, ethical qualities, and employment category influence the likelihood of offering assurance services. Results indicate that specific knowledge of assurance services consistently emerges as the strongest factor, with its effect remaining significant across both periods, although diminishing over time. General professional skills, statistically significant in 2010–2012, lost influence in 2022–2024, while the professional category, service fees, and ethical qualities remained statistically insignificant. These findings suggest that the Albanian assurance market is still developing, with technical expertise serving as the key determinant of service provision. The article concludes with implications for policymakers, professional organisations, and universities in preparing for a changing, more competitive assurance landscape.

**Keywords:** assurance services; logistic regression; audit; sustainability assurance.

**JEL Classification:** M42; M48; Q56; R11.

### Introduction

Assurance services beyond the statutory audit of financial statements play an increasingly important role in enhancing the credibility of both financial and non-financial information, strengthening trust between organisations and stakeholders. Their expansion has been associated with globalisation, complex organisational processes, and higher demands for transparency and accountability (Simnett, Vanstraelen, and Chua 2009). In mature markets, this broader assurance landscape includes other assurance and related, for example, assurance over non-financial disclosures (including sustainability information), internal control and compliance-related engagements, as well as review, agreed-upon procedures, and compilation services (Cohen and Simnett 2015; Perego and Kolk 2012; O'Dwyer and Owen 2005; Quick and Inwinkl 2019). As these services develop, professional accountants' roles extend beyond traditional statutory audit work and require specialised competencies, robust quality practices, and credible professional infrastructures (Knechel, Vanstraelen, and Zerni 2015; Francis 2011).

Despite the growing international importance of non-audit assurance services, much of the empirical evidence remains concentrated in mature markets and often focuses on sustainability assurance and other

advanced forms of assurance practice (Simnett *et al.* 2009; Perego and Kolk 2012; Cohen and Simnett 2015). We do not have a lot of information about how assurance markets emerge and professional capacity develops in transition and emerging economies, where institutional infrastructures may be evolving and where demand, regulation, and professional norms can be different from developed economies. Institutional theory suggests that professional service development is shaped not only by technical competence but also by regulatory pressures, professional norms, and market demand (DiMaggio and Powell 1983; Scott 2014). On the same basis, perspectives from the sociology of professions emphasise how professional jurisdictions and expertise evolve through competition, credentialing, and legitimacy-building (Abbott 1988). These lenses imply that supply-side determinants - knowledge, professional qualities, fees - may operate differently in less mature markets than in settings where assurance services are already well established.

Albania provides a relevant setting to study these issues because statutory audit has been institutionalised, including alignment with the International Standards on Auditing (ISA) and oversight arrangements through professional and public oversight mechanisms (the Public Oversight Board), while the broader market for other assurance and related services remains comparatively limited. Importantly, the present study excludes statutory audits of financial statements from the analysis and focuses instead on assurance and related services beyond the financial statement audit, which are typically undertaken on a voluntary basis and are offered mainly to private companies. In this study, "assurance services" therefore refer to engagements such as review engagements (*e.g.*, ISRE 2400), agreed-upon procedures (*e.g.*, ISRS 4400), compilation engagements (*e.g.*, ISRS 4410), and other assurance engagements (*e.g.*, ISAE 3000, including assurance on non-financial information), rather than statutory audits. Because these services are not as integrated into regular reporting and regulatory needs as statutory audits, their availability likely depends more on the growth of specialized knowledge, perceived market opportunities, and the skills of providers. In this context, this research looks at which supply-side factors are linked to the provision of other assurance and related services in Albania. It focuses on professional knowledge, service-fee relevance, ethical and professional qualities, and employment or professional categories. Two survey waves are analysed (2010 - 2012 and 2022 - 2024) to capture market development and shifts in professional practices over time, allowing comparison between an earlier stage and a later, more mature stage of the Albanian assurance market. Empirically, the study uses principal component analysis (PCA) to summarise related competencies and then applies binary logistic regression to test which factors are associated with whether respondents currently provide other assurance/related services to private companies. The original contribution of this study is threefold. First, in comparison with the traditional focus on the demand side, it focuses on the supply-side development of a broader non-audit assurance market. Second, rather than examining assurance provision at a single point in time, it compares two independent cross-sectional samples separated by more than a decade using comparable core measures. This makes it possible to examine how the relevance of provider-related factors changes as the market evolves. Third, by distinguishing specific assurance knowledge from broader professional, technological, business-process, and marketing capabilities, the study shows that these dimensions do not necessarily develop or influence service provision at the same pace. The findings therefore suggest that regulatory convergence, professional capacity, and market demand may evolve at different speeds.

## 1. Literature Review

### 1.1 Global Perspectives on Assurance Services

Assurance services, in the broad sense, comprise engagements that enhance the degree of confidence of intended users in information. In this study, we focus on "other assurance and related services" beyond statutory financial statement audits - such as assurance engagements under ISAE 3000 (Revised) and related services (*e.g.*, agreed-upon procedures and compilation engagements) - as currently provided to private-sector clients in Albania. Two recent standards have reshaped the assurance landscape. The International Auditing and Assurance Standards Board (IAASB) published the International Standard on Sustainability Assurance (ISSA) 5000 in November 2024, and this standard complements ISAE 3000 (Revised) (IAASB 2013), which continues to be applied to assurance engagements other than audits or reviews of historical financial information.

The International Ethics Standards Board for Accountants (IESBA) approved the International Ethics Standards for Sustainability Assurance (IESSA) in 2024 - 2025, introducing an ethics and independence framework for sustainability assurance engagements (IESBA 2025). ISSA 5000 and IESSA represent a move toward more formal sustainability assurance practices. They also raise expectations for the skill, independence, and quality control of assurance providers. Regulatory conditions in Europe have changed as well. Through Commission Delegated Directive (EU) 2023/2775, the EU changed the monetary thresholds that define company size classes under Directive 2013/34/EU by about 25%. Member States will implement this update in 2024. These changes may

indirectly lower the number of entities that require a statutory audit. At the same time, they could increase the demand for limited assurance in specific areas, such as sustainability. This shift may change the types of services professionals offer and make “other assurance” capabilities more important. Systematic reviews document the evolution of sustainability assurance practice and provide a research agenda for this rapidly expanding field (Hazaea, Zhu, Khatib, Bazhair, and Elamer 2022). Recent archival evidence suggests that firms with stronger board monitoring are more likely to select sustainability assurance providers from the Big Four (Alsahali, Malagueño, and Marques 2024), and that assurance can be associated with higher-quality sustainability reporting and greater credibility for external users (Grommes 2025; Vander Bauwhede and Van Cauwenberge 2022).

Evidence from other transition economies like Albania indicates that the development of assurance and auditing services depends not only on the adoption of international standards, but also on the maturation of professional bodies, market institutions, and enforcement mechanisms. Studies from the Czech Republic describe how audit roles and reporting practices evolved during market transition amid changing regulation and professionalization (Sucher and Zelenka 1998). Similarly, the Romanian experience highlights the importance of capacity building, education, and institutional support in establishing credible assurance markets (King, Beattie, Cristescu, and Weetman 2001; Albu, Albu, Faff, and Hodgson 2011). Research from Russia further illustrates challenges linked to independence and market pressures in transitional settings (Sucher and Bychkova 2001). These comparative insights help contextualize Albania’s trajectory and motivate an explicit focus on providers’ capabilities and market incentives.

## 1.2 Assurance Services in Albania

The development of assurance services in Albania has progressed slowly. This is mainly due to efforts to meet international standards, such as the International Standards on Auditing (ISA), the International Standard on Assurance Engagements (ISAE 3000), and the ethical guidance from professional bodies (IEKA 2006). The Institute of Authorised Chartered Auditors of Albania (IEKA) has been important in adapting international standards, providing professional guidance, and overseeing statutory audit practices. However, even with formal alignment, the growth of assurance services beyond financial statement audits is still limited.

Several challenges continue to hinder the growth of this service sector in Albania. First, professional training and capacity building remain uneven between companies and professionals. While larger firms and professionals with international affiliations (e.g., Big 4 or ACCA members) have greater access to continuous professional development, many small and medium-sized companies lack up-to-date training opportunities in non-audit assurance engagements (Singh and Waller 2024). This creates a gap in the supply of qualified professionals who can deliver services such as sustainability assurance, compliance reviews, or internal control reporting.

Second, awareness among businesses and stakeholders about the potential benefits of assurance services is still low. Empirical evidence suggests that many managers in Albanian companies view external auditing through the lens of statutory audit compliance, without recognising the added value that assurance can provide in areas such as risk management, governance, or non-financial reporting (Muceku and Bello 2021). This is consistent with findings from other researchers in transition economies, where demand for assurance services is strongly correlated with managerial knowledge and exposure to international markets (Eilifsen *et al.* 2006).

Third, although Albania has continuously adopted EU reforms in financial reporting and auditing, there is no explicit mandate or strong incentives for companies to engage in sustainability assurance or internal control procedures. Additionally, the oversight mechanisms remain primarily focused on statutory audits, leaving assurance engagements outside financial reporting less regulated and, in practice, less trusted by the market.

The Albanian assurance market is thus characterised by limited client demand, dependence on statutory audit, and a lack of awareness of the need for assurance. The predominance of statutory audit has constrained innovation in the profession, while assurance engagements in emerging areas - such as environmental, social, and governance (ESG) reporting - are perceived as premature, or “luxury services”. Nonetheless, Albania’s ongoing integration with the European Union and the gradual adoption of sustainability reporting directives are expected to create new opportunities (Zherri and Kalemi 2025). The introduction of the EU’s Corporate Sustainability Reporting Directive (CSRD), together with the IAASB’s ISSA 5000, is likely to pose external pressure on Albania to expand assurance practices into sustainability.

In summary, although Albania has achieved significant formal progress in aligning with international standards, the assurance services sector (beyond statutory audit) is still in its formative stage. Further advancement will depend on improving professional training and education, raising awareness among stakeholders, strengthening the regulatory framework, and fostering a competitive environment where assurance is valued not only as a compliance requirement but also as a strategic tool to enhance transparency and stakeholder trust.

### 1.3 Supply-Side Factors: Theoretical Framework and Hypothesis Development

A recurring theme in the literature is the importance of professional knowledge and competencies in providing other assurance and related services. Technical expertise in assurance standards, evidence-gathering, and the planning for the engagement is viewed as indispensable for credible assurance work (Knechel, Wallage, Eilifsen, and Van Praag 2006). As assurance services expand beyond historical financial information, practitioners also require more capabilities - such as digital literacy, business process understanding, and communication skills - to meet more complex client demands. Recent evidence supports this shift, showing that auditors' technical and digital skills can improve professional outcomes in technology-intensive environments (Al Frijat and Al-Hajaia 2025).

Beyond individual human capital, assurance provision is shaped by organisational resources and professional setting. Employment in large firms or international networks can provide access to specialised methodologies, training, industry expertise, and internal quality-control systems that facilitate the delivery of non-audit assurance engagements. Research on assurance markets also indicates that users perceive credibility differences across provider types and respond more favourably when assurance is delivered by professional accounting firms rather than non-accounting providers (Pflugrath, Roebuck, and Simnett 2011; Quick and Inwinkl 2020). This supports including professional category/firm environment (e.g., Big 4/international network vs local/freelance) as a relevant supply-side determinant of whether practitioners currently provide other assurance and related services.

A further set of factors relates to provider qualities and perceived credibility, including independence, objectivity, integrity, and reputation. Early evidence from voluntary assurance settings suggests that clients' choices are associated with provider expertise and independence, alongside economic considerations (Simnett, Vanstraelen, and Chua 2009). Consistent with this, detailed analyses of assurance statements highlight persistent concerns about how providers demonstrate and communicate independence and how management influence can shape the assurance process (O'Dwyer and Owen 2005). These arguments imply that stronger professional/ethical qualities can support market trust and, in turn, the feasibility of supplying assurance engagements beyond audit.

In voluntary assurance markets, fee considerations are part of the selection environment (Simnett *et al.* 2009). Where fee pressure is high, providers may be less willing to offer resource-intensive engagements. Conversely, where assurance is valued, studies suggest it can enhance the quality and credibility of non-financial disclosure, supporting demand that can sustain provider participation (Hodge, Subramaniam, and Stewart 2009; Moroney, Windsor, and Aw 2012).

Early research emphasizes that clients' assurance-provider choices reflect perceived provider expertise, independence, reputation, and service fees (Simnett, Vanstraelen, and Chua 2009). As the market increasingly expects assurance over sustainability reporting, assurance providers are expected to deepen expertise in sustainability frameworks and related ethics and independence requirements (IFAC, AICPA, and CIMA 2025).

To motivate the supply-side focus, we draw on the theory that professional service markets in emerging economies converge toward international models through regulatory alignment and professional norms, yet outcomes depend on local enforcement and capacity (DiMaggio and Powell 1983; Scott 2014). From a professionalization lens, the expertise of providers shape which services are provided and by whom (Abbott 1988). Complementing these views, knowledge diffusion arguments imply that new assurance standards and practices spread gradually as competencies and training pathways develop (Rogers 2003). Accordingly, we examine the following research questions and hypotheses, stated in associational terms:

RQ1: Which supply-side factors are associated with certified auditors' current provision of other assurance and related services in Albania?

H1: The probability of offering non-audit assurance services is positively influenced by the category of service provider.

H2: The probability of providing non-audit assurance services is positively influenced by the level of general knowledge and skills of service providers.

H3: The probability of providing non-audit assurance services is positively influenced by service fees.

H4: The probability of providing non-audit assurance services is positively influenced by the level of qualities of assurance service providers.

RQ2: Do these associations differ between 2010 - 2012 and 2022 - 2024 as the Albanian market develops?

## 2. Research Methodology

### 2.1 Sample Selection and Data Collection

This study uses logistic regression models over two different periods: 2010 - 2012 and 2022 - 2024. We used this two-period design to capture changes in market development enabling a comparison of the determinants of non-audit assurance service provision. Data were collected through a structured questionnaire distributed to certified auditors in Albania. For the 2010 - 2012 survey, 120 questionnaires were distributed using publicly available email addresses listed on the website of the Institute of Certified Public Accountants of Albania (IEKA), and 64 valid responses were obtained. For 2022 - 2024, there were 120 questionnaires distributed with 59 valid responses collected.

The questionnaire was developed on the basis of the literature on assurance-provider expertise, professional qualities, service fees and professional competence, together with the international standards relevant to assurance and related-service engagements. The instrument was designed to capture both respondents' professional characteristics and the principal factors associated with the provision of non-audit assurance services. The same structured questionnaire was used for both study periods. This decision was intended to ensure consistency in the measurement of the main constructs and to enable a comparison of the factors associated with non-audit assurance service provision over time. The questions, structure, response scales and the respective variables included in the analyses were maintained across the two periods. In the second survey period, only references to specific professional standards were updated to reflect versions applicable at the time of data collection. In addition, ISSA 5000, General Requirements for Sustainability Assurance Engagements, was added to the list of relevant standards because it did not exist when the questionnaire was first administered. This was a contextual update to the standards referenced in the questionnaire and did not alter the core questions, constructs or the measurement scales used in the comparative analysis.

Before its first initial administration, a pilot test was carried out with 5 legal auditors who possessed characteristics similar to those of the target respondents. The pilot participants were asked to assess the clarity of the instructions and questions, the appropriateness of the response options, the time required to complete the questionnaire and the technical functionality of the data-collection format. The pilot responses showed a tendency among participants to select the middle or neutral category when a five-point Likert scale was used. To encourage respondents to express a clearer direction in their responses, the scale was changed from a five-point to a four-point Likert scale. The final response categories therefore excluded a neutral midpoint. Apart from this change, the pilot indicated that the questionnaire was sufficiently clear and relevant for the main study.

In both periods, the questionnaire was distributed electronically to legal auditors selected from the IEKA professional register applicable at the time of data collection. In both periods the questionnaire was administered through Google Forms (linked to Google Spreadsheet for the first period). The information about the purpose of the study, the voluntary nature of participation and the confidentiality of the responses was incorporated into the form for the second period and on the email for the first period.

The target population comprised certified statutory auditors registered with IEKA during each study period. For each period, we compiled the sample from the official register available at the time of data collection and sent emails to 120 eligible auditors to participate. Eligibility criteria were: (i) active certification status, (ii) professional practice in Albania during the relevant period. Because the auditors' register changes over time, the participant list was updated for the second wave using the most recent register. The study uses two independent cross-sectional samples rather than a panel. Given workforce mobility and changes in the professional register over time, we did not aim to re-interview the same individuals. Instead, each sample drew from the active auditor population at that time. This approach reflects changes in the active professional population, including the entry of newly certified legal auditors, retirement and professional mobility. This design (a repeated cross-sectional design) allows comparison of determinants at different stages of market development, without assuming individual-level stability across a decade meaning that differences between the two models may reflect both the development of the assurance market and changes in the demographic or professional composition of the samples. The results should therefore be interpreted as differences in population-level rather than as changes experienced by the same practitioners.

Data were collected in two concentrated time windows rather than continuously across the three-year ranges. The surveys for the first period were collected and administered between September and November 2013 and the survey for the second studied period between September and November 2025. Responses were recorded in a single dataset per period.

Principal component analysis (PCA) with Varimax rotation was applied to reduce variables into key factors (Bryant and Yarnold 1995). Logistic regression was then applied to test hypotheses on the probability of providing assurance services. The validity of the model was evaluated using the Omnibus test, Hosmer - Lemeshow test, pseudo- $R^2$  indicators (Cox, Snell and Nagelkerke), and classification accuracy.

## 2.2 Logistic Regression and Variable Construction

To test the hypotheses above, we employ a binary multiple logistic regression model. Logistic regression is appropriate because the study's dependent variable is dichotomous and the research aims to examine how a set of supply-side factors jointly relate to the likelihood that certified auditors provide non-audit assurance and related services. In line with RQ1 and hypotheses H1-H4, the model estimates the direction (positive/negative) and statistical significance of the associations between the independent variables (provider category, general knowledge and skills, service fees, and provider qualities) and the probability of service provision. The emphasis is therefore on identifying which factors increase or decrease the likelihood of offering these services, rather than on forecasting exact probabilities for individual auditors (although the model permits probability estimation).

The dependent variable captures current provision of non-audit assurance and related services by the respondent (Y). It is operationalised as a binary indicator equal to 1 if the certified auditor reports that they currently provide at least one non-audit assurance/related service (as defined in the questionnaire), and 0 otherwise. This coding allows the model to estimate how changes in the explanatory variables affect the odds of service provision.

To address RQ2, the regression models are estimated separately for the two periods (2010 - 2012 and 2022 - 2024) and the results are compared across waves to assess whether the strength and significance of the associations change as the Albanian assurance market develops.

The first independent variable considered in the study is the category of the practitioner (CAT). Based on the Handbook of Audit, Assurance, and Ethics Statements, accounting professionals may operate either as (i) independent/freelance practitioners (including practitioners working independently or as a firm) or (ii) employed practitioners within an entity. A preliminary review of the survey responses indicated that the opportunity to deliver assurance services beyond statutory financial statement audits is not limited to independent practitioners or specific memberships (e.g., ACCA). In practice, respondents reporting higher exposure to, and capability for, such engagements were often those employed in large audit firms, particularly Big Four firms or local branches/affiliates of international networks. This suggests that assurance capability reflects not only individual qualifications but also firm-level resources, such as access to specialised methodologies, training, client portfolios, and internal quality-control infrastructures.

To ensure a transparent and conceptually meaningful classification - distinguishing firm-network advantages from purely individual credentials - we recategorized respondents into two groups and operationalised this variable as a binary indicator:

CAT (Professional category) = 1 if the respondent is employed in a Big Four firm or in a branch/affiliate of an international audit/accounting network;

CAT (Professional category) = 0 if the respondent is a freelance practitioner or employed in a domestic Albanian accounting/audit firm.

A similar distinction between international-network and non-network providers is used in the assurance literature (Hasan, Maijor, Mock, and Roebuck 2005). Because CAT is measured with a single survey item, it is treated as a single-indicator construct and therefore not included in the PCA. Instead, CAT enters directly as an independent variable in the binary logistic regression model.

The second factor examined is the level of the professional's knowledge and skills (KNOW), which was measured through a set of survey questions capturing respondents' self-assessed competencies across the relevant dimensions. Each item was rated using a 4-point Likert scale (from low to high). A 4-point (even-numbered) scale was intentionally selected instead of a 3- or 5-point scale in order to avoid a neutral midpoint and reduce "middle-option" responding, thereby encouraging respondents to indicate a clearer direction in their assessment. These are the variables included in the survey:

KNOW\_AS = Knowledge of assurance services

KNOW\_St = Knowledge of assurance service standards

KNOW\_St2400 = Knowledge of ISAE 2400

KNOW\_St4400 = Knowledge of ISAE 4400

KNOW\_St4410 = Knowledge of ISAE 4410

KNOW\_St3000 = Knowledge of ISAE 3000

KNOW\_Proc = Knowledge of the processes and business for which the service is provided

KNOW\_Tech= Technological skills

KNOW\_Mark= Marketing skills

Researchers Carcello, Hermanson, and McGrath concluded that these dimensions are critical to the quality of assurance services (Carcello, J.V., Hermanson, R.H., and McGrath, N.T. 1992). Similarly, Eilifsen, Knechel, Wallage, and Praag (2006) included "provider expertise" as a key attribute in the success of assurance service providers. According to them, expertise includes knowledge of both the business processes and verification procedures used in providing assurance services. Specifically, there are several questions in the questionnaire corresponding to these dimensions. To determine whether these dimensions can be represented as underlying latent constructs, Principal Component Analysis (PCA) was conducted. Based on the 2010 - 2012 data, the KMO coefficient (0.816) and Bartlett's Test of Sphericity ( $\chi^2 = 336.003$ ,  $df = 36$ ,  $p < .001$ ) indicated data suitability (Gjika 2015). Similarly, for the 2022 - 2024 data, the KMO coefficient (0.771) and Bartlett's Test ( $\chi^2 = 266.523$ ,  $df = 36$ ,  $p < .001$ ) confirmed that the data were appropriate for factor analysis.

The analysis in both periods suggested that the nine variables could be grouped into two factors. The first comprised the knowledge of assurance services (KNOW\_AS) and the knowledge of assurance standards (KNOW-St, KNOW\_St2400, KNOW\_4400, KNOW\_St4410, KNOW\_St3000), which together form a new factor, which is the specific knowledge of assurance services (SKNOW). The second factor comprised business and process knowledge (KNOW\_Proc), technological skills (KNOW\_Tech), and marketing skills (KNOW\_Mark), collectively labelled as the general knowledge and skills of the professional (GKNOW). A rotated factor matrix, constructed using the Varimax method with Kaiser normalisation, confirmed this structure.

The third factor included in the analysis was the applied service fees (SFEE). This factor's influence is studied through two dimensions, each measured using survey items rated on a Likert scale to ensure consistent scaling across constructs

- FEE\_Imp = The impact of the fee on the development of assurance services
- FEE\_Comp = Comparison of assurance service fees with audit service fees

Several studies have been conducted on how the cost of assurance services impacts their development. One of the main studies on this field is that of Eilifsen, Knechel, Wallage, and Praag (2006), which specifically examines how the characteristics of the assurance service affect the user's choice of a particular service provider. Among these characteristics, service cost is studied in particular detail. The KMO and Bartlett's test results were at the minimum acceptable threshold, supporting further analysis. The same results are achieved based on the data from both periods, 2010 - 2012 and 2022 - 2024. Communalities indicated that both dimensions should be retained.

The last factor included in the research is the qualities of potential service providers (QUAL). For research purposes, this factor has been broken down into the following dimensions:

- QUAL\_Conf = Confidentiality
- QUAL\_Int = Integrity
- QUAL\_Obj= Objectivity
- QUAL\_Ind= Independence

These dimensions have been derived from the literature review above and are included as separate questions in the questionnaire, each measured using survey items rated on a Likert scale. Professors Eilifsen, Knechel, Wallage, and Praag (2006) listed these provider traits as the basic qualities that influence the provision of assurance services. PCA confirmed that all four variables strongly loaded onto a single factor. Factor loadings were exceptionally high (above 0.90) for both periods, confirming the statistical robustness of QUAL as a construct.

The presence of multicollinearity can lead to inaccurate conclusions about which independent variables are statistically significant for the dependent variable. Therefore, before performing the binary logistic multiple regression analysis, we evaluated multicollinearity among the independent variables, and the correlation values for both periods resulted in being between -0.7 and 0.7, meaning they will not cause problems in further analysis (Lind *et al.* 2002).

### 3. Research Results

The logistic regression model based on the 2010-2012 data demonstrated better explanatory power (Nagelkerke  $R^2 = 0.70$ ) than the 2022 - 2024 data (Nagelkerke  $R^2 = 0.293$ ) (Table 1). The 2010 - 2012 model showed that the specific knowledge of assurance services (GKNOW) and the general knowledge and skills of the professional (SKNOW) are statistically significant ( $p < 0.01$ ). The other factors, such as the professional category (CAT), service fees (SFEE), and the provider's qualities (QUAL), were not statistically significant. Based on the 2022 - 2024 data, the only variable that resulted as statistically significant was the specific knowledge of assurance services

(GKNOW) ( $p < 0.001$ ). Other factors, including the professional category, “the general knowledge and skills of the professional, the service fees, and the provider’s qualities, resulted as “not statistically significant” (Table 2).

The regression results for 2010 - 2012 are finalised on the following formula:

$$p = \frac{e^{1.162 - 1.029xQUAL - 0.271xSFEE + 2.359xGKNOW + 2.768xSKNOW + 0.793xCAT}}{1 + e^{(1.162 - 1.029xQUAL - 0.271xSFEE + 2.359xGKNOW + 2.768xSKNOW + 0.793xCAT)}}$$

where  $p = P(Y=1)$  denotes the predicted probability of offering assurance services (Gjika 2015).

The logistic regression based on the 2022 - 2024 data was statistically valid but with moderate explanatory power (Nagelkerke  $R^2 = 0.295$ ). Specific knowledge of assurance services ( $B = 1.147$ ,  $p = 0.003$ ,  $\text{Exp}(B) = 3.149$ ) remained significant, while general skills, professional category, service fees, and provider qualities were not significant predictors. The regression formula for 2022 - 2024 would be:

$$p = \frac{e^{-0.056 + 0.187xQUAL - 0.206xSFEE + 0.19xGKNOW + 1.147xSKNOW + 0.237xCAT}}{1 + e^{-0.056 + 0.187xQUAL - 0.206xSFEE + 0.19xGKNOW + 1.147xSKNOW + 0.237xCAT}}$$

Table 1. Logistic Regression Results for Assurance Services Provision

|                                      | Model 1: 2010-2012 |       |       |       |        | Model 2: 2022-2024 |       |       |       |        |
|--------------------------------------|--------------------|-------|-------|-------|--------|--------------------|-------|-------|-------|--------|
| Variable                             | B                  | S.E.  | Wald  | Sig.  | Exp(B) | B                  | S.E.  | Wald  | Sig.  | Exp(B) |
| Professional category (CAT)          | 0.793              | 1.428 | 0.308 | 0.579 | 0.453  | 0.237              | 0.913 | 0.067 | 0.795 | 1.267  |
| Specific knowledge (SKNOW)           | 2.768              | 0.933 | 8.79  | 0.003 | 15.91  | 1.147              | 0.38  | 9.089 | 0.003 | 3.149  |
| General knowledge and skills (GKNOW) | 2.359              | 0.848 | 7.746 | 0.005 | 10.59  | 0.19               | 0.367 | 0.268 | 0.605 | 1.209  |
| Service fees (SFEE)                  | -0.271             | 0.442 | 0.376 | 0.54  | 0.763  | -0.206             | 0.322 | 0.411 | 0.521 | 0.814  |
| Provider's qualities (QUAL)          | -1.029             | 0.551 | 3.471 | 0.062 | 0.358  | .187               | 0.357 | 0.275 | 0.6   | 1.206  |
| Constant                             | 1.162              | 0.553 | 4.416 | 0.036 | 3.195  | -0.056             | 0.807 | 0.005 | 0.945 | 0.945  |

Note: Model 1:  $\chi^2(5) = 31.988$ ,  $p < .001$ ; Nagelkerke  $R^2 = 0.70$ ; Classification accuracy = 85.7%.

Model 2:  $\chi^2(5) = 13.653$ ,  $p = .018$ ; Nagelkerke  $R^2 = 0.293$ ; Classification accuracy = 69.1%.

Table 2 summarises the results of this research, indicating that specific assurance knowledge remains the most influential determinant of assurance service provision in Albania, while general professional knowledge and skills, which resulted as significant in the first model, are not a significant factor anymore.

Table 2. Logistic Regression Significance

| Factor                                          | 2010–2012 Significance     | 2022–2024 Significance     |
|-------------------------------------------------|----------------------------|----------------------------|
| CAT: Professional category                      | Not significant            | Not significant            |
| SKNOW: Specific knowledge of assurance services | Significant ( $p = .003$ ) | Significant ( $p = .003$ ) |
| GKNOW: General professional skills              | Significant ( $p = .005$ ) | Not significant            |
| SFEE: Service fees                              | Not significant            | Not significant            |
| QUAL: Provider's qualities                      | Not significant            | Not significant            |

## 5. Discussions

The finding that specific assurance knowledge remains an important factor of assurance service provision in Albania is consistent with international research emphasising the importance of technical expertise in enhancing service credibility (Eilifsen, Knechel, Wallage, and Praag 2006). Professionals who possess deeper familiarity with assurance standards, methodologies, and engagement types are significantly more likely to provide these services. However, the predictive strength of this factor declined between the two periods. This decline suggests that specific knowledge has become more widespread among accounting professionals, meaning that now its differentiating capability has decreased. More professionals in Albania are acquiring this knowledge through undergraduate studies or CPD trainings, and what was once a distinctive advantage is gradually becoming a normal requirement for providers in the assurance market. However, this interpretation should remain cautious. Because the coefficients are obtained from two independent logistic regression models, a decline in the odds ratio does not, by itself,

demonstrate that the effect changed significantly over time. A pooled model containing interaction terms between the study period and each explanatory variable would be required to test such differences more formally.

By contrast, the insignificance of general skills, service fees, and providers' qualities underscores the relatively immature state of the Albanian assurance market. In more advanced economies, client demand is often shaped not only by technical knowledge but also by providers' ability to demonstrate independence, objectivity, ethical conduct, and cost-effectiveness (Simnett, Vanstraelen, & Chua, 2009). These factors influence trust and create competitive differentiation among service providers. The absence of such effects in Albania implies that users of assurance services - whether companies, investors, or regulators - do not yet systematically incorporate these broader considerations into their decision-making. Instead, assurance provision continues to be perceived primarily as a technical exercise, rather than a multidimensional professional service combining expertise, independence, and value-added benefits. While studies such as Kılıç (2021) highlight how institutional practices influence assurance adoption internationally, the Albanian context still shows limited awareness and demand, referring to assurance engagements still being largely restricted to statutory audit. The loss of statistical significance of general knowledge and skills should not necessarily be interpreted as evidence that technological, marketing and business-process capabilities have become unimportant. These qualities may also function as legitimacy requirements expected of all certified auditors rather than as attributes that differentiate providers from non-providers.

The shift from a negative coefficient in 2010 - 2012 to a positive one in 2022 - 2024 for QUAL (the providers' quality) suggests a growing alignment between professional quality and the likelihood of offering assurance services. This shift may reflect changes in the Albanian assurance market. In the earlier period, when the market was less developed and practice conditions were more uncertain, auditors with stronger ethical qualities (independence, objectivity, integrity, confidentiality) may have acted more cautiously and been less inclined to take on additional assurance engagements that could create perceived independence or reputational risks. By 2022 - 2024, the positive sign suggests that, as the market matures and expectations for credible assurance increase, stronger professional qualities may align more with offering such services - supporting trust and competitiveness. However, the effect remains statistically insignificant, implying these qualities do not clearly distinguish providers from non-providers in the sample, possibly because ethical attributes are widely reported as high (limited variation) and therefore function more as baseline requirements than as differentiating factors.

The findings altogether suggest that while technical expertise of specific assurance standards remains the key to assurance service provision in Albania, its role as a differentiator is diminishing. To remain competitive in the future market, service providers will need to integrate technical expertise, interdisciplinary competencies, ethical principles, and client-oriented skills.

A limitation of this study is the sample size for both of periods, which may have reduced the accuracy of some regression coefficients and statistical power as well as the ability to detect weaker associations between variables. To ensure that the estimations have the necessary accuracy and the quality, the appropriate tests were performed for both models. Both models do not have multicollinearity problems ( $VIF < 2$ ), the Hosmer and Lemeshow test ( $p > 0.05$ ) confirms that the logistic regression models fit the data well. Also, AUC values were found to be in acceptable between 0.7-0.79. Despite the limited sample size, the estimated indicators showed that the models are stable. A bootstrap resampling method with 1,000 samples was used, and the bootstrap estimates showed no substantial changes in direction of the coefficients, which remained unchanged, the bootstrap confidence intervals supported the robustness of the estimated coefficients.

## Conclusions and Recommendations

This study highlights that in Albania, the probability of providing assurance services is strongly shaped by professionals' specific assurance knowledge, while other factors - including general skills, service fees, professional category, and ethical qualities - are not yet significant. Between 2010 - 2012 and 2022 - 2024, the role of general knowledge and skills declined, reinforcing the importance of technical expertise in an underdeveloped market.

This reality has several implications for the future development of assurance services in Albania.

As part of its EU integration, Albania will also face an increased demand for assurance services, including sustainability reporting. In the longer term, interdisciplinary skills and familiarity with ESG frameworks and ethical qualities will become crucial for Albanian professionals. Universities and professional organisations in the country must continue to strengthen training in assurance standards, but also expand curricula to include sustainability assurance. By doing so, they will equip future practitioners with the expertise required to meet future market demand. They should be ready to use the Corporate Sustainability Reporting Directive (CSRD), the International

Standard on Sustainability Assurance (ISSA 5000) and the International Ethics Standards for Sustainability Assurance (IESBA). These developments will create both a challenge and an opportunity for local professionals.

Universities and training providers should ensure that specific knowledge on assurance standards is complemented by further focus on ethics standards, education in digital systems and data analytics. International evidence shows that as assurance practices evolve, clients value not only the technical accuracy of reports, but also the personal characteristics of the providers and their ability to interpret and communicate complex information (Eilifsen, Knechel, and Wallage 2006). Fostering such skills will help Albanian companies and professionals for the future challenges of the market. Universities and professional organisations should also integrate sustainability assurance and ESG reporting into accounting and auditing curricula. By doing so, they will make sure that students who complete master's degrees or new practitioners joining the professional organisations are prepared for evolving expectations.

The Ministry of Finance should support the gradual adoption of EU sustainability assurance requirements. A key factor would be the development of a supportive legal and institutional framework, accompanied by clear guidance on the scope of assurance, independence requirements, and quality control for sustainability engagements, including the introduction of Sustainability Assurance 5000.

Finally, the professional organisations in the country must anticipate growing competition from non-accounting professionals, such as IT specialists, environmental engineers, and legal experts, who are increasingly entering the assurance market in Europe and beyond. To protect the public interest and the credibility of the profession, Albanian regulators should establish clearer rules for assurance services outside statutory audit, highlighting the comparative advantages of accountants - particularly their ethical standards, the certification standards, and established oversight structures.

Finally, all these actors should join forces and promote these services to companies and their managers who, in many cases, still perceive assurance solely in terms of compliance requirements, but not as a competitive advantage that adds value and enhances stakeholder trust. This would support market development and stimulate both the demand and a competitive market for such services.

## Declarations

### Credit Authorship Contribution Statement:

**Lindita Gjika:** Conceptualization, Investigation, Project administration, Software, Formal analysis, Writing, Supervision, Data curation, Validation, Writing – review and editing, Visualization, Funding acquisition.

**Elena Myftaraj Tomori:** Methodology, Project administration, Software, Data curation, Validation.

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**Declaration of use of generative AI and AI-assisted technologies:** The authors declare that we have not used generative AI and AI-assisted technologies in the writing process before submission, but only to improve the language and readability of the paper and with the appropriate disclosure

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