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PROCEEDINGS



**The 5th International Conference
on Agriculture and Life Sciences of Albania 2030**

Tirana, 3-5 November 2025

PROCEEDINGS

PROCEEDINGS OF INTERNATIONAL CONFERENCE ON AGRICULTURE AND LIFE SCIENCES OF ALBANIA 2030 (ICOALS 5)

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THE IMPACT OF SOCIO-DEMOGRAPHICS ON E-FISCALIZATION COMPLIANCE: WHO, HOW, AND WHY?

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ABSTRACT

The research investigates how socio-demographics affect compliance with e-fiscalization in agribusinesses. The relationship between economic and financial innovations and socio-demographic trends such as aging, migration, and brain gain has made this subject increasingly relevant. The influence of socio-demographics on compliance with e-fiscalization has been a consistent area of research interest. Utilizing data from a cross-sectional survey of agribusiness operators, this study examines how variables such as age, gender, and educational background influence compliance with the e-fiscalization platform in Albania. The descriptive analysis reveals that gender and age, particularly in terms of work experience, significantly impact the compliance levels of agro-operators with e-fiscalization, underscoring the need for discussions among public policymakers. Additionally, the findings offer practical guidance for managers seeking to enhance digital transformation within the agribusiness sector, particularly among operators focused on small-scale production.

Keywords: *E-fiscalization compliance, age, gender, education*

INTRODUCTION

The fiscal reform of e-fiscalization has become a cornerstone of tax modernization in Albania. Discussion on its progress and future expectations is necessary and of research interest, especially for specific sectors such as agribusiness operators. Given that the agribusiness landscape in Albania is composed of a large part of micro-operators and small businesses, understanding the role of socio-demographic factors in shaping compliance with this reform is useful in several ways. This can be explained by the multi-dimensional nature of this problem, such as environmental-institutional and the intensity of endogenous-exogenous factors (professional governance, the imposition of crypto-fintech, EU-regional integration, etc.). Also, demographics factors (and national agricultural-food dynamics), cultural-behavioral, technical-digital and in the case of small businesses especially economic-financial one, defining a wide spectrum of business decision-making. Although previous studies emphasize that units of larger organizations with structured leadership can adopt digital innovations more effectively [7], the dynamics in the agribusiness ecosystem nevertheless often remain controversial.

Studying the socio-demographic identity of agro-operators can serve to design a profile of their behavior (and differences and changes over time) towards e-fiscalization. And similar innovations, minimizing costs and understanding the interfaces, or how the matrix (economy, institutions, behavior) works, avoiding unclear-sequential policies and improving the efficiency of public reforms. Furthermore, factors such as gender, age, and education have over the decades been under pressure from developments at different times, such as migration and the departure of the younger generation; brain-gain or the presence of intellectual capital as a source of governance and common standard; growth per capita, wealth or flows of capital and savings; and traditional (informal) institutions or beliefs to women entrepreneurs, etc. Knowing the impact of these factors on compliance in the agri-system is useful. Through it, the theoretical gap can be filled and the debate on

the priorities of complementary actions that institutions should have can be justified according to the time and priorities of the goals of governance, as well as contribute practically to the agro-operators and the necessary solutions.

The standard discussion on behavioral factors such as e-fiscalization compliance towards innovative-digital developments often refer to the Technology Acceptance Model (TAM) [3] and Unified Theory of Acceptance and Use of Technology (UTAUT) [9] supporting that perceived ease of use, or usefulness, and facilitating conditions may be influenced by the context of the operator. The influence and possible interaction of socio-demographics, such as the relationship between age and experience, or higher education and the impact on compliance, and this view given the (relatively new) context of the development of the sector in the case of agro-operators in Albania may be particularly justified. Furthermore, the problem of inherited knowledge and perceptions based on the age and gender of agro-operators may vary widely between different sizes of companies and especially in the context of medium and small units (larger in number), which suffer from (1) increasing costs (labor and migration) and (2) access to markets (as a consequence of competitiveness and integration processes). This may have a significant impact on the level of compliance with the e-fiscalization reform.

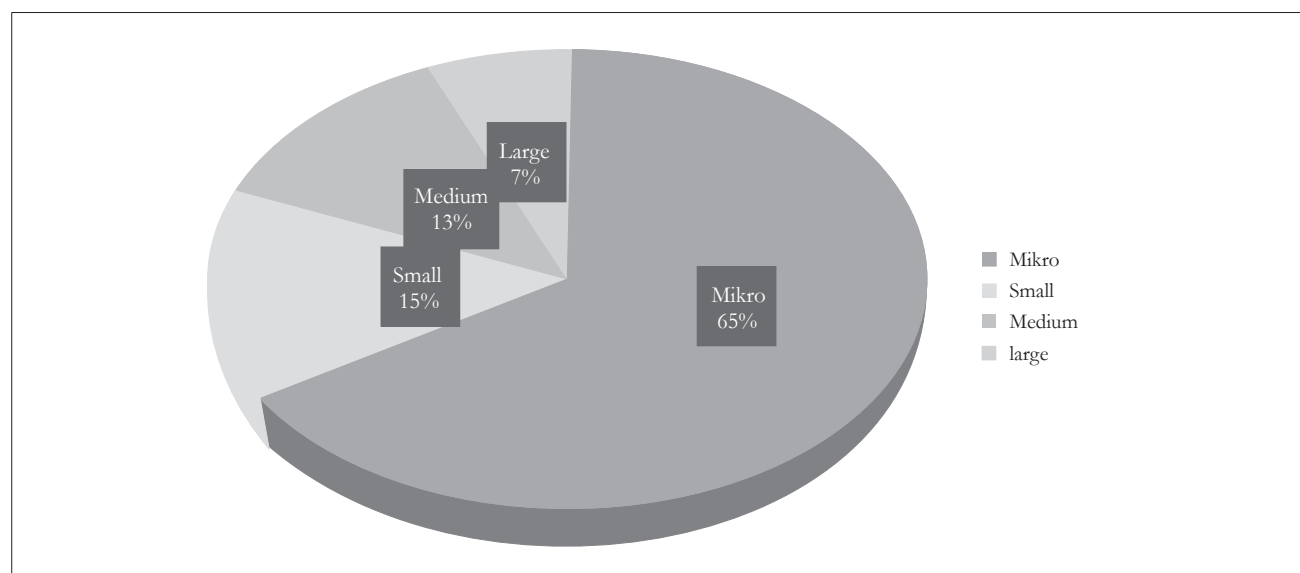
MATERIALS AND METHODS

The study used a cross-sectional survey of agro-operators (121) in Albania. Participants were approached in advance and provided with a detailed explanation of the study’s objectives. Data were subsequently collected through a structured questionnaire utilizing a four-point Likert scale (1 = strongly disagree; 4 = strongly agree), calibrated to enhance the precision and interpretability of the responses. In addition to the main variables related to e-fiscalization, the questionnaire also included socio-demographic data, covering age, gender, level of education, work experience and enterprise size (micro, small, medium, and large), allowing a deeper understanding of how these factors may affect compliance. Based on descriptive analysis and the respective tools, we measured the impact of socio-demographic data on e-fiscalization compliance.

RESULTS AND DISCUSSION

Microenterprises represent the largest group of the surveyed economic units (Figure 1), with approximately 65% of the total sample, followed by small, medium, and large enterprises. This distribution reflects the structural characteristics of the agribusiness sector in Albania, which is composed of micro and small enterprises. As has been emphasized in more in-depth studies on this subject [1, 2] this distribution reflects the structural characteristics of

Figure 1: Classification of economic units

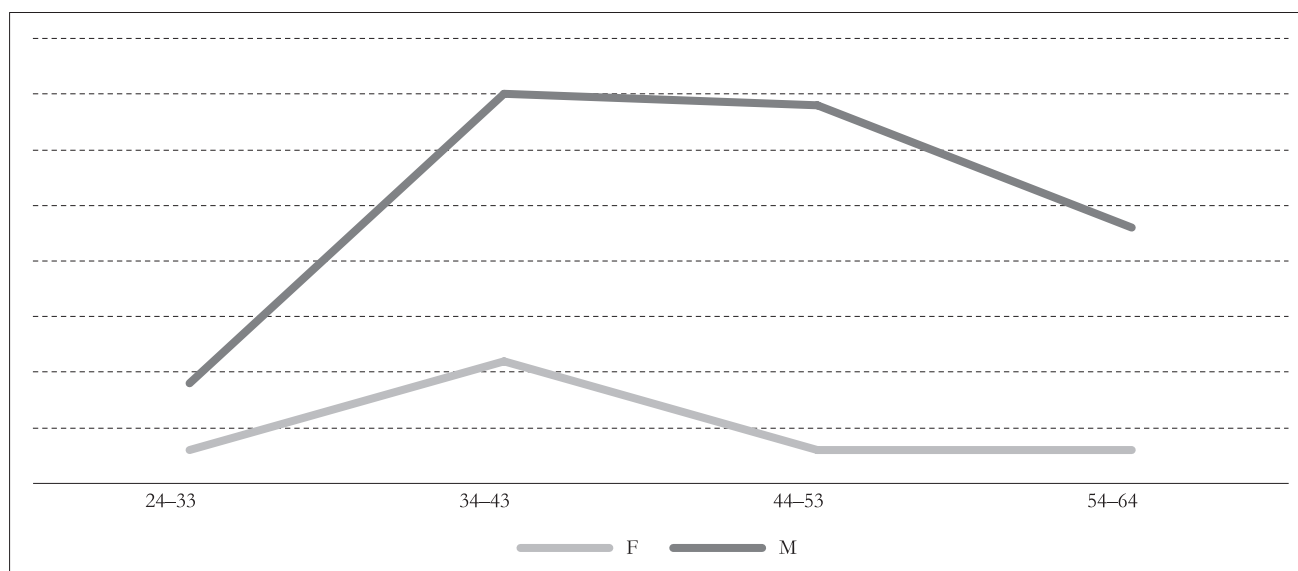


Source: Author’s processing

the agribusiness sector in Albania and given the (relative) functioning of the “invisible hand” in small markets (with resource, capacity, technological insufficiency, etc.). The importance of analyzing these characteristics and games is essential for food market regulations (costs, final prices) and the organization of production (within the theory of general equilibrium). Also, the structuring of production units can be useful [6]. Micro-units’ predominance influences the sector’s readiness for digital platforms such as e-fiscalization, given that smaller firms often face distinct resources and capacity constraints compared to larger, more structured organizations with infrastructure, assistance, and personnel, etc.

The data show that many respondents are male (83.5%), mainly in the 34–43 age group (Figure 2). This reflects the demographic profile of Albanian agro-operators, where working-aged men dominate ownership and management roles, thus influencing the processes of digitalization and the intensity of these dynamics. In the introductory discussion, we emphasized that the issue of the impact of socio-demographics on behavioral factors and compliance with digital platforms such as e-fiscalization can also be influenced by traditional factors (informal institutions). The potential beliefs regarding women and their roles, while significant and the interplay of these elements (gender–tax compliance) is documented [3], indicate that social inequality warrants further examination.

Figure 2: Grouping data by age and gender

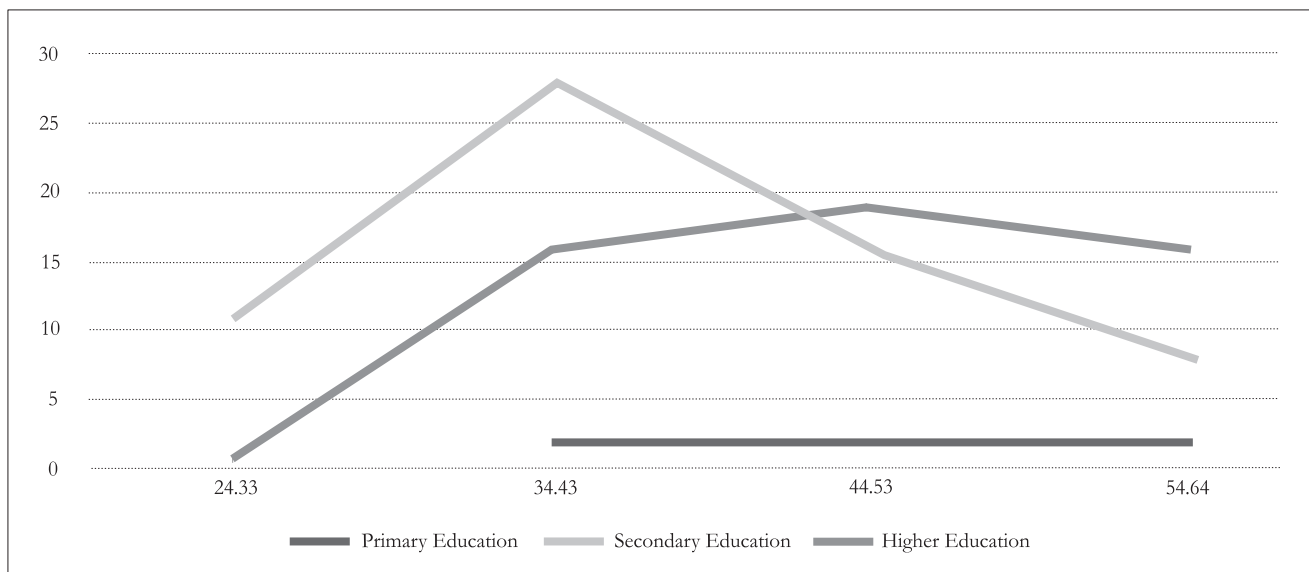


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The distribution of respondents by age and education level demonstrates that most participants are in the 34–43 and 44–53 age groups (Figure 3). Regarding education, most agro-operators hold secondary qualifications, with 52% respectively, while only 5% of respondents reported having primary education (level 1). Notably, the age group 34–43 dominates both in size and the proportion of participants with higher education. This demographic indicator allows us to identify categories that may be exposed to the risks (psychological, social, informational, etc.). This explains the digital divide–inequality [10], suggesting that a relatively well-educated and “productive” age of agro-operators can positively influence their ability to comply with e-fiscalization.

Table 1 presents the distribution of respondents by work experience, education level, and gender. The largest subgroup consists of operators with 1–10 years of experience (55%), who also show higher compliance of e-fiscalization, potentially reflecting greater openness to digital tools and newer work practices. The group with 11–20 years of experience includes 33%, with a higher proportion of individuals holding secondary education (level 2). The smallest group (12%) consists of those with 21–30 years of experience. Across all experience levels, male participants predominate, and education levels are skewed toward secondary qualifications. These patterns suggest that educational background and work experience interact to shape readiness for adopting e-fiscalization, with younger, more educated operators displaying a stronger propensity toward compliance. The impact of work

Figure 3: Grouping data by age and education



Source: Author's processing

experience in different agro-sectors is different. For instance, given the mobility and implications (migration, aging, youth departure, etc.) in rural areas, 10 years of experience is very good in the agro-production system, marketing and sales or digital access. But 10 years of experience as an engineer or technologist in the agro-processing system or similar small units where high knowledge intensity and capacity etc. are used, may not be sufficient if we consider companies at the European level (e.g. Danone, DMK, Müller) or in the region (Turkey, Bulgaria, Croatia, Slovenia). This affects competitiveness and deserves special attention [4].

Table 1: Grouping data by work experience, education, and age.

Experience	Education and age								Total
	1	1 Total	2		2 Total	3		3 Total	
	M		F	M		F	M		
1–10	4	4	9	36	45	4	13	17	66
11–20	1	1	5	8	13	2	24	26	40
21–30	1	1		5	5		9	9	15
Total	6	6	14	49	63	6	46	52	121

Source: Author's processing

E-fiscalization compliance constitutes a pivotal dimension of contemporary tax administration reforms, as it enhances fiscal transparency, ensures regulatory conformity, and mitigates the risks of informality within business transactions. Referring to the questionnaire results, the overall mean compliance is about 92.25% of the maximum possible on the adjusted Likert scale (Table 2) and the highest 96.75% in micro companies.

Table 2: Compliance average of e–fiscalization in economic units.

Economic Unit	E–Fisc_Comp
Micro	96.75 %
Small	87.25 %
Medium	93.25%
Large	91.75 %
Total	92.25%

Source: Author's processing

The findings suggest that the size of the economic unit is a critical factor influencing the degree of compliance. Socio–demographic factors significantly shape the compliance of e–fiscalization. Microenterprises and younger, better–educated operators show greater readiness. Future research could expand on these findings by employing multivariate regression or structural equation modeling (SEM) to further clarify causal relationships [8].

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