

The impact of vat in the fight against the informal economy in Kosovo

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Abstract: This paper explores the role of Value Added Tax (VAT) in tackling the informal economy in Kosovo, focusing on how tax reforms can support the shift toward a more formal and transparent market. Drawing on ordinary least squares (OLS) regression, correlation analysis, and trend evaluation, the study examines the relationship between VAT revenues and economic growth, as measured by GDP. While the statistical findings point to a weak positive correlation (0.1014), suggesting a limited direct effect of VAT on GDP, the broader analysis highlights deeper structural issues. Challenges such as high compliance costs, complex tax procedures, and limited institutional capacity continue to undermine the effectiveness of VAT as a tool for formalization. The research argues that for VAT to make a meaningful difference, reforms must go beyond tax policy—requiring digital modernization, stronger enforcement, and efforts to build public trust. The study offers practical recommendations for policymakers, emphasizing the importance of simplifying tax compliance, improving tax administration, and encouraging formal participation in the economy. These measures are crucial for reducing informality and creating a more stable and transparent fiscal environment in Kosovo.

Keywords: *Econometric analysis, Economic development, Economic formalization, Fiscal and economic correlation, Fiscal compliance, GDP (Gross Domestic Product), Impact of tax administration, Informal economy, economic growth, OLS linear regression, Sources of state revenue, Tax Administration of Kosovo (TAK), Tax compliance costs, Tax policies, public investments, Tax revenues, Taxation in developing economies, VAT (Value Added Tax), VAT collection efficiency, Fiscal impact.*

1. Introduction

Value Added Tax (VAT) plays a crucial role in fiscal policy, serving as both a revenue-generating mechanism and a tool for combating the informal economy. This paper examines the impact of VAT in addressing the challenges posed by the informal sector in Kosovo. By analyzing the effectiveness of VAT enforcement, compliance measures, and policy reforms, the study evaluates the extent to which VAT contributes to reducing informality and improving economic transparency [1].

The informal economy poses significant challenges to economic development, tax collection, and fiscal stability in Kosovo. VAT, as an indirect tax applied to goods and services, serves as a critical instrument for reducing informality by encouraging businesses to register and report transactions [2]. A well-designed VAT system can deter informal transactions, ensuring greater transparency and accountability. However, weak enforcement and low compliance levels continue to pose significant barriers to fully leveraging VAT as a means of economic formalization [3]. Theoretical Framework Several economic theories provide insight into the relationship between VAT and the informal economy. The "Tax Compliance Theory" suggests that higher compliance costs lead to tax evasion, while the "Cost-Benefit Analysis of Formalization" posits that businesses weigh the benefits of formalization against compliance burdens [4]. Empirical studies indicate that VAT can serve as both a

deterrent and an incentive for formalization, depending on enforcement mechanisms and administrative efficiency [5].

VAT Policy in Kosovo Kosovo implemented VAT in 2001, with subsequent reforms to improve compliance and broaden the tax base. Key policy changes include:

- The introduction of differentiated VAT rates [6]
- Strengthened tax administration capacity [7]
- Digitalization of tax reporting systems [8]
- Enhanced collaboration between tax authorities and businesses [9]

Challenges in VAT Enforcement Despite policy efforts, several challenges persist in enforcing VAT compliance:

1. High levels of tax evasion – Many businesses operate informally to avoid VAT obligations [10].
2. Weak enforcement mechanisms – Limited resources and corruption hinder effective oversight [3].
3. Lack of taxpayer education – Businesses may lack knowledge about VAT regulations and benefits [5].
4. Cash-based transactions – The prevalence of cash transactions reduces traceability and compliance [1].

The Role of VAT in Reducing the Informal Economy Research suggests that effective VAT implementation can:

- Increase tax revenue collection [6]
- Enhance transparency in business transactions [2]
- Encourage formalization of businesses [4]
- Improve fiscal stability and public service funding [7]

Comparative Analysis: Kosovo vs. Regional Practices Comparing Kosovo with neighboring countries (e.g., Albania, North Macedonia, Serbia) highlights variations in VAT enforcement strategies. Countries with robust digital tax systems and stricter penalties for non-compliance tend to experience lower levels of informality [9].

Policy Recommendations To maximize the impact of VAT on reducing the informal economy, Kosovo should consider:

1. Strengthening enforcement mechanisms – Investing in digital tax administration and audit systems [3].
2. Providing incentives for formalization – Reducing compliance burdens for small businesses [5].
3. Enhancing taxpayer education – Conducting outreach programs to improve VAT awareness [4].
4. Implementing stricter penalties for non-compliance – Deterring tax evasion through legal reforms [8].

VAT is a vital tool in combating the informal economy in Kosovo, but its effectiveness depends on strong enforcement, taxpayer education, and policy reforms. Addressing the challenges of VAT compliance and strengthening tax administration can significantly reduce informality and enhance economic transparency [10].

1.1. Entry

The informal economy poses a significant challenge to the Kosovo economy, limiting tax revenues and market transparency. This sector includes economic activities that operate outside the official system, avoiding taxation and thus reducing state revenues. Among the main factors contributing to the growth of the informal economy are the high cost of compliance with tax rules and the lack of effective mechanisms for tax collection.

In this context, the role of Value Added Tax (VAT) in reducing the informal economy is a topic of particular importance, as improving its collection can directly contribute to the formalization of economic activities and the increase of state revenues. According to Michael Keen in research for the International Monetary Fund (IMF), developing countries face significant challenges in the administration of VAT due to the complexity of the fiscal system. This often pushes businesses to operate outside the formal system to avoid the administrative burden and high compliance costs [11]. The same point is also emphasized by Søk [12] who note that different VAT implementation practices create uncertainty for businesses, negatively affecting the fulfillment of tax obligations and increasing the tendency towards informality [12].

This study aims to analyze how improving VAT collection mechanisms can help reduce the informal economy and increase transparency in Kosovo.

To this end, the study will draw on data from tax practices in Kosovo and the factors that drive the informal economy, formulating recommendations for more effective VAT policies in Kosovo. The International Monetary Fund (IMF) emphasizes that improving VAT administrative capacity and its uniform application help reduce informality and therefore contribute to a more transparent and sustainable economy [13]. This study is of particular importance for Kosovo, as it addresses one of its main economic challenges: the high level of the informal economy. Around 30-40% of Kosovo's economy operates informally, causing a loss of revenue that could be invested in important public sectors such as health, education and infrastructure. Improving VAT collection would contribute not only to increasing state revenues, but also to the transparency of economic transactions and increasing trust in public institutions. In this way, formalizing the economy through the informal economy in Kosovo is estimated to account for a significant portion of GDP, with sectors such as retail, construction, and agriculture being particularly affected [14]. The lack of formal employment opportunities and weak enforcement mechanisms have contributed to the persistence of informal activities [15]. VAT, as a consumption tax, has the potential to formalize transactions by creating a paper trail and incentivizing businesses to register with tax authorities [16].

The Role of VAT in Formalizing the Economy

VAT implementation in Kosovo has been a key component of tax reforms aimed at increasing revenue and reducing informality. By requiring businesses to issue invoices and report transactions, VAT creates transparency and accountability [17]. Studies have shown that VAT adoption in developing countries has led to a reduction in informal economic activities by up to 15% [18]. In Kosovo, the introduction of a flat VAT rate of 18% in 2015 has improved tax compliance, particularly among small and medium-sized enterprises (SMEs) [19].

Despite its potential, VAT implementation in Kosovo faces several challenges. High compliance costs, limited administrative capacity, and widespread tax evasion undermine its effectiveness [20]. Additionally, the prevalence of cash transactions and the lack of digital infrastructure hinder the enforcement of VAT regulations [21]. Addressing these challenges requires targeted policy interventions, such as simplifying tax procedures and enhancing taxpayer education [8].

The experiences of other countries provide valuable insights for Kosovo. For example, Albania and North Macedonia have successfully used VAT reforms to reduce informality by leveraging technology and strengthening enforcement mechanisms [22]. These case studies highlight the importance of political will, institutional capacity, and public awareness in ensuring the success of VAT reforms [23].

2. Theoretical Background

Cash transactions for various goods and services pose a high risk of tax evasion. This study Awasthi and Engelschalk [24] examines the strategies used by policymakers and tax administrators to improve control of cash transactions and shows the apparent strong negative relationship between the size of the shadow economy and the use of formal or electronic payments.

The study concludes that improving tax compliance in a cash-based economy requires a comprehensive and combined approach. Technology alone or isolated measures, such as setting limits

on cash payments or using lotteries to encourage the issuance of invoices, are not sufficient to achieve sustainable improvements.

Instead, the strategy should include cooperation with the private sector, broad access to third-party data, promotion of voluntary compliance, and strengthening of control measures. Such a comprehensive system aims to formalize economic activities in sectors where the use of cash is common and to increase the overall effectiveness of the tax system, helping to reduce the informal economy.

Meanwhile Hoseini [25] highlights the importance of VAT as a self-enforcing tool for reducing the informal economy, especially in developing countries. By encouraging formal traders to purchase from formal suppliers for tax benefits, VAT creates a chain effect of formalization in the economy. For effective enforcement, the tax administration should focus on auditing activities with strong backward linkages and final consumers, as this approach helps increase tax compliance. Empirical evidence from India shows that the adoption of VAT has led to reduced informality, increased productivity, and development of the service sector, underlining the positive impact of formalization on economic growth and improved access to credit markets.

The literature Benjamin, et al. [26] analyses the role of the informal sector and suggests that a comprehensive approach, which values the diversity of informal activities, is essential for economic development. Self-implementation of VAT encourages formality, improving formalization and productivity of businesses, as shown in the case of India. Policies that focus on improving governance, public-private partnerships, and skills development programs and services for small businesses are key to increasing tax compliance and strengthening the informal sector without forcing immediate formalization.

The study Osemeke, et al. [27] examines efforts to increase tax collection in Anambra State, Nigeria, where a digital registry called ANSSID has been created to include businesses in the Informal Economy. Despite the success of this registry, paying taxes remains difficult for businesses and workers in the informal sector. The main reasons for this are lack of infrastructure development, lack of accountability by the government, misuse of funds, and lack of awareness. They concluded that to improve tax revenue, it is essential for policymakers to address these challenges by providing more public services and accountability, building trust through transparency, and strengthening awareness programs on the importance of paying taxes.

Another study related to our topic is from Adhikari [28] suggesting that while VAT can contribute to economic efficiency significantly, its effectiveness is closely linked to the level of development of the country. High-income countries benefit more from VAT due to a stronger tax administration and a more transparent economy. For low-income countries, the results show that adopting a VAT does not necessarily bring significant benefits without a modernization of tax administration and a strengthening of its enforcement. These findings point to the need for personalized approaches for low-income countries, which should focus more on strengthening administrative capacity to achieve effective results.

Knowing that inflation is one of the main factors affecting a country's economy, another study by Mazhar and Meon [29] examines the relationship between the size of the informal economy and inflation by empirically testing it in a sample of up to 153 developed and developing countries during the period 1999–2007. The findings show that there is a positive relationship between the size of the informal economy and inflation, but a negative relationship between the size of the informal economy and the tax burden. The growth of the informal economy leads to an increase in inflation, which is associated with changes in monetary policies, and on the other hand the tax burden falls, which means that governments may face a decrease in tax revenues. Both relationships are dependent on the independence of the central bank and the exchange rate regime, suggesting that in strong institutional structures, these relationships are stronger.

The following study Aizenman and Jinjarak [30] examines the political economy and structural factors that affect the efficiency of Value Added Tax (VAT) collection in a group of 44 countries over the period 1970–1999. It assesses how the probability of audit and penalties for underpayments affect this efficiency. Some of the main findings were that a one standard deviation increase in political regime

stability results in a 3.1% increase in VAT collection efficiency, a one standard deviation increase in GDP results in an 8.1% increase in VAT collection efficiency, and an increase in the level of urbanization has a positive effect, increasing VAT collection efficiency by 12.7%. In conclusion, this study highlights the need to improve the efficiency of VAT collection through strengthening political and structural factors, making this an important issue for public policies and economic development.

One of the most relevant studies to our topic is Gjokutaj [31] which analyzes the tax gap, focusing specifically on Value Added Tax (VAT) in Kosovo and Albania. It examines tax exemptions and incentives as well as the impact of economic and political factors on the efficiency of VAT collection. Some of the main findings are that taxes constitute a large part of budget revenues: 88.7% in Kosovo and 92.8% in Albania, Kosovo has collected 1.73 billion Euros, while Albania 3.49 billion Euros from tax revenues, in Albania, the VAT gap is 255.4 billion Lek (2.1 billion Euros), while in Kosovo it is 1.2 billion Euros, the gap from non-compliance with the law is 0.5% of GDP in Albania and 1.7% in Kosovo, VAT efficiency is 0.66 in Albania and 0.93 in Kosovo, indicating that Kosovo has a better performance in VAT collection.

The study shows that the tax gap shows a non-compliance with the principles of equality in taxation, negatively affecting those who pay taxes, however, a deeper analysis and effective measurement of the tax gap is needed to assess the effectiveness of fiscal policies and tax administration. Taxing informal sector operators could help build tax morale and a culture of compliance, although more evidence is required for this claim, it could foster the growth of small businesses and create a more favorable environment for formal sector firms, it could bring wider benefits in governance and negotiations between the state and society.

Regarding encouraging compliance among informal sector firms, recent work has shed considerable light on reducing compliance costs and formalization, but has said much less about how to provide positive incentives for formalization.

The possibility is examined that administrative and institutional reform related to the collection of informal sector taxes may be able not only to address narrow administrative shortcomings, but also to create positive incentives among taxpayers, political leaders, and administrators. The prospect of decentralizing a larger share of micro and small firm taxation to local governments carries significant risks, but also promises to strengthen commitment to reform and encourage engagement between taxpayers and governments. However, these and other options remain insufficiently studied according to [32].

This review presents an in-depth analysis of the role of VAT and strategies that governments can use to reduce the informal economy. It examines the impact of cash transactions on tax evasion and suggests that a comprehensive approach is needed to improve tax compliance. In addition to the benefits of technology, strategies include public-private partnerships, access to data, and audit measures. With analysis from countries such as India and Nigeria, the review highlights the effects of formalization on the informal economy and economic development. The review also suggests the need for tailored reforms for low-income countries and the use of fiscal policies to address administrative challenges and foster commitment to tax formalization at the local level.

3. Methodology

This study uses quantitative data to examine the role of Value Added Tax (VAT) in the fight against the informal economy in Kosovo. The research methodology includes ordinary linear regression (OLS) analysis, correlation method to assess the relationships between variables, and trend analysis to explore economic dynamics over time.

The research aims to provide a deeper understanding of the relationship between improving VAT collection mechanisms and their impact on reducing economic informality. To this end, we will examine our two main hypotheses.

The linear OLS method is a powerful statistical method that allows us to estimate and interpret the coefficients associated with each independent variable, test hypotheses, and make predictions based on the estimated model.

The trend method, on the other hand, provides a systematic framework for analyzing time series data, predicting future values, and deriving insights into how variables will behave over time. Trends can be upward (indicating growth or expansion), downward (indicating decline or contraction), or flat (indicating stability).

The general form of the linear regression equation is:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + u_i$$

$$\text{GDP it} = \beta_0 + \beta_1 \text{VAT} + \beta_2 \text{Government Expenditures} + \beta_3 \text{Consumption Expenditures} \\ + \beta_4 \text{Net Exports} + \beta_5 \text{Unemployment} + \beta_6 \text{Foreign Direct Investments} \\ + \beta_7 \text{Gross Savings} + u_i$$

Where:

- Y is the dependent variable (in this case, Kosovo's GDP).
- $X_1, X_2, X_4, X_5, X_6, X_7$ are the independent variables (such as government spending, consumer spending, net exports, unemployment, foreign direct investment, and gross savings).
- β_0 is the intercept (the value of Y_i when all independent variables are zero).
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ are the coefficients of the independent variables (representing the change in Y_i for a one-unit change in each independent variable, holding other variables unchanged).
- u_i is the error term (the difference between the observed and predicted values of Y_i that cannot be explained by the independent variables).

This equation allows us to assess how VAT and other variables affect the growth of a country's GDP.

The data in this study were collected from KAS, World Bank and IMF Reports.

Although this study has empirical significance for the Kosovo literature, it has several limitations. One of them is the lack of complete data for longer periods, which will affect the assessment of the accuracy of the results. Also, the analysis will focus only on Kosovo, without comparing it with other countries in the region, which could provide a broader perspective.

Through this methodology, we aim to contribute to the understanding of the complex relationships between tax policy and economic informality, providing valuable recommendations for the development of a more sustainable fiscal system in Kosovo.

The hypotheses of this study are as follows:

- H1: Improving VAT collection mechanisms and clarifying laws and regulations will significantly impact the reduction of the informal economy in Kosovo.
- H2: Increasing VAT revenues has a positive and direct impact on GDP growth in Kosovo, helping to improve economic development and strengthen fiscal capacities.

4. Result

In this section, we report descriptive statistical/empirical data and findings from linear regression analyses regarding the role of Value Added Tax (VAT) in the fight against the informal economy in Kosovo.

The analysis will include a detailed examination of variables related to VAT compliance costs, labor registration, and perceptions of corruption and administrative barriers, providing a clear picture of how these factors contribute to the growth of the informal economy. Finally, we will present our findings, offering recommendations for improving the VAT collection system and strategies to combat the informal economy.

First, we will examine what the variables that will be used in this paper mean.

The informal economy, also known as the undeclared economy or shadow economy, is present in all countries, however, there is no consensus in the scientific literature on its definition. The National Strategy of Kosovo for the Prevention and Fight against Undeclared Work, Money Laundering, Financing of Terrorism and Financial Crimes for the period 2014-2018 [33] defines the undeclared grey economy as a group of activities that, although legal, are kept undeclared to the authorities in order to avoid paying taxes and social security contributions.

VAT compliance costs refer to the expenses that businesses and individuals incur to comply with the legal and administrative requirements of Value Added Tax (VAT). These costs include:

1. Time spent preparing documents: The time businesses spend collecting and submitting the necessary documentation for VAT registration and preparing tax returns.
2. Cost of administrative work: Salaries or fees of specialists such as accountants who handle VAT procedures for businesses.
3. Fees for external services: Payments to financial advisors or accounting firms that assist businesses in meeting VAT obligations.
4. Expenditures on software or technological systems: Investments in software for VAT management and tax data storage, such as accounting programs that automate declaration and registration processes.
5. These costs can be high for some businesses, pushing some to operate informally to avoid these obligations. Studies often show that increasing compliance costs contribute to an increase in the level of the informal economy, as businesses tend to avoid complex procedures and high compliance costs.
6. GDP: Defines economic growth in terms of gross domestic product (GDP) for Kosovo. This is the dependent variable that measures the total impact of other factors.
7. VAT: VAT revenue as a percentage of GDP, which measures the impact of increasing VAT revenue on economic growth.
8. Consumer Spending: Represents consumer spending, which can affect economic growth through increased demand.
9. Government Expenditure: Government spending on goods and services that increase economic activity in the public and private sectors
10. Net Exports: The difference between exports and imports, which contributes to Kosovo's GDP and trading power.
11. Unemployment: Employment rate, which indicates the level of engagement of the labor force in the economy.
12. Foreign Direct Investment (FDI): The income of foreign investors that helps create new jobs and increase production.
13. 13. Gross Savings: Savings in the economy that enable the financing of development projects and investments in productive sectors.

These variables help to understand whether VAT revenues and the investments realized through them contribute to the overall GDP growth and economic development of Kosovo.

The informal economy in Kosovo constitutes a complex challenge that is influenced by various economic, social and institutional factors.

H1: Improving VAT collection mechanisms and clarifying laws and regulations will significantly impact the reduction of the informal economy in Kosovo.

To support this hypothesis, we examine the contribution of factors that drive informality and the impact of potential legal and institutional changes.

The informal economy in Kosovo is supported by a number of structural and economic factors. On the one hand, the high initial cost of business registration, high fees, and institutional corruption keep barriers to formalization high, fueling a sizeable underground economy. On the other hand, entrepreneurs often have little incentive to formalize businesses if they can operate without state restrictions on access to public goods and services.

The development of the informal economy is also closely linked to factors such as the lack of sustainable economic development and high unemployment. While privatization programs have caused an increase in unemployment and have led many workers to enter the informal market to survive, the low level of wages in the formal sector has led many individuals to seek work in the informal sector to increase their income.

Although there is no systematic analysis of informality in Kosovo, different estimates from several reports and studies using relatively different definitions of this concept indicate a similar level of informality in the country. According to the Kosovo National Strategy for Preventing and Combating Undeclared Work, Money Laundering, Financing of Terrorism and Financial Crimes for the period 2014–2018, the undeclared economy in Kosovo is estimated to be between 26.67% and 34.75% of GDP. In monetary terms, this ranges from one million euros in 2008 to 1.7 billion euros in 2012. Also, a report by the Economic Reform Program suggests that the level of the undeclared economy is around 32% of the country's GDP [34].

From this number, we see that the state budget loses more than 300 million euros per year (just counting VAT).

Next we will see some graphs with data based on the World Bank on the level of the informal economy in different sectors. Now we will talk about the main factors that negatively affect businesses in Kosovo that push them to operate towards the informal economy.

First, the analysis shows the existence of about 40 inspectorates at the central level and 4–5 others at the local level, which are regulated by about 80–90 laws and bylaws. This large number of inspectorates, together with the lack of proper coordination between them, creates unnecessary pressure on businesses that are inspected frequently and in an unorganized manner, which increases administrative costs and reduces the effectiveness of these inspections. Furthermore, most of these inspections are carried out without a clear focus on risk, including businesses that have a low or moderate level of risk.

Second, in addition to the lack of coordination, laws and bylaws regulating inspections often lack sufficient detail on the responsibilities and rights of inspectors and businesses subject to inspection. This lack of clarity creates uncertainty for firms in the appeals process, making the process unclear and difficult for businesses.

Third, it has been found that inspectors often focus more on finding violations than on improving businesses' compliance with the rules. Furthermore, requests for "gifts" are common, with around 90% of businesses being inspected by tax authorities within a one-year period, according to data from the World Bank's Business Environment Technical Assistance Project in 2013. This phenomenon of informal requests for gifts indicates high levels of corruption, hindering a fair and sustainable business environment.

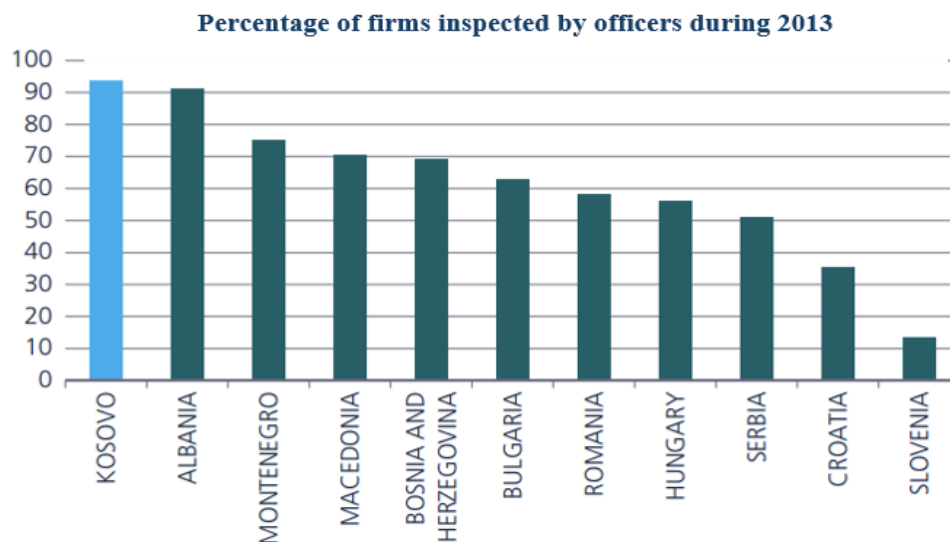


Figure 1.
Percentage of inspections in 2013.

4.1. Sources: *World Bank*

The results from Figure 1 show that, among other Balkan countries inspected during 2013, Kosovo had the highest number of inspections conducted on firms at that time.

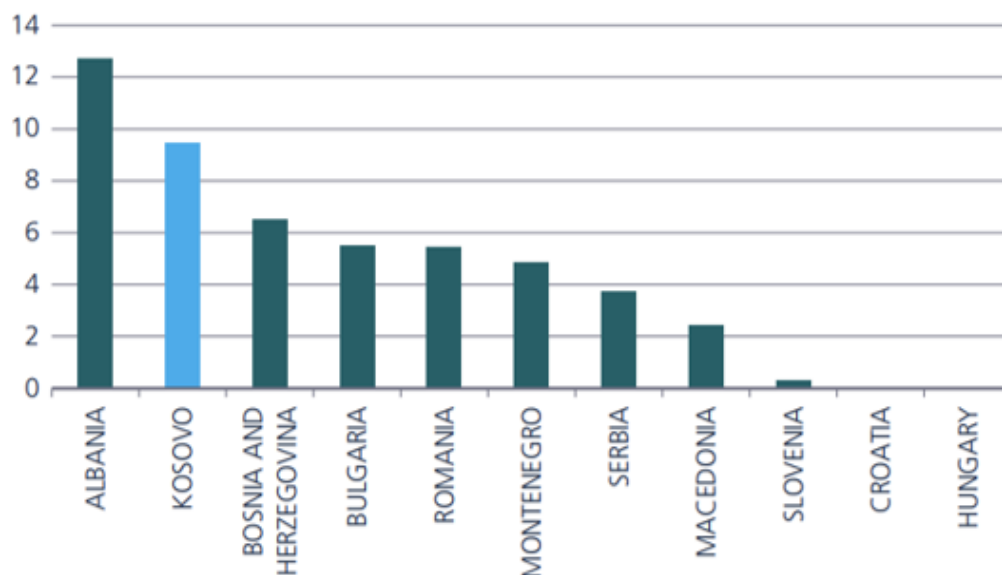


Figure 2.
Informal gift giving, 2013.

4.2. Sources: *World Bank*

The results presented in this figure show that Albania holds the first place for the level of corruption in 2013, while Kosovo ranks immediately after it. This ranking is in contrast to the data presented in the previous figure, which suggests a high number of inspections of firms for informal activities. However, despite this high number of inspections, many cases of potential violations were not

met with appropriate sanctions, meaning that often a “gift” was enough to avoid further legal prosecution.

These results highlight a significant problem in the effectiveness of law enforcement mechanisms, where inspections, instead of serving to strengthen compliance and combat informality, end up being influenced by corrupt practices. This situation not only undermines efforts to reduce the informal economy, but also damages public and business trust in justice institutions and fiscal administration.

According to Cojocaru [35] the quality of public institutions in Kosovo is among the lowest in the region, which directly affects the growth of the informal economy. Institutional failures, such as corruption and the lack of rule of law, have created a moral asymmetry between the state and citizens. This institutional dysfunction has caused a decline in citizens' trust in institutions, encouraging them to avoid engaging in the formal sector.

Reports show that improving governance and transparency of rules and laws are closely linked to reducing the level of the informal economy. Formalizing and clarifying the legal framework for businesses, supported by improving government efficiency and strengthening law enforcement, will help reduce informality.

Studies have shown that regulatory burden penalizes small firms, pushing them towards informality or small-scale operations, while also negatively affecting the growth of large and medium-sized firms. This concentration of economic activity in micro firms rather than SMEs affects the formal economy and weakens long-term economic development.

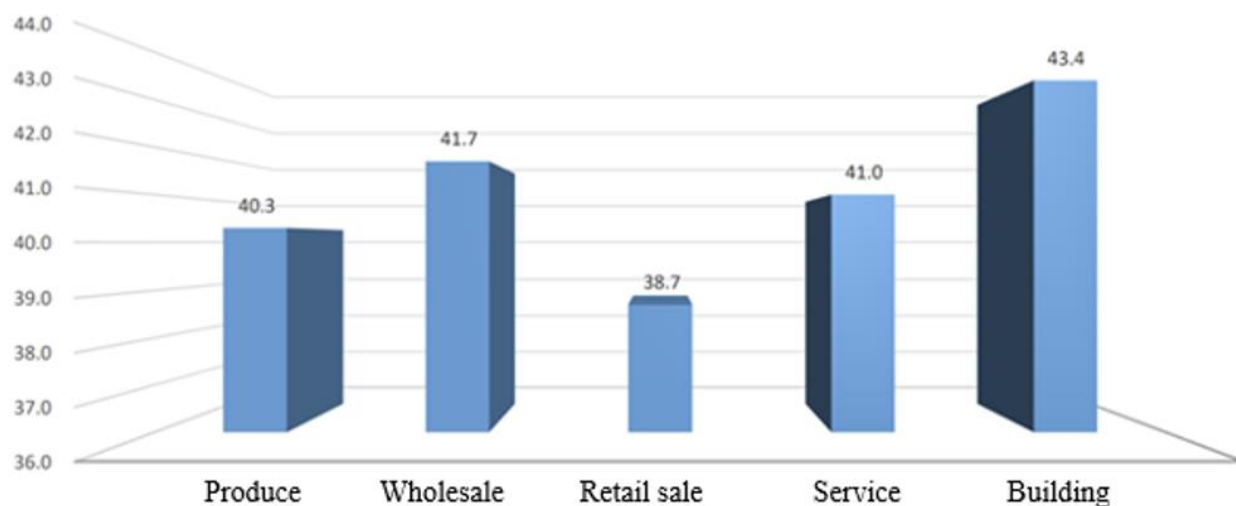


Figure 3.
Size of the shadow economy (% of GDP) by sector in Kosovo.

4.3. Sources: *World Bank*

Figure 3 summarizes how the shadow economy varies by sector. The retail sector has the lowest shadow economy index (38.7%) and construction the highest (43.4%). The shadow economy index for Kosovo's construction is on par with Latvia, where the sector is shown to contribute to the shadow economy (around 40%).

These issues of corruption and law enforcement effectiveness create a difficult context for the labor market in Kosovo, where informal unemployment is a growing problem. Informal unemployment, which includes individuals working outside the formal labor framework and without regular employment contracts, directly affects the country's economic stability.

According to recent data, a significant percentage of the workforce operates in informal sectors, significantly reducing access to social benefits and increasing the risk of poverty. This situation is

particularly pronounced among young people and women, who often face multiple obstacles to integrating into the formal labor market. In addition, informal unemployment contributes to the creation of a vicious cycle, where individuals without regular employment are unable to invest in the development of their professional skills and, as a result, are forced to remain in informal activities.

Informality rate (workers without employment contracts) in ECA countries, 2010

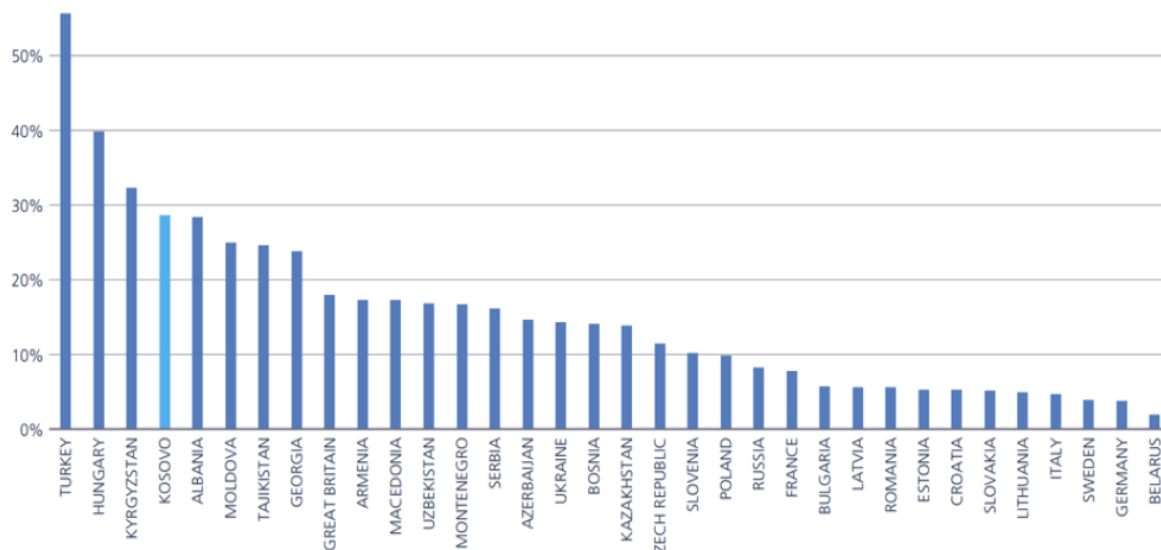


Figure 4.
Informality rate in ECA countries, 2010.
Source: Data from the World Bank

Informal employment in Kosovo is higher than in most EU countries. On the other hand, informality in Kosovo is lower only than in Greece and Cyprus if we define informality as “employees in units with 10 or fewer employees, self-employed workers with or without employees in non-professional occupations, and all unpaid family workers.” The rate of informality in Kosovo is about twice as high as the rates in Belgium and the Netherlands according to this definition.

Evidence shows that more effective governance, including an improved VAT collection system and a clearer regulatory framework, would create incentives for entrepreneurs to formalize their businesses, reducing the size of the informal economy.

Furthermore, a more efficient and fair VAT collection system could increase government revenues, creating more opportunities for investment in economic development and support for vulnerable groups, which often remain exposed to work in the informal sector.

The above-mentioned data support the hypothesis that the regulatory system in Kosovo, due to these structural problems, negatively affects the development and formalization of businesses.

H2: Increasing VAT revenues has a positive and direct impact on GDP growth in Kosovo, helping to improve economic development and strengthen fiscal capacities.

Following the analysis of the effects of VAT on Kosovo’s economic development, the second hypothesis suggests that increasing VAT revenues has a positive and direct impact on GDP growth, helping to improve economic development and strengthen fiscal capacities. To test this hypothesis, OLS linear regression techniques and correlation analysis will be used, which provide an assessment of the relationship between VAT revenues and other key factors that may affect economic growth. The use of data on key variables, such as government spending, consumer spending, net exports, unemployment, foreign direct investment and gross savings, will enable the identification of concrete impacts of VAT revenues on improving GDP and economic stability in Kosovo.

We will initially use the Pearson correlation coefficient to test the relationship between VAT and Kosovo's economic growth.

This coefficient measures the linear correlation between these two variables, providing us with a result between -1 and 1. If the result is close to 1 it will support our hypothesis, indicating a strong positive correlation. Otherwise, if the results are close to the value -1 they indicate a strong negative relationship, so the hypothesis is rejected. While a relationship close to 0 indicates that there is no linear correlation between them.

Table 1.

Correlation between VAT and GDP.

Parameters:	Values:
Average GDP	4.279686
Average VAT	856.7778
GDP standard deviation	3.32338
VAT standard deviation	241.5058
Correlation	0.1014

The average GDP growth during the observation period is around 4.279686%. This shows the typical annual change in GDP. While the average VAT seems to be around 856.7778%. Thus showing the average amount of VAT during the observation period.

The standard deviation of GDP is about 3.32338, while that of VAT is about 241.5058. This represents the degree of variation around the mean

The correlation coefficient between GDP growth and VAT in Kosovo is seen to be around 0.1014, supporting our second hypothesis that increasing VAT revenues has a positive and direct impact on GDP growth in Kosovo, helping to improve economic development and strengthen fiscal capacities

This result indicates a weak positive linear relationship between the two variables. Meanwhile, the very low correlation suggests that changes in GDP are not significantly related to changes in VAT, implying that these two variables operate largely independently of each other.

We will also test the second hypothesis in this way: Using OLS regression analysis, we aim to provide empirical evidence on the effects of VAT and other variables on GDP growth.

Table 2.

OLS analysis to determine the relationship between VAT and the country's economy.

Variables	Coef.	Std.Err.	t
TVSH	0.0483687	0.2258864	0.21
Government Expenditures	-0.5208402	8.652708	-0.06
Consumption Expenditures	-0.0863768	1.473216	-0.06
Net Exports	0.8824206	3.485803	0.25
Unemployment	0.5899275	3.475056	0.17
FDI	-20.28581	43.03063	-0.47
Bruto Savings	-1.492743	2.195079	-0.68

Based on the results in Table 2, the coefficients describing the relationship between the independent variables and the dependent variable (GDP) are presented. The positive coefficient of 0.0484 for the first variable, VAT, suggests a slight positive relationship between VAT and GDP. This result indicates that for every unit increase in VAT, an average increase of 0.0484 units in GDP is expected, assuming that other variables remain unchanged.

To assess the reliability of these results, two key indicators were used: Standard Deviation (Standard Error) and T-statistic. A high Standard Deviation together with a low T-statistic value suggest that the variable has a high level of variability and its impact is uncertain in the model. On the other hand, a low Standard Deviation and a high T-statistic indicate that the variable is more reliable and has a statistically significant impact.

The Standard Deviation for the VAT variable is 0.2259, indicating relatively low variability. However, the low value of the T-statistic suggests that the impact of VAT on GDP is not statistically significant. Furthermore, some of the variables in the model have a slight negative impact on GDP, but overall, none of them reach high statistical significance and are not considered particularly reliable in explaining the dependent variable. This can be explained by the lack of complete data or by the use of limited time periods in the analysis.

5. Conclusions

Based on the empirical analysis of this study, it is concluded that the informal economy constitutes a significant obstacle to the economic development of Kosovo, reducing tax revenues and reducing transparency in the market. The impact of the Value Added Tax (VAT) in reducing the informal economy and improving state revenues remains limited due to challenges such as the lack of advanced capacities for VAT collection, the complexity of the tax system and the high level of informality in different sectors of the economy.

The low correlation coefficient between VAT and Gross Domestic Product (GDP), together with the statistically insignificant values of some of the key variables, suggest that improvements in VAT collection, alone, are not sufficient to significantly impact GDP growth. Additional aspects, such as increasing transparency, reducing the administrative burden on businesses, and strengthening the tax legal framework, are also seen as key elements for reducing informality and improving fiscal stability.

A significant proportion of businesses operating in the informal sector do not adhere to the tax system, mainly due to the heavy regulatory burden and high administrative costs associated with formalization. Corrupt practices and the lack of effective inspections further contribute to increasing levels of informality, creating a weak governance environment and reducing public trust. This situation encourages economic actors to operate outside the formal framework, further undermining tax compliance efforts.

Overall, the results of this study show that improving VAT collection has significant potential to contribute to reducing the informal economy. However, to achieve sustainable results, this process needs to be accompanied by broad reforms in tax administration and tax policy implementation, including improving institutional capacity and strengthening law enforcement mechanisms.

6. Recommendations

Improving the administrative structure for the collection of Value Added Tax (VAT) is essential for reducing economic informality. An advanced and clearly structured administrative system is essential to promote a more favorable environment for taxpayers and to increase tax compliance. In this context, it is necessary to invest in advanced technology to support more efficient tax collection processes. The implementation of electronic systems for VAT declaration and payment would contribute to increasing the accuracy of data, thus reducing bureaucratic procedures that often hinder the formalization of businesses and push them towards the informal sector. Such an approach would facilitate tax compliance and help build a more sustainable tax system.

Improving transparency in tax procedures, together with an effective strategy for the fight against corruption in public institutions, is essential for increasing business confidence in the tax system. This requires deep and sustainable reforms in inspection and monitoring procedures to minimize cases of corruption and encourage a fairer competitive environment. Establishing appropriate mechanisms for reporting anomalies and promoting institutional accountability are essential steps in this process.

Favorable policies for small and medium-sized businesses should be implemented to encourage their formalization. This can be achieved by reducing registration costs and improving access to finance for those enterprises that decide to operate in accordance with the law. Such a strategy would help reduce informality and increase fair competition in the market.

We need to promote the use of electronic payments to combat the informal economy. This can be achieved through policies that encourage the formalization of financial transactions, facilitating the monitoring of economic activities and increasing formality in the economy. Such a structure would

contribute to increasing transparency and helping institutions collect accurate data on economic activities.

Strengthening cooperation between the private sector and public institutions. Organizing seminars and trainings to raise awareness on the benefits of formalization is an important step towards improving tax compliance. Raising awareness about the importance of VAT and the benefits of the tax system are key factors in promoting a more sustainable and fair environment for all economic actors.

6.1. Enhance Interagency Coordination for Inspections

As the study indicates, the lack of coordination among inspection bodies increases the burden on businesses. Establishing a centralized inspection framework and using data-sharing among institutions can minimize redundant audits and increase transparency.

6.2. Strengthen Local Governance and Decentralized Tax Collection

Empowering municipalities to play a more active role in VAT monitoring and business registration, while ensuring oversight, could improve tax coverage and encourage community-level engagement in formalization efforts.

6.3. Invest in Digital Tax Infrastructure

To combat informality effectively, Kosovo's government should prioritize investments in digital platforms for VAT registration, invoicing, and reporting. Implementing user-friendly e-tax systems can reduce human error, discourage corruption, and make compliance easier for businesses of all sizes.

Clarification of tax laws and their stronger implementation are necessary to achieve sustainable results in the fight against economic informality. Creating a clear and strong legal framework for VAT is necessary to eliminate tax avoidance practices and increase budget revenues. Such a framework would contribute to creating a more trustworthy environment for investors and would help strengthen the legitimacy of the tax system.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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