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ijtimoiy-iqtisodiy, innovatsion texnik, fan va ta’limga oid ilmiy-amaliy jurnal

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05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
05.01.03 – Informatikaning nazariy asoslari
05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
05.01.07 – Matematik modellashtirish
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05.05.05 – Issiqlik texnikasining nazariy asoslari
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05.08.03 – Temir yo'l transportini ishlatish
05.08.06 – "G'ildirakli va gusenisali mashinalar va ularni ishlatish" (texnika fanlari)
05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
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08.00.02 – Makroiqtisodiyot
08.00.03 – Sanoat iqtisodiyoti
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08.00.06 – Ekonometrika va statistika
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08.00.15 – Tadbirkorlik va kichik biznes iqtisodiyoti
08.00.16 – Raqamli iqtisodiyot va xalqaro raqamli integratsiya
08.00.17 – Turizm va mehmonxona faoliyati

Ma'lumot uchun, OAK Rayosatining 2024-yil 28-avgustdagi 360/5-son qarori bilan "Dissertatsiyalar asosiy ilmiy natijalarini chop etishga tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga texnika va iqtisodiyot fanlari bo'yicha "Muhandislik va iqtisodiyot" jurnali ro'yxatga kiritilgan.

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DETERMINANTS OF THE SHADOW ECONOMY: A CONCEPTUAL CLASSIFICATION AND CROSS-COUNTRY EVIDENCE

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Abstract. This study examines the principal determinants of the shadow economy using cross-country evidence. It develops a conceptual classification of the main drivers of informality and analyzes their relative importance across countries with different levels of shadow economic activity. The findings indicate that institutional quality and fiscal policy are the two most influential policy dimensions. Stronger control of corruption is associated with smaller shadow economies, while the structure of taxation appears to be more important than the overall tax burden. The study concludes that effective anti-informality policies should be tailored to countries' levels of economic and institutional development rather than being based on a uniform reform strategy.

Keywords: shadow economy; informal economy; institutional quality; corruption; tax burden; tax structure; fiscal policy; tax administration; cross-country analysis.

INTRODUCTION

The shadow economy remains one of the most persistent challenges to sustainable economic development, reducing tax revenues, distorting competition, weakening public institutions, and limiting the effectiveness of fiscal policy. Despite considerable progress in understanding its magnitude and determinants, the shadow economy continues to account for more than 30% of GDP worldwide, on average, with substantial variation across countries (Medina & Schneider, 2018). These differences suggest that informal economic activity is shaped by a complex interaction of economic, institutional, administrative, and social factors rather than by taxation alone.

Previous studies have identified numerous determinants of the shadow economy, including tax burden, corruption, regulatory quality, unemployment, and tax morale. However, existing research has largely examined these factors individually, providing limited guidance on how their relative importance varies across countries with different levels of informality. Consequently, policymakers often rely on uniform reform strategies despite considerable cross-country heterogeneity in the underlying drivers of the shadow economy.

This study addresses this gap by developing a comprehensive conceptual framework that classifies the determinants of the shadow economy according to their functional role and examines their relative importance using cross-country evidence. The analysis first classifies countries by the size of the shadow economy, then evaluates the contribution of the principal determinants across regional income groups, and finally investigates the relationships between the shadow economy, institutional quality, and fiscal policy through correlation analysis.

LITERATURE REVIEW

The shadow economy has long been recognized as a multidimensional phenomenon that cannot be explained by a single economic or institutional factor. Schneider and Enste (2000) define the shadow economy as the legal production of goods and services deliberately concealed from public authorities to avoid taxes, social security contributions, labour regulations, or administrative obligations. More recent estimates by Medina and Schneider (2018) confirm that although the size of the shadow economy varies substantially across countries, its determinants are remarkably similar, reflecting the interaction between economic conditions, institutional quality, regulatory frameworks, and social behaviour.

Early studies primarily emphasized the role of economic incentives. According to Loayza (1996), excessive taxation and regulatory burdens increase the relative benefits of operating informally, particularly when governments provide limited public services and weak legal protection. Similarly, Schneider and Enste (2000) identify high tax burdens, labour market regulation, and economic instability as major factors encouraging informal economic activity. However, subsequent empirical evidence suggests that tax rates alone cannot explain differences in the size of the shadow economy across countries. Friedman et al. (2000) demonstrate that weak institutions, excessive bureaucracy, and corruption often exert a stronger influence than taxation itself, indicating that the quality of governance is equally important in determining firms' decisions to remain formal.

Institutional quality has consequently become one of the central themes in the recent literature. Weak rule of law, ineffective governance, corruption, and low trust in public institutions reduce voluntary tax compliance and weaken incentives for formalization (Torgler & Schneider, 2009; Dreher & Schneider, 2010). The OECD (2019) further argues that tax morale depends not only on the level of taxation but also on taxpayers' perceptions of fairness, transparency, and the quality of public expenditure. When taxpayers perceive the tax system as equitable and public institutions as trustworthy, voluntary compliance increases even under relatively high tax burdens.

The literature also highlights the importance of administrative capacity in shaping informal economic activity. High compliance costs, complex administrative procedures, inefficient tax administration, and weak enforcement increase the attractiveness of operating outside the formal sector (Loayza, 1996; Schneider & Enste, 2000). Conversely, improvements in tax administration, digital government services, electronic invoicing, and risk-based tax enforcement reduce transaction costs and increase the probability of detecting undeclared economic activities (Sung et al., 2017). These findings suggest that administrative efficiency plays a critical role in facilitating formalization.

Beyond economic and institutional explanations, recent studies increasingly recognize the significance of social and behavioural factors. Tax morale, public trust, social norms, and citizens' confidence in government substantially influence compliance decisions (Torgler & Schneider, 2009). Likewise, persistent poverty, unemployment, and limited opportunities in the formal labour market often force individuals and small enterprises to participate in informal activities as a survival strategy rather than a deliberate attempt to evade taxation (La Porta & Shleifer, 2014; Ohnsorge & Yu, 2021).

Overall, the literature indicates that the shadow economy is a multidimensional phenomenon shaped by the interaction of economic, institutional, administrative, and social determinants rather than by taxation alone. However, existing studies predominantly examine these determinants in isolation or classify them according to disciplinary perspectives without distinguishing their functional roles in influencing the scale and persistence of informal economic activity. Drawing on the reviewed literature, this study develops a conceptual framework that classifies the determinants of the shadow economy into four interrelated groups according to their association with the size of the shadow economy (Figure 1).

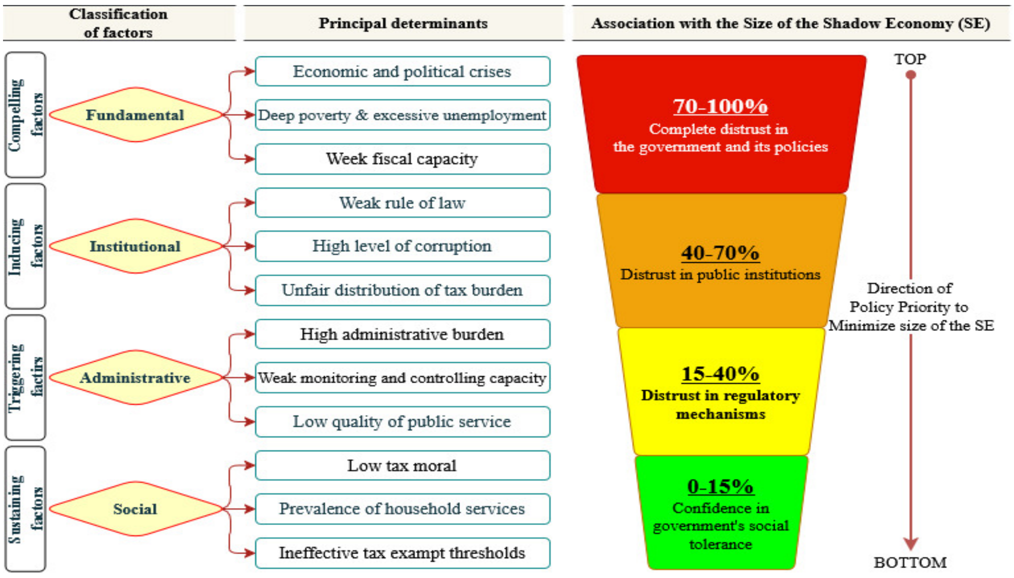

Figure 1. Classification of the determinants of the shadow economy based on their association with the size of the

shadow economy[1]

The first group comprises fundamental (compelling) factors, including economic and political crises, deep poverty, excessive unemployment, and weak fiscal capacity, which create the structural conditions under which informality becomes widespread. The second group consists of institutional (inducing) factors, such as weak rule of law, corruption, and an inequitable tax burden, which distort incentives and reduce trust in public institutions. The third group encompasses administrative (triggering) factors, including excessive administrative burdens, weak monitoring and enforcement capacity, and poor-quality public services, which increase compliance costs and facilitate participation in informal activities. Finally, social (sustaining) factors, including low tax morale, implicit social tolerance of informal economic activities as a means of livelihood for low-income households, and ineffective tax exemption thresholds, contribute to the persistence of informality by reinforcing public expectations that the government will tolerate certain informal activities to support vulnerable groups.

RESEARCH METHODOLOGY

Furthermore, the framework links these groups of determinants to different ranges of the shadow economy, ranging from relatively low levels (0–15%) associated with confidence in government and social tolerance to extremely high levels (70–100%) characterized by complete distrust in government and its policies. Accordingly, the proposed classification not only systematizes the existing literature but also establishes a policy-oriented hierarchy of determinants, highlighting the sequence of policy priorities required to reduce the size of the shadow economy.

Although previous studies have identified numerous determinants of the shadow economy, they generally examine these factors separately and provide limited guidance on how their relative importance varies across countries with different levels of informality. Building on the existing literature, this study proposes a comprehensive classification of the determinants of the shadow economy and applies it to international evidence. The subsequent sections estimate the global distribution of the shadow economy, classify countries according to the degree of informality, and empirically examine the relationships between the shadow economy and its principal determinants using correlation analysis. The findings provide the basis for identifying policy priorities appropriate for countries at different stages of shadow economy development.

ANALYSIS AND RESULTS

The shadow economy remains a pervasive feature of the global economy, accounting for more than 30% of world GDP, on average, although its size differs substantially across countries (Medina & Schneider, 2018). Such variation reflects differences in economic development, institutional quality, governance effectiveness, and the level of public trust in state institutions. Consequently, examining the global distribution of the shadow economy constitutes an important first step in understanding the heterogeneity of its determinants and identifying appropriate policy priorities. Figure 2 illustrates the size of the shadow economy across countries as a percentage of GDP.

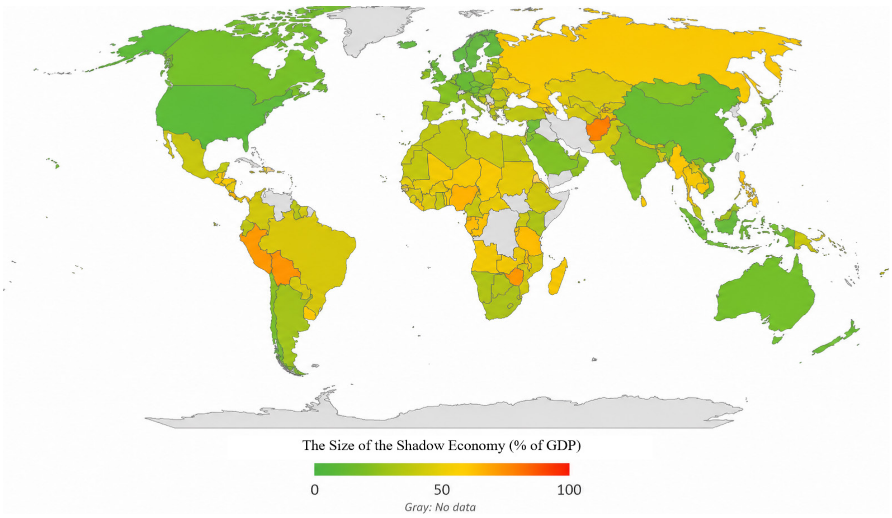

Figure 2. Global distribution of the shadow economy (% of GDP) in 2023[2]

1 Formulated by author based on the analysis of literature
2 Author`s compilation based on World economics database. URL: https://www.worldeconomics.com/Informal-Economy/

It can be seen that developed economies generally exhibit relatively small shadow economies, averaging around 20% of GDP or less. Countries such as Switzerland (8%), the United States and Germany (9%), Japan and Luxembourg (10%), and the United Kingdom (13%) record the lowest levels of informality. This reflects strong institutional quality, effective governance, transparent public administration, and high levels of public trust, which strengthen voluntary tax compliance and encourage formal economic activity (Medina & Schneider, 2018; OECD, 2019). The effective functioning of the social contract, whereby taxpayers perceive that taxes are transformed into high-quality public services, further reinforces incentives to remain in the formal sector.

In contrast, developing and transition economies exhibit intermediate levels of informality, averaging around 30% of GDP. Although formal institutions exist, administrative burdens, regulatory inefficiencies, corruption, and weak enforcement continue to constrain formalization. As a result, institutional weaknesses rather than taxation alone become the primary drivers of informal economic activity.

The highest levels of informality are concentrated in low-income and politically fragile countries, where the shadow economy frequently exceeds 40% of GDP. Particularly high levels are observed in Afghanistan (74%), Bolivia (64%), Zimbabwe (62%), and Nigeria (57%). In these economies, political instability, economic crises, weak governance, and widespread poverty undermine public confidence in state institutions, making informal activity an important means of economic survival.

In general, the international evidence indicates that the size of the shadow economy depends not only on the tax burden but also on the quality of institutions, governance effectiveness, and public trust. This cross-country heterogeneity suggests that both the determinants of informality and the corresponding policy priorities vary according to the magnitude of the shadow economy. Accordingly, the following section classifies countries by the size of their shadow economy and examines how the relative importance of its major determinants changes across these groups.

To better capture the heterogeneity in the global distribution of informality, countries were classified into four groups according to the size of the shadow economy (Figure 3).

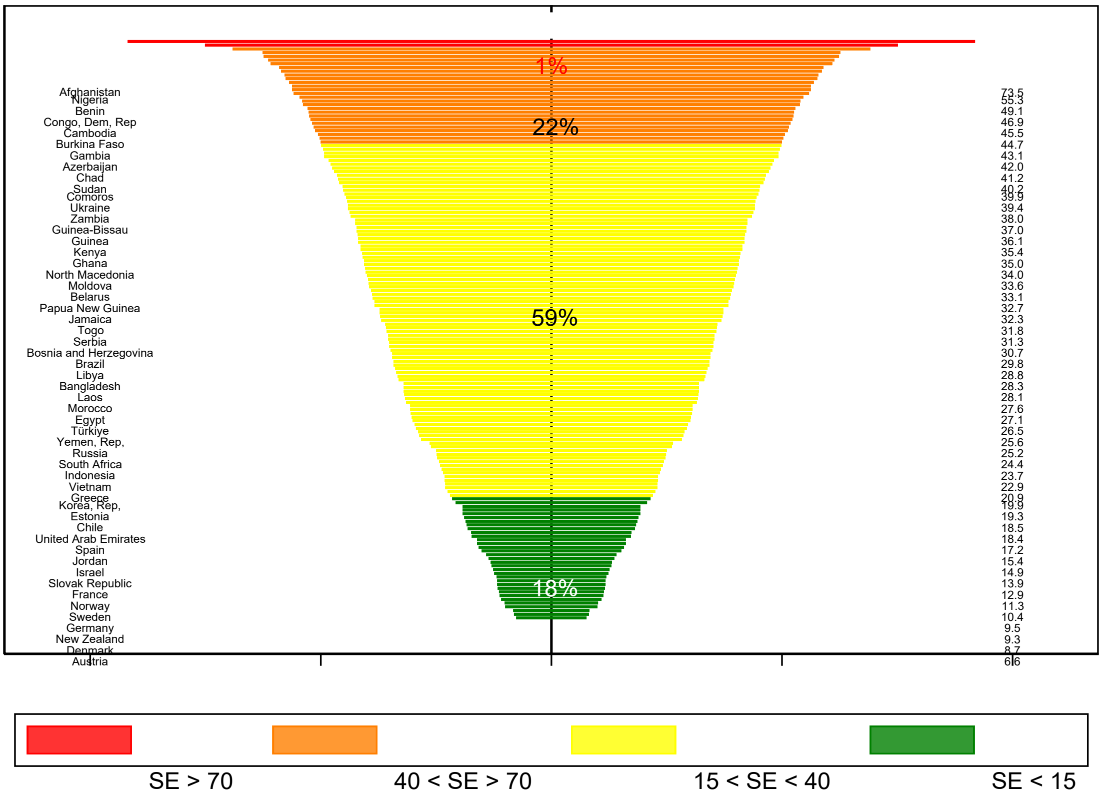

Figure 3. Classification of countries by the size of the shadow Economy in 2023[3]

The results show that only 1% of countries fall into the extremely high informality category (SE > 70% of GDP), represented solely by Afghanistan (73.5%). This group reflects situations in which the shadow economy is primarily driven by fundamental factors, including political instability, severe economic crises, widespread

3 Author`s compilation based on World economics database. URL: https://www.worldeconomics.com/Informal-Economy/

poverty, and ineffective fiscal policy, which undermine the state's ability to perform its basic functions. Consequently, restoring public confidence in the state and its economic policies becomes the principal policy priority.

Approximately 22% of countries have a shadow economy ranging between 40% and 70% of GDP, including Nigeria (55.3%), Benin (49.1%), the Democratic Republic of the Congo (46.9%), Cambodia (45.5%), Burkina Faso (44.7%), and Gambia (43.1%). In these economies, the persistence of informality is largely associated with institutional weaknesses, such as weak rule of law, corruption, inconsistent enforcement of legislation, and the perceived unfairness of the tax system. Accordingly, strengthening institutional quality and improving confidence in public institutions should precede administrative reforms.

The largest proportion of countries (59%) falls within the 15–40% interval, including Ukraine (39.4%), Kenya (35.4%), Brazil (29.8%), Türkiye (26.5%), Russia (25.2%), South Africa (24.4%), Indonesia (23.7%), and Greece (20.9%). These countries generally possess functioning fiscal and institutional systems; however, excessive administrative burdens, complex compliance procedures, and limited tax administration capacity continue to discourage formalization. Therefore, improvements in tax administration, digitalization, and regulatory simplification are expected to yield the greatest reductions in informality.

Finally, 18% of countries maintain a shadow economy below 15% of GDP, including Israel (14.9%), France (12.9%), Norway (11.3%), Sweden (10.4%), Germany (9.5%), New Zealand (9.3%), Denmark (8.7%), and Austria (6.6%). At this level, remaining informal activities are largely attributable to social and behavioral factors, particularly tax morale, small-scale household services, and economically insignificant activities, where the cost of enforcement exceeds potential tax revenues. Under these conditions, strengthening tax culture and maintaining trust in the tax system are likely to be more effective than expanding enforcement measures.

These findings indicate that countries with extensive shadow economies are unlikely to achieve substantial reductions in informality through improvements in tax administration alone. Instead, reforms should first address fundamental and institutional weaknesses before administrative and compliance measures can become fully effective.

The regional distribution of the principal determinants provides further insight into the sources of cross-country variation in the shadow economy. As shown in Figure 4, the relative contribution of these determinants differs substantially across regional income groups, indicating that the drivers of informal economic activity are closely associated with countries' levels of economic and institutional development.

In Developed Europe and North America, where the shadow economy is relatively small, tax rates represent the dominant determinant, accounting for 75% and 66%, respectively. By contrast, Central Asia and Eastern Europe, Western Europe, Latin America, and East Asia and the Pacific exhibit a more balanced distribution of determinants, with tax rates contributing 25–37%, while government effectiveness (19–34%) and the integrity of the legal system (10–19%) also play substantial roles. This indicates that further reductions in informality in these regions require not only sound tax policy but also continued improvements in institutional quality and public administration.

A different pattern is observed across Sub-Saharan Africa and parts of the Middle East and North Africa, where government effectiveness becomes the most influential determinant, contributing up to 37%, while the contribution of tax rates declines to 11–18%. At the same time, unemployment reaches 23% in lower-middle-income African countries, highlighting the importance of labour market conditions in sustaining informal economic activity. These findings suggest that weaknesses in governance and institutional capacity constitute more significant constraints than tax policy alone in economies with relatively high levels of informality (Figure 4).

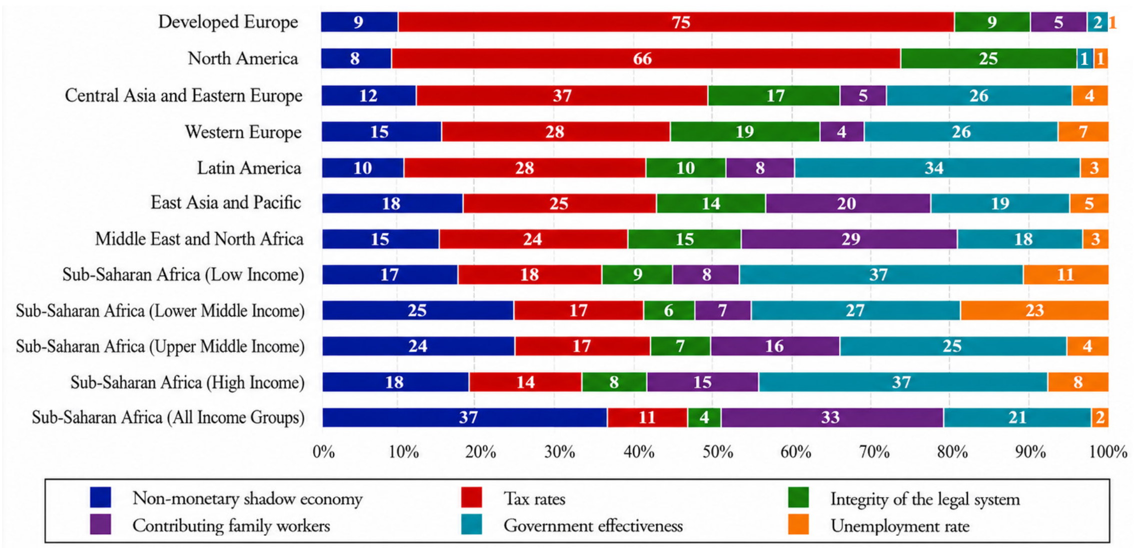

Figure 4. Shadow economy by income groups: contributions of different drivers in 2023[4]

Overall, these findings suggest that the determinants of the shadow economy are highly context-dependent, with their relative importance varying systematically across different stages of development. Consequently, policies designed to reduce informality should be calibrated to countries' institutional and structural characteristics, ensuring that reform priorities address the dominant sources of shadow economic activity in each development context.

While Figure 4 illustrates the relative contribution of the principal determinants across regional income groups, it does not reveal the strength or direction of their relationship with the shadow economy. Therefore, the following analysis empirically examines the two policy dimensions that governments can influence most directly: institutional quality and fiscal policy. Institutional quality is assessed through the **Control of Corruption** indicator, reflecting the effectiveness and integrity of public governance, whereas fiscal policy is evaluated using the overall tax burden together with the composition of direct and indirect taxation. Examining these relationships is essential for identifying whether institutional reforms or fiscal policy adjustments have greater potential to reduce the shadow economy and for validating the conceptual framework proposed in this study.

Institutional quality is examined first because it constitutes the institutional foundation upon which effective fiscal policy and tax administration depend. In particular, **Control of Corruption** is used as a proxy for the effectiveness, transparency, and accountability of public institutions, all of which influence taxpayers' willingness to participate in the formal economy. As shown in Figure 5, a clear negative relationship exists between **Control of Corruption** and the size of the shadow economy. Countries with strong corruption control, such as Denmark, Finland, Norway, Switzerland, Sweden, and New Zealand, are concentrated in the lower-right quadrant and consistently exhibit shadow economies below 15% of GDP (Figure 5).

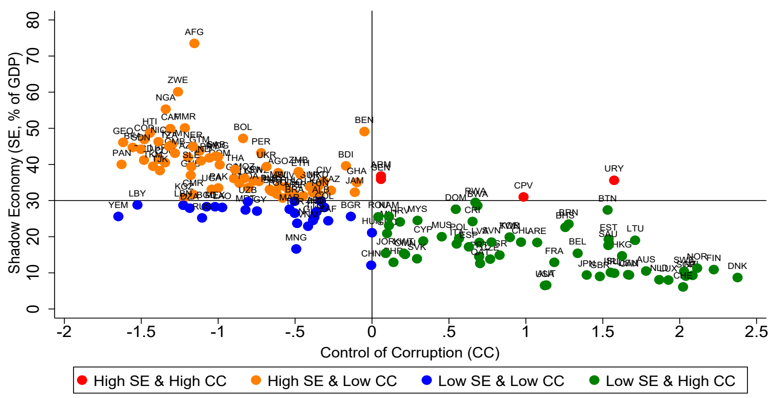

Figure 5. Cross-Country Relationship between Control of Corruption and the Shadow Economy[5]

4 Ernst & Young (EY). Shadow economy exposed: Estimates for the world and policy paths. 2025. (URL: https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/tax/documents/ey-gl-shadow-economy-report-02-2025.pdf)

5 Author`s compilation based on World economics database (URL: https://www.worldeconomics.com/Informal-Economy/) and Worldwide

Conversely, countries with weak corruption control, including Afghanistan (73.5%), Zimbabwe (60.1%), Nigeria (55.3%), and Haiti (48.8%), are predominantly located in the upper-left quadrant, where the shadow economy is substantially larger. This pattern provides empirical support for the argument that improving governance and reducing corruption are closely associated with lower levels of informality. However, several countries, including Uruguay, Cape Verde, Armenia, and Benin, deviate from this general trend, indicating that institutional quality alone cannot fully explain cross-country differences in the shadow economy. This observation underscores the importance of examining fiscal factors alongside institutional quality, which is undertaken in the subsequent analysis of the relationship between the shadow economy, the overall tax burden, and the composition of the tax system.

The institutional perspective is complemented by an examination of fiscal policy, which represents the second major policy instrument available to governments for reducing informality. Figure 6 illustrates the cross-country relationship between the shadow economy and four fiscal indicators: the overall tax burden, the share of direct taxes, the share of indirect taxes, and the difference between direct and indirect taxation.

The results indicate that the overall tax burden alone does not exhibit a clear relationship with the size of the shadow economy. Countries with relatively high tax burdens are observed in both the high- and low-informality groups, suggesting that the effectiveness of taxation depends not only on its level but also on the institutional environment within which it operates.

By contrast, the structure of taxation demonstrates a more distinct pattern. Countries characterized by a higher share of direct taxes generally exhibit lower levels of informality, whereas those relying more heavily on indirect taxation tend to have relatively larger shadow economies. A similar relationship is observed for the difference between direct and indirect taxes: countries where direct taxes constitute a larger share of total tax revenue are predominantly associated with lower levels of shadow economic activity, while economies relying primarily on indirect taxes are more frequently concentrated among countries with larger shadow economies (Figure 6).

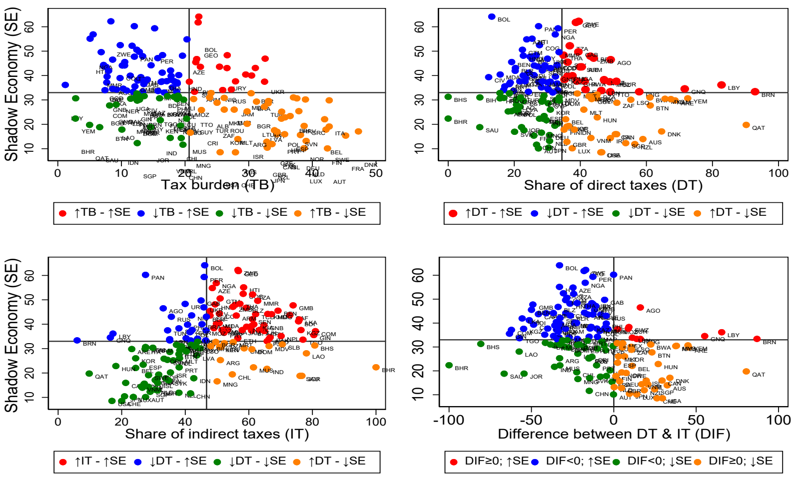

Figure 6. Cross-Country Relationship between Tax Burden, Tax Structure, and the Shadow Economy[6]

These findings suggest that the composition of the tax system may be more important than the overall tax burden in explaining cross-country differences in the shadow economy. Together with the institutional evidence presented in Figure 5, the results support the argument that reducing informality requires not only effective governance but also a balanced and equitable tax structure that strengthens voluntary tax compliance and improves confidence in the fiscal system.

CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that the determinants of the shadow economy vary systematically across countries according to their level of economic and institutional development. The findings indicate that institutional quality and fiscal policy are the two policy dimensions with the greatest potential to reduce informality. In particular,

Governance Indicators (URL: https://www.worldbank.org/en/publication/worldwide-governance-indicators)

6 Author`s compilation based on World economics database (URL: https://www.worldeconomics.com/Informal-Economy/) and World revenue longitudinal database (URL: https://www.imf.org/en/topics/fiscal-policies/world-revenue-longitudinal-database)

stronger control of corruption is consistently associated with smaller shadow economies, while the structure of taxation appears to be more important than the overall tax burden in explaining cross-country differences in informal economic activity.

The results suggest that policies should be tailored to countries' stages of shadow economy development. Economies with large shadow sectors should prioritize strengthening governance, combating corruption, and restoring public trust before implementing administrative reforms. As institutional quality improves, policy attention should shift toward enhancing tax administration, simplifying compliance, and designing a more balanced tax structure. Such a differentiated and sequential policy approach is likely to achieve more sustainable reductions in the shadow economy than a uniform reform strategy.

REFERENCES

1. Dreher, A., & Schneider, F. (2010). Corruption and the shadow economy: An empirical analysis. Public Choice, 144(1–2), 215–238.
2. Friedman, E., Johnson, S., Kaufmann, D., & Zoido-Lobatón, P. (2000). Dodging the grabbing hand: The determinants of unofficial activity in 69 countries. Journal of Public Economics, 76(3), 459–493.
3. La Porta, R., & Shleifer, A. (2014). Informality and development. Journal of Economic Perspectives, 28(3), 109–126.
4. Loayza, N. V. (1996). The economics of the informal sector: A simple model and some empirical evidence from Latin America. Carnegie-Rochester Conference Series on Public Policy, 45, 129–162.
5. Medina, L., & Schneider, F. (2018). Shadow economies around the world: What did we learn over the last 20 years? IMF Working Paper No. 18/17.
6. OECD. (2019). Tax morale: What drives people and businesses to pay tax? OECD Publishing.
7. Ohnsorge, F., & Yu, S. (Eds.). (2021). The long shadow of informality: Challenges and policies. World Bank.
8. Schneider, F., & Enste, D. H. (2000). Shadow economies: Size, causes, and consequences. Journal of Economic Literature, 38(1), 77–114.
9. Sung, M. J., Awasthi, R., & Lee, H. C. (2017). Can tax incentives for electronic payments reduce the shadow economy? World Bank.
10. Torgler, B., & Schneider, F. (2009). The impact of tax morale and institutional quality on the shadow economy. Journal of Economic Psychology, 30(2), 228–245.

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Ingliz tili muharriri: Feruz Hakimov
Musahhih: Zokir Alibekov
Sahifalovchi va dizayner: Abdurahmon Qurbonov

2026. № 7

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