



THE SHADOW ECONOMY AND FISCAL SECURITY: ASSESSING THE IMPLICATIONS FOR TAX REVENUES AND PUBLIC FINANCE

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Abstract. *This article looks at how the non-observed economy of Uzbekistan relates to the revenue side of public finance over 2021–2025. Official series from the National Statistics Committee and the Tax Committee are put side by side to compare the movement of tax receipts, nominal GDP and the shares of informal and hidden activity. Receipts collected by the tax authorities rose from about 128 trillion to 247.8 trillion soums, yet their ratio to GDP fell from 14.9 per cent in 2021 to 13.0 per cent in 2024 and recovered only partly, to 13.4 per cent, in 2025. The headline retreat of the non-observed economy, from 37.3 per cent of GDP to 26.9 per cent, comes almost wholly from the informal household segment, while the hidden segment that matters most for taxation stayed close to 8 per cent of GDP and grew in step with the economy. The article concludes that the fiscal position strengthened in 2025, but that the improvement leans on profit and subsoil taxes paid by a limited group of large taxpayers, and that further consolidation of the VAT and personal income tax bases is still required.*

Keywords: *shadow economy, non-observed economy, fiscal security, tax revenues, public finance, Uzbekistan.*

Introduction

A treasury can only spend what the economy allows it to collect. When part of production, trade and employment takes place out of sight of the tax administration, the cost of schools, hospitals, pensions and roads is carried by those who are visible, and governments are left with an uncomfortable choice between



heavier rates for compliant taxpayers and more borrowing. In this article fiscal security is understood in that narrow, practical sense: the ability of public finances to meet the state's obligations from a broad, stable and fairly distributed tax base, without leaning on one-off windfalls or on a small circle of large payers.

Uzbekistan is a useful setting in which to examine the relationship. In recent years the authorities have moved from general statements about a large shadow sector towards formal measurement, and official statistics now separate household-based informal activity from hidden activity, meaning legal production that is deliberately concealed. Policy has followed the same line. The presidential decree of 10 December 2025 sets goals to be reached by 2030, among them a 1.3-fold reduction in the share of the non-observed economy in GDP, an increase in the share of cashless payments by the population in trade and services to 75 per cent, and a rise in formal employment to 64 per cent of the economically active population [1]. What makes the decree interesting for researchers is that its aims are written in quantities, which can later be checked against published statistics.

The research question is straightforward. Did tax receipts and the officially measured non-observed economy move together between 2021 and 2025, and what does the pattern say about the strength of the revenue base? Two narrower issues sit behind it. One is which part of the non-observed economy actually bears on taxation. The other is how far the rapid growth of receipts in 2024 and 2025 can be credited to formalisation, as opposed to other forces.

The analysis is descriptive. It combines tax figures published by the Tax Committee with national accounts and non-observed economy statistics of the National Statistics Committee, adds a small number of ratios calculated by the author, and reads them against the literature reviewed in the next section. No causal claims are attempted. The purpose is to establish what the official numbers support and where they stop being informative.

Literature Review



The microeconomics of concealment was set out early. Allingham and Sandmo treated tax evasion as a decision under uncertainty: a taxpayer facing a given rate chooses how much income to declare by weighing the saving from under-reporting against the chance of being caught and the penalty that follows [2]. The model is deliberately stylised, yet it supplied a vocabulary that later work still uses, in which the tax rate, the probability of detection and the size of fines are the levers. It also helps to explain why tools that raise the probability of detection, such as the matching of invoices and payment data, are so attractive to tax administrations.

Schneider and Enste moved the discussion from the individual to the aggregate. Their survey compared direct, survey-based methods with indirect ones built on currency demand, electricity use or gaps between income and expenditure accounts, and it pointed to the burden of taxes and social contributions, together with the density of regulation, as the main forces driving activity underground. The consequences they stressed were an eroded tax base, higher rates on whoever remains in the formal sector, and distorted official statistics [3]. Medina and Schneider later extended this line of work with model-based estimates for 158 countries over 1991–2015, which put the average shadow economy at roughly a third of official GDP and show a slow downward drift in the later years of the sample [4]. Those figures are estimates from latent-variable models, not direct observation, and they tend to lie above what national statistical offices publish. The gap between modelled and statistical estimates is worth keeping in mind for any country-level assessment, including the one attempted below.

A different reading comes from La Porta and Shleifer. They argue that informal firms are overwhelmingly small, low-productivity enterprises run by owners with little schooling, and that these firms differ so strongly from formal ones that informality is better regarded as a symptom of low development than as a mass of productive businesses avoiding tax [5]. If the argument holds, the fiscal gain from pushing such units into the formal net is modest, and the more promising route lies in higher productivity and better formal institutions. This distinction will turn out to



be relevant to the data examined later, since most of the non-observed economy in Uzbekistan sits in household production and agriculture rather than in firms that conceal their turnover.

For Uzbekistan itself the empirical literature is thinner. Bhatti, Hamelin and Saidov analysed the influence of GDP, a corruption index, the tax rate and unemployment on the country's shadow economy rate. They report positive associations of the shadow economy with GDP and with corruption, and negative associations with the tax rate and the unemployment rate, explaining the first of the negative signs by the way changes in tax law affect the incentive to stay in the formal sector and the second by partial income reporting among those who evade [6]. Findings of this type rest on secondary time series and should be read as associations. The negative sign on the tax rate, in particular, is a reminder that cutting rates does not by itself make the hidden economy smaller. Norbaev, Ergashev and Abduraufov approach the subject from a regional angle, placing the Uzbek experience among Central Asian countries and linking the shadow economy with tax revenue, corruption and social stability, while reviewing the strategies neighbouring states have adopted against it [7].

Taken together, these works leave a fairly clear gap. Theory tells us which levers matter, the cross-country literature tells us that measurement choices shape the answer, the development view warns that the composition of informality decides how much revenue is at stake, and the Uzbek studies are mostly correlational and were written before the most recent official series appeared. What is still missing is a simple reading of how revenue outcomes and the officially measured components of the non-observed economy have actually moved together in the recent period. The next section makes that attempt.

Research Methodology

This study combines theoretical and empirical research methods, drawing on scholarly literature, regulatory documents, and reports on the shadow economy, fiscal security, and public finance. The empirical analysis uses official data from



Uzbekistan's statistical and tax authorities, as well as the World Bank, IMF, and OECD. Trend, comparative, and descriptive analyses are applied to assess the impact of the shadow economy on tax revenues and public finance stability. A deductive approach is also used to examine these issues in Uzbekistan's economic context.

Analysis and Results

1. Data and approach

Two official sources are used. Tax receipts are those reported by the Tax Committee as collected by the tax authorities for the budget. They include a non-tax component of state duties, fines and fees, about 15 trillion soums in 2024 and 19.5 trillion in 2025, and they leave out customs revenue, which is administered separately [9]. GDP at current prices and the division of the non-observed economy into informal and hidden parts come from the National Statistics Committee [8]. Two cautions apply to everything that follows. First, GDP has been revised more than once, and the ratios below use the series released in January 2026 for all five years. Second, the shares of informal and hidden activity are reported as they were published at each release and were not all calculated against the same vintage of GDP. The 2021 figure for tax receipts is obtained by subtracting the increase of 20.4 trillion soums reported for 2022 from the 2022 total of 148.4 trillion [9]. Everything else is a published figure, and the growth rates and ratios are the author's own arithmetic.

Table 1.

Tax receipts and nominal GDP of Uzbekistan, 2021–2025¹

Year	Tax receipts, trillion UZS	Growth, %	GDP at current prices, trillion UZS	Growth, %	Receipts to GDP, %
2021	128.0	10.0	128.0	10.0	100.0
2022	148.4	15.9	148.4	15.9	100.0
2023	136.0	-8.3	136.0	-8.3	100.0
2024	15.0	11.0	15.0	11.0	100.0
2025	19.5	30.0	19.5	30.0	100.0

¹ Compiled by the author from data of the Tax Committee of the Republic of Uzbekistan[9] and the National Statistics Committee of the Republic of Uzbekistan[8].



2021	128.0	-	861.2	-	14.9
2022	148.4	15.9	1041.9	21.0	14.1
2023	165.9	11.8	1261.8	21.1	13.1
2024	199.6	20.3	1535.4	21.7	13.0
2025	247.8	24.1	1849.7	20.5	13.4

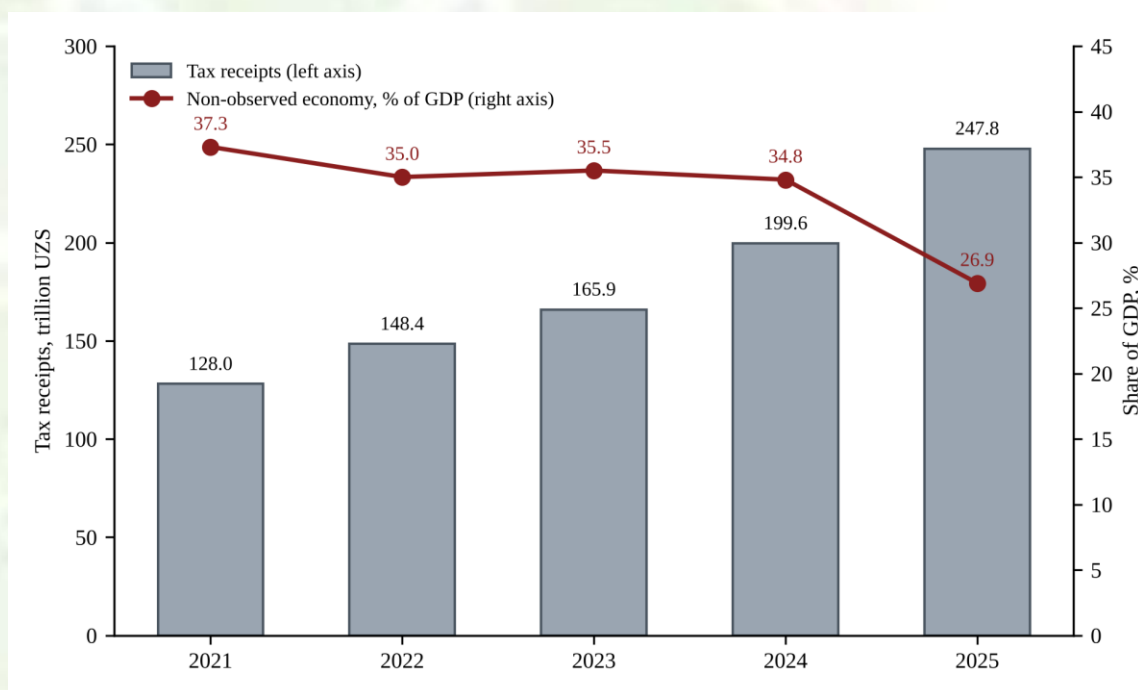
2. Tax receipts relative to GDP

Taken at face value, the receipts series is an impressive one: the amount collected in 2025 is almost 1.9 times the 2021 figure. Set against GDP, though, the picture is less straightforward. Nominal GDP rose faster than receipts in each of the years 2022, 2023 and 2024, and the ratio slipped from 14.9 per cent to 13.0 per cent. The biggest step down, of about one percentage point, came in 2023, the year in which the standard VAT rate was lowered to 12 per cent, so a good part of the fall is probably the planned cost of rate reform rather than a failure of collection. A second reason is statistical. The revised GDP series is wider than before and, by construction, takes in activity that the tax administration does not observe, so a larger denominator pushes the ratio down even where collection is unchanged. The data at hand do not allow these influences to be separated, but both point the same way.

The year 2024 looks like a pause. Receipts grew by 20.3 per cent against 21.7 per cent for nominal GDP, and the ratio stayed at 13.0 per cent. In 2025 the sequence broke: receipts rose by 24.1 per cent, GDP by 20.5 per cent, and the ratio edged up to 13.4 per cent, the first increase in the period. The Tax Committee links the stronger collection to digital administration. More than one billion receipts were issued through online cash registers in 2024, covering a turnover of 261.1 trillion soums, and the information systems of taxi aggregators were connected to the tax database from December 2023, after which one operator alone paid 145.2 billion soums in 2024 in a segment that had paid almost nothing the year before [9]. Examples of this sort are useful because they show formalisation working through a specific, observable channel. Whether they add up to more than a modest share of the 2025 increase is another matter, and we return to it in section 3.4.

Figure 1 sets receipts against the headline share of the non-observed economy. At first glance the two series tell a tidy story of rising collection and a retreating shadow sector. The drop in the share in 2025, from 34.8 to 26.9 per cent, is however too large to be taken at face value. The 2024 share was published against a GDP of about 1,454 trillion soums, while the series released in January 2026 puts GDP for the same year at 1,535.4 trillion [8]. In absolute terms, value added of the non-observed economy was 505.65 trillion soums in 2024 and 498.04 trillion in 2025, a nominal fall of 1.5 per cent in a year when nominal GDP grew by 20.5 per cent [8]. Some of that movement is real and some is the work of a revised denominator, and the published material does not make it possible to tell the two apart.

Figure 1. Tax receipts and the officially measured non-observed economy, 2021–2025²



3. Composition of the non-observed economy

The headline share hides a composition that matters more for fiscal analysis than the total does. Table 2 splits it into the informal economy, which is production

² Compiled by the author from [8] and [9].



by households and individuals, and the hidden economy, which is legal activity concealed from the authorities.

Table 2.

Informal and hidden economy in Uzbekistan, 2021–2025³

Year	Informal economy, % of GDP	Hidden economy, % of GDP	Total non-observed economy, % of GDP	Informal economy value added, trillion UZS
2021	29.7	7.7	37.3	243.5
2022	27.2	7.8	35.0	271.3
2023	27.1	8.4	35.5	323.3
2024	26.4	8.4	34.8	383.6
2025	19.0	7.9	26.9	351.0

Two features stand out. The first is that the whole of the decline sits in the informal component. Between 2021 and 2024 the informal share fell by 3.3 points and in 2025 by a further 7.4 points, while the hidden share stayed in a narrow band of 7.7 to 8.4 per cent and finished at 7.9 per cent. In value terms the hidden economy rose from 99.6 trillion soums in 2023 to 122.0 trillion in 2024 and to roughly 147 trillion in 2025 [8], increases of 22.5 and 20.5 per cent. That is almost exactly the pace of nominal GDP growth, which is why the share has hardly moved. Put differently, the available numbers show no clear retreat of the hidden segment relative to the economy, so far formalisation has done little more than keep pace with growth.

The second feature is where the non-observed economy is located. In 2023, the latest year for which we have a sectoral breakdown of the informal component, agriculture accounted for 48.1 per cent of informal value added and services for 39.0 per cent, with construction at 8.4 per cent and industry at 4.5 per cent (author's calculations from [8]). Looked at from the other side, informal and hidden activity

³ National Statistics Committee of the Republic of Uzbekistan [8].



together made up 63.4 per cent of value added in agriculture, 41.4 per cent in construction, 39.2 per cent in services and only 9.6 per cent in industry [8]. The hidden component is concentrated in services, where it equalled 15.1 per cent of the sector's value added, and in construction, at 9.5 per cent, while in agriculture it is recorded as nil [8].

What follows for taxation? The informal economy is dominated by agricultural and household production, much of it in very small units, and such activity may have limited capacity to bear tax, the development reading discussed in section 2 fits this structure rather well. The hidden economy is a different matter. Concentrated in services and construction, it is where concealed turnover and wages paid off the books are most likely to be found, and it is the segment to which VAT, personal income tax and social contributions are directly relevant. To give a sense of scale, we compared value added of the hidden economy with tax receipts of the same year. The ratio is 0.60 in 2023, 0.61 in 2024 and 0.59 in 2025 (author's calculations from [8] and [9]). The stability is notable, and the size is a reminder that concealed activity is large relative to the budget. It should not be read as a measure of lost revenue: value added is not a tax base, and a part of the concealed activity would in any case fall under reduced-rate or simplified regimes.

4. Implications for public finance

The structure of receipts in 2025 offers a further angle. Of the 247.8 trillion soums, profit tax contributed 72.3 trillion (up 37 per cent on 2024), VAT 45.2 trillion (up 14 per cent), personal income tax 42.4 trillion (up 20 per cent), the tax for subsoil use 25.8 trillion (up 28 per cent) and excise 20.0 trillion (up 13 per cent). Non-tax receipts stood at 19.5 trillion, and turnover tax, paid mostly by small businesses, brought in only 3.1 trillion, with growth of 8 per cent [9]. Profit tax and subsoil tax together provide close to 40 per cent of the total (author's calculations). Concentration shows up in another way too: in the first half of 2025 the inter-regional inspection serving the largest taxpayers collected 56.4 of the 102.6 trillion soums gathered nationally, some 55 per cent [9].



Two readings follow. The first is that the fastest-growing taxes are not the ones most exposed to concealed domestic turnover. VAT, which depends on an unbroken chain of invoices and on honest declaration of sales, grew more slowly than total receipts and than nominal GDP, and turnover tax grew slowest of all. If formalisation of trade and services had been the main driver of 2025, one would expect these lines to be among the leaders. The second reading is about resilience. Profit and subsoil taxes are the receipts most sensitive to the performance of a few large producers and to world commodity prices. The data do not tell us how much of their growth is price-driven, but the concentration is in itself a fiscal-security consideration, since a budget resting on a narrow base is more exposed to external shocks than one resting on a broad domestic base.

Early data for 2026 point the same way. Tax receipts reached 63.6 trillion soums in the first quarter, 24 per cent more than a year earlier, with the Tax Committee specifying that the figure leaves out income tied to higher world prices of gold and other precious minerals [9]. For the first half of the year, the National Statistics Committee reports the non-observed economy at 22.9 per cent of GDP, of which the hidden part is about 80 trillion soums, or 7.5 per cent [8]. These figures are preliminary, and the hidden share, as before, has moved far less than the headline.

Taken together, the evidence supports a measured conclusion. Fiscal security improved in 2025 in terms of both the level and the growth of receipts, and the first rise in the receipts-to-GDP ratio is an encouraging sign. At the same time, the hidden economy kept pace with GDP instead of retreating, the VAT and turnover tax lines grew more slowly than the economy, and a large part of the growth came from taxes paid by a limited number of large payers. In that sense the shadow economy remains a question of fiscal security even in a year of record collection.

Conclusion

This article set out to see whether the strong revenue performance of 2021–2025 can be matched to a shrinking non-observed economy. The official data give a mixed answer. Tax receipts collected by the tax authorities almost doubled, and the



ratio of receipts to GDP, after falling from 14.9 to 13.0 per cent through 2024, rose to 13.4 per cent in 2025. The non-observed economy appears to have fallen from 37.3 to 26.9 per cent of GDP, but nearly all of that movement belongs to the informal household segment, part of it reflects the revision of GDP, and the hidden segment relevant to taxation stayed close to 8 per cent.

Several implications can be drawn, bearing in mind the descriptive nature of the study. Policy aimed at the hidden economy should be directed to services, construction and retail trade, where matching of invoice, payment and payroll data offers the clearest route to a wider VAT and personal income tax base. The informal household segment calls for a different approach, centred on simple regimes, access to payment services and the legalisation of employment, because the fiscal return from enforcement against very small producers is likely to be low. Budget planning should treat the recent growth of profit and subsoil taxes with care and avoid building permanent commitments on revenues that depend on a few payers and on prices. Finally, the statistical authorities could help future research by publishing back-calculated non-observed economy series on the current GDP basis, so that trends are not blurred by revisions.

The study has limits that should be stated plainly. The series are short, the 2025 values are preliminary, estimates of the non-observed economy are themselves modelled, and the receipts series covers tax-authority collections rather than all general government revenue. A natural continuation would use regional and sectoral panels, where variation in the adoption of digital tools could allow the link between formalisation and revenue to be tested more directly.

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