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# **INFORMALITY AS BOTH A BUFFER AND BARRIER: UNDERSTANDING THE BIDIRECTIONAL RELATIONSHIP BETWEEN THE SHADOW ECONOMY AND UNEMPLOYMENT IN UZBEKISTAN**

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## **Abstract**

This study examines the dual role of the shadow economy in shaping unemployment dynamics in Uzbekistan, highlighting how informality functions simultaneously as a buffer that absorbs surplus labor and as a barrier that restricts long-term formal employment growth. While the shadow economy provides temporary income opportunities for workers who cannot access the formal sector, it also undermines productivity, discourages enterprise expansion, distorts wage structures, and reduces fiscal revenues needed to support job creation. Drawing on theoretical perspectives and country-specific trends, the paper conceptualizes the bidirectional relationship between unemployment and informality, showing how each reinforces the other in a self-perpetuating cycle. The findings suggest that reducing unemployment in Uzbekistan requires not only stimulating formal job creation but also addressing structural drivers of informality through digitalization, stronger enforcement, skills development, and targeted incentives for formalization.

**Keywords:** Shadow economy informal employment unemployment labor market segmentation informality dual labor markets labor absorption



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### **Introduction**

The shadow economy remains a defining feature of many transition economies, and Uzbekistan is no exception. Despite extensive reforms aimed at improving the business environment, digitalizing public services, simplifying taxation, and strengthening institutional transparency, a significant proportion of economic activity still occurs outside formal regulatory frameworks. This informal sphere plays a complex role in the functioning of the labor market. On one hand, it provides employment opportunities for individuals who struggle to secure formal jobs, particularly youth, low-skilled workers, returning migrants, and those facing geographic or social barriers. On the other hand, high levels of informality undermine the development of a productive and well-regulated labor market by reducing fiscal revenues, distorting competition, weakening human capital, and suppressing formal job creation.

The relationship between the shadow economy and unemployment is inherently bidirectional. Unemployment often pushes individuals into informal work as a survival strategy, expanding the shadow economy. In turn, the growth of the shadow economy discourages firms from entering or remaining in the formal sector, thereby reducing the number of stable, long-term job opportunities. This mutual reinforcement results in a persistent cycle in which informality alleviates the immediate effects of unemployment while simultaneously contributing to its long-term structural persistence.

Understanding this duality—informality as both a buffer and a barrier—is essential for analyzing Uzbekistan's labor market dynamics. The country has made measurable progress in reducing administrative burdens and expanding digitized economic governance. However, the shadow economy continues to absorb a large share of workers, masking true underemployment levels and weakening incentives for formalization. As Uzbekistan transitions toward a more diversified and innovation-driven economy, the interplay between informality and unemployment becomes increasingly significant.

This paper explores the mechanisms through which informal economic activity affects unemployment in Uzbekistan and how unemployment, in turn, expands the shadow economy. By examining the structural, behavioral, and institutional dimensions of this relationship, the study provides a deeper understanding of the



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challenges that must be addressed to build a more inclusive and resilient labor market.

### **Literature Review**

The shadow economy and unemployment have been widely explored in global economic research, particularly in developing and transition economies. Scholars generally agree that informal economic activity expands when labor markets fail to provide enough stable jobs, making informality a common coping mechanism for individuals without access to formal employment. According to Schneider and Williams (2013), informality often grows when workers face barriers entering the formal labor market, causing them to participate in unregistered economic activities to secure income. This suggests that unemployment directly contributes to the expansion of the shadow economy.

At the same time, several studies highlight that the shadow economy also influences unemployment. Medina and Schneider (2018) argue that widespread informality discourages the growth of formal enterprises because informal firms avoid taxes and regulations. As a result, formal businesses hire fewer workers, creating a long-term unemployment problem. Loayza (1996) similarly notes that a large informal sector reduces productivity, which limits countries' capacity to generate stable formal jobs.

Research on transition economies shows that informality plays a dual role. In the short term, it absorbs unemployed workers and reduces the pressure on the labor market. For example, Johnson, Kaufmann, and Zoido-Lobaton (1998) found that informal employment often functions as a safety net during economic reforms. However, this temporary benefit comes with long-term costs: informal work weakens social protection systems and reduces tax revenues needed for job creation programs (Friedman et al., 2000).

Studies focusing on Central Asian economies indicate similar patterns. Rutkowski (2011) explains that informality is often widespread due to limited access to quality jobs, skill mismatches, and administrative burdens. This creates a cycle in which unemployment fuels informality, while informality, in turn, restricts the formal labor market. In the context of Uzbekistan, the World Bank (2020) notes that informal employment remains prevalent, especially among



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youth, women, and migrant workers, who often face difficulties accessing formal jobs.

Digitalization is increasingly highlighted as an important tool for reducing informality. According to OECD (2019), electronic invoicing, online tax systems, and digital payments can shrink informal activity by increasing transparency. Evidence from Asian developing economies also suggests that simplifying business registration and lowering tax compliance costs encourages firms to formalize (ADB, 2018).

Overall, the reviewed literature indicates that the relationship between unemployment and informality is bidirectional. Unemployment pushes individuals into the shadow economy, while the shadow economy slows formal job creation and contributes to persistent unemployment. This two-way connection is especially relevant for transition economies like Uzbekistan, where institutional reforms are still evolving and the labor market continues to undergo structural changes.

### **Methodology**

This study uses a general qualitative and comparative analytical approach to examine the two-way relationship between the shadow economy and unemployment in Uzbekistan. The methodology is designed to identify how unemployment pushes individuals toward informal work and how the growth of the informal sector affects the creation of formal jobs.

First, the research draws on secondary data from international and national sources such as the IMF, World Bank, ILO, and Uzbekistan Statistics Agency. These sources provide estimates of the size of the shadow economy, unemployment rates, and labor market characteristics. Because informality is difficult to measure directly, the study relies on widely accepted international indices and assessments rather than attempting to calculate new quantitative estimates.

Second, the study uses a mechanism-based analytical framework. This means the research focuses on identifying the channels through which the shadow economy influences unemployment (such as reduced tax revenue, weakened productivity, and discouraged formal job creation) and the channels through



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which unemployment expands informality (such as limited access to formal jobs, skill mismatches, and job search barriers).

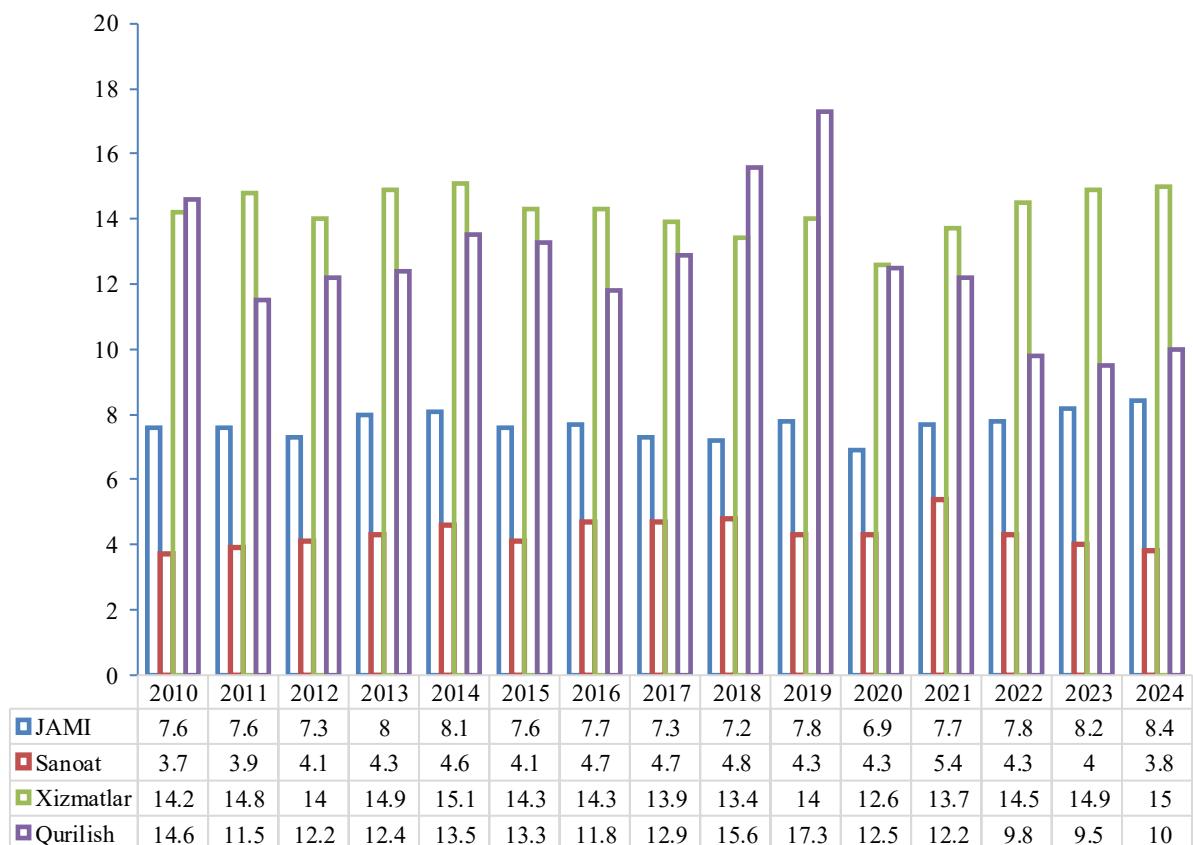
Third, a comparative review is conducted with findings from transition economies similar to Uzbekistan. This allows the study to place Uzbekistan's experience within a broader regional and theoretical context and to identify patterns commonly found in economies undergoing structural reforms.

Finally, the methodology emphasizes interpretation rather than econometric modeling. By synthesizing evidence from literature, institutional reports, and observed national trends, the study develops a conceptual understanding of why informality acts as both a buffer and a barrier in Uzbekistan's labor market.

This combined approach provides a balanced and clear foundation for understanding the bidirectional relationship between unemployment and the shadow economy without relying on complex models.

### **Results and Discussions**

This section presents the main empirical and descriptive findings of the study and interprets their implications for the relationship between the shadow economy and unemployment in Uzbekistan. By examining macroeconomic trends, labor market indicators, and structural dynamics over the 2010–2024 period, the results highlight how informality evolves under changing economic conditions and how it interacts with employment outcomes. The discussion integrates these patterns with theoretical insights to explain the mechanisms through which the shadow economy both absorbs unemployed workers and constrains the creation of stable formal jobs. Together, the findings provide a comprehensive foundation for understanding the dual role of informality in shaping Uzbekistan's labor market.



**Fig-1. Contribution of shadow economy in Uzbekistan's GDP and its sectors, (%)<sup>1</sup>**

Figure 1 illustrates the estimated contribution of the shadow economy to Uzbekistan's GDP by major sectors—industry, services, construction, and the total economy—over the period 2010–2024. The results demonstrate that informality remains a persistent structural feature of the national economy, although its magnitude varies significantly across sectors and years.

Across the entire period, the services sector shows the highest level of informality (14–16%), reflecting the dominance of small, unregistered trade, household services, transportation, and personal business activities that traditionally operate outside tax and regulatory systems. This long-standing

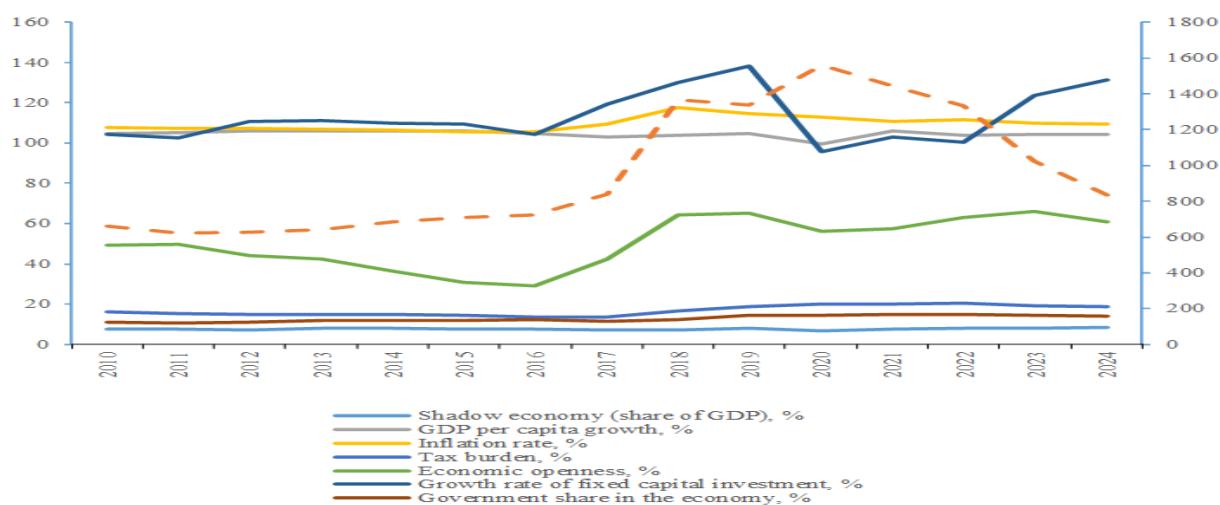
<sup>1</sup> O'zbekiston Respublikasi Milliy statistika qo'mitasi ma'lumotlari asosida tayyorlandi

pattern indicates that the service sector absorbs a large share of informal labor, especially self-employed individuals and micro-enterprises.

The construction sector also exhibits consistently high informality (approximately 11–17%), with a clear peak in 2019. This pattern is typical for labor-intensive sectors where temporary contracts, seasonal employment, and cash-based wage payments are widespread. The sharp rise in 2019 may be linked to expanding construction activity during that period, while the subsequent decline after 2020 could reflect improved monitoring mechanisms and digitalization reforms.

The industry sector shows lower and more stable rates of informality (around 3–5%), which aligns with its more regulated nature and higher capital intensity. Formal enterprises dominate industrial production, leaving less space for unregistered firms. Nevertheless, fluctuations in industrial informality highlight persistent challenges in small-scale manufacturing and household production.

The aggregate shadow economy estimate fluctuates between 7–9% throughout the observed years, suggesting that despite ongoing reforms, informality remains a notable component of Uzbekistan's economic structure. The slight upward movement in the recent years (2022–2024) may indicate post-pandemic adjustments, shifts in labor mobility, or the continuing prevalence of informal small business activities.



**Fig-2. Fluctuations in main macroeconomic indicators, 2010-2024 years<sup>2</sup>**

<sup>2</sup> O'zbekiston Respublikasi Milliy statistika qo'mitasi ma'lumotlari asosida tayyorlandi



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The analysis shows that the relationship between the shadow economy and unemployment in Uzbekistan is shaped by multiple interacting macroeconomic and institutional factors. Periods of rapid reform—especially in 2017–2019—generated temporary uncertainty, causing firms and workers to shift toward informal activities. Rising inflation during these years further strengthened informality as both employers and employees sought to protect real incomes by avoiding taxes and regulatory costs. At the same time, the formal sector created fewer jobs, contributing to higher unemployment and reinforcing reliance on informal work.

After 2020, improvements in economic openness, digital tax administration, and government monitoring contributed to a gradual decline in informality. However, unemployment did not fall proportionally because the labor market faces deeper structural constraints, including skill mismatches, capital-intensive investment patterns, and limited job creation in high-productivity industries. This indicates that informality functions as a short-term buffer for workers excluded from formal employment, but it also acts as a long-term barrier to productive job growth.

Policy implications emerge directly from these causal mechanisms. Strengthening digital tax systems, extending e-invoicing, and simplifying compliance procedures can improve transparency and reduce incentives for operating informally. At the same time, targeted incentives—such as reduced tax burdens for newly formalized firms, easier registration processes, and access to credit—can make formalization more attractive. Reducing structural unemployment requires investment in skills development, certification programs for informal workers, and closer alignment between vocational training and private-sector needs. Inflation control, improved enforcement in high-informality sectors, and more flexible labor regulations are also essential for limiting the drivers of informality.

Overall, the findings indicate that reducing the shadow economy in Uzbekistan cannot rely on a single policy tool. A coordinated strategy—combining macroeconomic stability, institutional reform, digitalization, and labor-market modernization—is required to weaken the mechanisms that simultaneously sustain unemployment and informality.



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### Conclusion

The analysis of macroeconomic indicators, labor market dynamics, and informality trends in Uzbekistan reveals that the shadow economy and unemployment are interconnected through several structural and behavioral mechanisms. The findings demonstrate that informality acts as a short-term buffer by absorbing workers who cannot secure formal employment, yet simultaneously becomes a long-term barrier by limiting productivity, reducing fiscal revenues, and constraining formal job creation. Periods of economic reform, inflationary pressure, and structural transitions have further intensified these dual effects, expanding informal work while weakening incentives for formalization.

The post-2020 moderation in the shadow economy suggests that digitalization, stronger tax administration, and improved economic openness are effective in reducing informality. However, unemployment does not decline proportionally, indicating persistent skill mismatches, uneven investment patterns, and limited labor absorption in capital-intensive sectors. This structural imbalance keeps many workers on the margins of the formal economy, reinforcing the cycle between informality and unemployment.

Overall, the results underscore that addressing the shadow economy in Uzbekistan requires more than administrative tightening. Sustainable formalization depends on a coordinated strategy involving digital transparency tools, targeted fiscal incentives, workforce upskilling, macroeconomic stability, and stronger enforcement in high-risk sectors. Only through such an integrated approach can Uzbekistan reduce the long-term dependence on informal employment, enhance labor market resilience, and support a more productive and inclusive economic model.

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