



REGIONAL DIFFERENCES IN LABOUR PRODUCTIVITY IN UZBEKISTAN: A STATISTICAL ANALYSIS

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Abstract. This study compares an output-per-worker proxy across Uzbekistan's 14 top-level regions using the National Statistics Committee's annual gross regional product (GRP), employment and real GRP growth series for 2023–2024. In 2024, current-price GRP per reported employed person ranged from 55.2 million soums in Surkhandarya to 299.7 million soums in Navoi, a 5.43-fold difference. The unweighted regional median was 69.2 million soums. Real GRP growth adjusted for employment growth implies the largest increase in Tashkent city (10.0%) and a small decline in Kashkadarya (−0.3%). The observed level gap combines differences in industry mix, capital intensity and prices; moreover, the employment series includes citizens working abroad. The results therefore describe regional output per reported employed person rather than a pure measure of within-region labour efficiency.

Keywords: labour productivity; gross regional product; regional inequality; employment; Uzbekistan

Introduction

Differences in output per worker are relevant to regional development because they can reflect unequal access to capital, infrastructure and high-value activities. A simple GRP-to-employment ratio is useful for identifying the scale of regional differences, but it cannot isolate workers' efficiency from the amount of capital used or the mix of industries [1]. This thesis compares the 14 first-level territories of Uzbekistan in 2024 and examines changes from 2023 using consistent, publicly available official series.



Data and methods

Annual GRP at current prices (billion soums), reported employment (thousand persons) and the real GRP volume index (previous year = 100) were obtained from the SIAT database [2–4]. For region r and year t , the level proxy is $P(r,t) = GRP(r,t) / E(r,t)$; the units are million soums per reported employed person. The 2024 real change in the proxy is $100 \times \{ [I(r,2024) / 100] \times [E(r,2023) / E(r,2024)] - 1 \}$, where I is the official GRP volume index. Descriptive statistics cover all 14 territories and use the population standard deviation. The 2024 GRP figures are marked preliminary in SIAT [2, 4].

Results

As Table 1 shows, Navoi recorded 299.7 million soums per reported employed person, followed by Tashkent city (212.6) and Tashkent region (120.8). Surkhandarya had the lowest ratio (55.2). The unweighted mean was 99.6 million soums, well above the median (69.2) because of the upper tail. The cross-regional coefficient of variation was 68.2% in 2024, compared with 57.6% for the 2023 current-price ratios. The top-to-bottom ratio rose from 4.51 to 5.43, although this nominal comparison also reflects sector-specific price movements and should not be interpreted as a change in real regional inequality.



Table 1. Regional output per reported employed person in Uzbekistan, 2024

Region	GRP (bn soums)	Employed (000s)	GRP worker (m soums)	per Real change in ratio (%)
Navoi	130,439.5	435.2	299.7	+6.0
Tashkent city	302,878.5	1,424.7	212.6	+10.0
Tashkent region	151,251.8	1,251.6	120.8	+6.2
Bukhara	73,434.1	796.7	92.2	+6.5
Syrdarya	28,655.5	351.2	81.6	+1.0
Jizzakh	43,545.9	559.2	77.9	+3.6
Andijan	93,026.3	1,338.6	69.5	+5.8
Khorezm	53,640.0	779.5	68.8	+5.9
Samarkand	103,882.7	1,521.1	68.3	+6.2
Kashkadarya	83,950.0	1,296.3	64.8	-0.3
Namangan	71,869.1	1,159.6	62.0	+4.5
Republic of Karakalpakstan	46,299.8	759.4	61.0	+0.9
Fergana	93,605.7	1,563.9	59.9	+4.6
Surkhandarya	56,553.9	1,024.9	55.2	+3.9

Note. Real change is computed from the official 2024 real GRP growth index and the 2023–2024 change in reported employment. Figures are rounded; calculations use unrounded inputs. Source: author calculations from SIAT series [2–4].

The real output-per-worker proxy increased most rapidly in Tashkent city (10.0%), followed by Bukhara (6.5%), Tashkent region and Samarkand (6.2% each). Kashkadarya was the only territory with a slight negative value (–0.3%): employment grew faster than real GRP. This is an accounting result, not evidence that individual workers became less effective.



Discussion and conclusion

The large level difference suggests that a single national productivity figure would obscure regional structure. Yet current-price levels are shaped by local sector composition and relative prices; neither cross-regional price deflators nor hours worked are available in the three series used here. More consequentially, the official employment definition counts Uzbek citizens working abroad [3], whereas regional GRP measures domestic regional output [2]. The mismatch can depress the ratio in regions with more external migration. Part of GDP is also not allocated to regions in the GRP series [2], so dividing the sum of regional GRP by national employment does not reproduce national GDP per worker.

The findings support a more detailed next-stage analysis using hours worked, employment located within each region, and sector-level value added at constant prices. Such data would help distinguish genuine efficiency differences from industrial composition, migration and price effects. Until then, the present estimates are best used as transparent descriptive benchmarks for regional policy, not causal rankings of workers or local institutions.

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