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Youth unemployment rates exceed twice total rates in most economies

A descriptive study of 182 economies using ILO modeled estimates for 2004, 2014 and 2024

Working paper 1.0.0.

Abstract

How does the unemployment rate of people aged 15 to 24 compare with that of the whole labor force, and did the comparison change between 2004 and 2024? We examine ILO modeled estimates from the World Development Indicators, frozen in September 2026, for the 217 nonaggregate economies of the World Bank roster, of which 182 have both rates in 2024. The median ratio of the youth rate to the total rate is 2.32. The youth rate is more than twice the total rate in 122 economies (67.0%) and more than three times in 38 (20.9%). In the same economies the median ratio was 2.01 in 2004, and the ratio rose in 137 (75.3%) by 2024, although youth rates fell in 103 economies and total rates in 124. A youth unemployment rate is not the share of all young people who are unemployed: the median unemployed share of everyone aged 15 to 24 was 5.18% in 2024. For 118 economies neither 2024 rate is flagged by ILOSTAT as a real value. Economies count equally, and the data describe published estimates, not causes.

Why compare youth and total unemployment rates?

Youth unemployment is usually reported beside the overall rate and compressed into one multiple. That multiple depends on what the youth rate divides by, which group young people are compared with, how economies are weighted and whether values were reported or modeled. This paper describes the published comparison economy by economy, in 2024 and over twenty years, and keeps those choices visible.

The questions are descriptive: the paper does not ask why young people are unemployed more often, whether any economy performs better, or which policies would change the ratio. The World Bank's metadata state that imputed observations "should not be used for country comparisons or rankings" and that the unemployment rate "should not be interpreted as a measure of economic hardship or of well-being". We therefore describe distributions and do not rank economies. WDI youth unemployment metadata and WDI total unemployment metadata.

What do the two rates measure?

The youth unemployment rate, WDI series SL.UEM.1524.ZS, divides unemployed people aged 15 to 24 by the labor force aged 15 to 24; the total rate, SL.UEM.TOTL.ZS, does the same for everyone aged 15 and over. The labor force is the employed plus the unemployed, who are without work, available for work and seeking work. Everyone else, including students who neither work nor seek work, is outside the labor force. The female and male youth rates, SL.UEM.1524.FE.ZS and SL.UEM.1524.MA.ZS, divide by their own youth labor force.

The denominator is therefore not the youth population. A youth unemployment rate of 20% means that 20 of every 100 young people in the labor force are unemployed, not 20 of every 100 young people. Young people who study and neither work nor seek work appear in neither the numerator nor the denominator. For a given youth unemployment rate, lower youth labor force participation implies a smaller unemployed share of all young people and therefore a larger gap between the rate and that share.

We summarize the comparison by the youth-to-total ratio, the youth rate divided by the total rate, and also report the difference in percentage points. The two can diverge: if both rates fall by the same number of points, the difference is unchanged and, when the youth rate is higher, the ratio rises. The total rate includes young people; it is a labor-force-weighted average of the youth rate and the rate for ages 25 and over, so whenever the youth rate exceeds the adult rate, the youth-to-adult ratio exceeds the youth-to-total ratio.

Data, source vintage and provenance

The five WDI series, including SL.TLF.ACTI.1524.ZS, the participation rate for ages 15 to 24, are labeled modeled ILO estimates and cite the ILO Modelled Estimates database, accessed by the World Bank on January 17, 2026. The responses, last updated on July 13, 2026, cover 2004 to 2024 and were retrieved with the country roster on September 30, 2026 UTC, saved without parsing and recorded with SHA-256 checksums. The roster is byte-identical to that of WEI-WP-003; without its 78 aggregates it lists 217 economies, including territories. WDI youth participation metadata.

The WDI observation-status fields are blank. For row-level provenance we also froze ILOSTAT's unemployment rates by sex and age, labeled "ILO modelled estimates, Nov. 2025", with its catalog entry and code lists. In each of the four unemployment series, all 3,918 WDI values are identical to their ILOSTAT counterparts once the Channel Islands (World Bank CHI, ILOSTAT CHA) are mapped, a mapping accepted on 42 matching values. ILOSTAT's 189 nonaggregate areas, the number its methodology gives, include 187 roster economies. ILO modeled-estimate methodology and ILOSTAT unemployment-rate table.

ILOSTAT's code list labels status R "Real value"; all other values have a blank status. Because the list also defines an unused "Imputation" code, blank values are described as not flagged rather than as confirmed imputations. The ILO combines reported observations with model imputations and warns that estimates for countries with limited reported data "should not be considered as “observed” data". Both 2024 rates are flagged in 64 economies and neither in 118; both are flagged in 110 of 187 economies in 2014 and 76 of 187 in 2004. ILOSTAT status code list.

All years come from one ILO edition, so the 2004 values are this edition's estimates, not figures published at the time. Each edition is "internally consistent by construction", so that "components, such as sex or age groups, add up to the corresponding totals": youth and total rates are not independent measurements. In all 182 economies the 2024 total rate lies between the youth rate and ILOSTAT's rate for ages 25 and over, within 0.001 points.

Analytical choices

An internal analysis plan was committed before any ratio, difference, distribution, association or change statistic was computed; coverage and status counts had been inspected, and values for three economies seen while locating the ILOSTAT data service. This is exploratory analysis with a documented workflow, not preregistration or blinded confirmation.

The primary sample, every economy with both rates in 2024, and the change panel, which requires both rates in 2004, 2014 and 2024, contain the same 182 economies, which also form the complete sample of WEI-WP-003. Nothing is imputed, trimmed or weighted; a mean describes the average included economy, not the average young person. Differences and ratios are exact; "more than twice" means strictly greater, and no ratio in any design year equals 1, 2 or 3 exactly. Quantiles interpolate linearly at position (N-1)p and standard deviations divide by N. The roster is not a random sample and the sources publish no standard errors, so no p values or confidence intervals are calculated.

Youth rates exceed twice total rates in most economies

Quantity, 2024, N = 182	Mean	Median	Middle 50%	Minimum	Maximum	Population SD
Youth rate, % of labor force aged 15 to 24	15.49	12.86	7.57 to 20.42	0.39	76.49	11.69
Total rate, % of labor force aged 15 and over	6.72	5.15	3.26 to 8.44	0.13	34.64	5.49
Youth rate minus total rate, points	8.77	7.39	4.02 to 12.33	-1.02	50.49	6.93
Youth-to-total ratio	2.45	2.32	1.88 to 2.95	0.76	7.04	0.88

Equal-economy summaries of published estimates. Every economy's values are in the study supplement.

The median ratio, computed economy by economy and therefore not the ratio of the two medians, is 2.32; the geometric mean ratio is 2.31. The youth rate exceeds the total rate in 179 economies (98.4%), twice the total rate in 122 (67.0%) and three times in 38 (20.9%). The complete set of exceptions is Kazakhstan (ratio 0.79), Liberia (0.76) and Sao Tome and Principe (0.95); none of their 2024 rates is flagged, and these point estimates should not be read as established reversals.

Youth and total rates are closely associated (Pearson 0.925, Spearman 0.903), partly by construction. The ratio has a weak monotonic association with the total unemployment rate

across economies (Spearman -0.101). A high ratio can coexist with a small gap in points when the total rate is low.

The ratio rose in most economies between 2004 and 2024

Year	Median ratio	Middle 50%	Mean	More than twice	More than three times	Below 1
2004	2.01	1.76 to 2.37	2.09	97 (53.3%)	15 (8.2%)	0
2014	2.18	1.86 to 2.57	2.29	119 (65.4%)	18 (9.9%)	2
2024	2.32	1.88 to 2.95	2.45	122 (67.0%)	38 (20.9%)	3

The 182 economies with both rates in 2004, 2014 and 2024. Summaries over all economies with data in each year, including five without 2024 values, are in the supplement.

The annual median for these economies reaches 2.31 in 2020, drops to 2.22 in 2021 and stands at 2.32 in 2024.

Period	Ratio rose	Ratio fell	Median ratio change	Youth rate fell	Total rate fell	Median youth rate change, points	Median total rate change, points
2004 to 2014	135	47	+0.16	87	97	+0.10	-0.09
2014 to 2024	120	62	+0.08	107	116	-0.45	-0.48
2004 to 2024	137	45	+0.28	103	124	-0.74	-0.92

The same 182 economies in every row. No ratio or rate was exactly unchanged. Medians of changes cannot be subtracted from one another.

Between 2004 and 2024 the ratio rose in 137 of the 182 economies (75.3%), with a median change of 0.28 and a middle half from 0.01 to 0.63. This did not come with a general rise in youth rates: the youth rate fell in 103 economies and the total rate in 124. The median change in the difference between the two rates was 0.06 points, with a middle half from -2.35 to 2.02. A rising ratio records a relative change and does not imply a larger gap in points.

The rise also appears among the 53 economies whose youth and total rates are flagged in both 2004 and 2024, a nonrandom subset: their median ratio moved from 2.18 to 2.51, the ratio rose in 46 and fell in 7, and the number above 3 grew from 5 to 17.

Regional patterns differ

Region	2024 data / frame	Median ratio, 2004	Median ratio, 2024	More than twice, 2024	More than three times, 2024	Ratio rose / fell, 2004 to 2024
East Asia & Pacific	29 / 37	2.20	2.82	26	11	22 / 7
Europe & Central Asia	48 / 58	2.09	2.48	41	15	42 / 6
Latin America & Caribbean	31 / 42	2.05	2.31	25	3	25 / 6
Middle East, North Africa, Afghanistan & Pakistan	21 / 23	2.33	2.56	17	5	18 / 3
North America	2 / 3	2.00	2.15	2	0	2 / 0
South Asia	6 / 6	2.46	3.62	5	4	6 / 0
Sub-Saharan Africa	45 / 48	1.75	1.72	6	0	22 / 23

Region labels from the frozen September 2026 roster. Both medians use the same economies. North America and South Asia have fewer than ten economies with data. Equal-economy summaries, not official aggregates.

Sub-Saharan Africa differs: its 2024 median is 1.72, only 6 of its 45 economies are above 2, none is above 3, and ratios rose in 22 and fell in 23. In each other region the median is above 2 and the ratio rose in most economies. A lower ratio is not evidence of better conditions for young people: the unemployment rate does not measure hardship, and the WDI metadata note that it omits people who want work but are not seeking it and that informal employment is hard to quantify where it is not tracked.

Young women and young men

In 2024 young women's unemployment rate exceeds young men's in 118 of 182 economies and is lower in 64; the median difference is 1.20 points and the median female-to-male ratio 1.12. Young women's rate was higher in 121 of 187 economies in 2004 and 120 of 187 in 2014. In 2024 it is higher in 25 of 31 economies in Latin America & Caribbean and 18 of 21 in the Middle East, North Africa, Afghanistan & Pakistan group, but in 24 of 48 in Europe & Central Asia and in neither North American economy. Each rate divides by its own youth labor force, so these figures say nothing about participation, and they use the providers' female and male categories. The WDI metadata note that unemployment counts can miss women who face barriers to seeking work or cannot be available because of care responsibilities.

How many young people are unemployed?

The youth unemployment rate multiplied by the youth participation rate, divided by 100, gives the unemployed share of everyone aged 15 to 24. In 2024 the median participation rate was 38.91%, with a middle half from 30.78% to 51.29%, so in at least half of the economies most people aged 15 to 24 were outside the labor force. The median youth unemployment rate was 12.86%, but the median unemployed share of everyone aged 15 to 24 was 5.18%. The highest youth unemployment rate in the sample is 76.49%; the highest unemployed share is 21.62%. The product of two rounded published values illustrates the definition; it is not a published indicator, and the participation series was not checked against ILOSTAT.

Adults aged 25 and over as the comparison group

Against ILOSTAT's rate for ages 25 and over, the median youth ratio in 2024 is 2.92 (middle half 2.32 to 3.72); it exceeds 2 in 160 of 182 economies (87.9%) and 3 in 85 (46.7%). It exceeds the youth-to-total ratio in 179 economies, exactly those in which the youth rate exceeds the adult rate, so the headline multiple depends on the comparison group.

Do provenance and rounding change the picture?

No economy has exactly one flagged 2024 rate. In the 64 economies with both rates flagged, the median ratio is 2.50 (middle half 2.22 to 3.16), 54 (84.4%) are above 2 and 20 (31.3%) above 3. In the 118 with neither flagged, the median is 2.14 (1.77 to 2.58), 68 (57.6%) are above 2, 18 (15.3%) above 3, and all three economies below 1 are in this group. The data cannot say whether this reflects measurement, modeling or the kinds of economies whose values are flagged.

Excluding the five economies with a 2024 total rate below 1.0%, a threshold fixed in the plan, leaves 177 economies with a median ratio of 2.32, 119 (67.2%) above 2 and 36 above 3.

Published values also differ in precision: 28 of the 182 total rates for 2024 appear with at most one decimal. A check added after the plan lets each value lie anywhere within half a unit of its last shown decimal, treating values without decimals as one-decimal values. The 2024 count above 2 could then range from 121 to 122, the count above 3 from 37 to 40 and the number of increases between 2004 and 2024 from 135 to 137; no 2024 ratio could cross 1. The visible decimal places do not establish the original rounding precision; these ranges are conditional on the stated scenario.

Who is missing?

Of the 217 economies, 35 lack 2024 values. Of these, 30 have no youth or total rate in any year and no values in the ILOSTAT table. Five series end early: Ukraine in 2021, Sudan and West Bank and Gaza in 2022, and Lebanon and South Sudan in 2023; the files do not say why. Coverage in 2024 ranges from 66.7% in North America and 73.8% in Latin America & Caribbean to 93.8% in Sub-Saharan Africa and 100% in South Asia. Economy coverage of 83.9% is not population coverage, and no assumption is made about the missing ratios.

Interpretation and limits

The results support a limited conclusion: in these published estimates youth rates are more than twice total rates in most economies, and ratios rose in most economies between 2004 and 2024, including economies with flagged values in both years. The data do not identify why.

Ratio and difference answer different questions: a higher ratio can coexist with an unchanged or smaller gap in points when both rates fall. Because the total includes young people, the youth-to-total ratio understates the youth-to-adult ratio whenever young people have the higher rate, and a changing youth share of the labor force can move the ratio even when youth and adult rates do not.

These are modeled estimates, not uniform measurements, and the World Bank advises against using imputed observations for country comparisons or rankings; economy values in the supplement serve reproduction, not ranking. Reproducing the published values verifies our arithmetic, not the models or their uncertainty.

Each economy counts once, so these summaries are not population-weighted and can differ from ILO or World Bank regional and global figures. The unemployment rate omits people who want work but are not seeking it and says nothing about job quality, and economy-level associations cannot be transferred to individuals. Weighted aggregates, broader labor underutilization and the share of young people not in employment, education or training would each need their own study plan.

Reproduction, authorship and source register

The release preserves the frozen responses, retrieval logs, availability inspection, analysis plan, all 217 economy rows, every summary and sensitivity result and chart-ready figure data. The standard-library pipeline youth_gap_study.py checks every input against the retrieval manifest, stops if any WDI value differs from its ILOSTAT counterpart and by default reproduces every output byte for byte. A separately written implementation, independent_youth_gap_check.py, recomputes every reported number from the raw files, and unit tests cover exact arithmetic and source integrity. Both were written by the preparing analyst, so these are computational checks, not external peer review.

The statistical sources are the five WDI series, distributed by the World Bank under CC BY 4.0, the country roster and ILOSTAT's unemployment-rate table with its catalog entry and status code list. Methodological references are the WDI metadata pages and the ILO's description of its modeled estimates, preserved in this supplement as a labeled web-retrieval text extraction first made for WEI-WP-003. ILOSTAT's page defining the unemployment rate returned HTTP 403 and is not cited. WDI female youth unemployment metadata and WDI male youth unemployment metadata.