



Challenges of Labor Force Participation in Aging Societies and Shifting Economies

SIPA Capstone Project Report

Shilin Guan
Wesley Ho
Andi Eka Iftitah
Esmira Isgandarova
Sihui Lu
Bernice Lung
Garima Sahni
Robin Zhao

School of International and Public Affairs
Columbia University
May 2026

Why Keeping Older Workers Productively Employed Is Everyone's Solution

Prepared for the World Bank by SIPA Capstone Team, Columbia University in the City of New York

As the world ages faster than its institutions can adapt, a Columbia SIPA research team finds that the long-standing fear of older workers crowding out the young is not strongly supported in the aggregate data, even though it may arise in specific contexts.

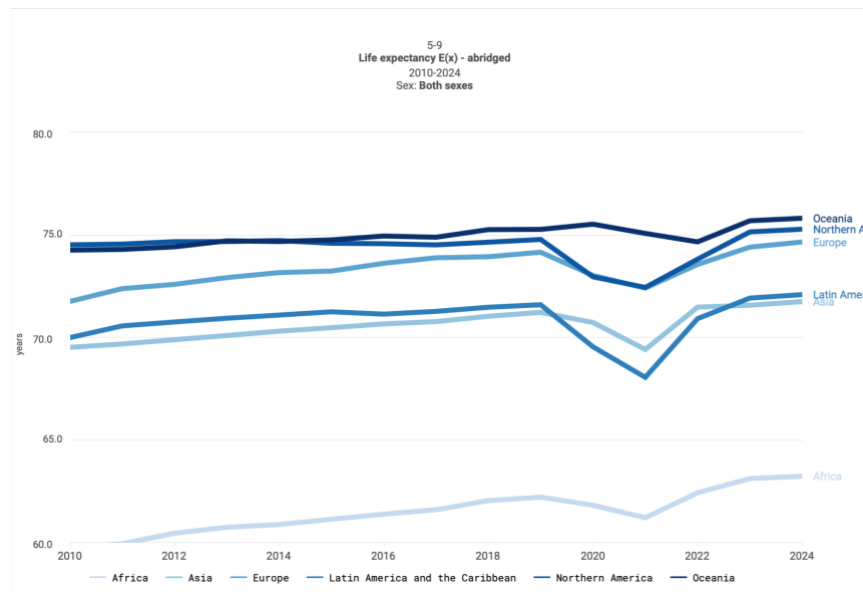
A widespread intuition persists across generations of policymakers and workers alike, that jobs are finite and that when an older worker stays employed, a younger one misses out. This belief continues to shape retirement policies and public attitudes toward older workers who are perceived as “not making way” for younger cohorts. However, the evidence suggests otherwise.

The Columbia SIPA Capstone team analyses labour force participation patterns across OECD and non-OECD economies, focusing on how ageing, pension systems, and labour market institutions shape employment outcomes. It evaluates whether higher participation among older workers is associated with weaker outcomes for younger cohorts. The findings have direct implications for policymakers navigating demographic change.

A World Growing Older, Faster

Graph 1 shows that life expectancy has increased steadily across all regions over recent decades, contributing to a global rise in older populations. While levels differ, with regions such as Africa remaining below others, the overall trend is remarkably similar, with most regions experiencing sustained gains over time. This shared upward trajectory reflects broad improvements in health and living conditions, even as countries remain at different stages of demographic transition.

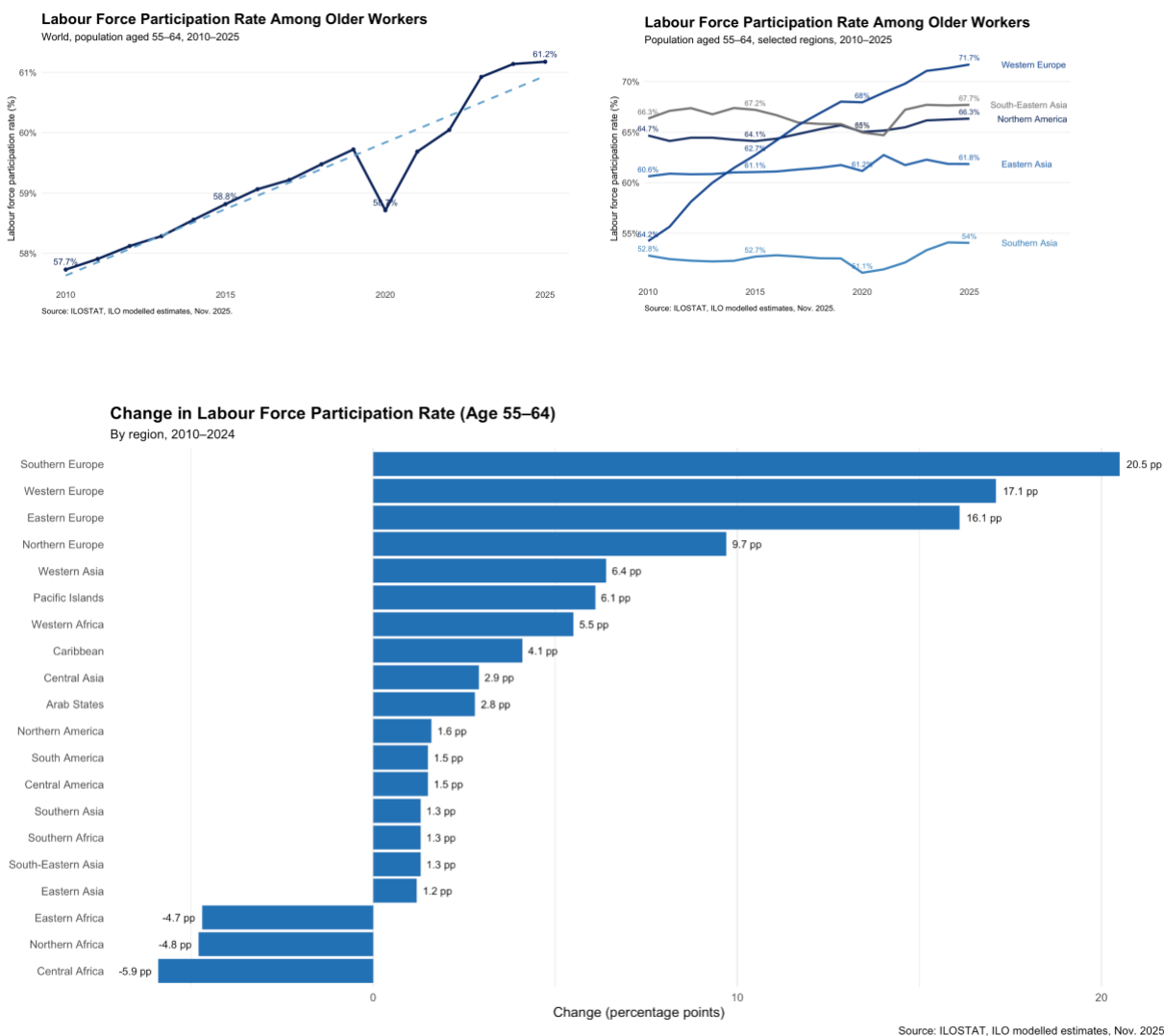
Graph 1. Life Expectancy at Age 5, by Region (2010–2024)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024 Revision. Life expectancy at age 5 (abridged life tables), both sexes, median variant, accessed via UN Data Portal.

Less widely recognised is that labour force participation among older workers (aged 55–64, world) has been rising across many regions over the past decade, as reflected in labour force participation data by age from the International Labour Organization (ILOSTAT). This trend suggests that ageing workforces are not withdrawing from economic activity, but rather are increasingly engaged in the labour market.

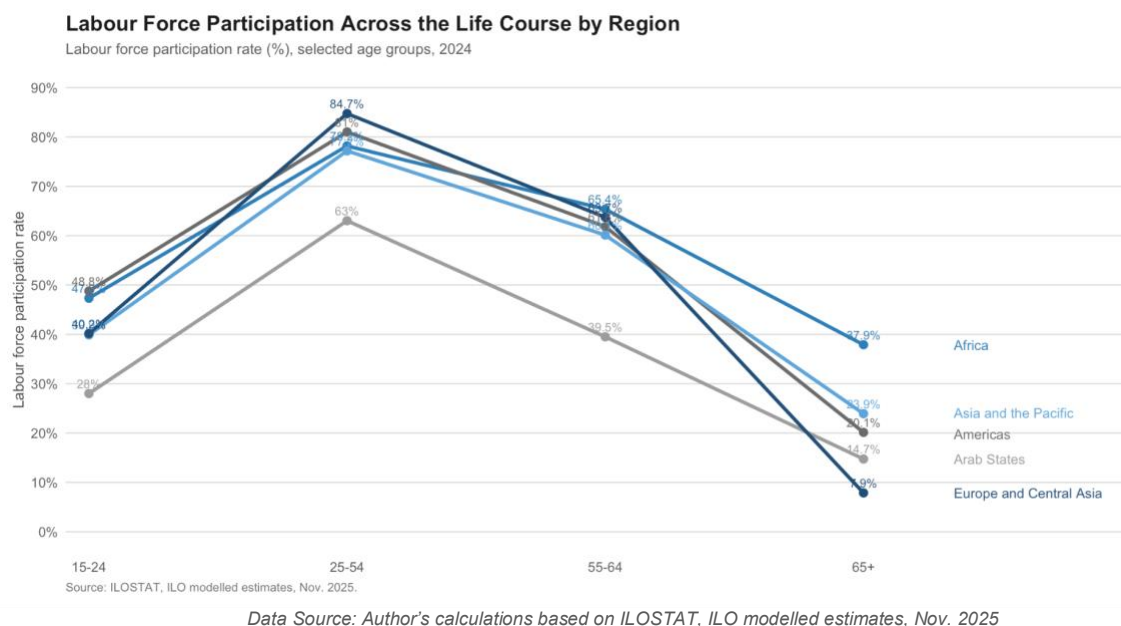
Graph 2. Labour Force Participation Rate Among Older Workers World Population (2010–2025) Aged 55–64



Source: International Labour Organization (ILO), ILOSTAT database, Labour force participation rate by sex and age — ILO modelled estimates (Nov. 2025). Data for population aged 55–64, 2010–2025, calculated by author.

Labour-force participation follows a clear life-cycle pattern across all world regions. Graph 3 shows that participation rates are lower among youth, rise sharply during prime working ages, and then decline among older age groups, particularly after age 65. Lower youth participation partly reflects continued education and delayed school-to-work transitions rather than weak attachment to the labour market. Regional differences nevertheless remain significant. Europe and Central Asia show the steepest decline after age 64, reflecting stronger retirement norms and pension systems, while Africa shows a more gradual decline, consistent with weaker formal retirement systems and greater economic necessity to continue working later in life. Youth participation remains particularly constrained in Arab States, where structural barriers, including rigid entry-level labour markets and gender-based exclusion of young women, continue to limit labour market entry.

Graph 3. Labour Force Participation Across the Life Course by Region 2024

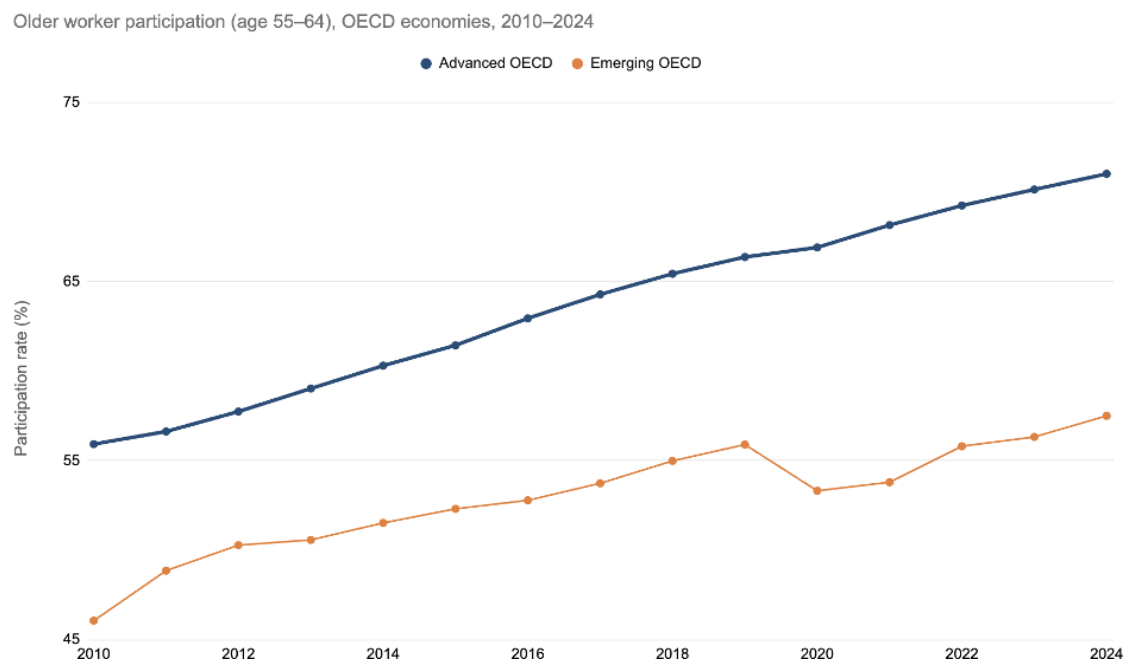


Busting the Lump of Labour Fallacy

The "lump of labour" dynamic can emerge in more constrained settings. Research at the firm level, for example, has shown that where hiring budgets or headcounts are fixed, delayed retirement can reduce opportunities for younger workers in the short term. Similar pressures may arise in sectors operating under fixed staffing or budget constraints, such as parts of the public sector, where delayed retirement can slow turnover and reduce openings for younger workers in the short term. But these are institutional or sector-specific constraints rather than a general law of labour markets. At the aggregate level, countries with higher participation among older workers often also sustain stronger employment outcomes for younger people.

Our cross-country analysis of OECD nations shows a weak positive relationship between older and youth participation rates. Countries like Iceland, which sit at the upper right of the distribution, combine very high older worker participation with robust youth employment. Türkiye sits closer to the opposite end: lower older worker participation, and lower youth participation too. The trade-off predicted by the fallacy simply does not appear consistently in the macroeconomic data.

Graph 4. Older Worker Participation (Age 55–64), OECD economies, 2010–2024



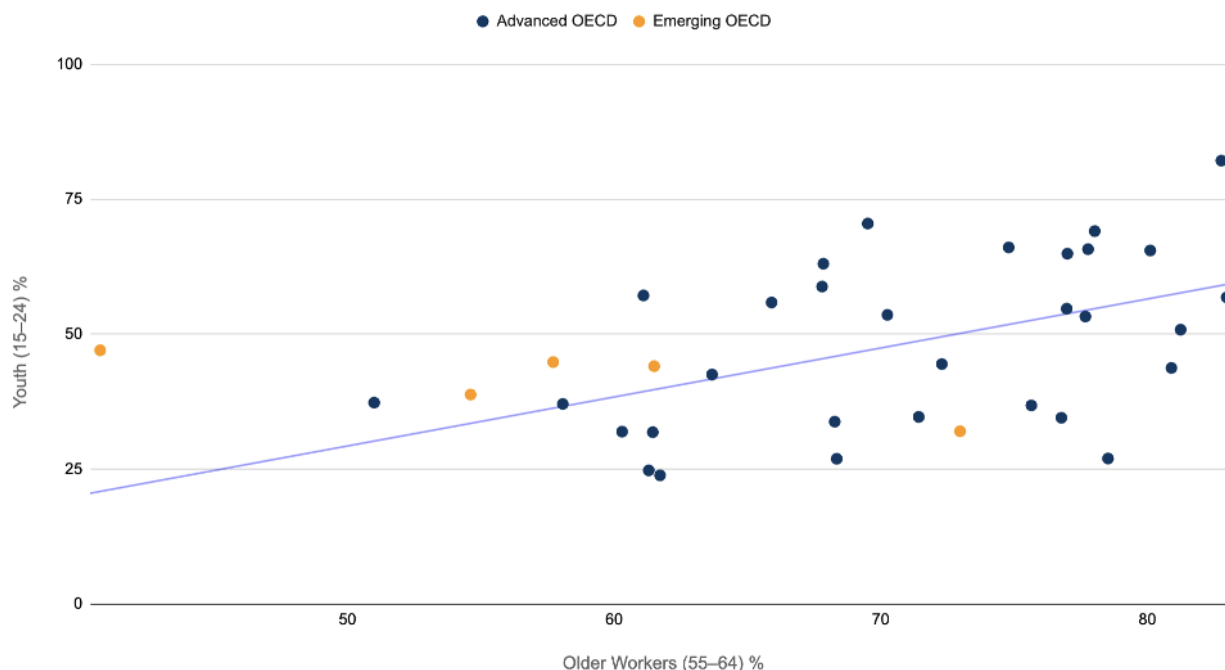
Data Source: OECD Labour Force Statistics, based on International Labour Organization data.

The reason, as our analysis of OECD evidence suggests, is that employment is not a fixed pie. Strong economic demand creates jobs for multiple age groups simultaneously, while labour market institutions shape how these opportunities are distributed. As a result, higher participation among older workers does not necessarily come at the expense of younger cohorts; in many countries, employment outcomes for both groups move together. Economies with stronger job creation and more dynamic labour markets often sustain both higher older worker participation and stronger youth employment.

Graph 5. Youth and Older Worker Participation Across OECD Countries

Youth and Older Worker Participation Across OECD Countries

Age groups: 15–24 and 55–64 (%)



Source: OECD Labour Force Statistics, based on International Labour Organization data.

School-to-work transitions and older-worker retention are complements, not substitutes, in well-functioning labour markets. Policies that support smoother labour market entry for young people, including apprenticeships, vocational pathways, and active labour market programmes, can coexist with reforms that encourage longer working lives, such as flexible retirement ages, phased retirement schemes, and lifelong learning investments. The key is not to redistribute a fixed number of jobs between generations, but to expand labour market participation and productivity across the life course.

Context Matters Enormously

While the aggregate picture is reassuring, the research reveals significant variation by region, income level, and country; and warns against assuming a single policy template will work everywhere.

In some cases, older workers transition from formal employment to informal employment, or into lower productivity work. Some others remain in the same sector throughout their career. Understanding this point is critical for interpreting labour market outcomes.

Indonesia & Viet Nam: Persistence in Informal and Agriculture

In Indonesia and Viet Nam, high older worker participation is driven largely by necessity. Limited pension coverage means that work remains the primary income source in old age, especially in rural and informal sectors. Retirement age increases are legislated but gradual: Indonesia targets 65 by 2043; Vietnam 62 for men by 2028. However, this reform has yet to fundamentally change labour market behaviour.

This is reflected in the employment structure. According to the International Labour Organization, informal work accounts for 81.0% of total employment in Indonesia (2023) and 67% in Viet Nam (2024). Older workers are heavily concentrated in these informal and agricultural activities.

Crucially, this does not reflect a transition into informality at older age. In some contexts, workers remain in informal and agricultural sectors throughout their working lives, pointing to a persistent and segmented labour market structure. In others, older workers may transition from formal wage employment into informal self-employment later in life.

This distinction is important for understanding whether older and younger workers are actually competing for the same jobs. In rural areas, where land is the main productive asset and returns are relatively low, older workers often retain control over land or informal enterprises, while younger workers are more likely to migrate or seek off-farm employment. In urban areas, however, different patterns may emerge, including later-life transition into informal self-employment.

As a result, high levels of older-worker participation can coexist with persistent youth unemployment without clear evidence of direct displacement. Younger and older workers are often concentrated in different sectors, employment arrangements, and geographic spaces rather than competing within a single labour market.

East Asia: Transition and Structural Constraints in Later-Life Employment

East Asia illustrates that high older worker participation does not necessarily come at the expense of younger workers, but instead reflects movement into different segments of the labour market.

In Japan, older worker participation is among the highest in the world, with near-universal participation among 55–64 year-olds (75–80%). However, many workers shift to non-regular, lower-wage employment after 60. This shift does not necessarily imply a decline in welfare: for some older workers, it reflects voluntary transitions toward more flexible or meaningful work, while for others it reflects

institutional constraints and reduced job security. In this sense, Japan exhibits a two-tier system in which older workers remain employed but under different conditions. Rather than competing with younger workers for the same position, older workers are absorbed into a secondary segment of the labour market.

A similar pattern is observed in South Korea, where elderly participation is among the highest in the OECD (75–80% for those aged 55–64), while youth participation remains relatively low at 46.1%. Rather than reflecting a direct trade-off, these trends are driven by distinct structural forces. A pronounced dualism in the labour market creates segmentation in job access, with younger workers facing barriers to entry into stable, formal employment due to skill mismatches and rigid hiring practices. Many young workers therefore wait for a limited number of high-quality positions, remaining unemployed or out of the labour force. At the same time, relatively low pension replacement rates (40% in 2025 and 43% in 2026) push many older workers to remain in or re-enter employment, often in lower-productivity or less secure roles with fewer entry barriers. As a result, the two groups are largely concentrated in different segments of the labour market, with limited direct competition for the same positions.

On the other hand, China occupies a particularly complex position. Rapid aging – [its 60+ population will reach more than 30% by 2035](#) – is occurring before the country has fully adjusted its institutional infrastructure. Retirement ages remain among the world's lowest (60 for men, 50 or 55 for women depending on occupation), and while gradual delays are in progress, the pace of demographic change may outrun the pace of reform. Work remains the main source of old-age income for a large share of the population, particularly in rural areas, a pattern that speaks less to wellbeing than to the inadequacy of pension coverage.

MEN

Arab States

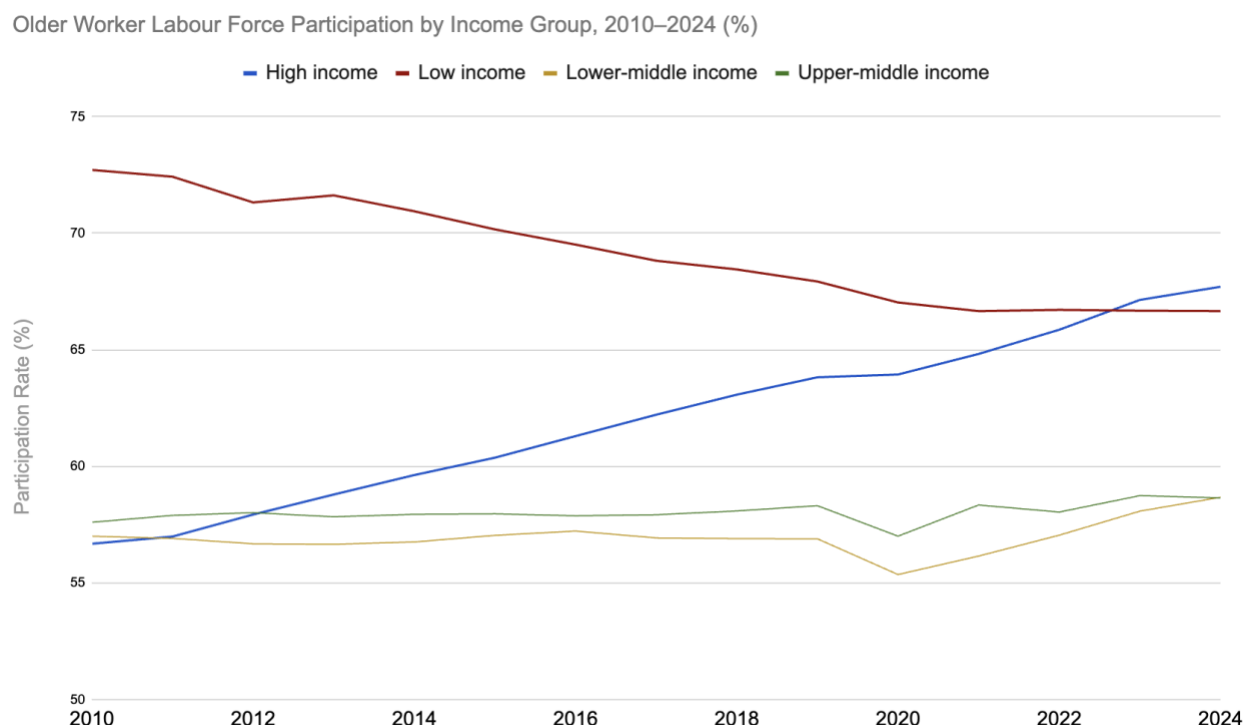
Low older worker participation (39.5%) — the lowest of any region — is driven by short contribution periods enabling early exit, pension abatement rules penalising post-retirement work, and structural barriers for women. Countries like Saudi Arabia and the UAE have begun reforms, but the region faces accelerating ageing with limited institutional readiness.

The Rich-World Divergence

One of the most striking findings concerns the divergence by income level. In 2010, high-income countries had lower older worker participation than low-income ones — a pattern driven partly by poverty and weaker systems of old-age financial support in developing economies, which often require continued work later in life. By 2023, that gap had essentially closed, with both groups converging around 67%.

The main driver of this convergence was the sharp rise in older-worker participation in high-income economies, particularly in Europe and Central Asia where participation increased from below 50% in 2010 to around 65% by 2024, the strongest upward trend of any region. This reflects a combination of factors: healthier ageing, the expansion of knowledge-based and less physically demanding work, pension and retirement-age reforms, and financial pressures associated with longer life expectancy, inadequate retirement savings, and rising old-age costs.

Graph 6. Older Worker Labour Force Participation by Income Group



Data Source: ILOSTAT, International Labour Organization

This reflects real policy change: pension age reforms, flexible retirement pathways, employment protection for older workers, and labour shortages in ageing advanced economies that have increased demand for experienced workers. Healthier ageing, the

expansion of less physically demanding and knowledge based work, and growing financial pressures associated with longer life expectancy have also contributed to rising older-worker participation in many high income economies.

The fallacy, the myth

Can the reforms that worked in advanced OECD economies be meaningfully adapted for rapidly ageing lower-middle- and upper-middle-income countries with weaker institutional capacity?

The answers matter. As populations age across both advanced and developing economies, governments face growing pressure to support longer working lives while maintaining opportunities for younger cohorts. The evidence presented here suggests that the relationship between older and younger workers is not a simple zero-sum trade-off. In many countries, higher older-worker participation coexists with strong youth labour market outcomes, while in others, segmentation between sectors and employment arrangements limits direct competition between generations.

What matters most is not age alone, but how labour markets, retirement systems, and economic structures shape opportunities across the life course. The challenge for policymakers is therefore not simply extending working lives, but building institutions that allow ageing societies to remain productive, inclusive, and adaptable as demographic structures continue to shift.

About this research: This analysis was produced by a Columbia University SIPA Capstone team working in partnership with the World Bank. It draws on ILO/ILOSTAT data, OECD Labour Force Statistics and Pensions at a Glance (2025), national statistical agencies, and a review of country-level retirement reform literature. The quantitative methodology employs difference-in-differences analysis and cross-country panel regression. Findings are preliminary and subject to ongoing revision.

Does Aging Gracefully Mean Working Longer? Evidence from Brazil

Prepared for the World Bank by SIPA Capstone Team, Columbia University in the City of New York

A common concern in labor market policy is that jobs are limited in number: if older workers remain in employment longer, fewer opportunities will be available for younger workers. This belief, known as the lump of labor fallacy, has long shaped global debates on retirement and youth unemployment.

As Brazil faces rapid population aging alongside a series of landmark pension reforms, it provides a compelling setting to test this concern. As a large and diverse emerging economy undergoing structural change, Brazil offers insights that extend beyond its borders, particularly for upper-middle-income as well as perhaps middle-income countries facing similar demographic transitions. These dynamics make Brazil a particularly informative case for assessing whether intergenerational labor market trade-offs exist in practice.

Our analysis examines whether keeping older Brazilians in the workforce “crowds out” the next generation, or whether labor markets are more dynamic than this assumption suggests. Drawing on over 5.3 million observations across a decade of labor market data, the findings suggest that the “fixed-pie” view of employment is, in fact, a myth.

A Policy Shift Toward Longer Working Lives

Over the past decade, Brazil has implemented a series of pension reforms aimed at improving fiscal sustainability and encouraging longer labor force participation. While earlier reforms in 2012 and 2015 gradually reduced pension generosity and tightened eligibility conditions, the 2019 constitutional reform marked a structural turning point. These reforms reflect a broader regional trend toward strengthening pension systems in response to demographic aging pressures

Prior to 2019, workers could retire based primarily on years of contribution, with no binding minimum retirement age. This enabled relatively early exits from the labor force, often in the mid-50s. The 2019 reform fundamentally changed this system by introducing a minimum retirement age of 65 for men and 62 for women, alongside minimum years of contribution requirements (20 and 15 years) and calculating benefits on the basis of all wages earned rather than the top 80 percent.

As a result, many workers who would otherwise have retired were required or at the very least strongly incentivized to remain in the labor force, creating a real-world test

of whether increased employment among older workers comes at the expense of younger cohorts.

Testing the “Fixed Jobs” Hypothesis

To examine this question, the SIPA Capstone Team analyzed quarterly labor force data from Brazil’s PNADC survey, covering the period from 2012 to 2024. The analysis leverages variation across Brazil’s 27 states (including one federal district): regions with a higher share of workers nearing retirement age prior to the reform were more exposed to its effects.

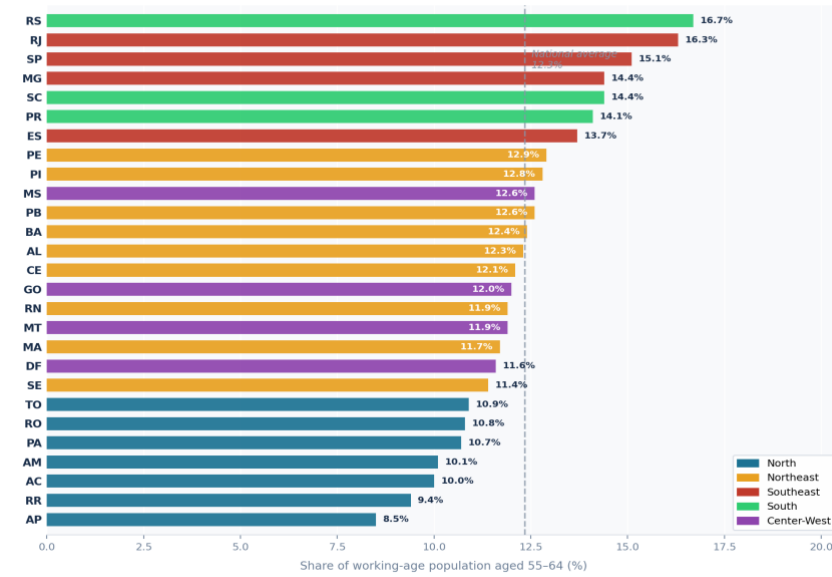
If jobs were truly fixed in number, states more affected by the reform should experience proportionately greater declines in youth employment than less exposed states.

However, the data tell a different story.

No Evidence of Youth Job Displacement

The PNADC survey is a microlevel dataset, drawn from a quarterly household labor survey, covering all 26 states plus the federal district from 2012 – 2024 with over 5 million observations. For the study, three outcomes for the population aged 18–29 are traced. These include whether they are employed, whether they are actively looking for jobs or working and whether they are working in the informal economy without a contract. On the macroeconomic level, this translates to employment rate, labour force participation rate, and the informality rate.

Figure 1. Reform Exposure Varies Widely Across Brazil's 27 States



Before identifying whether the lump of labour fallacy held, it is necessary to establish that the effect of the reform actually did match the intended purpose. Figure 2 does confirm this. This concludes that the reform is not only a legal change on paper but with actual behavior change effect which alters the older Brazilians' retirement behaviors, ensuring the reform keeps older workers employed which is essential to the conducting of the natural experiment of its effect on labour market outcome of the young.

Figure 2. The Reform Did Keep Older Workers Employed

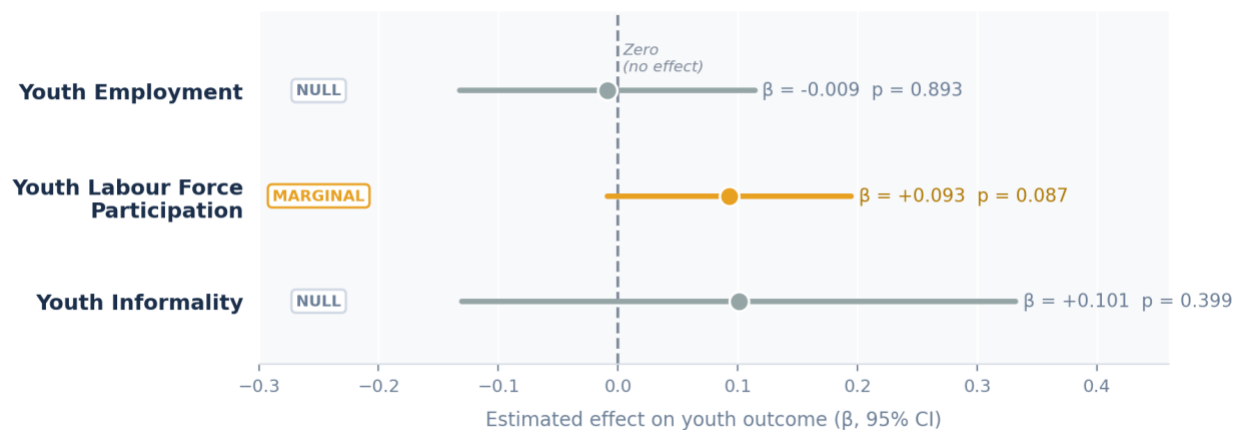


Source: PNADC Trimestral, IBGE. Dependent variable = older worker (55-64) LFP rate.

Across more than five years of post-reform data, the second stage analysis finds no statistically significant evidence that the increased share of older workers relative to the overall working age population reduced employment opportunities for younger individuals. Figure 3 compares labor market outcomes across states with high and low exposure to the reform. Despite substantial differences in how strongly states were affected, our model reinforced the absence of crowding-out effects for youth

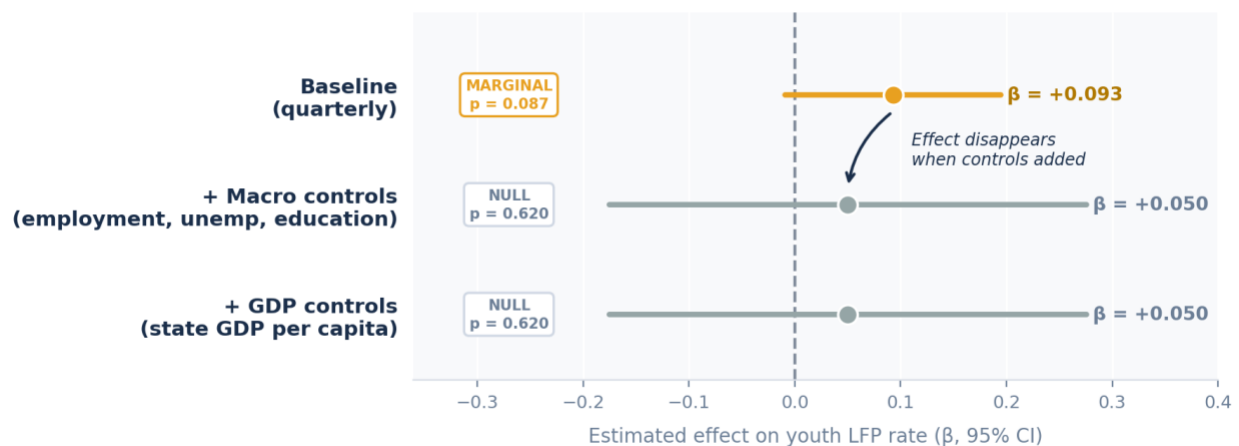
employment and youth informality rate. Despite the marginal effect on youth labour force participation in our baseline model, after controlling for macro-level factors and GDP factors which are common controls as referenced from literature as reflected in Figure 3, the marginal effect vanishes, which again aligns with the long-held view by economists.

Figure 3. No Crowding-Out Effect on Youth Labour Market Outcomes



Source: PNADC Trimestral, IBGE. Preferred quarterly DiD spec, $N=1,188$.

Figure 4. The LFP Result Does Not Survive Controls



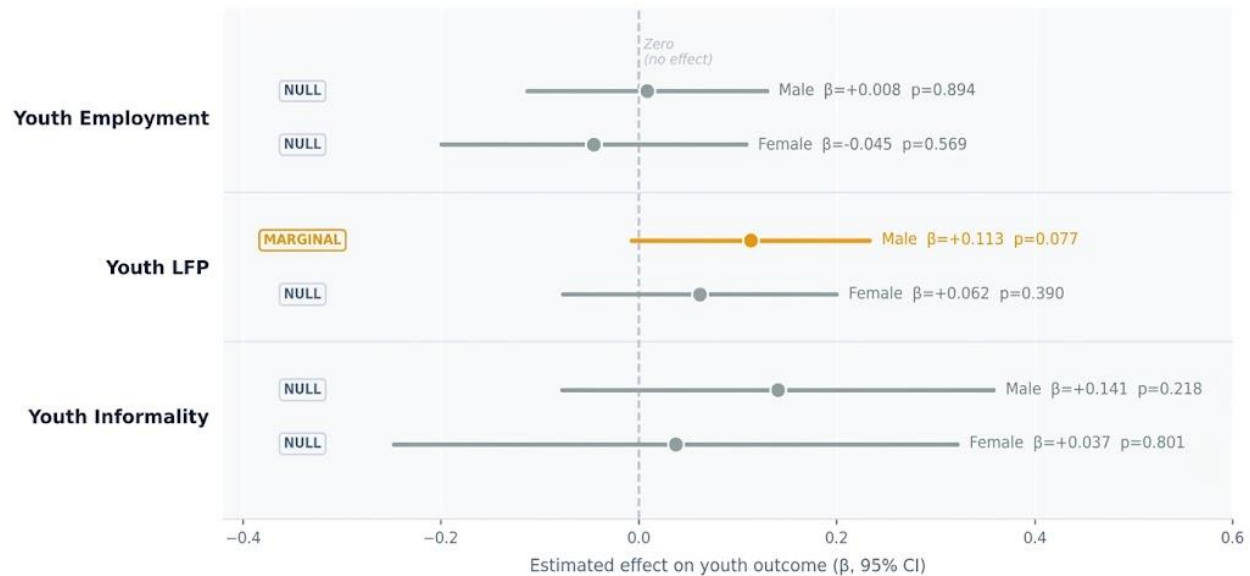
Source: PNADC Trimestral, IBGE. Preferred quarterly DiD spec, $N=1,188$.

While the above gives a general overview, it is possible that the aggregate result might not show the full picture with various opposing forces in place. To further probe the findings above, the analysis is disaggregated by gender, sector formality and geography.

The findings remain consistent with the above, a displacement effect in employment or formality does not show any significance across any of the categories, with

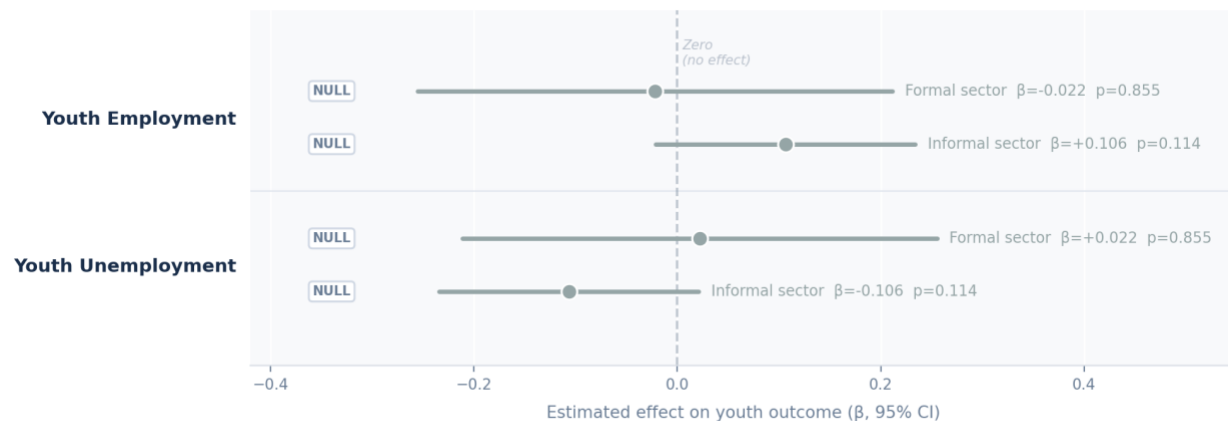
geography showing an opposing trend. Rather than crowding out younger workers in rural areas, there seems to be a positive relationship between the older worker and youth labour market outcomes, aligning with some prior literature which states the two are actually complementary. These findings suggest the need for future study on the underlying dynamics and more detailed analysis.

Figure 5. No Gender Differences in the Crowding-Out



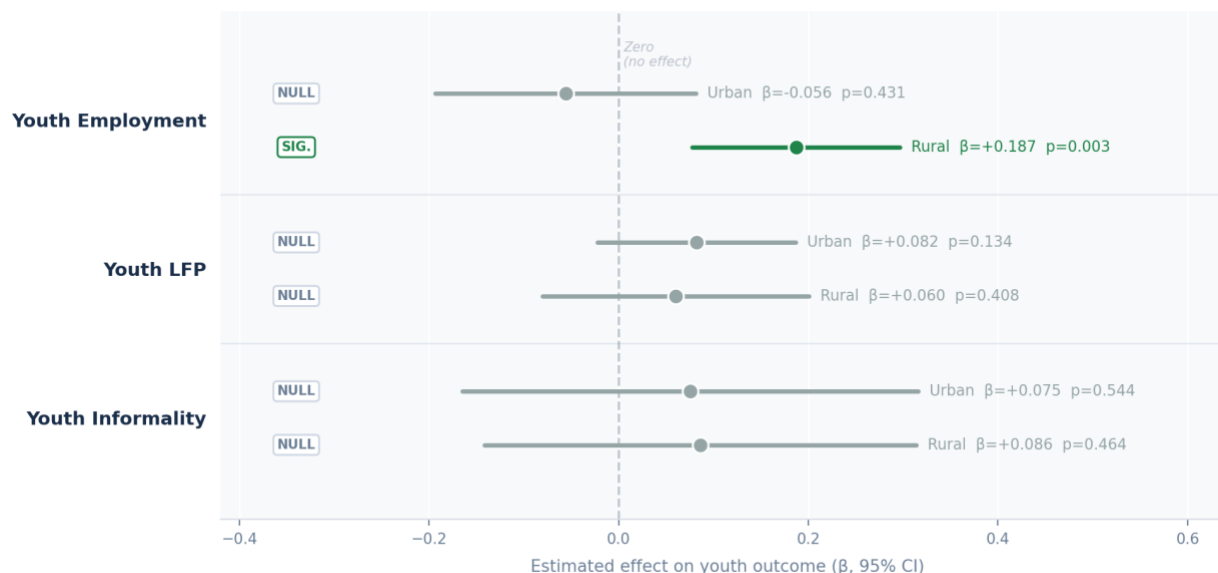
Source: PNADC Trimestral, IBGE. Q2 spec: state + year + season FE, COVID excluded, N=1,188. Clustered SE by state.

Figure 6. No Crowding Out in Either the Formal or Informal Sector



Source: PNADC Trimestral, IBGE. Q2 spec: state + year + season FE, COVID excluded, N=1,188. Clustered SE by state.

Figure 7. Rural Youth Employment Rose in High-Exposure States — No Urban Effect



Source: PNADC Trimestral, IBGE. Q2 spec: state + year + season FE, COVID excluded, N=1,188. Clustered SE by state.

Why Didn't Jobs "Run Out"?

The absence of displacement effects highlights a key limitation of the fixed-jobs perspective. Labor markets are not zero-sum systems in which one worker's employment necessarily comes at the expense of another's.

Instead, employment levels are shaped by broader economic dynamics. When older workers remain employed, they continue to earn income, consume goods and services, and contribute to overall economic activity. This, in turn, can stimulate labor demand and support job creation across sectors.

Firms respond to increased demand by expanding production and hiring, rather than reallocating a fixed number of jobs across age groups.

We stress that these are preliminary results based on the initial years of a complex reform whose full provisions—transition rules for those in the system, calculation of benefits based on past earnings, and so on – will take over a decade to take effect fully and to be reflected in the retirement vs continued work calculation of those in the latter stages of their careers at the time of the reform. There is also reason for caution in extrapolating too much from this initial period of the pension reform. Brazil's 2016 labor code and outsourcing reforms, which became effective in 2017, also affected labor markets by increasing flexibility and easing worker movement across firms and

employment arrangements. While early studies did not find large direct impacts on aggregate job creation, these reforms may nonetheless have influenced the broader labor market dynamics observed during the post-2019 period. However, as expected, there has been a clear increase in the share of older Brazilians staying in the work force from 2019 to 2024—from 23.1 to 24.4 percent for those 60 and older and from 64.8 to 71.3 percent for those ages 55–59. This has undoubtedly hastened trends toward working longer related to increased longevity among other factors.

Implications for Policy

Brazil's experience provides important lessons for policymakers, particularly in the context of aging populations and concerns about youth employment.

First, policies that encourage early retirement as a means of “making room” for younger workers may be misguided. The evidence suggests that such approaches are unlikely to generate the intended employment benefits.

Second, reforms that promote longer working lives by strengthening the fiscal sustainability of pension systems can support broader macroeconomic stability and do not appear to harm youth labor market outcomes. By reducing pressure on public finances, such reforms can ease constraints on government borrowing and contribute to a more stable economic environment, which is conducive to job creation across age groups. At the same time, complementary policies play an important role in shaping labor market quality. Programs such as *Bolsa Família* have been associated with increased formalization and the expansion of the middle class in Brazil. By easing immediate income constraints, these safety nets may enable younger individuals to invest in education and skills, rather than entering low-quality or informal employment prematurely. In this way, social protection policies can complement pension reforms by strengthening, not weakening, overall labor market performance. The interaction between social protection and labor market institutions is therefore central to understanding distributional outcomes.

Finally, the findings underscore the importance of focusing on policies that expand labor demand, such as productivity growth, investment, and skills development, rather than assuming that employment opportunities are fixed.

Conclusion

Brazil's 2019 pension reform provides a rare, large-scale if still preliminary test of a widely held belief about labor markets. The initial five-year results are clear: increasing employment among older workers did not reduce opportunities for younger workers. Prior studies in the literature are however inconclusive about the time it takes to fully

realize the effect of policy changes, which leaves room for further study over a longer time horizon.

Far from being a zero-sum game, the labor market adjusts in ways that allow multiple generations to participate simultaneously. As countries confront demographic change and rising longevity, this insight from Brazil is critical for designing effective, evidence-based labor policies.

Do Older Workers Crowd Out the Young? Evidence from Morocco's Narrow Labor Market

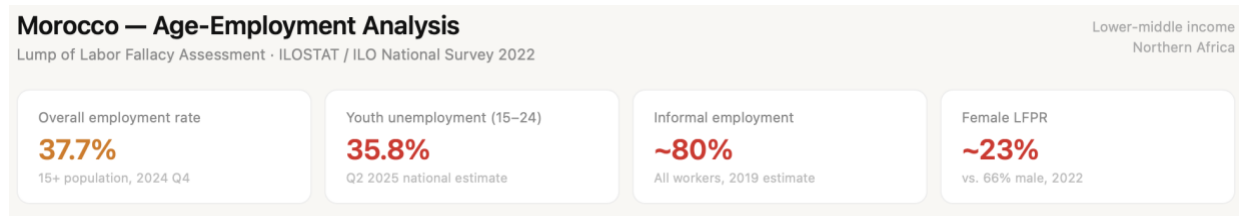
Prepared for the World Bank by SIPA Capstone Team, Columbia University in the City of New York

Morocco appears to face a classic labour market dilemma: high youth unemployment alongside a large number of older workers who continue to work well past retirement age.

At first glance, this seems to confirm a widely held concern that older workers are crowding out the young. The intuition is simple: if jobs are limited, then keeping older workers in employment must come at the expense of younger workers.

But the data tells a different story.

What's Really Driving the Labor Market Problem?



Source: ILOSTAT/ILO National Survey 2022

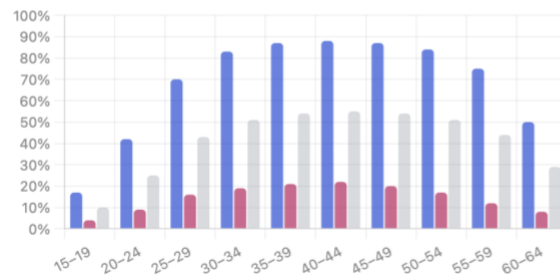
At the aggregate level, Morocco presents a striking paradox. Despite a substantial share of older workers remaining economically active, youth unemployment remains persistently high. With an overall employment rate of **37.7%** and informal work at nearly **80%** of the work force, this pattern may appear consistent with a fixed number of jobs.

The Moroccan case requires a more nuanced view due to its massive informal sector. The labor market may indeed behave as a system of fixed jobs if there are significant **barriers to entry**. Establishing an informal business is not frictionless; it requires the accumulation of financial, human, and social capital. Because older workers have spent decades marketizing these assets through their own firms or trades, they effectively occupy the limited desirable space within a heterogeneous sector that struggles to expand. Consequently, for the youth who lack such capital, the labour market appears as a zero-sum game, lending credence to the "lump of labour" intuition in this specific structural context.

Employment rate by age group

% of each age cohort that is employed - 2022

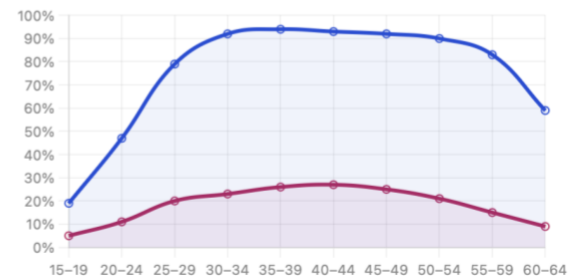
■ Male ■ Female ■ Total



Labour force participation rate

LFPR by age group and sex - 2022

■ Male ■ Female



Source: ILOSTAT/ILO National Survey 2022

These patterns are further reflected in demographic differences. Among workers aged 55-64, employment remains significant (29%-35%). Although the statutory retirement age is around 60, pension eligibility depends on contribution history, and coverage remains limited (only 23.4% are covered). As a result, many older workers are not eligible for pension benefits and continue to work, often in informal, low-productivity roles.

At the same time, youth unemployment remains high (35.8%), not because older workers are occupying their jobs, but likely in part because many young people are searching for a narrow set of formal, higher quality urban jobs that are in short supply. This creates the illusion of a “lump of labour” dynamic, but the underlying issue may be better understood as a mismatch between job preferences and the structure of available employment.

Taken together, the evidence points not to direct competition between generations, but to a deeper structural divide within the labour market.

Different Worlds, Different Jobs

Employment by sector, 2023

Share of total employed (11.3 million)

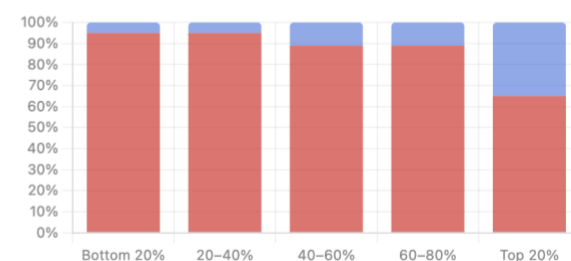
■ Services 44% ■ Agriculture 33% ■ Industry 23%



Formal vs. informal employment

By income quintile - 2018/2019

■ Informal ■ Formal



Source: ILOSTAT/ILO National Survey 2022

The absence of a crowding-out effect becomes clearer once the structure of Morocco's labour market is taken into account. Rather than competing for the same jobs, older

and younger workers are concentrated in fundamentally different segments of the economy.

Informality plays a crucial role. Nearly 80% of work is informal, and older workers are disproportionately concentrated in these activities, especially in agriculture and self-employment. While these jobs are typically low-productivity and lack social protection, the informal sector is closely linked to the formal economy: when formal sector opportunities expand or contract, informal employment adjusts accordingly. As a result, informality reflects both a buffer for labor market shocks and the limited capacity of the formal sector to absorb workers.

By contrast, younger workers are primarily oriented toward formal, urban employment, especially in services and the private sector for formal and decent employment with high wages. However, the supply of such jobs remains limited. As a result, many young people face prolonged unemployment or inactivity, not because older workers are occupying their positions, but likely at least in part because the types of jobs they are willing to accept are not being created at sufficient scale especially since they have [great expectations with highly educated levels](#). This reflects both weak formal private sector job creation and a growing supply of educated workers.

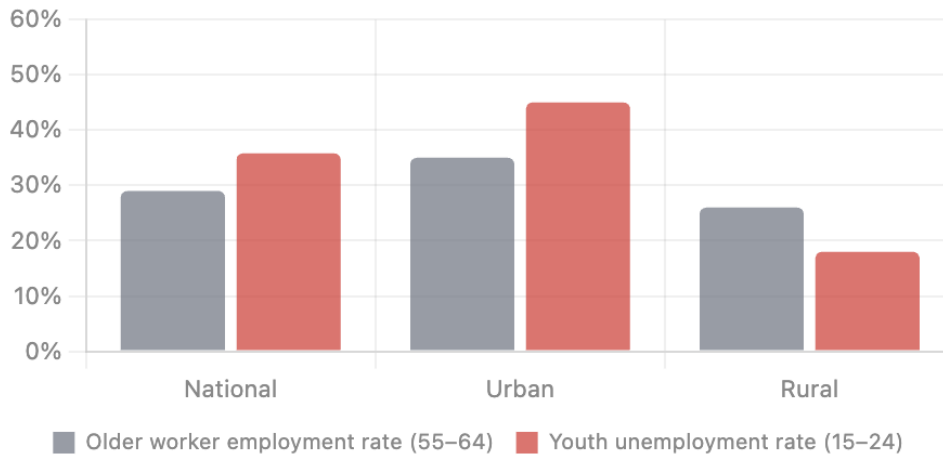
This divide is also reflected in sectoral patterns. Agriculture continues to absorb a large share of employment while contributing a much smaller share of output, highlighting a significant productivity gap. Older workers are overrepresented in this sector, while younger workers tend to avoid it, further reducing direct competition between age groups.

In this context, the labour market is better understood as an integrated system rather than a set of segmented sub-markets. However, outcomes differ across groups due to differences in job preferences and reservation wages (the minimum wage or job quality workers are willing to accept before entering employment). Younger workers tend to seek formal, higher-quality urban employment, while many available jobs are in informal, low-productivity sectors. This mismatch, rather than job competition, likely helps explain the coexistence of high youth unemployment and continued employment among older workers.

Different Regions, Different Outcomes

Older worker employment vs. youth unemployment

Evidence against the lump-of-labor fallacy · by region type

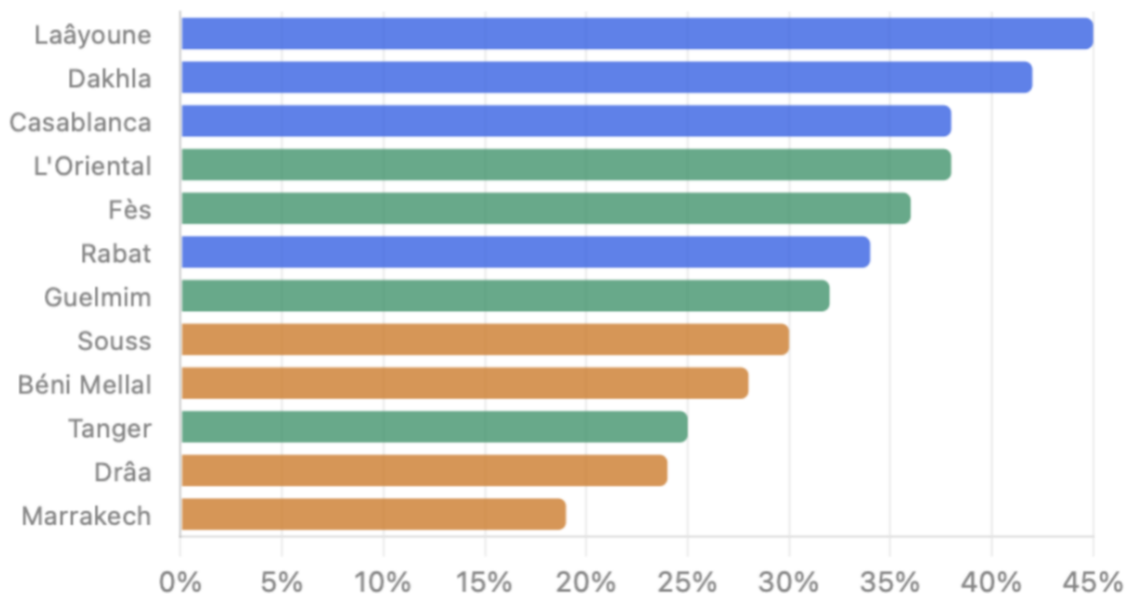


Source: ILOSTAT/ILO National Survey 2022

Across Morocco's 12 administrative regions, the data suggests that older-worker employment and youth unemployment are jointly shaped by structural differences, particularly across urban and rural areas.

Youth unemployment rate by region

% of youth labour force aged 15-24

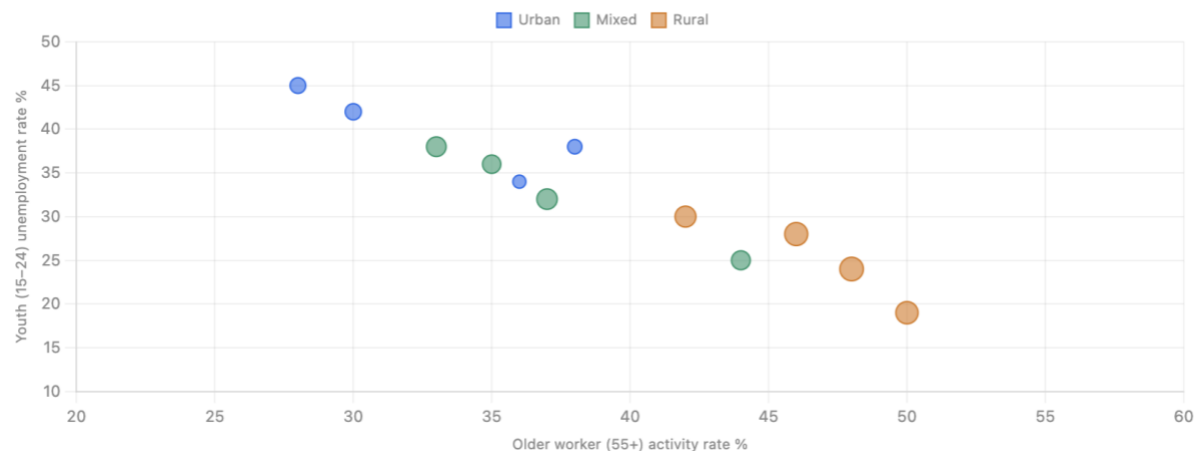


Source: 12 regions · HCP National Employment Survey 2022 · Testing lump-of-labor segmentation within Morocco

Youth unemployment vs. older worker activity rate — 12 regions

Bubble size = informality proxy (inverse of formal wage employment share) · Each bubble = one region

● Urban-dominant ● Mixed ● Rural/agricultural



Source: 12 regions · HCP National Employment Survey 2022 · Testing lump-of-labor segmentation within Morocco

In agricultural hubs such as **Marrakech-Safi** and **Béni Mellal-Khénifra**, older worker activity rates are among the highest in the country at 50% and 46%, yet youth unemployment remains relatively moderate at around 19% and 28%. In these areas, different generations often work alongside each other within the agricultural value chain, young and old workers typically perform different jobs within the same agricultural value chain, and there is usually no competition between them since they all need to work.

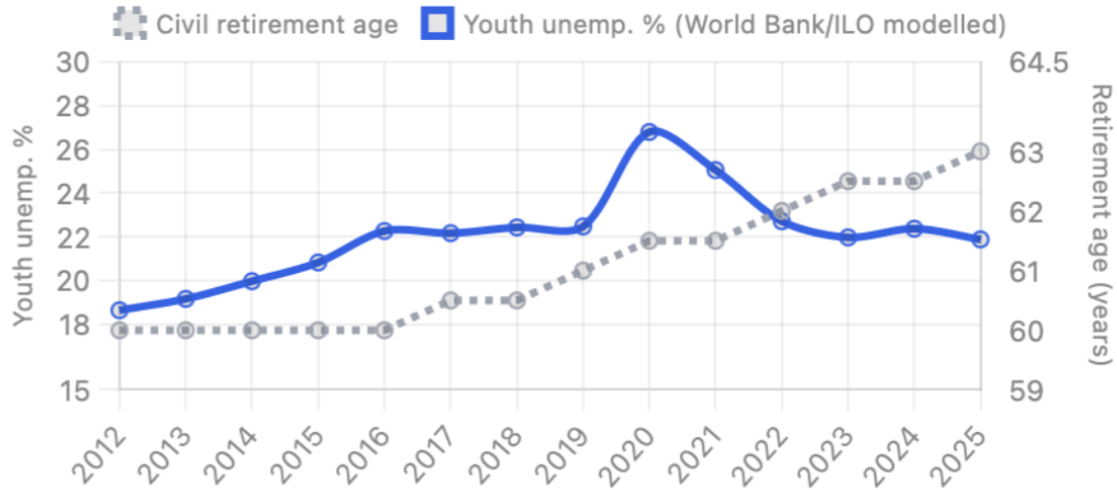
In contrast, urban centres such as **Laâyoune-Sakia** exhibit much higher youth unemployment, which can exceed 45%, driven by rural-urban migration and a strong preference among young workers for formal service-sector jobs, which remain limited in supply and are typically not occupied by older workers engaged in informal or agricultural activities.

Taken together, these patterns reinforce the conclusion that labour market outcomes in Morocco are shaped by structural segmentation, not by intergenerational job competition.

Natural Experiment: The Pension Reform of 2016

Morocco: civil service reform 2016

CMR civil retirement age per cohort reaching retirement age each year · Youth unemp.: World Bank/ILO (SLUEM1524ZSMAR) · 63 yrs reached in 2025 (1962 cohort)



Source: Morocco · France · South Korea · Age-employment profiles, pension reform impacts, regression framework · Sources: ILOSTAT, OECD, Eurostat, Statistics Korea · ~2022–2024

Morocco provides a useful but limited "natural experiment" through its 2016 pension reforms, which gradually raised the civil service (CMR) retirement age from 60 to 63 while also increasing employee contribution rates and reducing pension benefits relative to salary. The reform aimed to improve the financial sustainability of the public pension system and indirectly raises the question of whether delaying retirement reduces opportunities for younger workers.

However, given the relatively small size of the public sector as a share of the labor force in comparative regional terms ([at around 14%](#)), the possible displacement effect would be partial rather than large-scale. At the same time, public-sector jobs remain highly desirable due to their relative stability, wages, and benefits.

The available labour market evidence provides only limited support for the idea that reform significantly worsened youth unemployment. Since the reform began, youth unemployment trends have remained largely decoupled from the rising retirement age. Fluctuations in youth unemployment, including the spike during 2020 to 2021, were driven by broader macroeconomic shocks such as the COVID-19 pandemic and severe droughts, rather than retaining older civil servants. As economic conditions improved in 2023, youth unemployment declined even as the retirement age continued to rise.

Thus, this evidence suggests that delaying retirement does not appear to have generated a large-scale crowding-out effect on younger workers. Instead, the main issue lies in the structure of the labour market itself.

Conclusion

In short, we can draw a suggestive conclusion that the increase in youth unemployment in Morocco has many drivers, including young people's education levels, traditional gender norms, informality, and differences between urban and rural areas, and is not mainly due to older workers crowding out the labor market. On the contrary, the employment patterns of people of different age groups in the Moroccan labor market do not significantly affect each other because different age cohorts operate primarily in different economic sectors.

About this research: This analysis was produced by a Columbia University SIPA Capstone team working in partnership with the World Bank. It draws on ILO/ILOSTAT data, OECD Labour Force Statistics and Pensions at a Glance (2025), national statistical agencies, and a review of country-level retirement reform literature. The quantitative methodology employs difference-in-differences analysis and cross-country panel regression. Findings are preliminary and subject to ongoing revision.