INTERNATIONAL MONETARY FUND

Regional Income Disparities in Panama

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Regional Income Disparities in Panama

Prepared by Mai Hakamada (WHD)

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ABSTRACT: Panama exhibits high income inequality largely driven by disparities between regions rather than within them. The Panama Canal corridor, including Panama City and Colón, benefits from concentrated economic activities with high labor productivity and incomes. In contrast, rural and indigenous provinces face structural constraints such as poor infrastructure, limited education, and high informality, resulting in low productivity and poverty. Accounting decomposition shows that regional income gaps stem mainly from labor productivity differences, influenced by population density, sectoral composition, education, healthcare access, and infrastructure. These factors collectively underpin Panama's pronounced regional income disparities.

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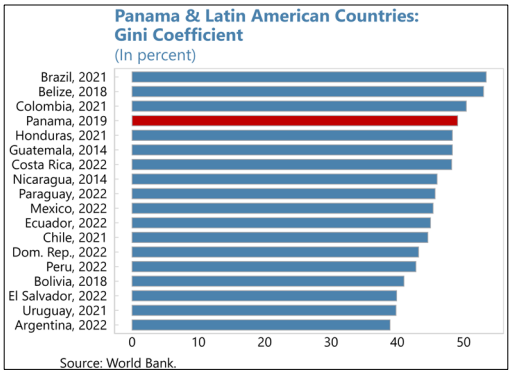
CONTENTS

REGIONAL INCOME DISPARITIES IN PANAMA

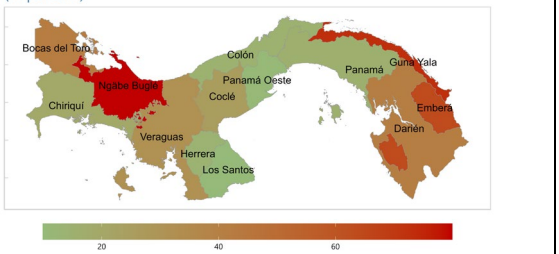
A. Introduction and Background

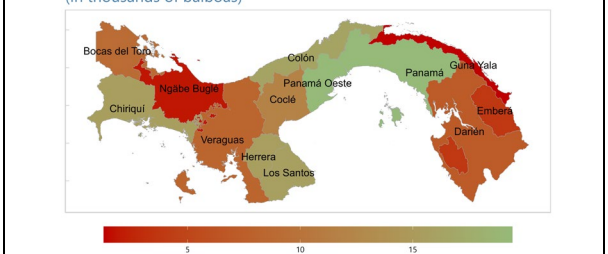
1. Income inequality in Panama is high by both global and regional standards. In 2019 the country's Gini coefficient was 49.1—well above the world average of 39.7 and the Latin America & Caribbean average of 47.9.



2. To a large extent, high income inequality is the result of income inequality between regions, rather than income inequality within regions.

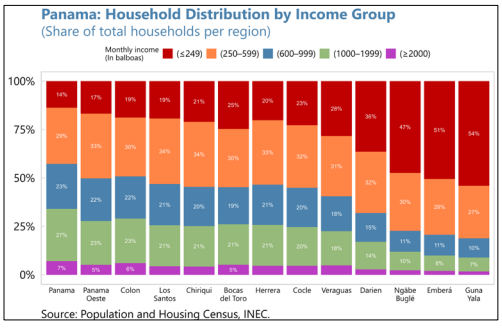
- The Panama Canal corridor—including Panama City and Colón—enjoys relatively high per-capita incomes thanks to concentrated economic activity in shipping, logistics, trade and tourism.
- By contrast, rural and indigenous provinces face structural constraints—poor infrastructure, limited access to health and education services, and weak market linkages—that keep output and employment rates low.





3. These regional divides show up clearly in household incomes: in urban provinces like Panamá and Panamá Oeste, a large share of families earn more than B/.1,000 per month, whereas in comarcas such as Guna Yala the majority earn under B/.250 per month.

4. This analysis explores the underlying drivers of regional income disparities. We show that from an accounting decomposition perspective, regional differences in per capita GDP are largely the result of differences in labor productivity, though variations in employment rates also play a role. Differences in labor productivity in turn are related to differences in population density, the share of population working in agriculture, informal employment, infrastructure gaps and educational attainment.



B. Regional Overview

5. Urban Provinces. Panama City, Colón and Chiriquí have the highest per-capita incomes and the lowest poverty rates in Panama. Panama City functions as the country's principal financial and commercial hub, hosting the Panama Canal Authority, a large banking sector, and numerous multinational firms. The concentration of high-value financial services, global enterprises and premium real estate underpins elevated productivity and wages. Colón, at the northern entrance to the Canal, serves as a vital trade and maritime center: the Colón Free Trade Zone—one of the world's largest—generates substantial customs revenue and supports logistics-related employment. Chiriquí, though predominantly rural, has a strong export-oriented agricultural base—particularly in coffee and livestock—with the city of David emerging as a regional trade node and Boquete developing into a premier tourism destination.

6. Rural Provinces. Bocas del Toro, Veraguas and Darién have noticeably lower per-capita incomes and higher poverty rates than the urban provinces. Bocas del Toro relies on tourism, banana cultivation and artisanal fishing, but inadequate infrastructure and limited formal employment opportunities constrain income growth. Veraguas benefits from a diversified economy—including agriculture, fisheries and nascent ecotourism—yet the absence of significant industrial investment and underdeveloped value-addition capacity restricts productivity gains. Darién remains the least developed province, dependent on subsistence agriculture, forestry and informal cross-border trade; its geographic isolation and weak transport networks severely limit market access. Although regions such as Cerro Colorado (in Ngäbe-Buglé) hold copper reserves and Darién possesses extensive timber resources, these endowments remain largely unexploited.

7. Indigenous Comarcas. Ngäbe-Buglé, Emberá-Wounaan and Guna Yala record the lowest per-capita incomes and the highest poverty incidence nationwide. In Ngäbe-Buglé, households subsist on small-scale agriculture and seasonal, low-wage coffee harvesting; minimal infrastructure and service delivery impede economic diversification. Emberá-Wounaan communities depend on small-scale farming, fishing and traditional crafts, but remote locations and weak market linkages limit income-earning opportunities. Guna Yala's economy centers on coastal fishing, coconut production and niche tourism, yet restrictive land-tenure arrangements and scarce public investment constrain expansion. These structural barriers to market integration and service access perpetuate low output and entrenched poverty.

C. Differences in Per Capita GDP: A Bookkeeping Perspective

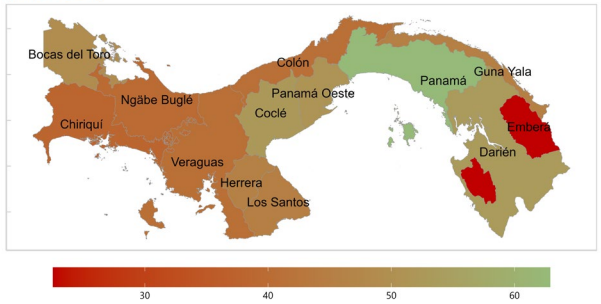
8. From an accounting decomposition perspective, regional differences in per capita GDP are largely driven by disparities in labor productivity, though variations in employment rates also play a contributing role.

Differences in Employment Rates

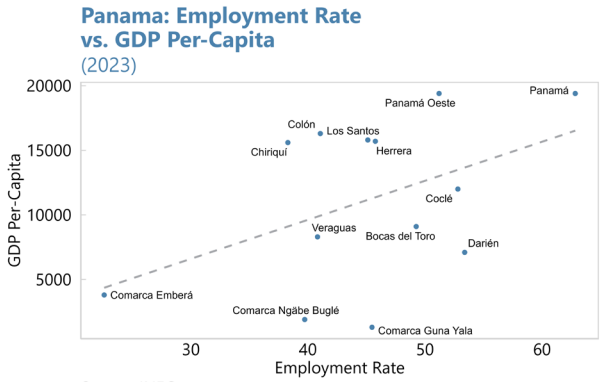
9. Significant differences in employment-to-population ratios exist across regions. Panama Province records the highest employment rate at 63 percent. In contrast, rural areas such as

Chiriquí (38 percent), Ngäbe-Buglé Comarca (40 percent), and Veraguas (41 percent) exhibit substantially lower rates.

10. However, employment gaps do not seem a key factor in explaining income differences. For example, even if Ngäbe-Buglé Comarca matched Panama Province's employment rate, its per capita GDP would increase from approximately USD 2,000 to only about USD 3,000.



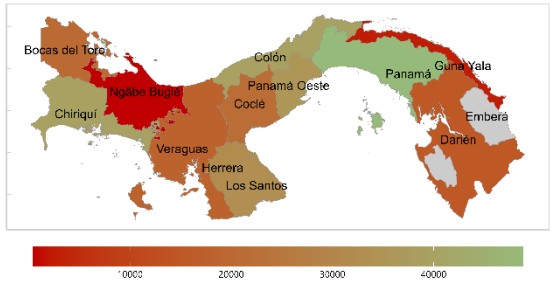
Sources: INEC and IMF staff calculations.



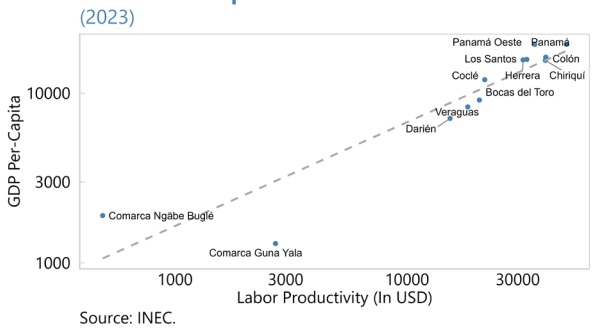
Source: INEC.

Differences in Labor Productivity

11. Labor productivity and GDP per capita vary markedly across provinces. Urban regions such as Panama City and Colón have the highest level of labor productivity. Rural provinces, including Herrera, Los Santos, and Chiriquí, have more modest productivity levels, while Darién and Veraguas lag behind. The indigenous comarcas, including Ngäbe-Buglé and Guna Yala, have the lowest levels of labor productivity and GDP per capita, reflecting barriers such as limited access to markets, education, and investment. [1] GDP per capita is strongly correlated with labor productivity.



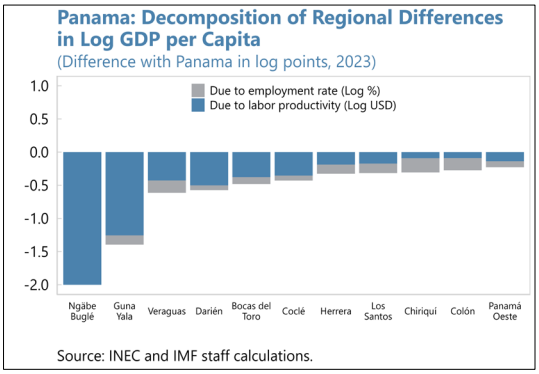
Source: INEC and IMF staff calculations.
1/ Comarca Embera is excluded.



Source: INEC.
1/ Comarca Embera is excluded.

[1] However, Comarca Emberá appears as an outlier, likely due to specific localized economic activities or data anomalies.

12. Differences in GDP per capita relative to Panamá are mostly the result of differences in labor productivity, with much smaller contributions from employment rates. In Ngäbe-Buglé, for example, roughly –2.0 log-points of the per-capita shortfall stem from lower productivity, while reduced employment accounts for less than –0.3 points. Guna Yala shows a similar pattern (≈–1.5 vs. –0.5), and mid-tier provinces such as Veraguas, Darién and Bocas del Toro each exhibit productivity deficits of around –0.5 to –0.6 log-points but only minor employment gaps. By contrast, Colón, Chiriquí and Panamá Oeste sit almost at zero in both dimensions. Across all regions with low GDP per capita, the blue bars tower over the grey ones—underscoring that productivity heterogeneity, far more than employment differences, drives Panama's regional income disparities.

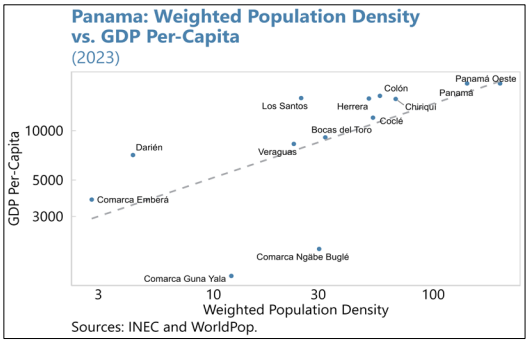


D. Factors Explaining the Differences

Population Density

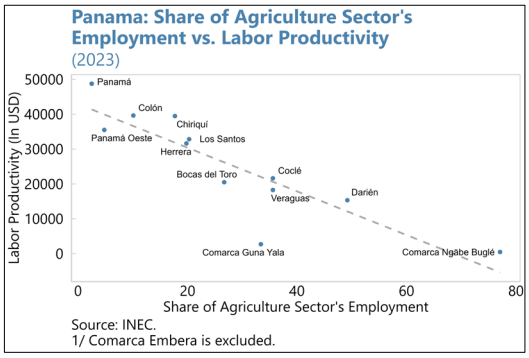
13. The economic literature has long established that higher population density is associated with higher labor productivity, driven by agglomeration economies, knowledge spillovers, and labor market efficiencies. Marshall (1890) first identified these mechanisms, highlighting shared inputs, deeper labor markets, and faster idea diffusion. Empirical studies confirm this link—Ciccone and Hall (1996) find that higher employment density boosts labor productivity, while Combes et al. (2012) estimate a 5 percent productivity gain from doubling density. Knowledge spillovers (Glaeser et al., 1992; Moretti, 2004) and labor market advantages (Glaeser & Maré, 2001; Wheeler, 2001) further enhance productivity, while infrastructure efficiencies (Henderson, 2003) and increased innovation (Carlino & Kerr, 2015) reinforce these effects. Together, these factors explain why densely populated areas consistently exhibit higher per capita GDP.

14. Population density and per-capita income in Panama go hand-in-hand. The two wealthiest regions—Panamá and Panamá Oeste—also rank highest in weighted population density. By contrast, sparsely inhabited comarcas such as Ngäbe-Buglé and Emberá-Wounaan combine low densities with the country's lowest GDP per capita.



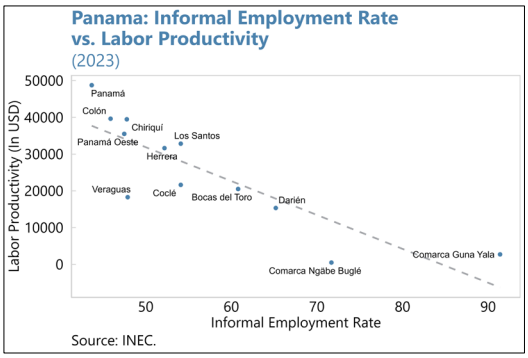
Share Of Agriculture

15. Heavy reliance on agriculture in low-density areas helps explain their weak productivity. Value-added per worker in farming is far below that in industry and services, and in comarcas such as Ngäbe-Buglé agriculture still employs the lion's share of the labor force. By contrast, in Panama and Colón—where fewer than one in ten workers are in agriculture—average productivity is much higher. Moreover, recurrent droughts and low rainfall in provinces like Herrera and Los Santos have further depressed crop yields and kept agricultural output—and overall regional productivity—artificially low.



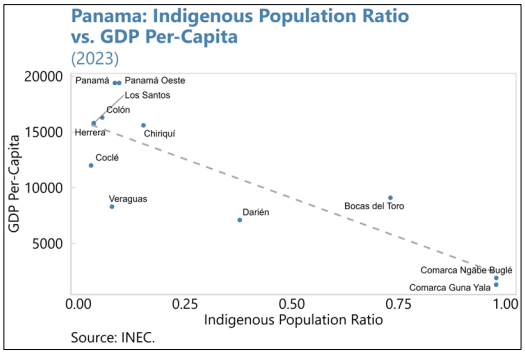
Informal Employment

16. High rates of informal employment further depress productivity in low-density areas. In Ngäbe-Buglé and Guna Yala, informal work makes up roughly 72 percent and 91 percent of all jobs, respectively, compared with just 44 percent in Panamá Province and 46 percent in Colón. Without formal contracts or access to credit, informal workers face barriers to skills training and capital investment, keeping output per worker well below that in the formal sector.



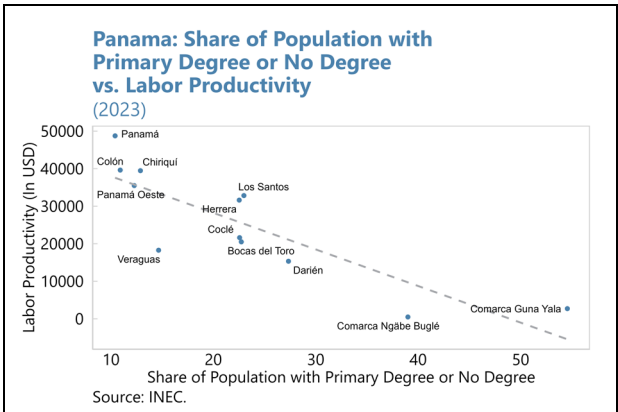
Indigenous Population

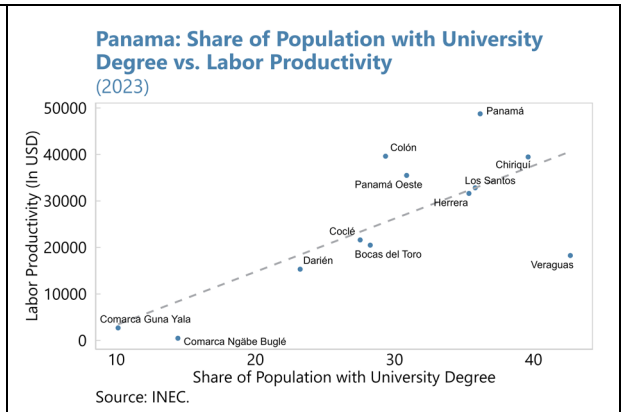
17. Areas with larger indigenous populations generally have lower incomes. In Panama City and Colón—where indigenous peoples account for less than 10 percent of residents—per-capita incomes rank among the nation's highest. By contrast, in some rural provinces and comarcas where indigenous shares reach as high as 76 percent, GDP per capita falls to the lowest levels in the country. This gap reflects long-standing challenges—underinvestment in infrastructure, schooling and services—that disproportionately affect indigenous communities in remote areas**.**



Educational Attainment

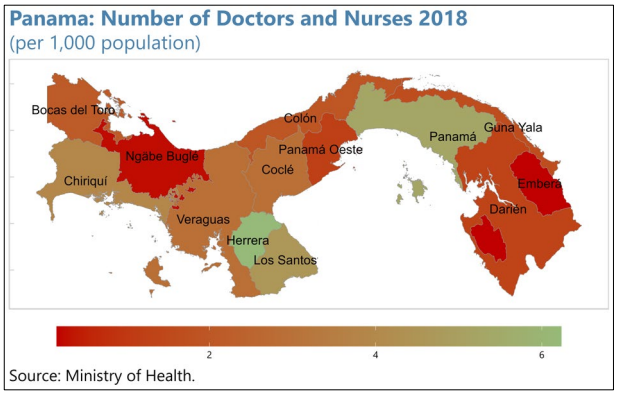
18. Educational attainment is a powerful predictor of regional productivity. In urban provinces—Panamá and Colón—about one in three adults have a university degree, fueling a more skilled workforce and higher value added per worker.



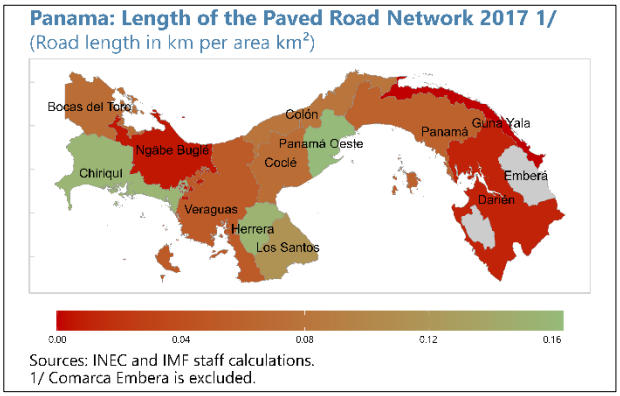


19. By contrast, many rural and indigenous regions remain trapped by low levels of schooling. In Ngäbe-Buglé, for example, 7 percent of residents never complete a formal degree, and only 14 percent go on to university. In Darién Province almost 30 percent of adults have no degree or only a primary degree. With limited qualifications, workers in these areas struggle to access higher-paying jobs or training opportunities, perpetuating poverty cycles and widening the productivity gap.

Healthcare



20. Access to health-care professionals in Panama is highly uneven. Urban provinces—particularly Panamá and Herrera—lead the country with the highest ratios of doctors and nurses per capita, and other cities like Chiriquí and Los Santos also maintain above-average medical staffing levels. By contrast, rural provinces such as Darién and Panamá Oeste suffer notable shortages. The most severe gaps appear in the comarcas: Ngäbe-Buglé has just 0.25 health professionals per 1,000 residents, Emberá-Wounaan only 0.17 per 1,000, and Guna Yala a mere 1.66 per 1,000. These stark disparities hinder human-capital development, reduce worker productivity, and exacerbate the economic divide between well-served urban centers and underserved rural communities.



Transportation Infrastructure

21. The density of Panama's road network plays a pivotal role in shaping economic access and opportunity. In provinces like Panamá, Coclé and Colón—each with more than 1,000 km of roads—residents enjoy relatively easy travel to jobs, markets and services, reinforcing urban economic dynamism. By

contrast, Comarca Guna Yala's mere ~30 km of roads severely limits mobility, leaving many communities physically cut off from higher-value labor markets and basic services. At the same time, provinces such as Chiriquí and Veraguas, with over 3,000 km of roadways apiece, act as vital conduits that link agricultural heartlands to processing centers and export points, strengthening both rural livelihoods and national trade flows.

E. Conclusion

22. In this paper, we document that Panama's pronounced income inequality in part reflects stark disparities in per-capita output across its regions rather than within them. Using an accounting decomposition, we show that differences in labor productivity account for the bulk of the gap in regional GDP per capita, while variations in employment-to-population ratios play only a secondary role. Urban provinces clustered around the Canal corridor—especially Panamá, Panamá Oeste and Colón—have high productivity, buoyed by dense economic activity in services, logistics and trade. In contrast, rural provinces and indigenous comarcas face persistently low productivity owing to low population density, heavy reliance on low-value agriculture, high informality, limited educational attainment, uneven health-care access and sparse infrastructure. Across almost every region outside the Canal corridor, labor productivity shortfalls of 0.5 to over 2 log-points drive the divergence in incomes, dwarfing the modest effects of employment-rate differences. In sum, Panama's regional income divides are rooted in heterogeneous productivity levels, themselves shaped by demographic, sectoral and institutional factor

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