What the first comprehensive productivity study tells us about PNG's economy

Farmers from the Highlands transport their produce to Lae port for distribution to national markets
Photo Credit: Facebook/PNG Department of National Planning and Monitoring

by Martin Davies

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Productivity is the single most important driver of long-term wage growth, improvements in living standards and national competitiveness. Yet, until now, Papua New Guinea has lacked robust, sector-specific measures of productivity to guide wage setting and economic policy.

A new study, the first of its kind, fills that gap. Commissioned by the Employers Federation of Papua New Guinea (EFPNG), the *Productivity Study of the Non-Resource Sector in Papua New Guinea, 2001–2024* provides an analysis of productivity growth in the formal services, industry and agricultural sectors. The findings helped to inform the 2025 Minimum Wage Board decision, which will see PNG's minimum wage lifted to K5 per hour from January 2026.

At its simplest, labour productivity measures how much output a worker produces. Workers may become more productive through better tools, improved skills, or more efficient organisation, better infrastructure and institutions. When this happens, businesses can afford to pay higher wages without losing competitiveness. If wages rise faster than productivity, firms may cut jobs or pass on costs through higher prices. If productivity rises but wages do not, workers are left behind. Linking wages to productivity provides a sustainable path to rising incomes and competitiveness.

Conventional methods, which require detailed data on output and hours worked, are not feasible in PNG. Instead, we use a "wage-as-a-window" approach: in competitive labour markets, real wage growth (after controlling for worker, firm, and macroeconomic factors) serves as a reliable proxy for productivity growth. Using superannuation data from around 200,000 workers between 2000 and 2018 that we analysed in a previous study (summarised in a blog here), combined with macroeconomic variables (real exchange rate, terms of trade) and a Business Difficulty Index, the study estimates productivity growth for each sector from 2001 to 2018, then projects forward to 2024.

Across the non-resource formal economy, labour productivity grew at an average of 1.5% per year between 2001 and 2024. Breaking it down by sector, services recorded the fastest growth, about 1.9% per year during 2001–2018, moderating to 1.45% between 2019–2024 once worsening business conditions are considered. Industry grew at 1.46% consistently across the full period 2001–2024, though forecasts show recent gains eroded by tougher business conditions. Formal sector agriculture showed no productivity growth at all over the two decades with estimates statistically indistinguishable from zero, while projections for 2019–2024 remain flat. When weighted by labour shares (services 68%, industry 22%, agriculture 11%), the overall benchmark for non-resource productivity growth is 1.53% per year.

These results highlight the duality of PNG's economy. Services and industry have generated steady productivity gains, while agriculture has stagnated. This divergence has profound implications. Agriculture remains the livelihood base for most Papua New Guineans, yet formal agricultural firms have not seen the productivity improvements needed to raise wages sustainably. Without reform, the formal sector agricultural workforce risks being permanently left behind. Interestingly, PNG's services sector has outpaced industry in productivity growth, the reverse of the "Baumol cost disease" seen internationally, where services typically lag manufacturing. This unusual pattern likely reflects PNG's structural constraints. Infrastructure bottlenecks such as unreliable power, costly transport and expensive port services weigh more heavily on industry. Further, skills shortages, especially with respect to technicians and supervisors, leave factories running below potential capacity. These results suggest that without these impediments, productivity growth in industry might be higher, perhaps substantially so, than that observed in services. Technology transfer is easier in the services sector, where software and managerial know-how can be imported more readily than physical industrial processes.

One innovation of this study is the creation of a Business Difficulty Index (BDI), based on the Westpac–Business Advantage CEO Survey. It captures perceptions of six key impediments: access to foreign exchange, unreliable utilities, government capacity, regulatory uncertainty, skills shortages and law and order. The BDI shows that business conditions deteriorated sharply after 2019, reaching the worst levels on record in 2024. When productivity projections are adjusted for these conditions, growth rates fall notably across all sectors. In services, for example, the unadjusted forecast of 1.61% per year drops to 1.45% once worsening business conditions are factored in. For industry, forecasts fall from 1.71% to 1.46%. This adjustment underscores the importance of a supportive business environment. Even sectors with strong underlying productivity potential cannot thrive in an economy hampered by foreign exchange shortages, unreliable infrastructure and regulatory bottlenecks.

The study provides an evidence-based benchmark for policy. Three implications stand out.

First, minimum wage setting — With productivity growth averaging 1.5% per year, minimum wages adjusted for inflation can rise in line with this benchmark without undermining competitiveness. However, agriculture is a caveat. With zero productivity growth, agricultural firms will find it harder to absorb wage increases. Existing safeguards, which include the *Agriculture Sector Partial Payment* mechanism and the *Exemption for Incapacity to Pay* remain important.

Second, agricultural reform — Stagnant productivity in agriculture reflects structural problems: weak infrastructure, poor market access, low technology adoption and limited investment. Without reforms, agricultural incomes will continue to lag those in other sectors.

Finally, improving the business climate — Productivity gains in all sectors are being held back by deteriorating conditions. Fixing foreign exchange access, utilities, regulation and security issues is critical. Without these reforms, PNG risks eroding the productivity growth its more dynamic sectors have managed to achieve.

Looking ahead, the study highlights the value of institutional mechanisms to sustain reform efforts. Many countries (including Australia) have independent institutions dedicated to monitoring productivity and advising government. PNG would benefit from a similar body to diagnose bottlenecks, coordinate reforms and anchor the productivity agenda in evidence.

The study equips PNG with a new tool: a robust, data-driven method for measuring productivity growth, tailored to low-data environments. Going forward, policymakers can link wage policy and economic reform to an empirically grounded measure of productivity. This matters because productivity growth is the foundation of long-run improvements in wages, competitiveness and living standards. If PNG can sustain productivity growth and increases in real wages in tandem, it can chart a path toward more inclusive and resilient growth. However, ongoing productivity growth is not guaranteed. It will depend on structural reforms, especially in agriculture, and on policies to improve the overall business environment.

Author/s:

Martin Davies
Martin Davies is Professor of Economics at Washington and Lee University, Visiting Professor at the School of Business and Public Policy, UPNG, and Visiting Fellow at the Development Policy Centre, ANU.

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https://devpolicy.org/what-the-first-comprehensive-productivity-study-tells-us-about-pngs-economy-20251021/