Wage Policy and Inflation in the Philippines

An Evidence-Based Assessment of Wage Reforms and Productivity

Data Sources:
Philippine Statistics Authority (PSA)
World Bank (World Development Indicators)

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Prepared for the Office of Senator Imee Marcos

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Executive Summary

- ₱ **Wage increases matter.** They raise household income and support demand.
- **Impact on prices is delayed.** Our analysis shows wage effects pass through to inflation with a **1–3 year lag**, not immediately.
- **Productivity is key.** If productivity rises with wages, inflationary effects are limited. If not, some costs may eventually show up as higher prices.
- **Policy message:** Pair wage reforms with productivity measures (skills, technology, competitiveness) to ensure benefits for workers while managing inflation.
- **Bottom Line:** Wage reforms can **improve welfare and support growth**, but must be implemented with **productivity support** to avoid long-run inflation risks.

Data & Methodology

Data (PSA, World Bank) → Statistical Tests → Models (SARIMAX) → Insights (CPI impact, SHAP)

- Data Sources

Philippine Statistics Authority (PSA): Consumer Price Index, Wholesale Price Index, Electricity Prices, GDP.

World Bank (WDI): Productivity (GDP per person employed), PPP conversion ratio, macro indicators.

- Methodology

Exploratory Data Analysis (EDA): Checked trends, correlations, and data quality.

Statistical Testing: Stationarity (ADF, KPSS), Granger causality to confirm wage/productivity effects on inflation.

- **Modeling:** ARIMAX/SARIMAX models with exogenous drivers (Productivity, Unit Labor Costs, GDP, PPP, Energy).
- **Interpretability:** SHAP analysis to identify most influential features.
- Key Approach

Focused on **YoY CPI** as the target.

- Simulated ₱ wage increases through **ULC (Unit Labor Cost) growth**.
- Compared multiple model specifications and validated with out-of-sample tests.

Scenarios Tested

Wage Policy Scenarios Modeled

- **Scenario A:** Flat ₱200/day wage increase
- **Scenario B:** Unified national minimum wage

Approach

- Simulated through **Unit Labor Cost (ULC) growth** in the SARIMAX model
- Compared against a **baseline (no policy change)**
- Forecast horizon: **12–24 months**

Purpose

- Quantify short- and medium-term inflation effects
- Assess how productivity improvements can offset cost pressures

Key Findings

₱ Wages ↑ → ULC ↑ → CPI ↑ (after 1–3 years)
Productivity ↑ → balances CPI

- ₱ Wage effects are real but delayed. Unit Labor Cost (ULC) growth and productivity growth predict CPI with a 1–3 year lag, not immediately.
- Productivity is the balancing factor. If wages rise with productivity, inflationary impact is limited; if not, higher labor costs may pass through to prices later.
- GDP dominates in current models. Inflation co-moves strongly with GDP levels, but this reflects long-term growth trends rather than short-run wage policy.
- Explanatory power improves with targeted features. Simple ARIMAX/SARIMAX models work best; adding lags for ULC and productivity increases interpretive value.

Policy Implications

- **Wage reforms raise living standards.** They increase household income and boost domestic demand.
- **Inflationary impact is not immediate.** Wage effects appear with a **1–3 year lag**, giving time to pair reforms with complementary measures.
- **Productivity support is essential.** Investments in skills, technology, and competitiveness help offset cost pressures, keeping inflation manageable.
- **Balanced approach recommended.** Wage increases + productivity programs ensure workers benefit without destabilizing prices.

Bottom Line: Wage reforms are **feasible and beneficial**, provided they are implemented **alongside productivity measures** to sustain growth and control inflation.

Conclusion & Call to Action

Conclusion

- Wage reforms are **feasible and beneficial**, improving worker welfare and supporting domestic demand.
- Inflationary impact is **delayed** and can be managed if reforms are paired with productivity support.

Call to Action

- 📈 **Adopt wage reforms** that raise household incomes.
- ⚙️ **Simultaneously invest in productivity measures** (skills, technology, competitiveness) to balance inflation risks.
- ⏳ **Monitor outcomes** over a 1–3 year horizon to adjust policies proactively.

Bottom Line: Wage increases should proceed, but **with a parallel commitment to productivity programs** to ensure sustainable, inclusive growth.

Thank You

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