

# Measuring Labor Share in Economies without COE

## A Bottom-Up Approach in Vietnam

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### KEY MESSAGE

*In many developing economies, compensation of employees (COE) is absent from national accounts, making standard growth accounting infeasible. Using Vietnam as a case study, we show that a bottom-up approach—constructing labor compensation from micro-level wage and employment data—yields internally consistent estimates that align with available benchmarks, and that errors in labor share measurement propagate directly into TFP estimates.*

### WHY THIS MATTERS

Standard growth accounting requires labor compensation to construct factor income shares used as weights in total factor productivity (TFP) measurement. However, in many developing economies—particularly in the CLMV countries (Cambodia, Lao PDR, Myanmar, and Vietnam)—COE is not estimated in national accounts. In Vietnam, only a combined “COE plus mixed income (MX)” aggregate is available at several benchmark input–output tables, leaving labor shares unavailable on a consistent time-series basis.

### EVIDENCE FROM VIETNAM

We construct a multi-layered labor dataset for Vietnam since 1970, cross-classified by gender, education, age, and employment status, as part of the Asia Quality-Adjusted Labor Input (AQALI) database at Keio Economic Observatory. Hours worked are estimated from population censuses and labor force surveys, while wage rates are constructed from fragmentary sources including civil servant statistics, Japanese firm wage surveys in Vietnam, and household income surveys, and aggregated using a bottom-up approach to derive COE and labor share estimates. Figure 1 presents the results.

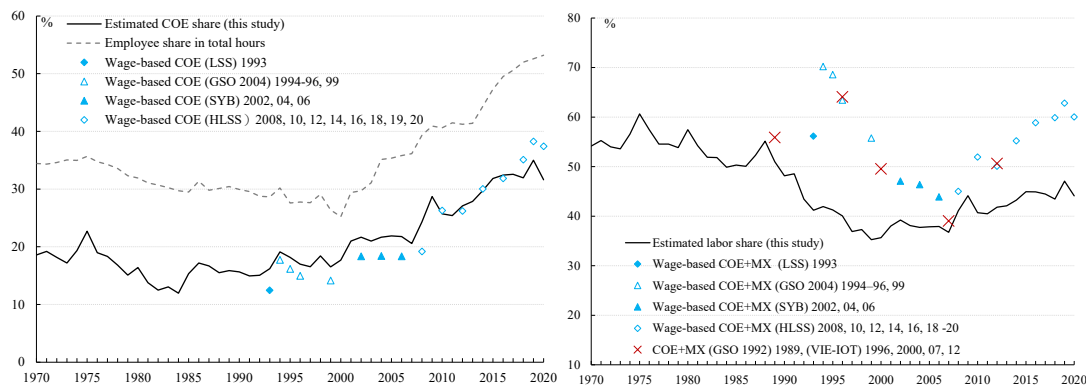


Figure 1. COE Share and Labor Share Estimates for Vietnam, 1970–2020 —COE share in GDP (left) and Labor share (right). Source: Nomura (2023).

The left panel shows the estimated COE share in GDP alongside two reference indicators: the employee share in total hours and wage-based estimates from household and income surveys. The right panel compares the estimated total labor compensation share—comprising COE and the imputed labor income of the self-employed and unpaid family workers—against benchmark COE+MX aggregates from input–output tables and survey-based estimates of wage and self-employment income. The bottom-up estimates consistently fall below the COE+MX benchmarks, as expected given that MX includes capital income of unincorporated enterprises, lending credibility to the approach.

## INTERPRETATION

Figure 1 demonstrates that the bottom-up approach yields plausible labor share estimates. To assess the implications of labor share uncertainty for TFP measurement, we compute TFP growth rates under alternative labor share assumptions (baseline, +10%, –10%) for 2010–23. For Vietnam, the range spans from 0.8% to 1.7% per year—a gap of nearly one percentage point—arising solely from uncertainty in labor share measurement. Recognizing this margin is essential when interpreting TFP estimates. This does not diminish the value of TFP measurement; rather, labor productivity alone cannot distinguish whether Vietnam's rapid growth reflects genuine efficiency gains or simply capital accumulation. Without the bottom-up labor share estimates constructed here, growth accounting in Vietnam—and in other CLMV economies where COE is similarly absent—cannot be conducted on a sound empirical basis.

## MEASUREMENT CONSIDERATIONS

The bottom-up estimates are subject to uncertainty, particularly in earlier decades where data coverage is limited. Wage rate series are constructed from the fragmentary sources described in the Evidence section. Wage differentials between employees and the self-employed are assumed constant over time at the elementary level. Cross-country comparisons using the AQALI suggest that Vietnam's estimated labor share trajectory—its level and trend—is broadly consistent with regional peers at similar stages of development, providing additional support for the approach. Should COE become available in official national accounts, or as additional micro-level data emerge for historical periods, these estimates will require systematic revision.

## IMPLICATIONS

### 01

Economies where COE is absent from national accounts require bottom-up labor compensation estimates as a prerequisite for growth accounting.

### 02

Labor productivity measures, while more readily available, cannot identify the sources of growth; TFP measurement requires reliable labor share estimates as a prerequisite.

### 03

Errors in labor share measurement propagate directly into TFP estimates — a  $\pm 10\%$  change in labor share shifts measured TFP growth by nearly one percentage point in Vietnam.

## REFERENCE

Nomura, K. (2023). “Half a Century of Experience in Labor Input and Productivity in the Vietnamese Economy,” *Okayama Economic Review*, 54 (3), 37–59. (in Japanese)

*This note is part of the Productivity Research Notes series, examining key issues in productivity and economic performance in Asia. The views expressed are those of the author(s). Inquiries may be directed to [sankenoffice@info.keio.ac.jp](mailto:sankenoffice@info.keio.ac.jp).*

