



REPUBLIC OF THE PHILIPPINES
NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY

Impact of Digitization on the Philippine Economy

OG-PHL Model

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Presentation Outline

1. Background
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Background



Background

In the Philippines, the prices of fixed broadband plan is 19.6 percent higher compared with the average price in other ASEAN countries.

The Konektadong Pinoy bill aims to boost the development of data transmission infrastructure and remove barriers to competition in the telecommunications sector, thereby providing **a fast, reliable, and affordable internet access for the Filipinos**

Konektadong Pinoy Bill

The following are the salient features of the proposed bill:

- **Franchise and Licensing Reforms.** By removing the current legislative franchise requirement and transitioning to a general authorization regime, the telecommunication sector can attract more investment and encourage new entrants.
- **Improving Interconnection and Access Rules.** The proposed policy suggests enhancing regulatory oversight and transparency in interconnection processes.
- **Infrastructure Sharing.** The policy recommends both passive and active infrastructure sharing among operators. This approach, which aligns with international practices, can lead to more efficient use of network resources, reduce costs, and facilitate the entry of new players.

Research Questions

Research Questions



To what extent does digitalization accelerate economic growth?



What is the impact of improved labor productivity due to digitalization on wages and income of the bottom income deciles?

OG-PHL Model



Parameters

General Assumptions:

- The model assumes a two-sector economy:
 - Sector 1: Telecom
 - Sector 2: Others

Exogenous Parameters	Calibrations
e	Labor Productivity is assumed to increase by 5%, given the increase in internet penetration, improved efficiency, and higher level of human capital resulting from digitalization
delta_annual	Depreciation rate is assumed to be 4.5%, indicating lower capital costs resulting from digitalization

Parameters

Household Budget Constraint:

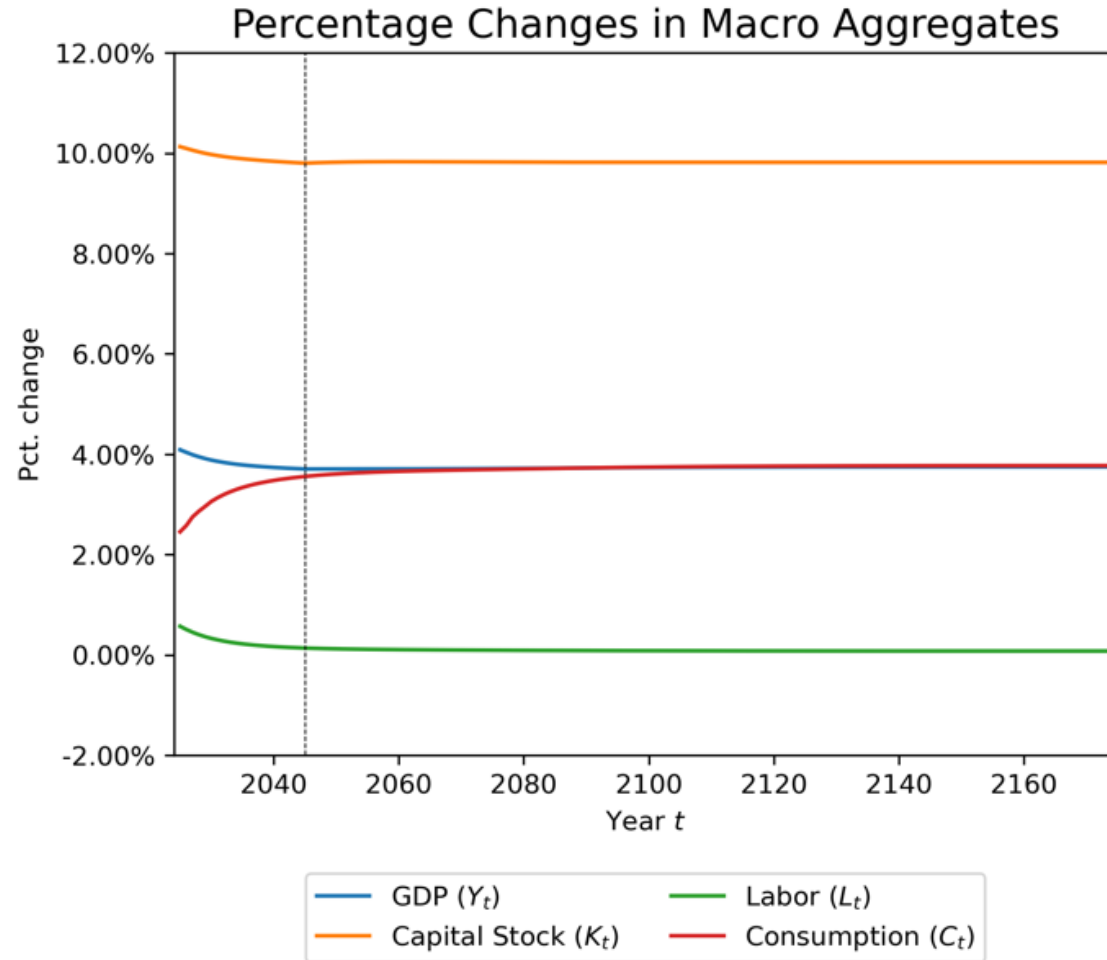
$$\begin{aligned}
 p_t c_{j,s,t} + \sum_{i=1}^I (1 + \tau_{i,t}^c) p_{i,t} c_{min,i} + b_{j,s+1,t+1} = \\
 (1 + r_{p,t}) b_{j,s,t} + w_t e_{j,s} n_{j,s,t} \dots \\
 + b q_{j,s,t} + r m_{j,s,t} + t r_{j,s,t} + u b i_{j,s,t} + p e n s i o n_{j,s,t} - t a x_{j,s,t} \\
 \forall j, t \quad \text{and} \quad E + 1 \leq s \leq E + S \quad \text{where} \quad b_{j,E+1,t} = 0
 \end{aligned} \tag{22}$$

Firm Profit Function:

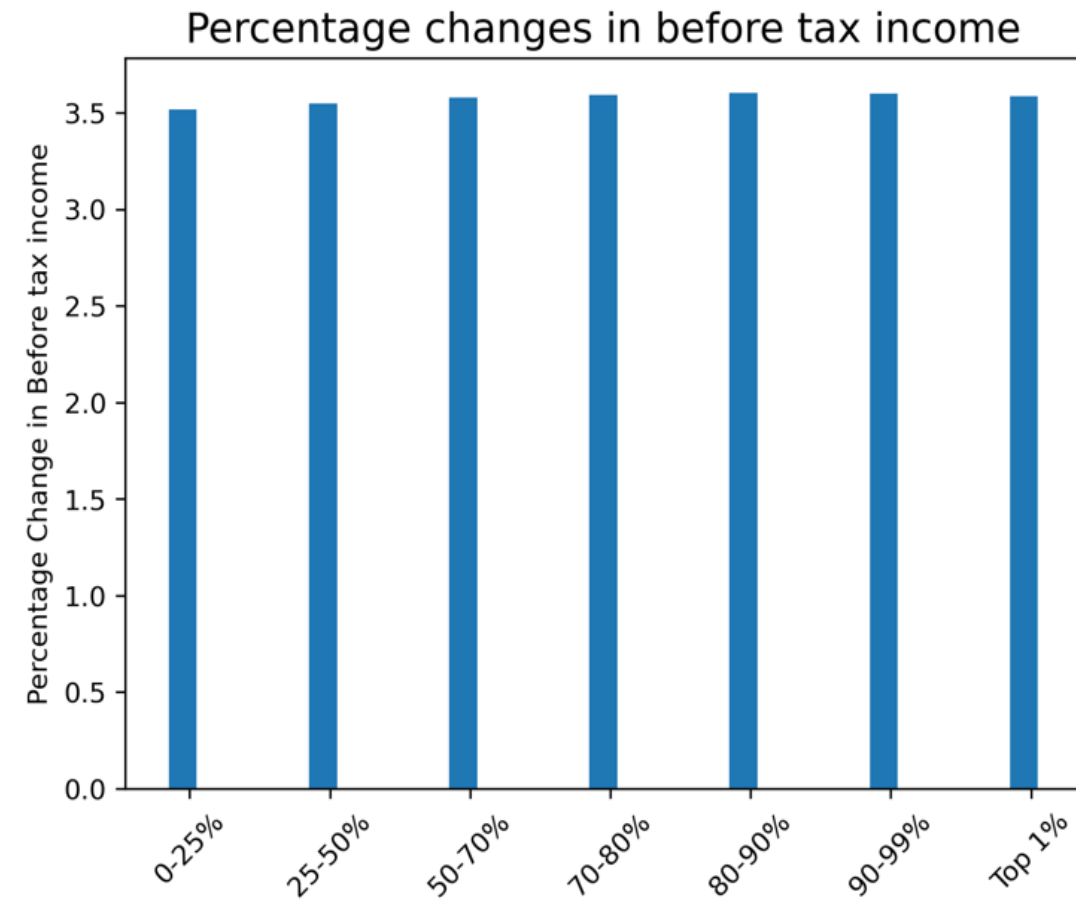
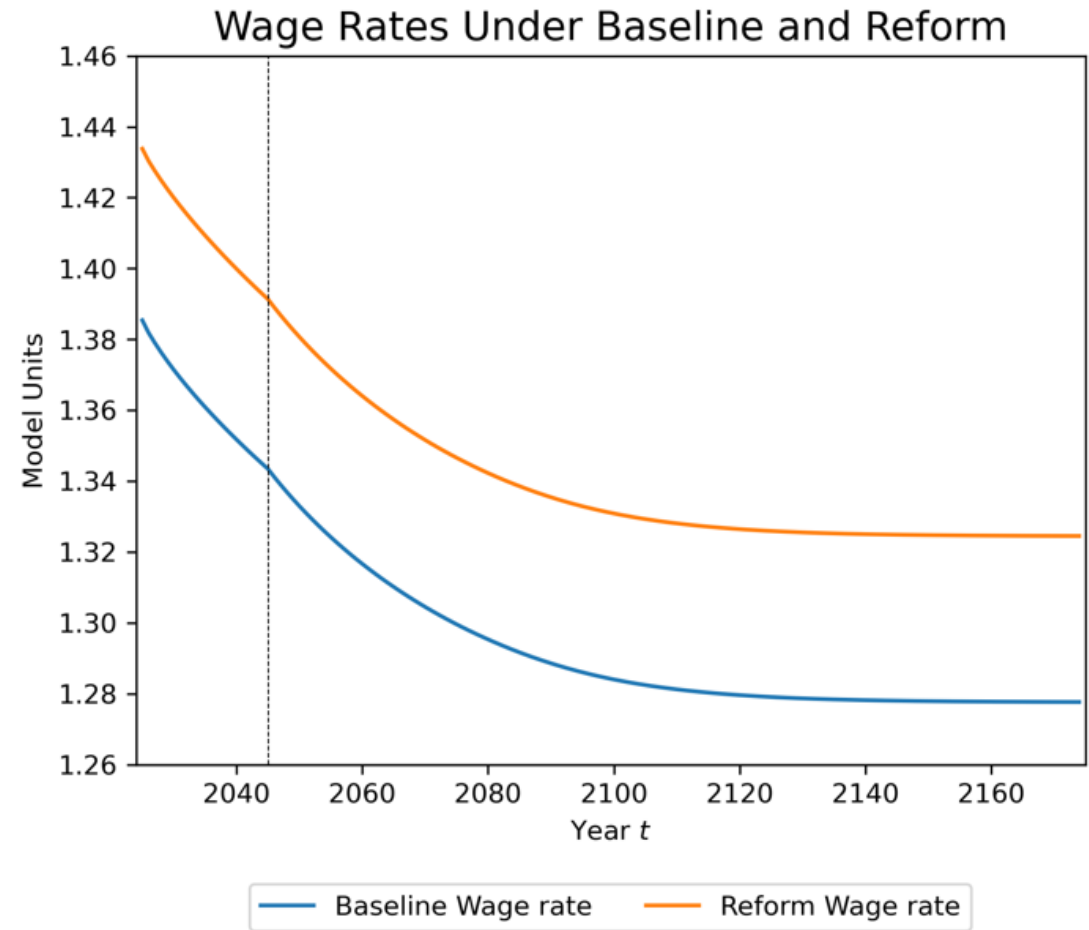
$$\begin{aligned}
 P R_{m,t} = (1 - \tau_{m,t}^{corp}) \left[p_{m,t} F(K_{m,t}, K_{g,m,t}, L_{m,t}) - w_t L_{m,t} \right] - \\
 (r_t + \delta_{M,t}) K_{m,t} + \tau_{m,t}^{corp} \delta_{m,t}^{\tau} K_{m,t} + \tau_{m,t}^{inv} \delta_{M,t} K_{m,t} \quad \forall m, t
 \end{aligned} \tag{44}$$

Results

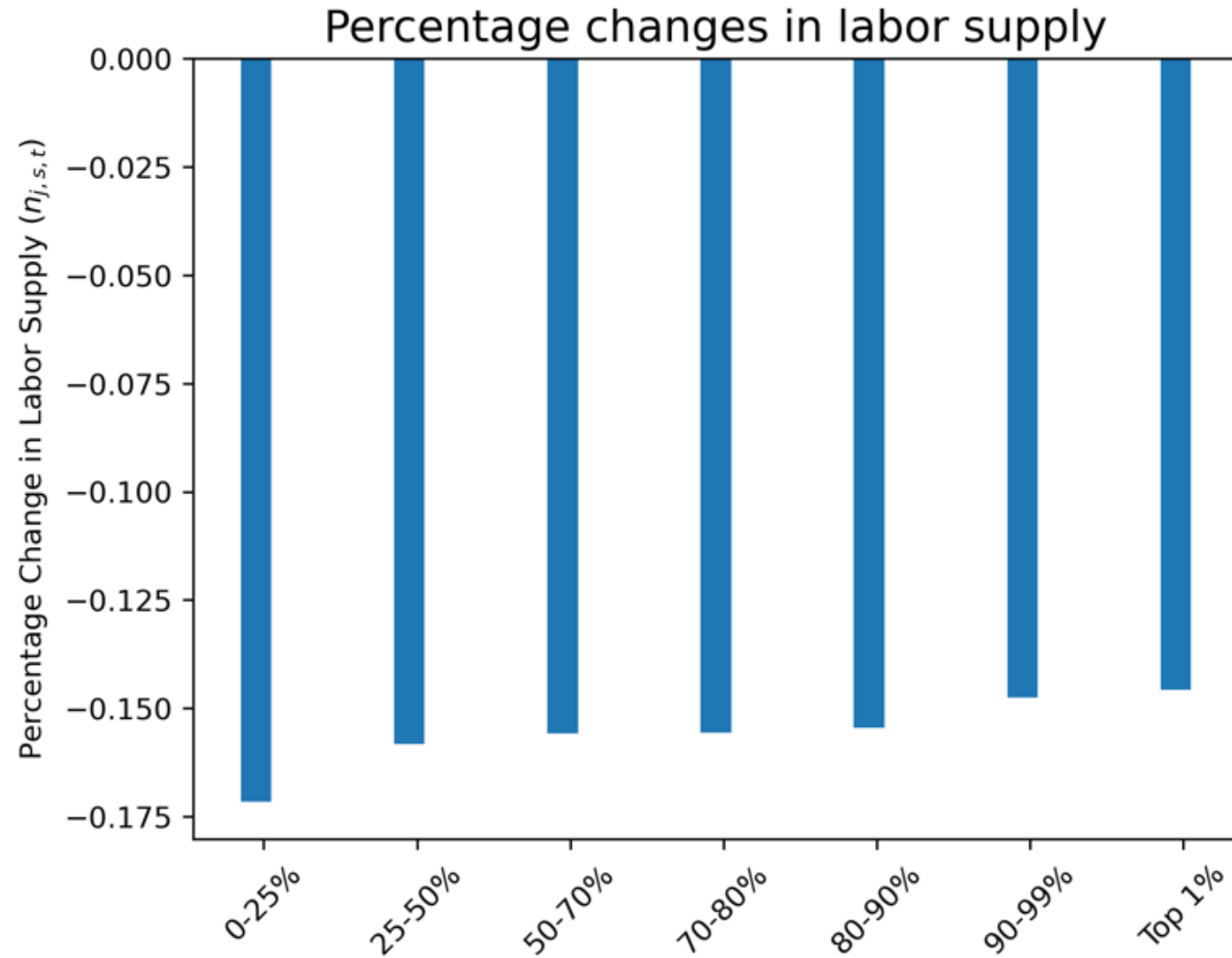
Change in consumption is accelerating, while growth in GDP, labor, and capital stock are decelerating.



Reform wage rates are higher, while increased income across all income deciles is observed



Labor supply decreased, especially among the bottom income group



Conclusion



Conclusion



Digitization results in higher income across all income groups, indicating an inclusive growth that benefits even the last mile households.



While positive impact of digitalization is expected, its effects may wane over time, implying that there will eventually come a point at which its benefits plateau.

Thank you