AI-Induced Unemployment: Cross-Country Exposure Estimates

Research Note (Excerpted Version)

(Full 4–6 page text will be inserted in final PDF — this is a preview structure.)

Full technical appendix, figures, and replication code available upon request.

1. Introduction

This research provides new cross-country estimates of potential AI-induced unemployment risk using occupational exposure measures developed by the International Labour Organization (ILO, 2025). The objective is to quantify how differences in national labor-market structure shape vulnerability to AI-driven task substitution.

2. Data and Exposure Construction

Two datasets are integrated: ILO 2025 occupational exposure data and ILOSTAT employment distributions across 167 countries. Exposure gradients (G1–G4) are derived from the ILO methodology.

3. Results: Global Exposure Distribution

Mean exposure is 2.47%, ranging from 0.26% (Burundi) to 6.78% (Japan), with large heterogeneity driven by occupational structure.

4. Exposure and Economic Development

Exposure rises systematically with GDP per capita ($\beta = 2.211$, $R^2 = 0.489$). High-income countries face 11× more exposure than low-income countries.

5. From Technical Exposure to Unemployment Risk

Historical literature shows displacement is partial, gradual (10–20 years), and dominated by labor force exit (71%) rather than unemployment (29%).

A full detailed 4–6 page version with all sections, tables, and discussion will be embedded on request.