



DISCUSSION:

NEW TECHNOLOGIES AND PRODUCTIVITY AND INEQUALITY DYNAMICS IN LATIN AMERICA (BY SANTIAGO LEVY)

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LA: Three Facts and a Key Priority

- ❑ #6: Slow Growth...due to dismal TFP
- ❑ #7: High Inequality...due to many factors (but not technology)
- ❑ #5: High Informality...due to dysfunctional institutions

Key Priority: Reforms to tackle informality...even without considering new technologies

But new technologies make them more urgent:

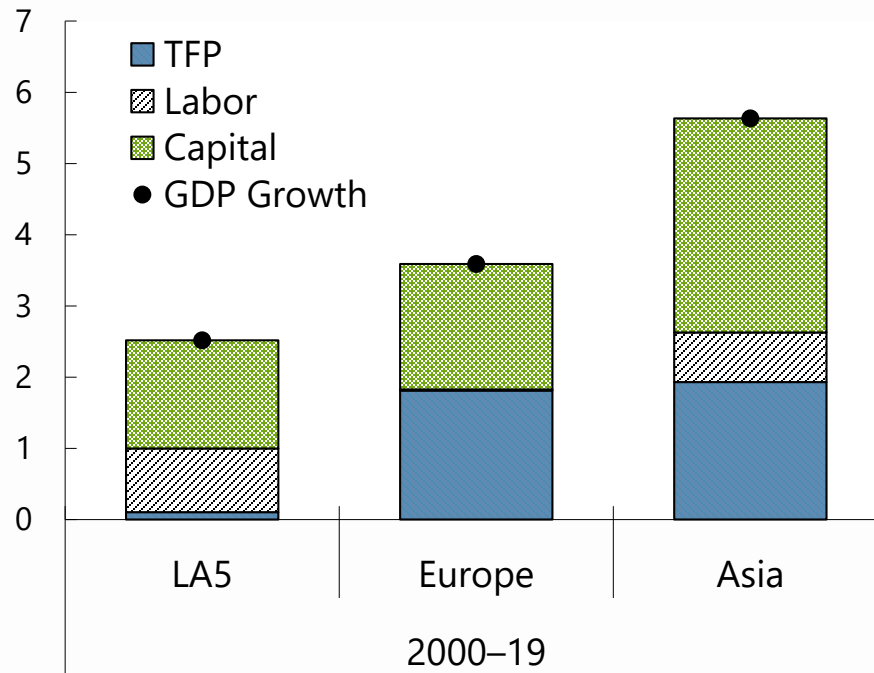
- Innovation will help few, large firms in TFP frontier. TFP may increase but also inequality
- LA will lag further behind with greater difficulties competing in the global economy

 **Pessimistic Outlook: Divergence with more inequality**

LA: Three Facts and a Key Priority

#6: Slow Growth...due to dismal TFP

Emerging Markets: Contributions to Real GDP Growth
(Percent change)



Sources: IMF, World Economic Outlook database; Penn World Table 10.0 database; and IMF staff calculations.

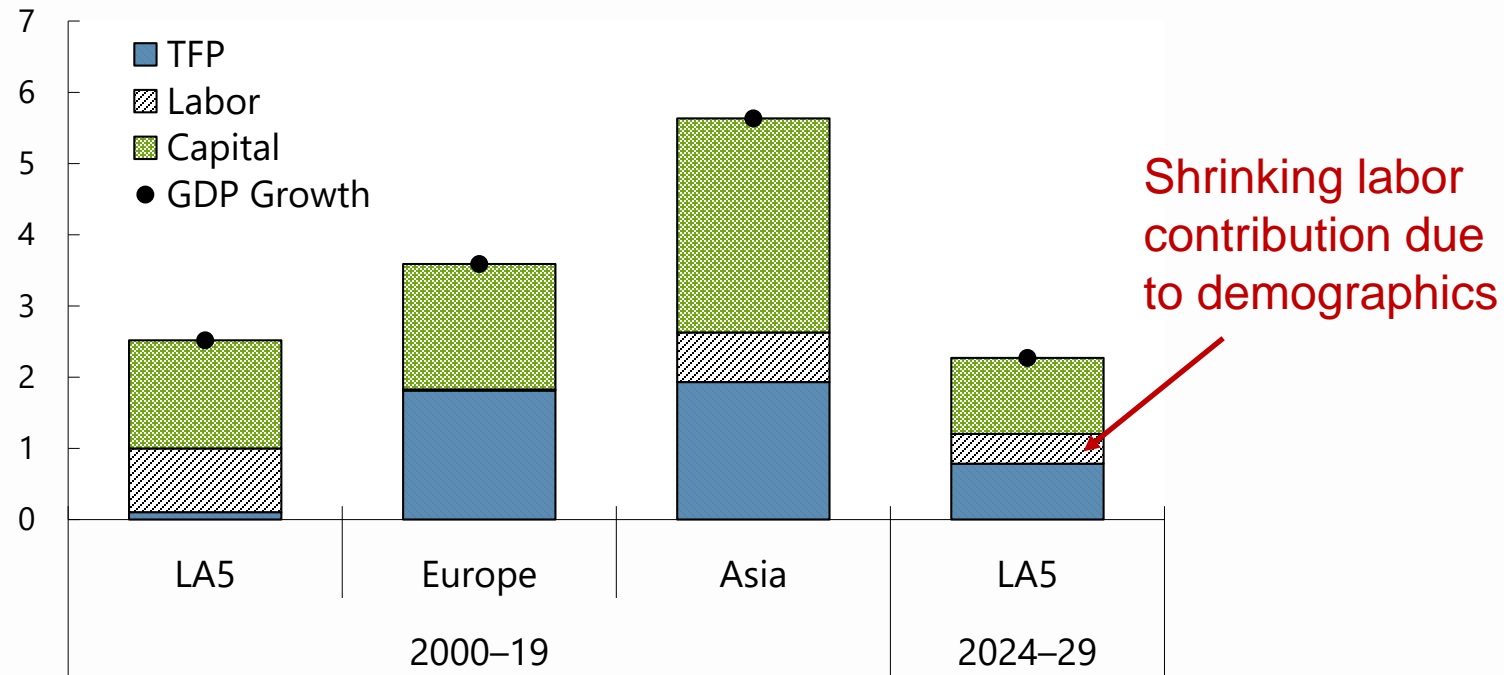
Note: Aggregates are purchasing-power-parity GDP- weighted averages.

EM Asia = India, Indonesia, Malaysia, Philippines, Thailand; EM Europe = Bosnia and Herzegovina, Bulgaria, Hungary, Poland, Romania, Serbia; EM LA5 = Brazil, Chile, Colombia, Mexico, Peru.

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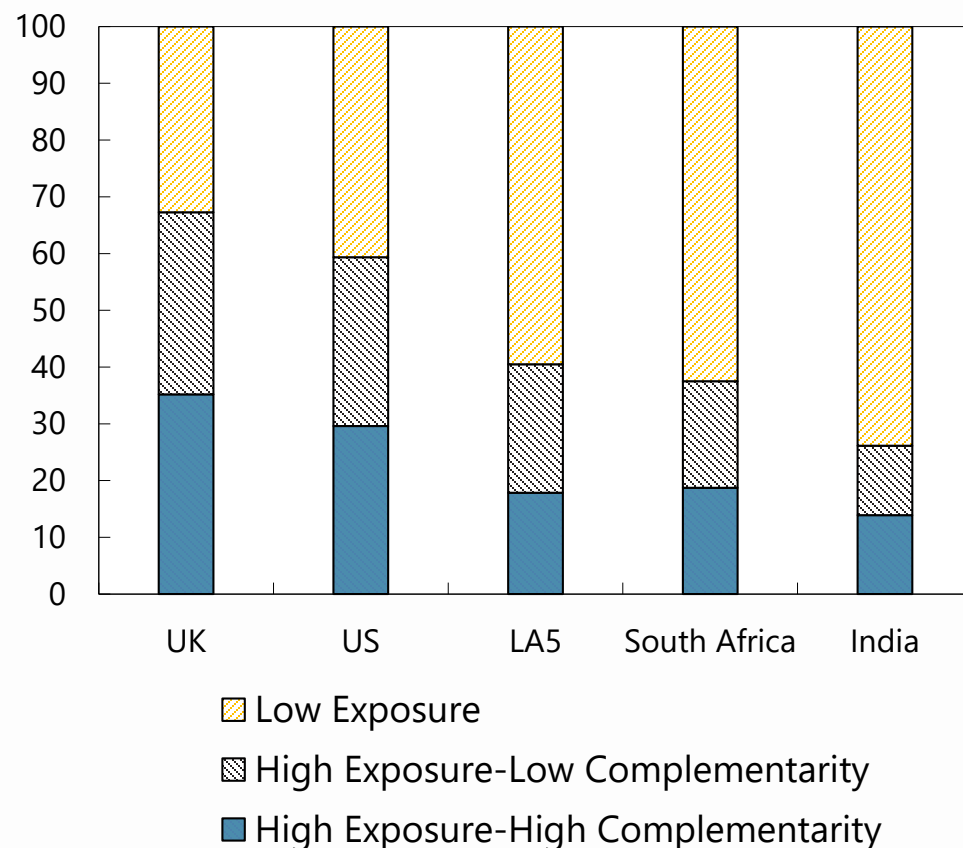
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Labor, Artificial Intelligence, and Productivity

Labor Exposure and Complementarity to AI

(Percent of employment)



- ✓ Exposure: Degree to which AI can perform human tasks and increase overall productivity
- ✓ Complementarity: Degree to which AI can enhance human tasks and increase labor productivity

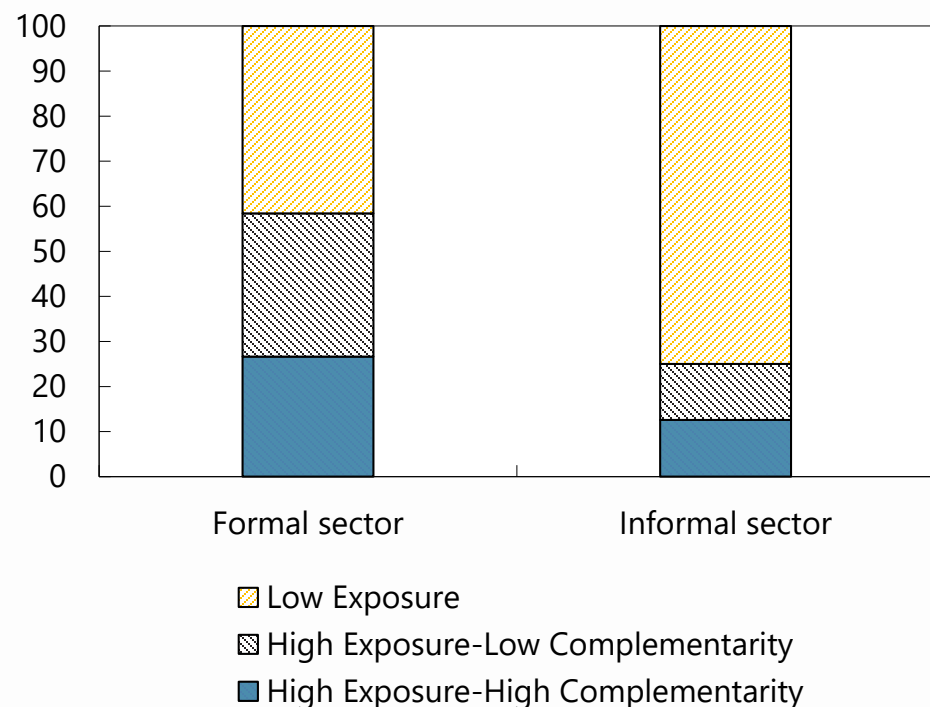
Examples:

- ❑ Low Exposure:
Mango seller at the street corner
- ❑ High Exposure-Low Complementarity:
Receptionist at call center
- ❑ High Exposure-High Complementarity:
Medical doctor

Sources: IMF staff calculations; ILO; Peru ENAHO; Pizzinelli, Carlo, Augustus Panton, Marina M. Tavares, Mauro Cazzaniga, and Longji Li. 2023. "Labor Market Exposure to AI: Cross-country Differences and Distributional Implications." IMF Working Paper, WP/2023/216; Bakker Bas, Sophia Chen, Dmitry Vasilyev, Olga Bespalova, Moya Chin, Daria Kolpakova, Archit Singhal, and Yuanchen Yang. 2024. "What Can Artificial Intelligence Do for Stagnant Productivity in Latin America and the Caribbean?" IMF Working Paper No. 2024/219.

Informality Lowers Exposure (and Possible Gains)

**Peru: Labor Exposure and Complementarity to AI:
Formal vs. Informal Sectors**
(Percent of employment)



In general:

- ✓ High Exposure-High Complementarity concentrated among high income (and high education) workers
- ✓ High-Exposure-Low Complementarity more evenly distributed
- Potential adverse impact more evenly spread; benefits concentrated at the top
- ❖ Women more exposed than men (middle-skill service and retail jobs)

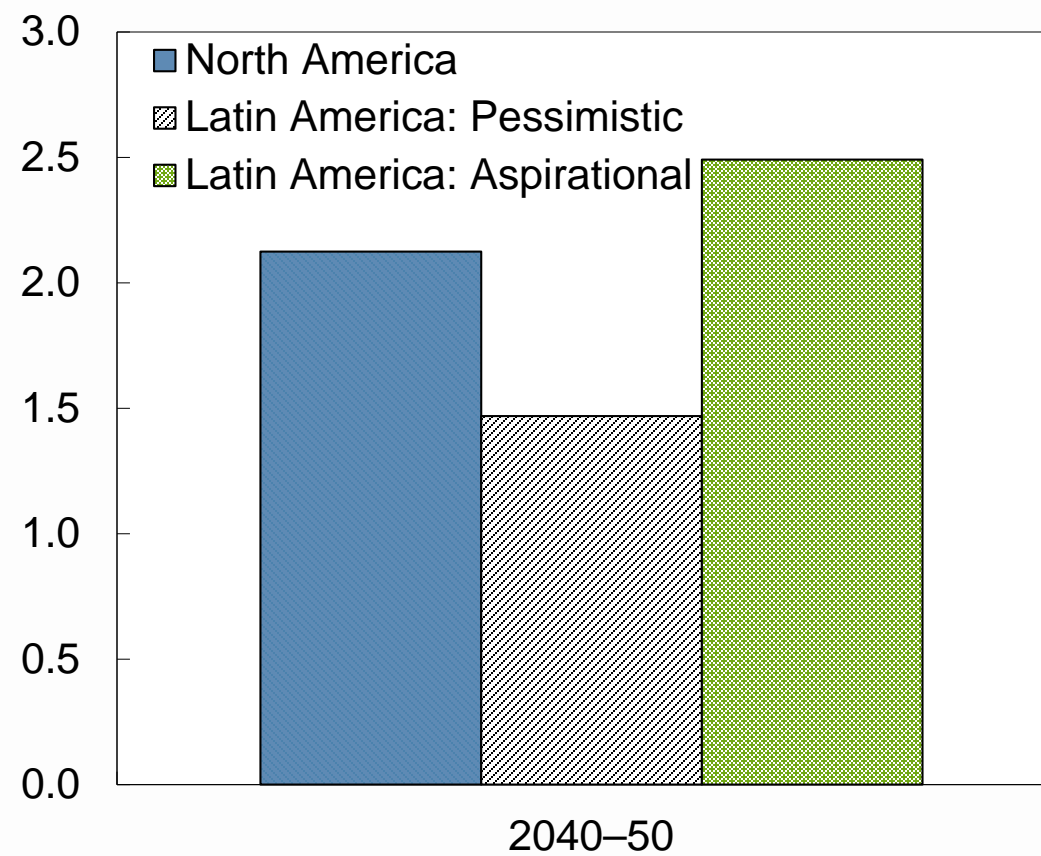
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LA: From Pessimistic to Aspirational Outlook

- ❑ Pessimistic Scenario:
 - ✓ AI penetration gap with the US follows trend of past technologies
 - ✓ Low AI exposure exacerbates gap
- ❑ Aspirational Scenario:
 - ✓ Accumulated gap in technology use intensity is halved by 2050
 - ✓ AI exposure gap is also halved


➔ Channel: Larger, more productive formal sector

GDP p capita Growth: Simulation Scenarios
(Percent change)



Source: Bakker Bas, Sophia Chen, Dmitry Vasilyev, Olga Beshpalova, Moya Chin, Daria Kolpakova, Archit Singhal, and Yuanchen Yang. 2024. "What Can Artificial Intelligence Do for Stagnant Productivity in Latin America and the Caribbean?" IMF Working Paper No. 2024/219.

LA: From Aspiration Back to Reality

- ❑ Potential growth too low to foster convergence; makes it harder to foster inclusion
 - Obstacles in all drivers of growth: Capital, Labor, and TFP
 - ❑ Wide-ranging reform agenda—not new...but difficult:
 - Governance, business environment, competition, trade integration
 - Labor opportunities for new entrants (women!) that adapt to new technologies
 - Skills and social policies equipped to buffer transitions
-  Channel: Larger, more productive formal sector