Central Bank of Chile Annual Conference · Policy Panel

The Future of Labor in the Age of AI

Macroeconomic Challenges for Emerging Economies

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Is a Job Apocalypse Coming?

"AI could eliminate half of all entry-level white-collar jobs within five years."

— Dario Amodei, CEO Anthropic (2025)

"In 10 to 20 years, work will be optional thanks to AI and robotics."

— Elon Musk, CEO SpaceX and Tesla (2026)

Historical GPTs: Time to Global Scale

Steam Engine	**1760s**	~80 years
Electricity	**1880s**	~40 years
Internet	**1990s**	~20 years
AI (ChatGPT)	**2022–**	**Months**

AI is diffusing at a pace no prior GPT has approached.

Will AI's labor market effects be different from the past technological revolution?

Four Questions

Q1

Mechanisms

Will AI displace or augment workers and which workers, tasks, and sectors are most at risk?

Q2

Distribution

Does AI widen inequality across skill levels, career stages, firms, and countries?

Q3

Macroeconomy

How does AI reshape growth, inflation, R*, financial stability, and central bank policy frameworks?

Q4

Policy Response

What policies and institutions help AI's gains to spread?

Why AI Is Different: Broader Capabilities, Faster Diffusion, Wider Exposure

Broader Capabilities

- Cognitive + analytical tasks — not just routine physical work
- Performs at or above expert level in law, medicine, code, finance
- Capabilities doubling roughly every 6–12 months
- Professional occupations now fully within scope

Faster Diffusion

- ChatGPT: 100 million users in 2 months (internet took 7 years)
- Middle-income countries = half of initial ChatGPT global traffic
- No physical installation or hardware upgrade required
- API access: instant global deployment at near-zero marginal cost

Wider Exposure

- Share of tasks exposed far exceeds prior automation waves
- High-skill, high-wage jobs most exposed
- Concentration: a few frontier models from a few firms and countries
- EM evidence gap: limited data on actual developing-economy impacts

How AI Changes Labor Demand

Displacement

AI substitutes for human labor

- Routine cognitive tasks automated
- Workers must transition or compete directly with AI systems.

Workers pushed toward non-routine, non-cognitive tasks; transition costs are high.

Augmentation

AI complements human skills

- AI expands what workers accomplish.
- Productivity rises; labor demand rises for the “right” skills.

Demand rises for judgment, supervision, interpersonal skills.

Reinstatement & Scale

AI creates new roles and amplifies overall labor demand

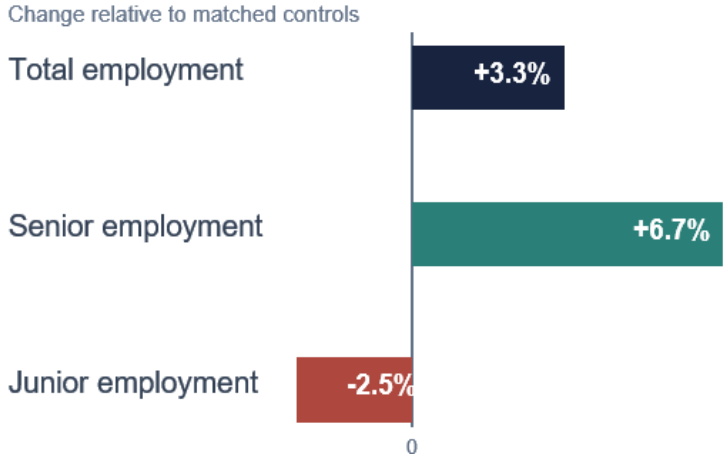
- New AI-created tasks and roles
- Productivity gains lower costs and prices → output demand expands → firms hire across non-automated functions

New tasks + scale expansion: net labor demand need not fall.

Three channels shape AI's labor impact — net effect depends on their relative strength.

What the Evidence Shows: Muted Aggregate, Uneven Risks

Employment Change (1.25B job postings, 41 countries)



Notes: Data: 1.25 billion job postings and 154 million employment; affiliate-level panel from Jan 2021 through March 2026. Estimates are relative to matched controls. Senior effect: $p < .01$. Total: $p < .10$. Junior: not statistically significant.
Source: Chandar and Klein Teeselink (September 2026), How Does AI Change Labor Demand? Evidence from 41 Countries, Table 3.

Broad consensus

Aggregate employment effects as yet muted — consistent finding across studies in high-income economies.

Entry-level effect

Junior hiring shows early signs of pressure — worth monitoring as AI capabilities expand.

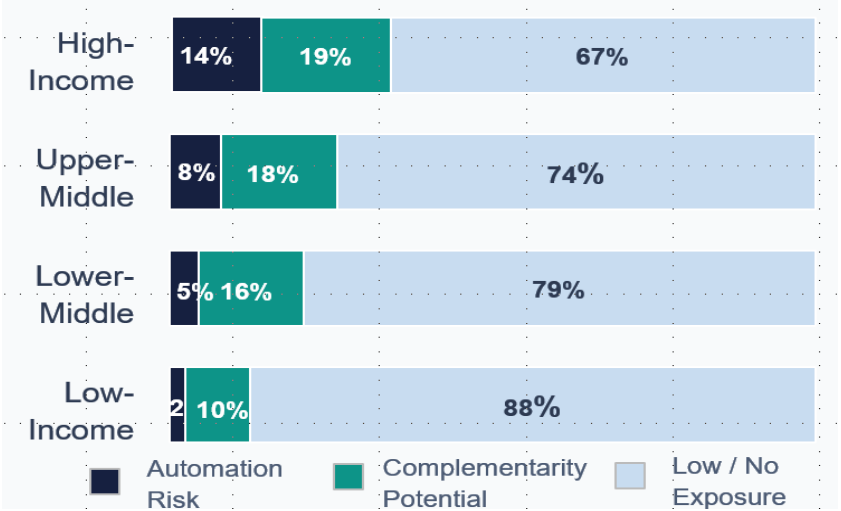
Complementarity

Employment is flat or rising where AI mainly complements workers or creates new roles.

Aggregate employment effects remain muted so far — but entry-level hiring shows early pressure.

EM Evidence: Lower Exposure, But Weaker Complementarity Gains

Share of Jobs by AI Exposure Level, by Income Group



Source: World Bank, World Development Report 2026 based on Gmyrek, P., M.Viollaz, and H. Winkler. 2026. "Disruption Without Dividend? How the Digital Divide and Task Differences Split GenAI's Global Impact." ILO

Low immediate displacement risk

4.5% of LMIC jobs at automation risk vs 14.2% in HICs. ChatGPT impact on AI-exposed postings statistically insignificant in LMICs. (World Bank 2026)

Entry-level as early warning

Korea: youth employment fell in high-AI sectors.
China and India: entry-level hit first.

Complementarity — potential, not yet captured

16.2% of LMIC jobs have AI complementarity potential.
ASEAN: only 3.3% in highest-exposure roles. (ILO 2026)

The EM challenge is not avoiding displacement — it is building capacity to capture AI complementarity gains.

AI May Widen Inequality at Multiple Levels

Across Workers

- High-skill tasks now most exposed.
- Capital–labor split widens if AI is capital-augmenting
- Gig and platform workers lack portable benefits and reskilling entitlements

At Career Entry

- Junior hiring down globally.
- Entry-level positions eliminated before early-career workers build experience
- Human capital formation disrupted: less apprenticeship-style learning

Across Firms & Countries

- AI monopolies emerging fast: winner-take-most dynamics in frontier AI
- Data access asymmetries disadvantage SMEs and emerging economies
- Global AI investment is concentrated in a handful of firms — far beyond the reach of most developing economies

Without proactive policy, AI risks being a winner-take-most technology, concentrating gains in a few firms, workers, and countries.

How Does AI Affect the Overall Economy?

Growth

- GPT potential — J-curve: short-run disruption, long-run gains.
- Complementary investment (compute, energy and skills) must precede the payoff.

Productivity

- Labor-augmenting → wage growth; Capital-augmenting → inequality.
- Whichever channel dominates shapes the macro trajectory.

Inflation

- Near-term: AI capex → inflationary
- Medium-term: productivity → disinflationary.
- Net effect on inflation highly uncertain.

Saving & Investment

- Massive AI capex surge in compute, data centers, energy.
- Household saving uncertain — precautionary motive vs. anticipated income gains.

Natural Interest Rate (R*)

- AI capex and productivity gains push R* up;
- Inequality and weaker labor income push R* down.
- Net direction uncertain over medium term.

Financial Stability

- Efficiency gains but new systemic risks: opacity, speed, concentration, procyclicality.
- BigTech dependency creates unregulated concentration risk outside CB supervisory reach.

AI impacts all major macroeconomic variables simultaneously — requiring integrated analytical frameworks.

Policy Challenges for Central Banks

Productivity & R*

- AI reshapes productivity and labor markets with great uncertainty, complicating inflation and output gap measurement.
- R* direction unclear: investment surge pushes up; inequality pushes down.

Inflation Dynamics

- Near-term: AI capex → inflationary. Medium-term: productivity increase → disinflationary.
- Household anticipation of income gains may sustain demand.
- Net effect highly uncertain.

Transmission Mechanisms

- Algorithmic pricing removes menu costs but may entrench stickiness, blunting tightening.
- AI credit scoring speeds transmission; shadow finance expands beyond CB reach.
- Algorithmic herding amplifies FX and asset price volatility.

Financial Stability

- Correlated AI decisions amplify systemic risk; speed of contagion rises.
- Opacity in AI credit decisions challenges supervisory capacity.
- Regulatory frameworks lag technological change, allowing harmful uses to outpace oversight.

CBs must update analytical tools, policy operating strategies, and supervisory capacity to stay ahead.

What Should Governments Do? A Policy Agenda

FISCAL POLICY

- Invest in education and lifelong learning; expand reskilling
- Fund public R&D and AI infrastructure, subject to fiscal-space constraints in EMs
- Automatic stabilizers: strengthen unemployment insurance ahead of displacement

SOCIAL PROTECTION

- Portable benefits decoupled from employment status
- Earned income tax credits extended to self-employed and gig workers
- Progressive taxation of AI-generated capital income and economic rents

STRUCTURAL REFORMS

- Reform worker classification and bargaining; improve mobility and flexibility with transition support
- Create incentives for firms to create jobs and train workers
- Adapt competition and AI governance

EM-SPECIFIC PRIORITIES

- Lower displacement risk, but weaker capacity to capture gains.
- Treat electricity, broadband, digital ID and data access as public infrastructure
- Invest in institutions and human capital before AI scale-up, not after displacement occurs

Building complementarities between AI and workers is key — policy built ahead of displacement, not in response.

Key Messages

1. AI holds real transformative potential, but labor market disruption remains muted in aggregate, while already uneven at career entry and across skill levels.

2. Emerging economies are less exposed to displacement, but also less equipped to capture AI's gains. Institutions, infrastructure, and human capital all bind.

3. AI reshapes all major macroeconomic variables simultaneously. Central banks must update analytical tools, policy operating strategies, and supervisory capacity to stay ahead.

4. Inclusive outcomes require effective policies and institutions built ahead of displacement, not in response. Building AI-worker complementarities is key.

5. AI-pocalypse is premature, but complacency is dangerous. EMs can shape their own trajectory.

Thank you

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