# Ageing & AI:
# Rethinking fiscal pressures

***Taxing Times: The Future of Government Revenue***

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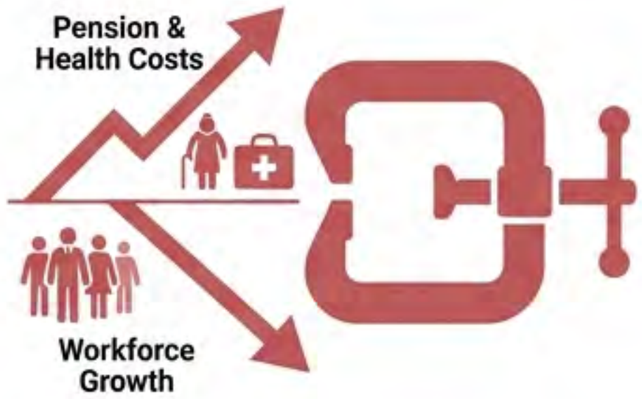
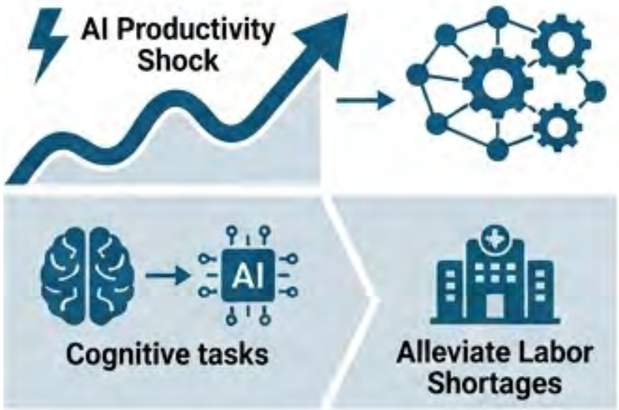
# Executive Summary: The Fiscal Pivot

## The Fiscal Pincer



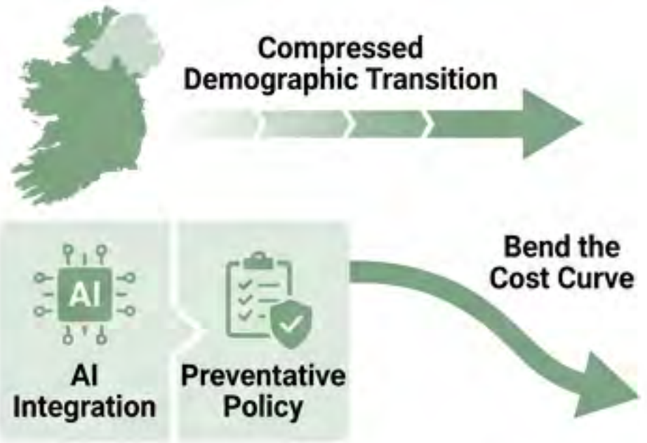

OECD countries face a structural squeeze. Rapid population ageing is driving up pension and health costs just as workforce growth slows.

## The AI Variable



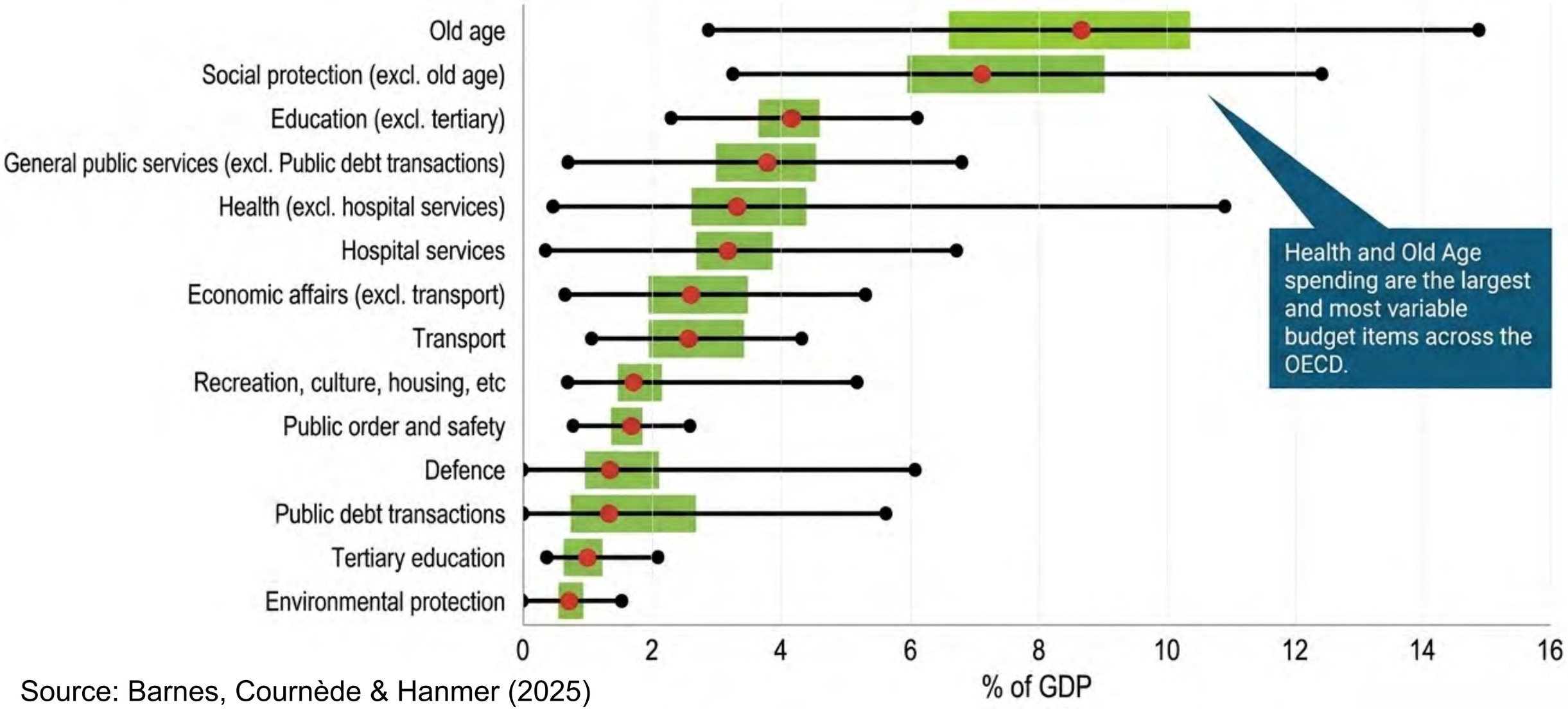

AI offers a potential 'productivity shock' comparable to the 1990s ICT boom. Automating cognitive tasks could alleviate labor shortages in healthcare.

## The Irish Laboratory



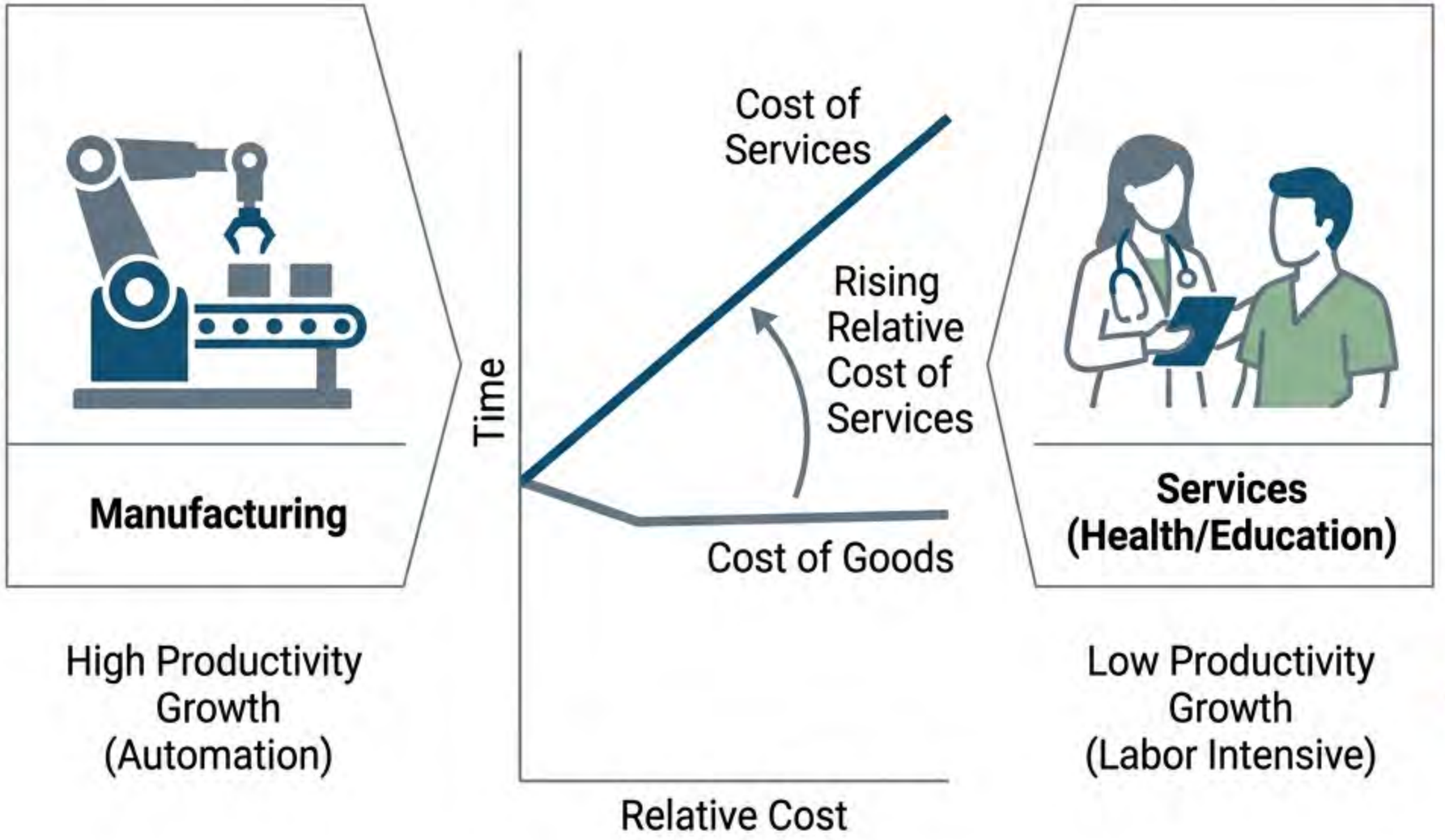

Ireland faces a compressed demographic transition. AI integration, combined with preventative policy, offers a pathway to bend the cost curve.

# The Fiscal Landscape: Spending is Weighted Toward Ageing




Source: Barnes, Cournède & Hanmer (2025)

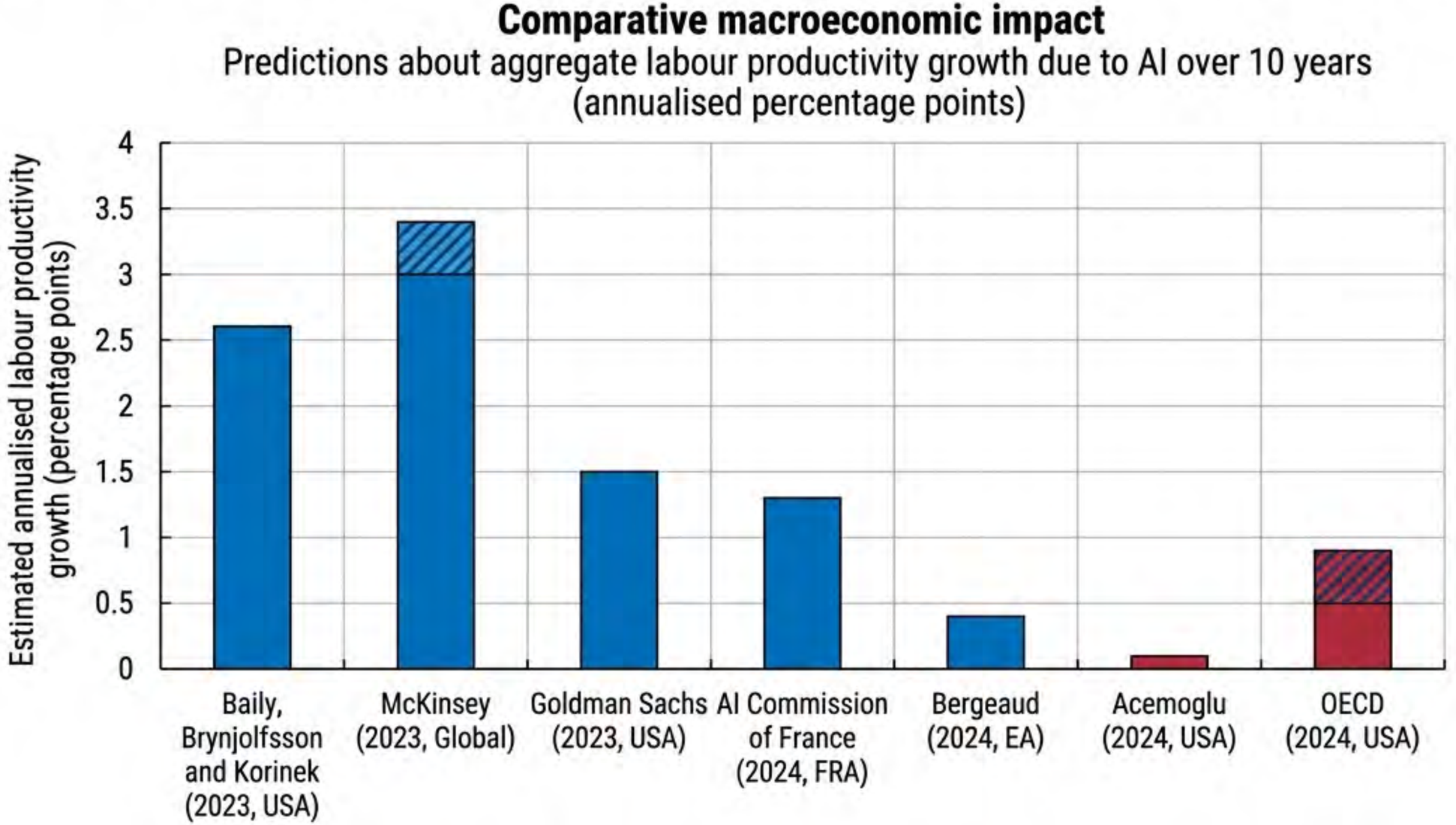
# The Productivity Puzzle and Baumol's Cost Disease




- **Concept:** Public services are labor-intensive. While the wider economy automates, these sectors lag, making them relatively more expensive over time (Baumol's cost disease).
- **The Fiscal Implication:** If productivity cannot be raised, the tax burden becomes unsustainable.
- **The Pivot:** Can AI break Baumol's curse by automating cognitive tasks?

# AI's Productivity Impact: Miracle or Myth?

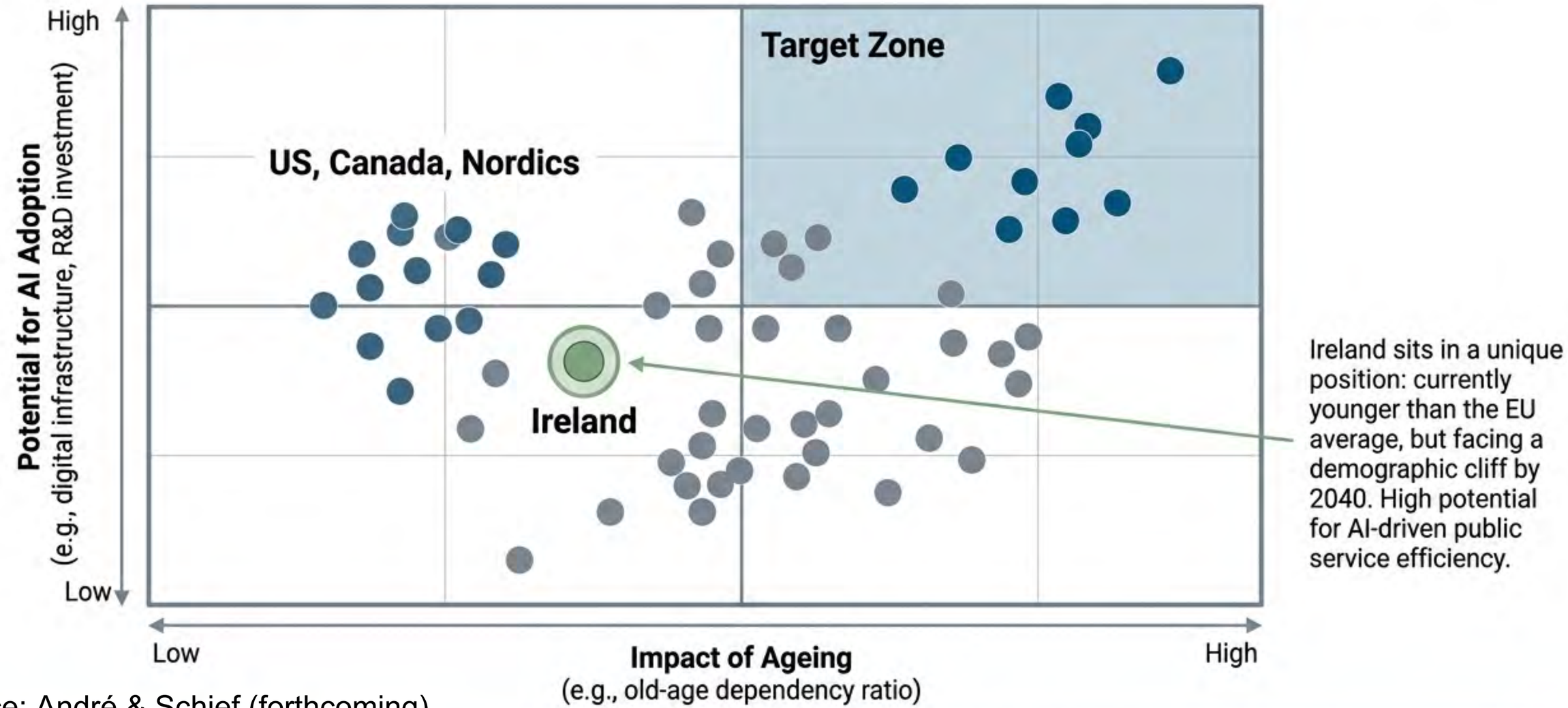
## Even conservative OECD estimates match the 1990s ICT boom.




ICT-boom of the mid-90s boosted US productivity by 1-1.5pp...
*(Byrne et al, 2013; Bunel et al, 2024)*

# Assessing Exposure: Who Gains the Most?

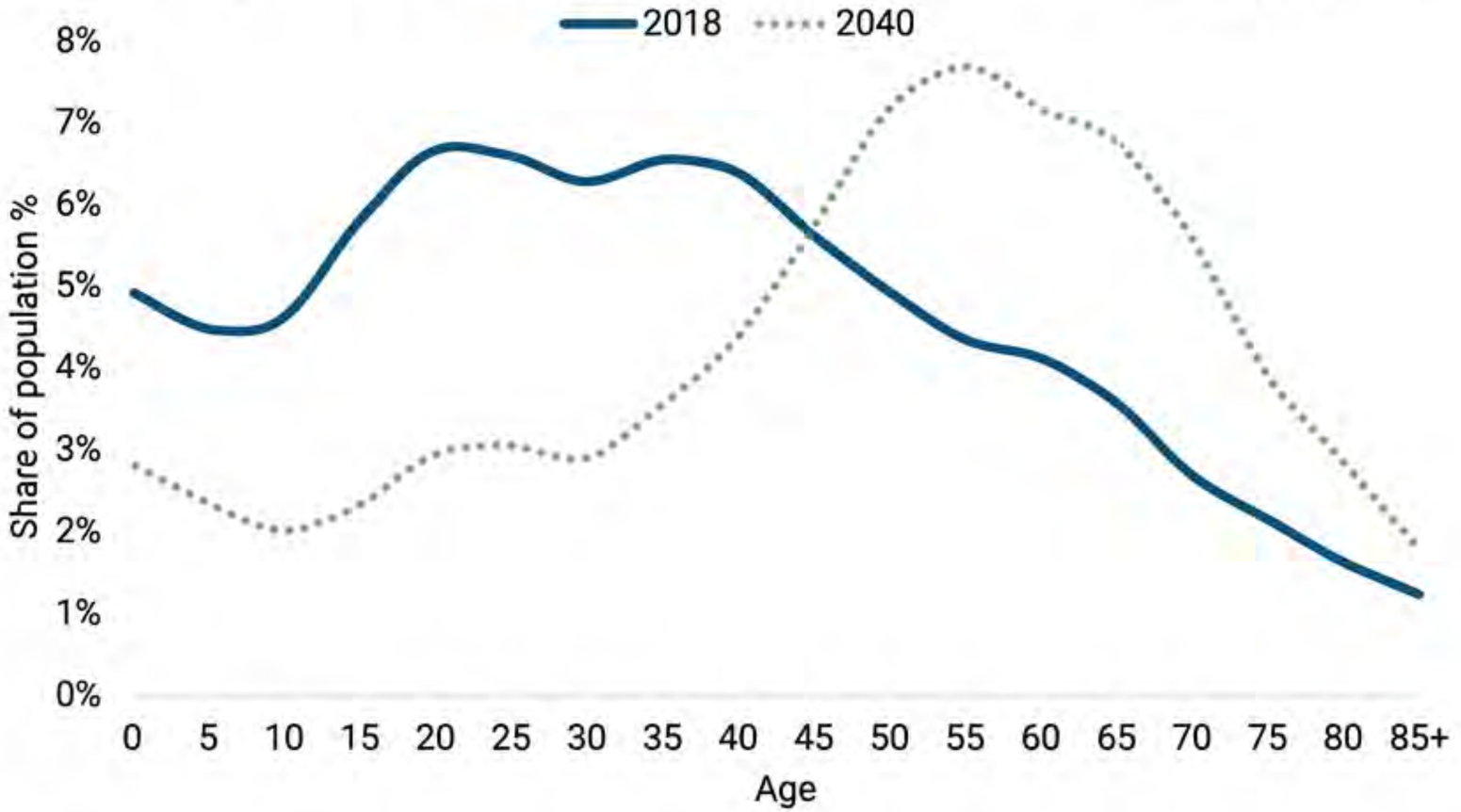
A comparative look at countries' demographic shifts and their readiness for AI-driven efficiency.




Source: André & Schief (forthcoming)

# Ireland's Compressed Demographic Transition

**Share of Population across time (OECD baseline scenario) by age group**




Between now and 2040, the share of the population aged >50 will rise sharply, while the <15 cohort shrinks.

**Implication: A shrinking workforce supporting a growing beneficiary class.**

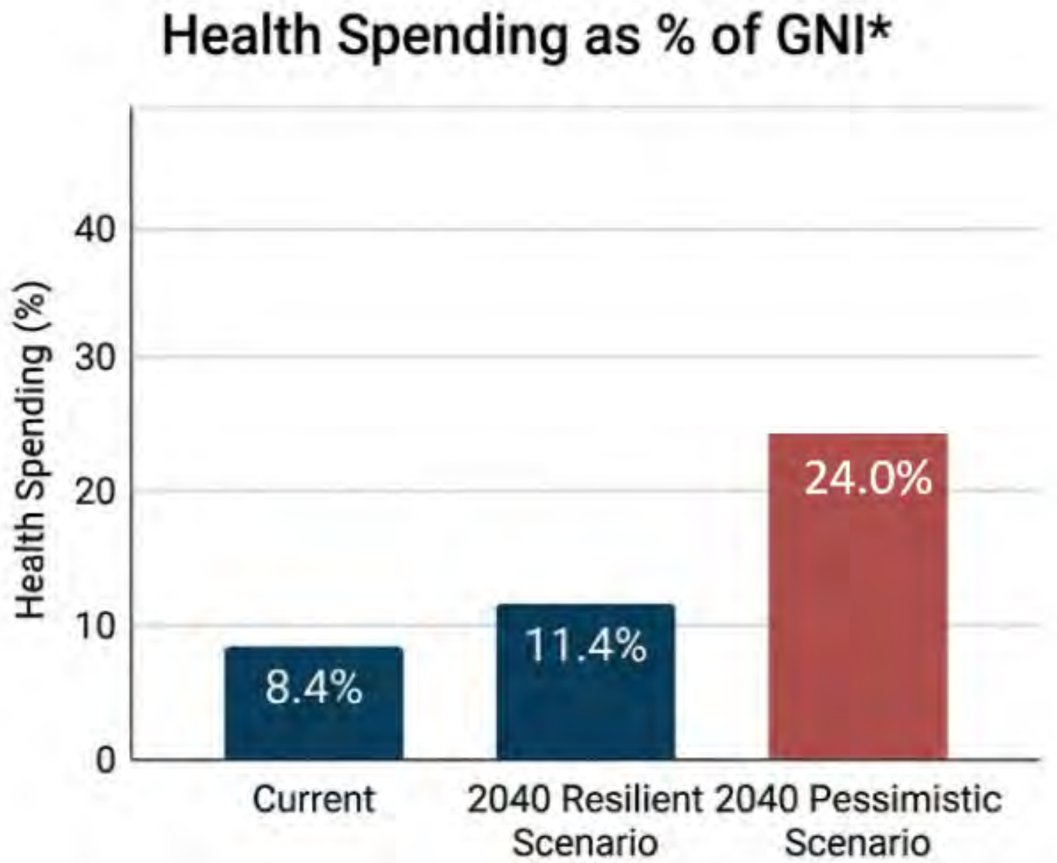
Context: Ireland's demographic structure is undergoing rapid change, moving from a relatively young population to an older one within a compressed timeframe.

Source: Lorenzoni et al. (2023)

# The Looming Healthcare Bill

## Key Stats

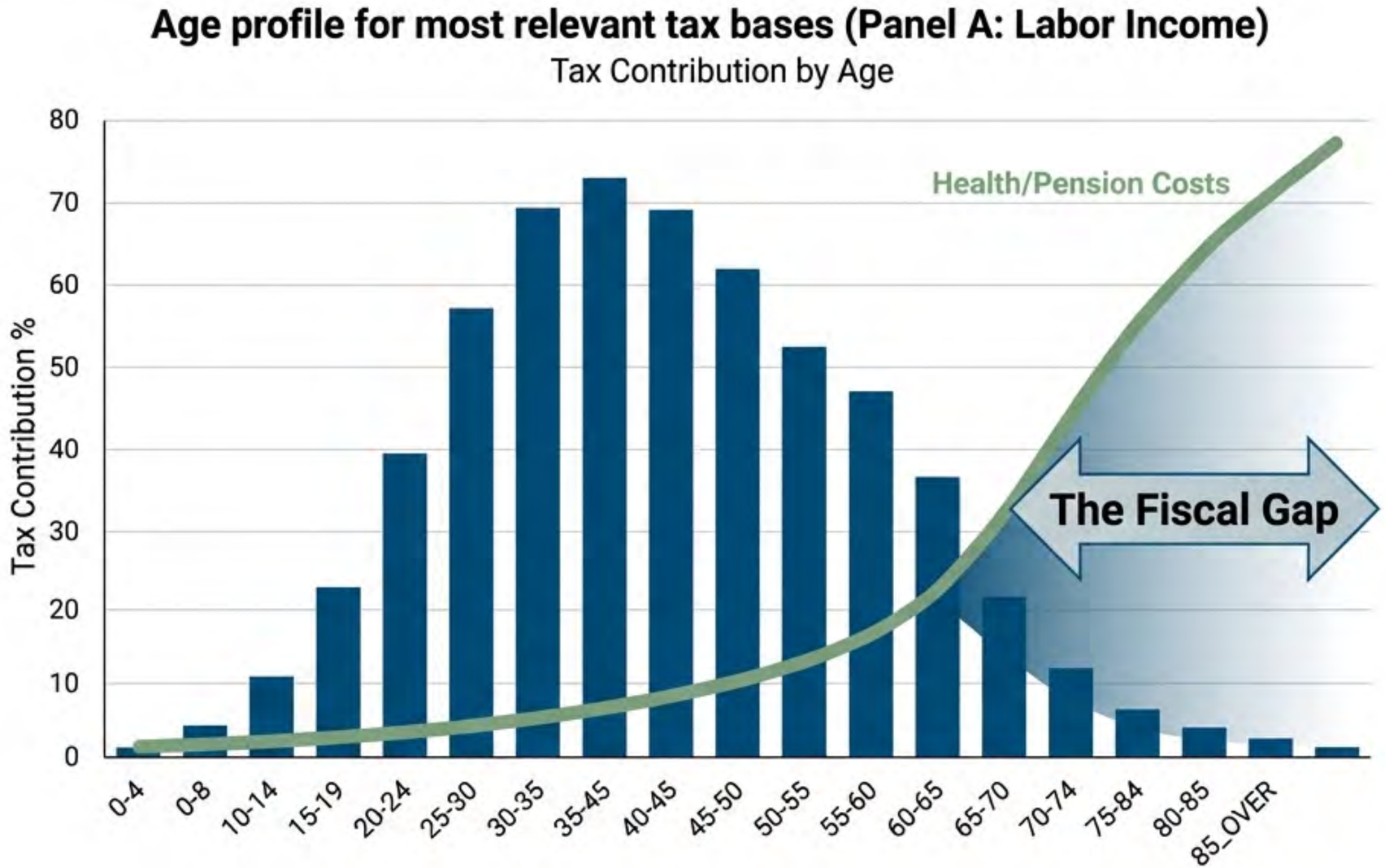
- **Current:** Health spending is **~1/5** of government spending.
- **Projection:** Health spending grows **3.4%** annually vs Revenue growth of **2.6%**.




Source: Lorenzoni, Dougherty, de Biase & McCarthy (2023)

*Modified Gross National Income (GNI*) used to accurately reflect the Irish domestic economy.

# Fiscal Vulnerability & Tax Buoyancy




As the population bulge retires, they shift from **net contributors (Labor Tax)** to **net beneficiaries**. The current tax base is **not buoyant enough to fund this shift.**

Note: Illustrative scenario

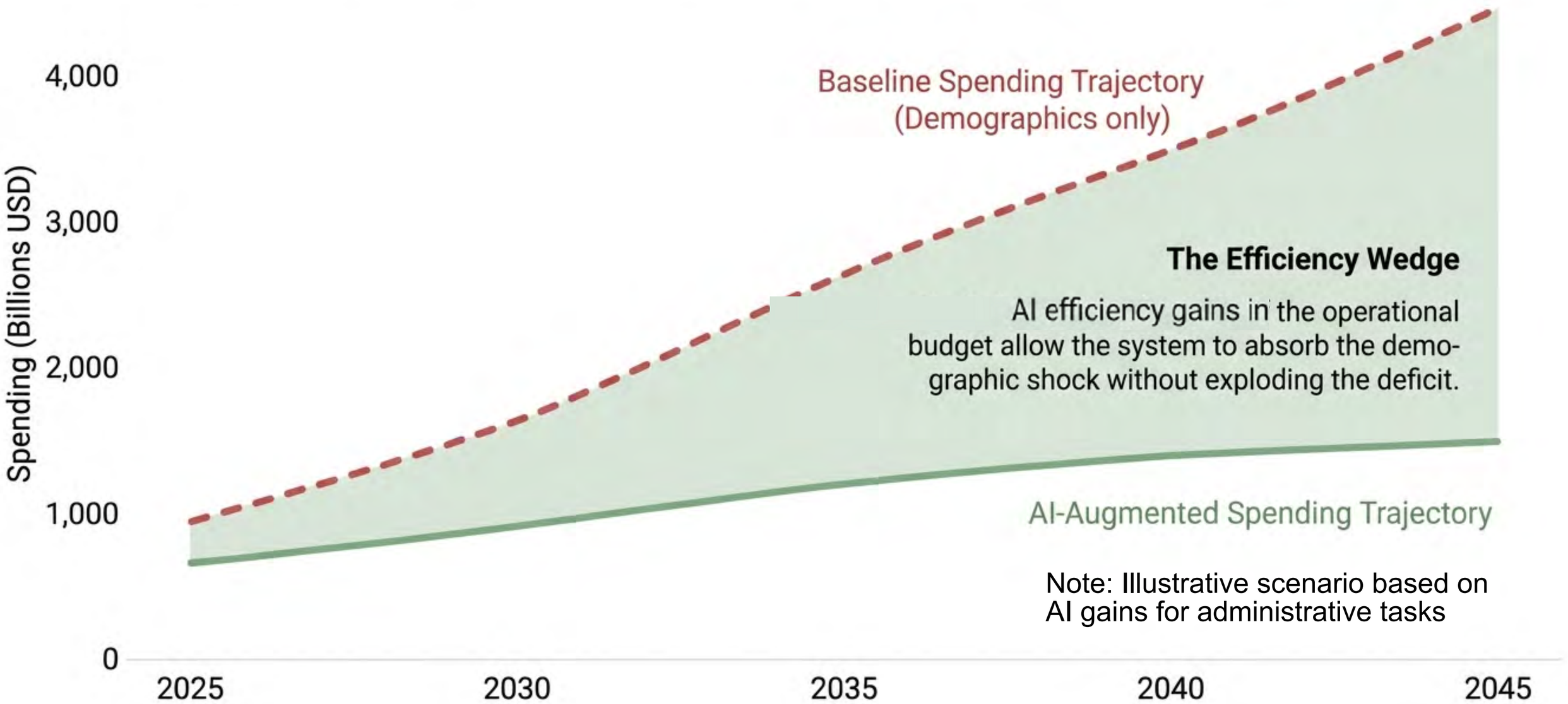
Source: Dougherty, de Biase & Lorenzoni (2022)

# Simulation: Can AI Bend the Cost Curve?

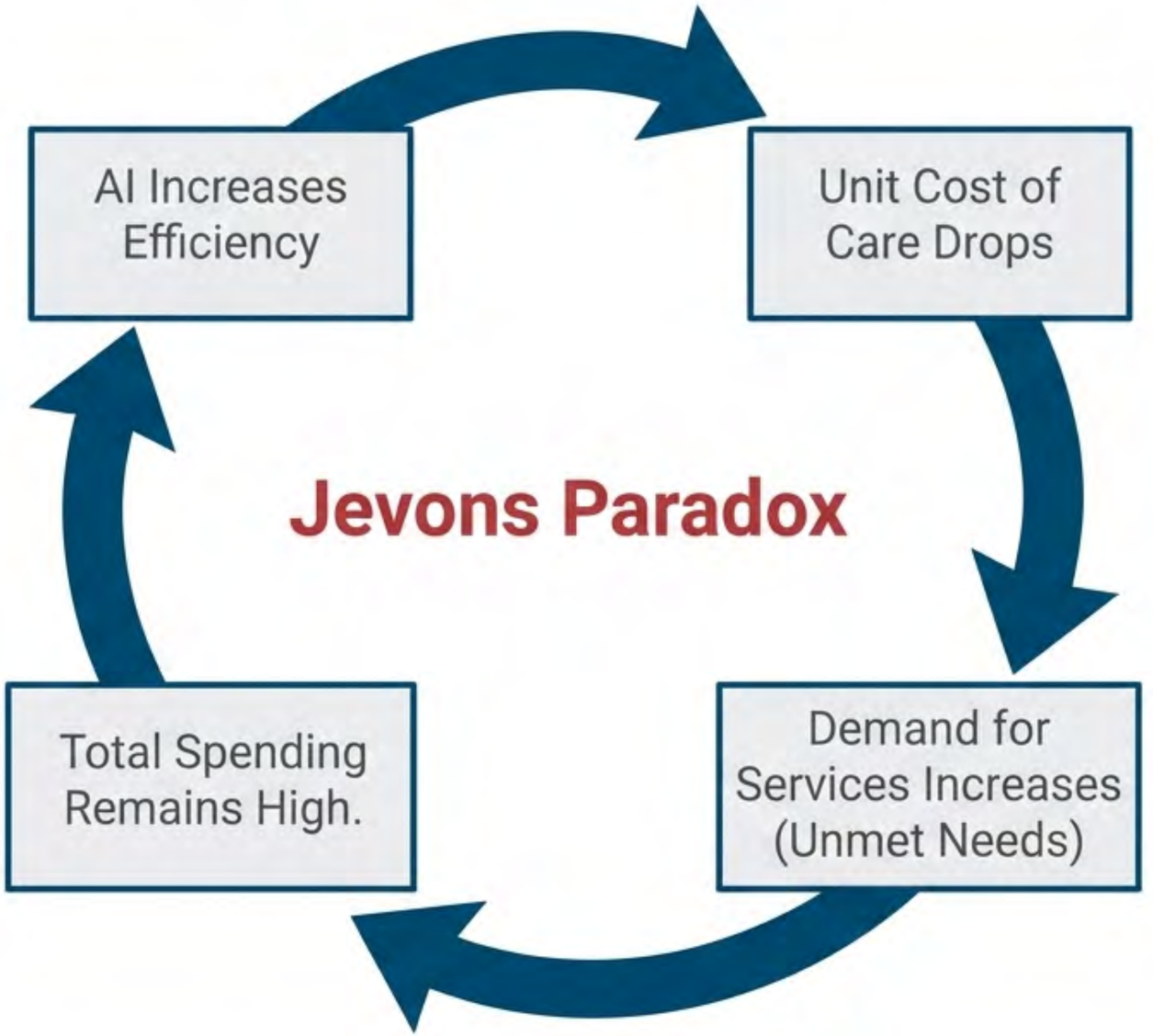

**Caveats**
**Methodology:** Illustrative analysis mapping task-level productivity gains to expenditure patterns. Does not account for implementation lag or workforce friction.

Source: Dougherty, Damiani & Montes (2025)

# Inter headline: The AI Wedge: Efficiency as a Stabilizer



# Risks: The Rebound Effect & Demand Saturation

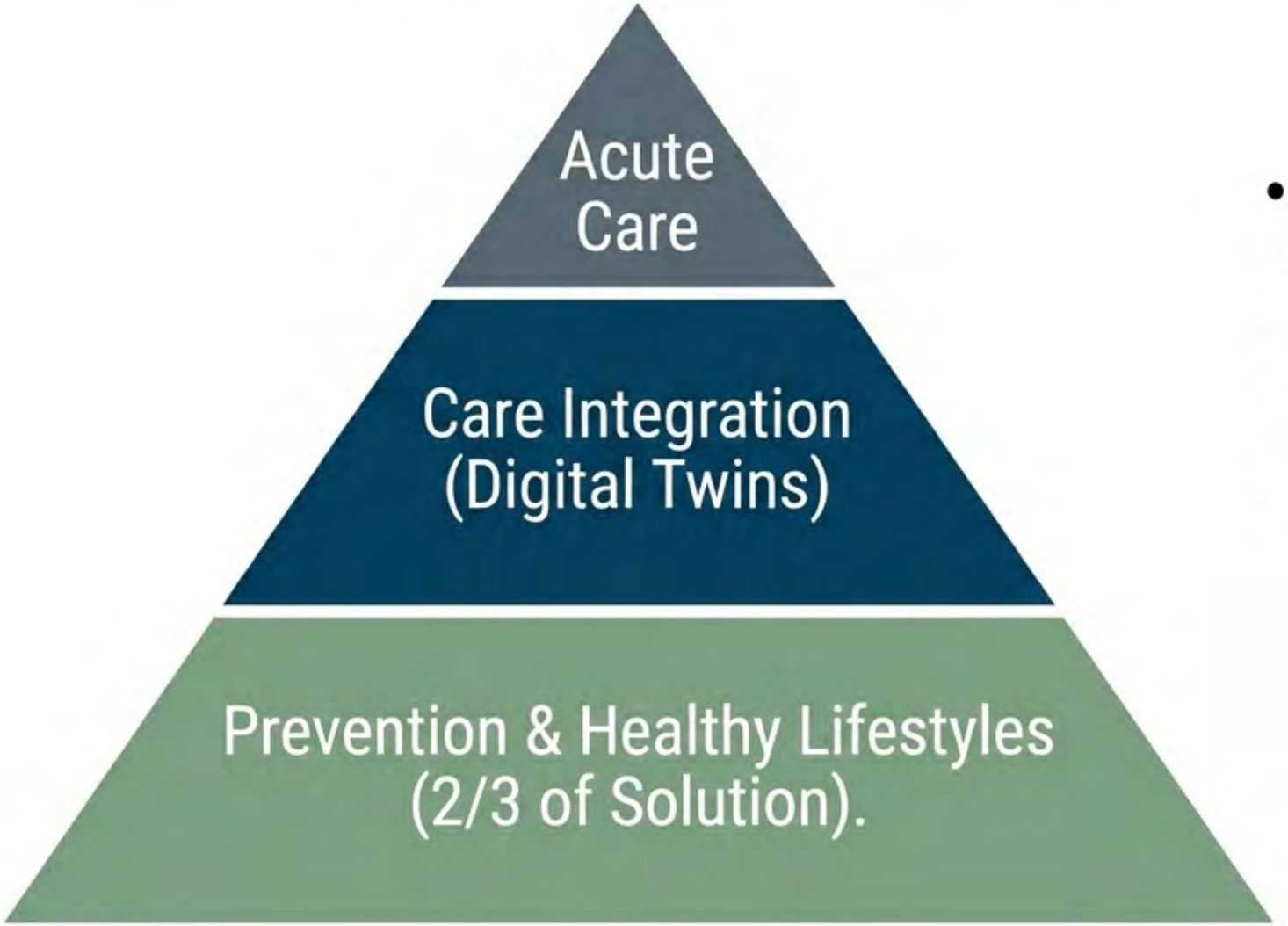



**Structural Barrier:**
Ireland's rapid ageing may hinder the very adoption needed, as older workforces tend to adopt new technology more slowly.

# Policy Response I: Revenue Robustness


- Increase reliance on VAT/GST and Property/Capital Gains taxes.
- Objective: Make government revenues robust to population ageing.

# Policy Response II: Prevention & Integration




- **Action:** Use AI for Predictive Analytics to target preventative care before expensive chronic conditions develop.

# Conclusion: The Window of Opportunity


- Demography is destiny, but productivity is a choice.
- Ireland has a unique window before the super-ageing trend accelerates in the 2030s to integrate AI into its public finance infrastructure.

Network on Fiscal Relations across Levels of Government

*Twitter @econecho*

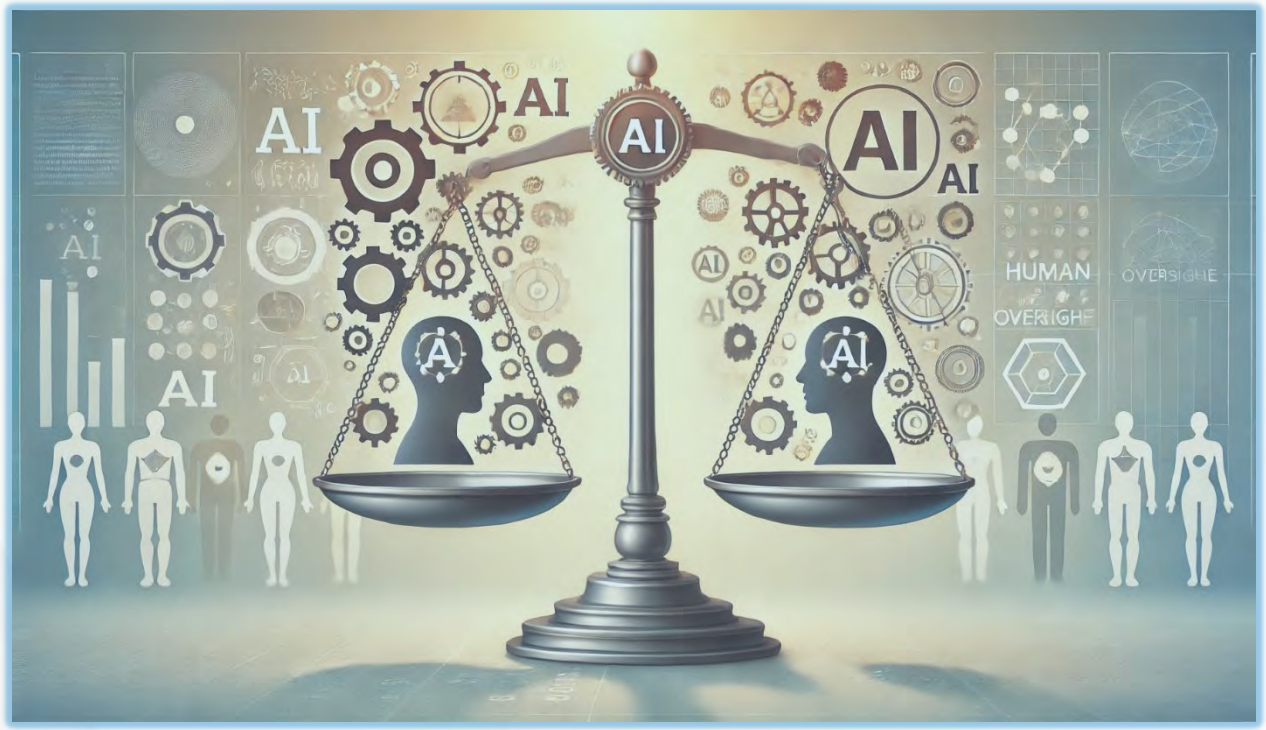
# Key sources

http://oe.cd/fiscalnetwork

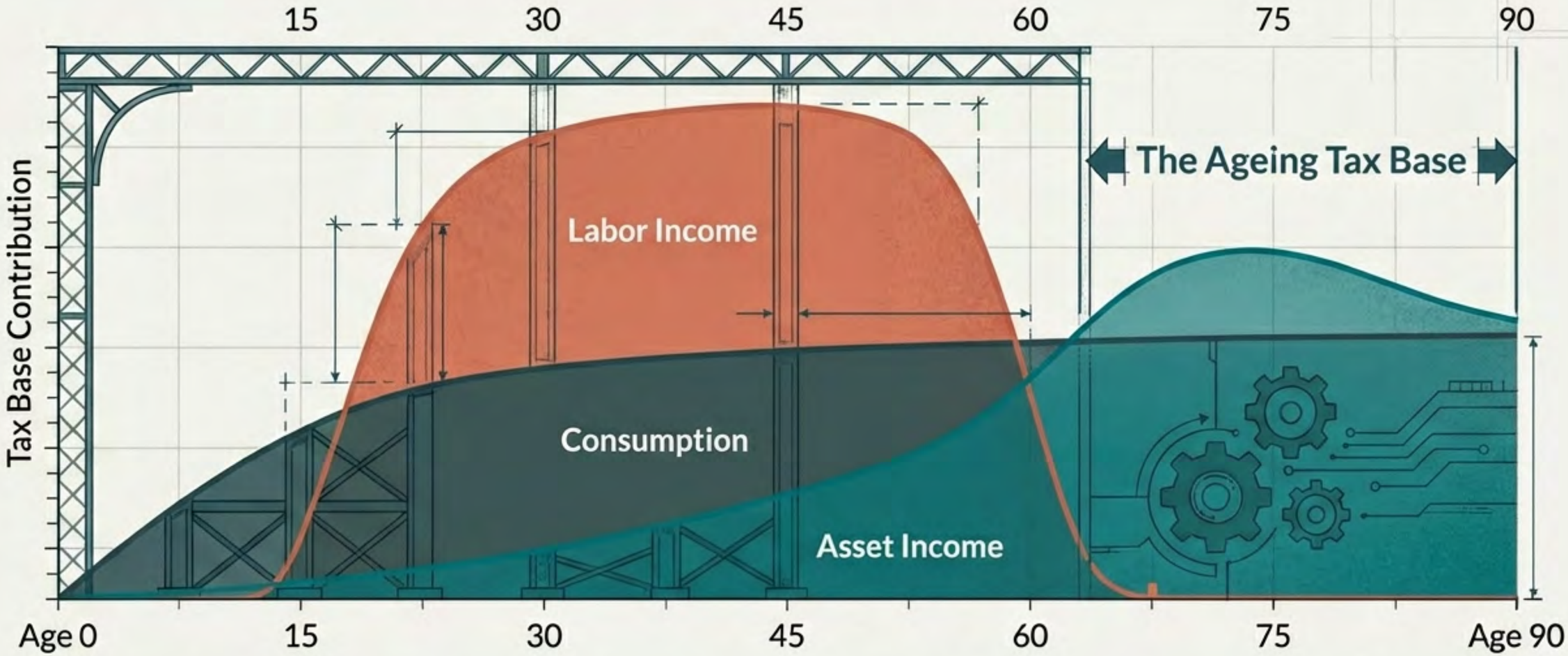
- Dougherty, de Biase & Lorenzoni (2022), “Funding the Future: The Impact of Population Ageing on Revenues across Levels of Government”, *OECD Working Papers on Fiscal Federalism*, No. 39.
- Lorenzoni, Dougherty, de Biase & McCarthy (2023), “Assessing the future fiscal sustainability of health spending in Ireland”, *OECD Health Working Papers*, No. 161.
- Dougherty, Damiani & Montes (2025), “AI for public finance: Potential subnational efficiency gains”, OECD Network on Fiscal Relations across Levels of Government, *Policy Memo*.
- Barnes, Cournède & Hanmer (2025), “Assessing Government Spending in OECD countries and Searching for Savings”, *OECD Economics Department Working Papers*, No. 1845.
- André & Schief (2026), “A Boost from AI in Ageing Societies? Early Insights”, *OECD Economics Department Working Papers*, *forthcoming*.

*Slides enhanced with NotebookLM*

# Supplemental slides



# Shifting Tax Bases Over the Lifecycle




Current tax systems target the Labor Curve (which is shrinking). Future systems must target the Consumption and Asset Curves (which remain robust).

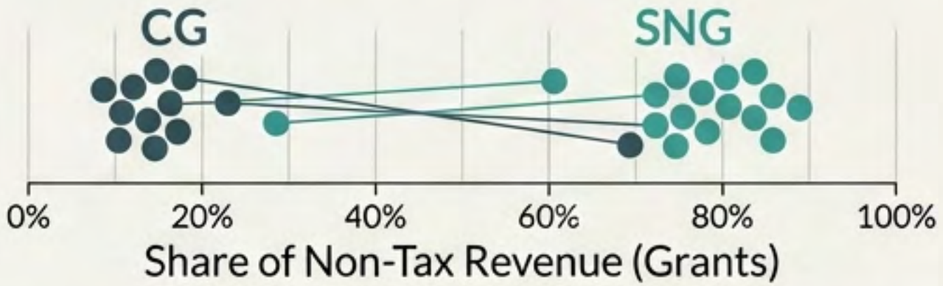
# The Federalism Fracture

**Central Government (CG)**

Relies on Income & Consumption Tax.
**Risk:** Labor shrinkage.
**Opportunity:** VAT resilience.

**Sub-National Government (SNG)**

Relies on Property Tax & Grants.
**Risk:** Funding gap for elderly care.




**Trap: 42%** of SNG health funding comes from Central transfers.
If Central revenue falls, local health systems collapse.

# The Productivity Imperative

**Demographic Decline**
(-20% GDP Drag)

**AI Productivity Lever**

The Math: We cannot change fertility rates in time. We cannot cut health costs easily. **The only variable left is Productivity.**

AI must shift from “Replacing Labor” to **“Augmenting the Shrinking Workforce”.**