Society of Actuaries in Ireland

Life Reinsurance and Innovation Series Part 1: Irish Demographic and Economic Outlook

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Competency Framework Wheel

Demographics, Higher Investment, and the Potential Growth Rate of the Irish Economy

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0 Irish Economic Performance Post 1995

- Significant fluctuations but underlying growth
- Growth post-2013
  - Follows the substantial decline from 2008 to 2012
- Which emerged after the excesses of the “Celtic Tiger” era
- Post-1995 export-led growth
  - Gave way to a credit bubble and unsustainable housing activity
- Economy in 2023 transformed from 1995

0 Ireland: 1995 - 2023 (in a snapshot)

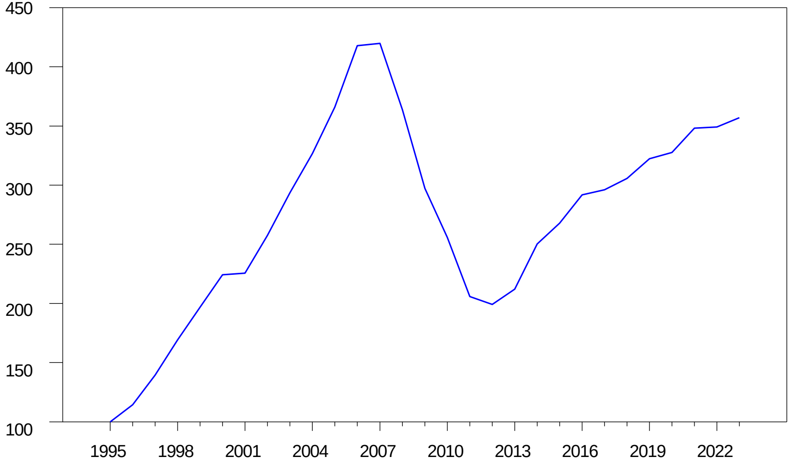
Year	1995	2023
Population	3.6m	5.3m
Employment	1.3m	2.7m
Output per capita	100	174
Exchequer receipts per capita (€)	3,850	16,543
Life Expectancy	34th	9th

Note: output per capita is in real terms with 1995 = 100

0 Ireland: 1995 - 2023 (another snapshot!!)

Figure 1

Irish house prices (1995 = 100)



0 What Do We Do?

- Ireland at a crossroads?
- Strong persistent growth giving way to more subdued rates?
- Controlling for distortions in the Irish national accounts and
- Using a traditional Solow growth model
  - Growth accounting calculations
- We generate long-term forecasts for the Irish economy
- Under specific assumptions
  1. Around future total factor productivity (TFP) growth
  2. Around investment rates and weekly work hours
- All subject to the latest demographic forecasts
  - With baseline, high and low migration rate assumptions

0 What Do We Find?

- Irish growth rate looks set to modify over the coming years
- Rapid growth at an end?
  - Celtic tiger and post-2013 era
- Declining rate of productivity growth has important longer-term implications
- Scenario analysis confirms
  1. Plausible increases in both TFP and investment rates
  2. Can improve the outlook
  3. Recent European Commission (2024) report
- Population dynamics set to give rise to “demographic drag”

0 Standard Growth Accounting Framework

- Cobb-Douglas production function
  - $Y_t = A_t K_t^{\alpha} L_t^{1-\alpha}$
- Which implies the following growth accounting equation
  - $\frac{\dot{Y}_t}{Y_t} = \frac{\dot{A}_t}{A_t} + \alpha \frac{\dot{K}_t}{K_t} + (1-\alpha)\frac{\dot{L}_t}{L_t}$
- We set the capital share $\alpha = \frac{1}{3}$
- Using the perpetual inventory method
  1. Generate a capital stock with a depreciation rate of 6 per cent
  2. Assume capital-output ratio equals steady-state value in 1995

0 Labour Input

- In our framework, total labour supply is generated as follows:
- For each C_i = 15-19, 20-24, ... 60-64, 65-69, 70-74, 75 up

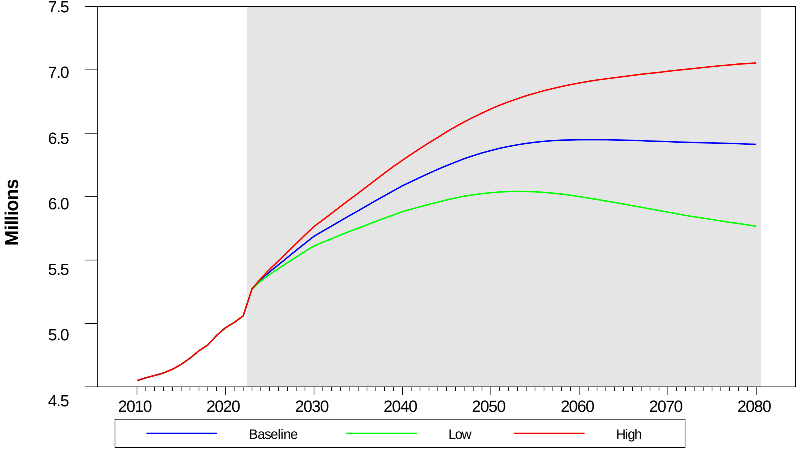
$$\text{Total Employment} = \sum_{i=15-19}^{75up} h\,(1\text{-urx}) \times \text{Activity Rate}_{C_i} \times \text{Fraction Population}_{C_i} \times (\text{Population})$$

- Total Hours Worked = Total Employment x Average Hours Worked Per Emplo

0 Future Irish Population Levels - Bergin and Egan (2024)

Figure 4

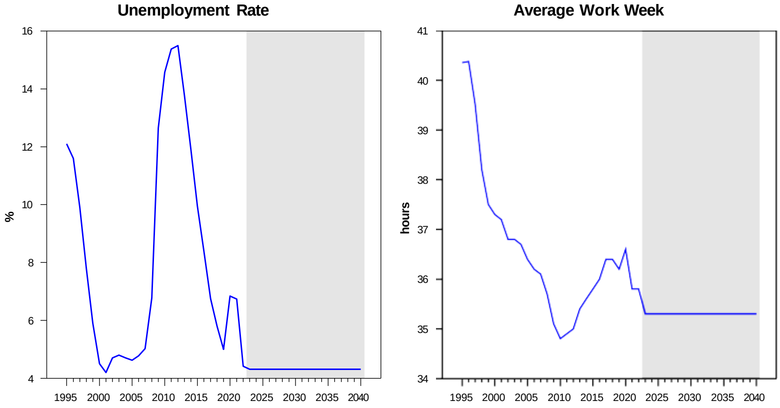
Migration scenarios



0 Key Labour Market Assumptions

Figure 5

Baseline Labour Market Assumptions



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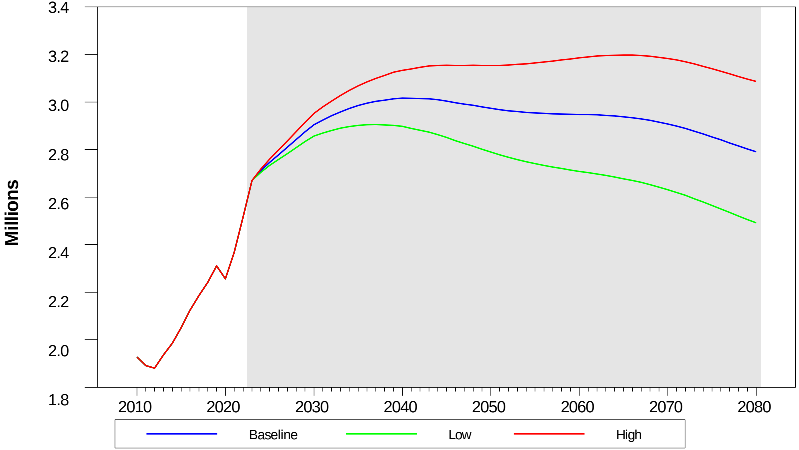
0 Future Irish Employment Levels

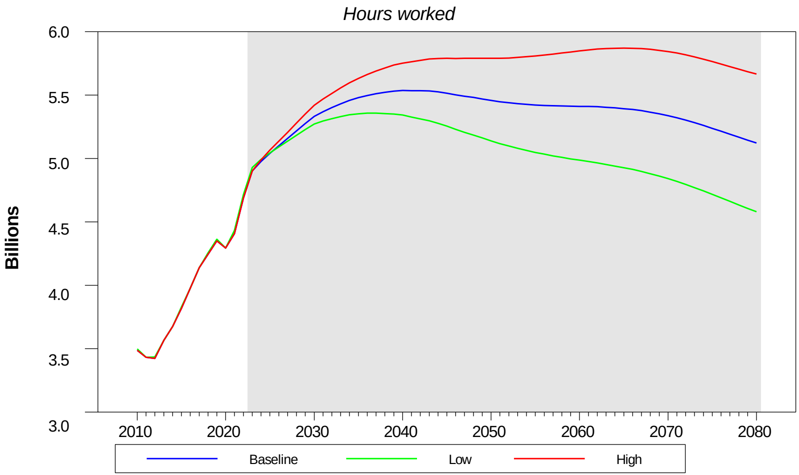
Figure 6

Employment levels



0 Future Irish Hours Worked

Figure 7



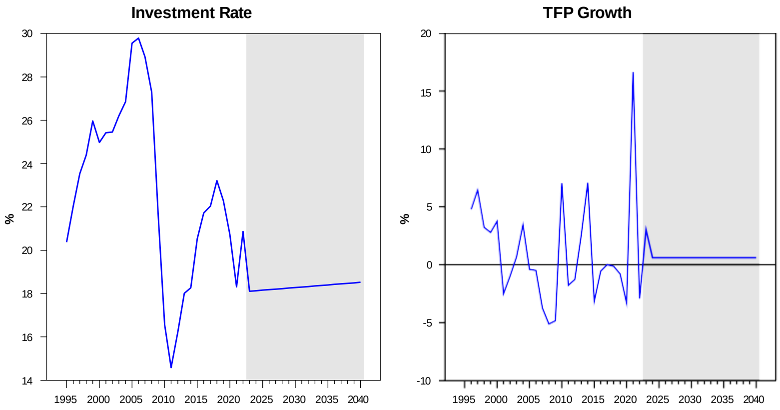
0 Longer-Run Outlook

- Model and underlying assumptions:

$$
\begin{aligned}
Y_{it} &= A_{it}K_{it}^{\alpha}L_{it}^{1-\alpha} \\
K_{it} &= (1-\delta)K_{t-1} + I_{t-1} \\
L_{it} &= (1-U_{it})(PART_{it} \times WorkPop_{it}) \times H_{it} \\
I_{it} &= s_{it}Y_{it} \\
\Delta \log A_{it} &= g
\end{aligned}
$$

Figure 8

Baseline Investment and TFP Assumptions



0 Baseline Irish Growth Forecasts (%)

Table: Baseline Irish Growth Forecasts (%)

	2024-2030	2030-2040	2040-2050
Output	2.0	1.5	1.1
Output Per Hour	0.8	1.1	1.2

Note: Average annual growth rate for the period in question.

0 Scenario Analysis

- Impacts of future different population forecasts?

- Different migration levels have implications for labour supply
  $L_{it} = (1 - U_{it})(PART_{it} \times WorkPop_{it}) \times H_{it}$

- Along with baseline forecast,
  - High and low migration scenario

0 Investment Scenario analysis

- Greater rates of investment in the Irish economy?
- Significant fall-off in capital investment between 2009 - 2017
- Barrett and Curtis (2024) highlight infrastructural deficits
- Recent EU level report (European Commission (2024))
  1. Additional investment of EUR 750 to 800 billion is needed
  2. 4.4-4.7 per cent of EU GDP in 2023
- Increase EU investment rates from
  - 22 per cent of GDP today to around 27 per cent
- Therefore, we propose two scenarios:
  1. investment rate grows to 25 per cent of output by 2030 and
  2. to 30 per cent of output by 2033

0 Scenario Investment Rates

Figure 11

Scenario Investment Rates

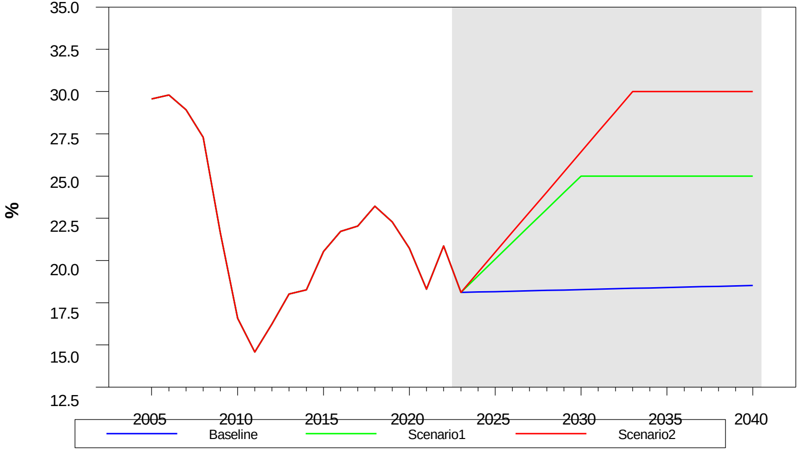


Table: Output Growth Rates under Baseline, Migration and Investment Scenarios (%)

	Baseline Migration	Low Migration	High Migration
	Baseline Investment		
2024 - 2030	2.0	1.9	2.2
2030 - 2040	1.5	1.3	1.7
2040 - 2050	1.1	0.8	1.2
	Investment Scenario 1		
2024 - 2030	2.4	2.2	2.6
2030 - 2040	2.1	1.9	2.3
2040 - 2050	1.3	1.1	1.5
	Investment Scenario 2		
2024 - 2030	2.5	2.3	2.6
2030 - 2040	2.4	2.2	2.6
2040 - 2050	1.6	1.3	1.7

Note: Average annual growth rate for the period in question.

0 Key Results and Policy Implications

- Lower growth rates seem more likely over the coming period
- Scenarios indicate that increasing population and investment
  1. Could increase output by over 1 per cent per annum
  2. Higher investment could add up to 1 per cent itself
- Lower pace of total factor productivity growth a concern
  - Acts as a significant drag on output per worker
- Policies should address the following
  1. Boost productivity amongst domestic indigenous firms
  2. Consistent rates of investment in the domestic economy
  3. Policies should offset the implications of “demographic drag”
- Policies not necessarily mutually exclusive

0 Some Final Thoughts

- Historic growth rates mainly driven by
  1. Increased population and hence
  2. Greater labour input
- Strong labour demand
  - Provided by multinational (MNE) sector
- In the future:
  - Maintaining constant growth and improved living standards
- Will be challenging and require imaginative policy response
- As other jurisdictions have struggled with these
  - Low TFP growth
  - McQuinn and Whelan (2008, 2016, & 2018)

A better life with Irish Life

Growth Rate Implications for our industry

Key impacts (and opportunities) for our industry

Projections that will influence the Life, Pensions and Investment Industry:

- Demographic Drag
- Labour Market Decline
- Moderated Growth

Impact 1

Pension provision and retirement planning for an ageing population

Impact 2

Life and health insurance needs with greater longevity

Impact 3

Consumer demand and sentiment into the future

Irish Life

Key implications for our industry

Pension and Retirement Implications

- Demographic drag only increases pressure on pensions system.
- Projected labour market figures a big impact. By 2052 estimated the Old Age Dependency Ratio will be 2 working people for every retiree.
- Dampened economic growth likely to impact Sate Pension provision into the future with knock on implications for private pension provision.
- 800,000 people without pensions eligible for auto-enrolment but experience in UK is that rate of savings still low. This is a multi year challenge. Its a good start but alot to be done!
- Retirement preparedness an ever growing challenge. Average pension savings not sufficient (regrets) with higher life expectancy and many renting into retirement.
- Workplace trends of more contract work and shorter tenures impacts complexities of retirement planning and potential for multiple pots.

Key implications for our industry

Life and health insurance needs for greater longevity

- Longevity a key theme for life insurance and health provision.
- More pressure on Healthcare provision and greater need for care. Currently 1 in 8 people in Ireland provide care to family, friends and strangers *.
- More government investment needed in healthcare system and nursing home provision.
- Life and health products need to evolve to account for care needs in later life.
- Estate planning also a factor as intergenerational wealth transfer grows
- We are still an under insured country – just 1 in 2 adults have life cover beyond their Mortgage Protection

*source

Key implications for our industry

Consumer Demand and Sentiment

- Consumer Sentiment heavily influenced by market sentiment including economic growth projections, impacts investment engagement and persistency.

- Demographic shifts, movement of life milestones and home ownership impacting overall product demand and timing.
    - 38 median age of first-time joint house buyers. 42 for solo buyers.
    - ESRI research* estimates 65% of those aged 35-44 will be homeowners at retirement compared to 90% of over 65's today.

- Consumer confidence about finances remains cautious and overall knowledge remains low. Our research shows just 20% of people feel very knowledgeable about finances and they are typically older.

*source

The challenges we have to meet

Close the Advice Gap

- Almost 60% of adults in Ireland haven't had formal financial advice through an adviser, broker or bank in the last three years.
- 1 in 4 people turning to social media for general financial advice.
- Just 30% of people getting advice at retirement.
- 1 in 3 people say they don't know how to access financial advice.

(Irish Life Research, Red C 2024)

Support the under covered

- Life insurance gap remains, with 1 in 2 without cover outside mortgage protection.
- Support the 800,000 without pensions to make the best decisions for their circumstances.
- Encourage more active engagement with retirement planning as early as possible.
- 88% of the savings (€178bn) held by Irish households are sitting in accounts earning close to nothing, EU average is 55%
- Women have lower rates of product ownership.

Grow Awareness and Literacy

- 43% of Irish adults do not meet the minimum OECD level of financial literacy needed to manage their finances effectively day-to-day.
- 1 in 8 can only cover their costs for a month or less in the event of an income shock. (CCPC, 2024)
- Inertia remains a big challenge with many people knowing they need to plan their finances but haven't because of time/effort.

We can meet these challenges by prioritising consumer education, behavioural nudges, technological innovation (including AI) and digital ease.

Irish Life

Thank You

Q&A