

South Africa's long-term fiscal choices

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National Treasury
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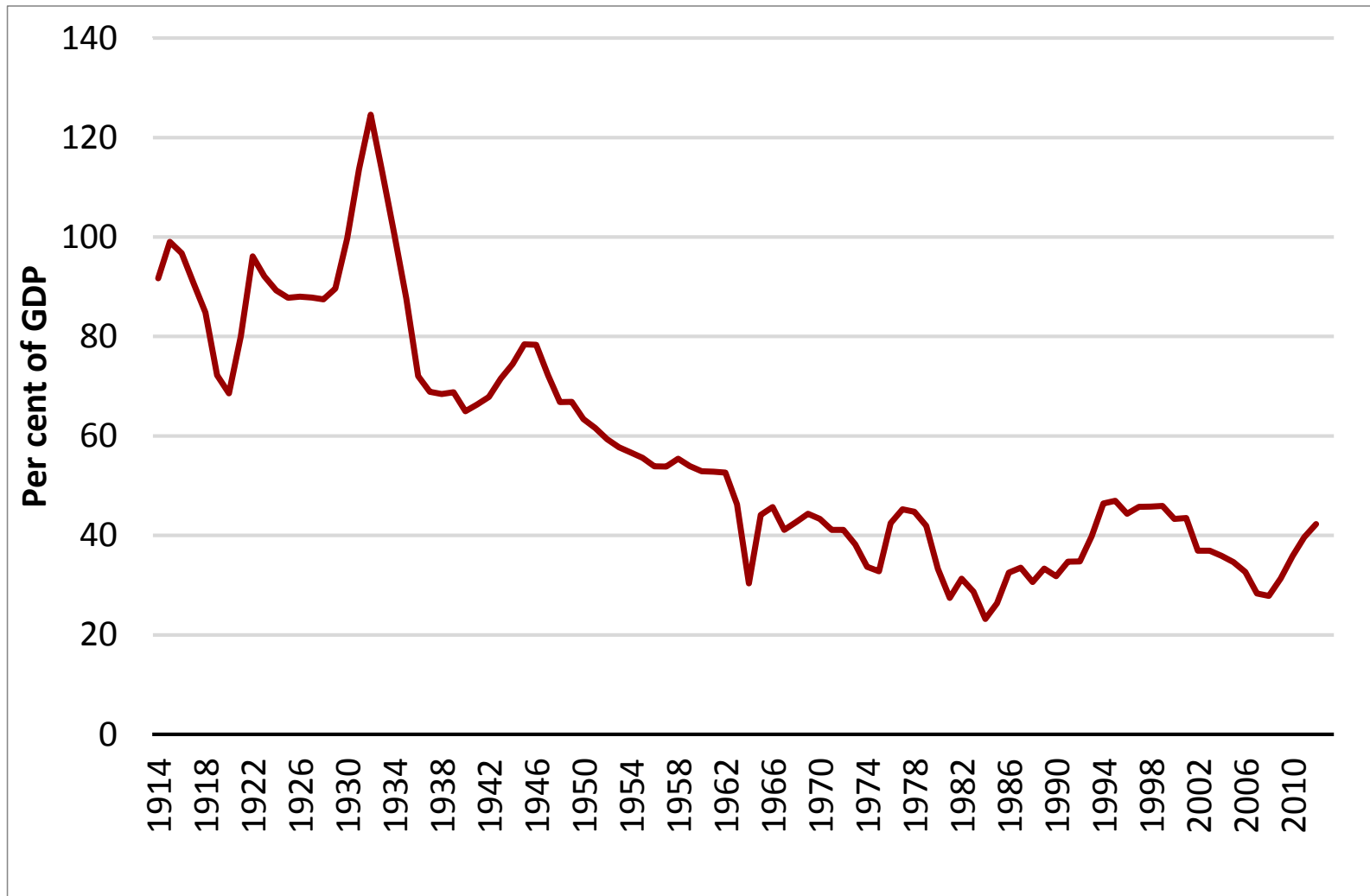
Background to public sector sustainability



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Gross national debt over 100 years



Source: Rogoff and Reinhart dataset

Defining sustainability: which liabilities?

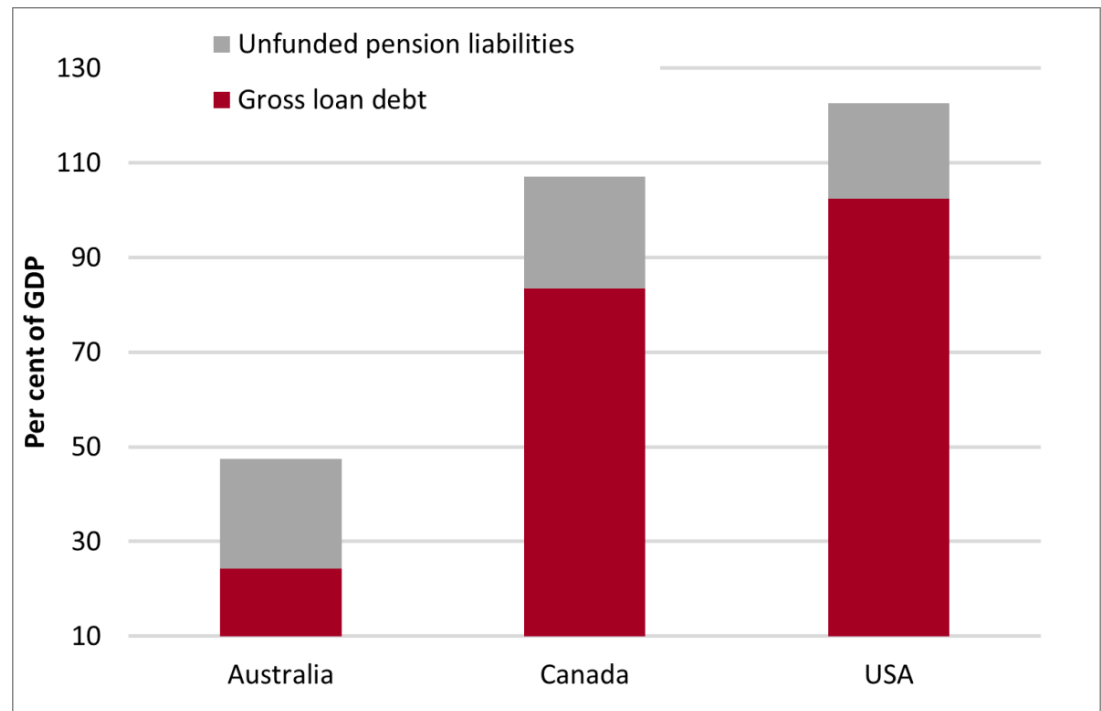
- Due to accounting conventions, some liabilities are included, while others are ignored.
- In South Africa, the government employees pension fund has R1.4 trillion in assets under management.
- According to the fund's actuaries, it is more than fully funded on a best-estimate basis

Per cent of GDP	2006	2008	2010	2012	2014 (est)
GEPF assets (fair market value)	30.9	31.3	30.1	32.9	37.4
GEPF liabilities (actuarial)	24.1	27.2	27.7	32.1	32.3
Net position	6.8	4.1	2.4	0.9	5.0

Unfunded pension liabilities (SNA 2008 method)

- Many other countries have large unfunded pension liabilities.
- Australia has an unfunded pension liability of over 24 per cent of GDP
- Australia's gross debt is lower than South Africa's. But once unfunded pension liabilities are included it is higher.

National debt and unfunded pensions liabilities, 2011



Source: IMF Fiscal Monitor (April 2014)

Defining sustainability: which assets?

- Social security funds hold large surpluses, with the UIF projecting an accumulated surplus of R73 billion for 2013/14
- In total, social security funds have assets that far exceed their liabilities, although the Road Accident Fund still has a negative net asset position.

Social security funds, 2010/11 – 2016/17

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
	Outcome			Revised estimate	Medium-term estimates		
R million							
Unemployment Insurance Fund							
Revenue	13 878	15 206	16 532	20 254	21 947	23 664	25 483
Expenditure	6 435	6 780	7 287	9 207	11 490	14 485	15 599
Compensation funds							
Revenue	6 919	6 177	9 041	10 320	10 919	11 531	12 162
Expenditure	4 032	2 569	2 383	3 521	4 530	4 849	5 158
Road Accident Fund							
Revenue	14 339	16 472	18 116	20 361	22 390	24 384	26 451
Expenditure	13 857	13 364	16 217	20 262	24 019	27 155	28 221
Total revenue	35 137	37 855	43 689	50 935	55 256	59 580	64 096
Total expenditure	24 324	22 713	25 888	32 990	40 039	46 489	48 978
Budget balance¹	10 813	15 142	17 801	17 945	15 216	13 090	15 117

1. A positive number reflects a surplus and a negative number a deficit

State-owned company assets

- State-owned company liabilities are of concern, but they are financing asset growth.
- Infrastructure investments have led to a steady increase in the asset base of state-owned companies, from R450.1 billion in 2008/09 to R793.9 billion in 2012/13.

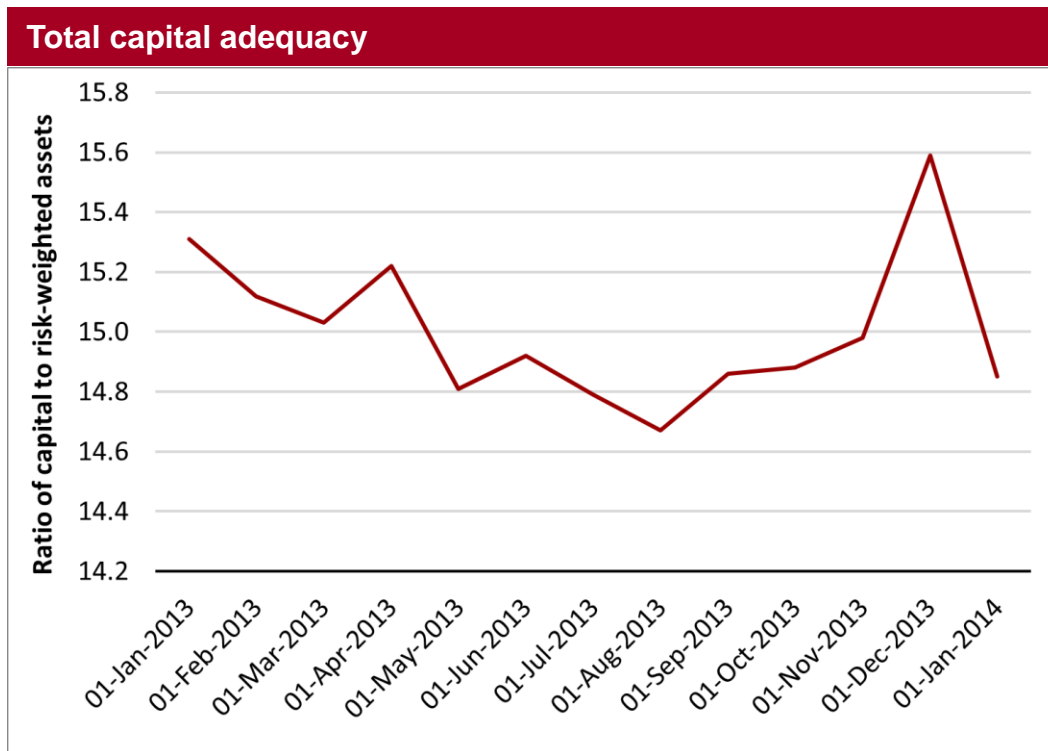
**Consolidated balance sheets of state-owned companies,¹
2008/09 – 2012/13**

R billion	2008/09	2009/10	2010/11	2011/12	2012/13
Total assets	450.1	517.8	639.4	708.1	793.9
<i>% growth in assets</i>	17.7	15.0	23.5	10.7	12.1
Total liabilities	290.6	341.6	442.9	470.6	541.7
<i>% growth in liabilities</i>	26.9	17.6	23.8	11.1	15.1
Net asset value	159.5	176.2	216.5	237.5	252.2
<i>% growth in asset value</i>	3.9	10.5	22.9	9.7	6.2
% return on equity	-4.0	3.8	6.7	7.6	4.0

1. Major state-owned companies listed in Schedule 2 of the PFMA

Financial sector remains well capitalised

- Fiscal risks often involve the transfer of liabilities from the private sector (e.g Spain after 2009).
- In South Africa, the private financial sector is well capitalised, and remains profitable and well regulated.
- In January 2014, South Africa's total capital adequacy stood at 14.9 per cent



Source: SARB

Long term fiscal outlook



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Social spending and three great transformations

“Since the eighteenth century, the rise of tax-based social spending has been at the heart of government growth.

It was social spending, not national defence, public transportation, or government enterprises that accounted for most of the rise in government’s taxing and spending as a share of GDP over the last two centuries.

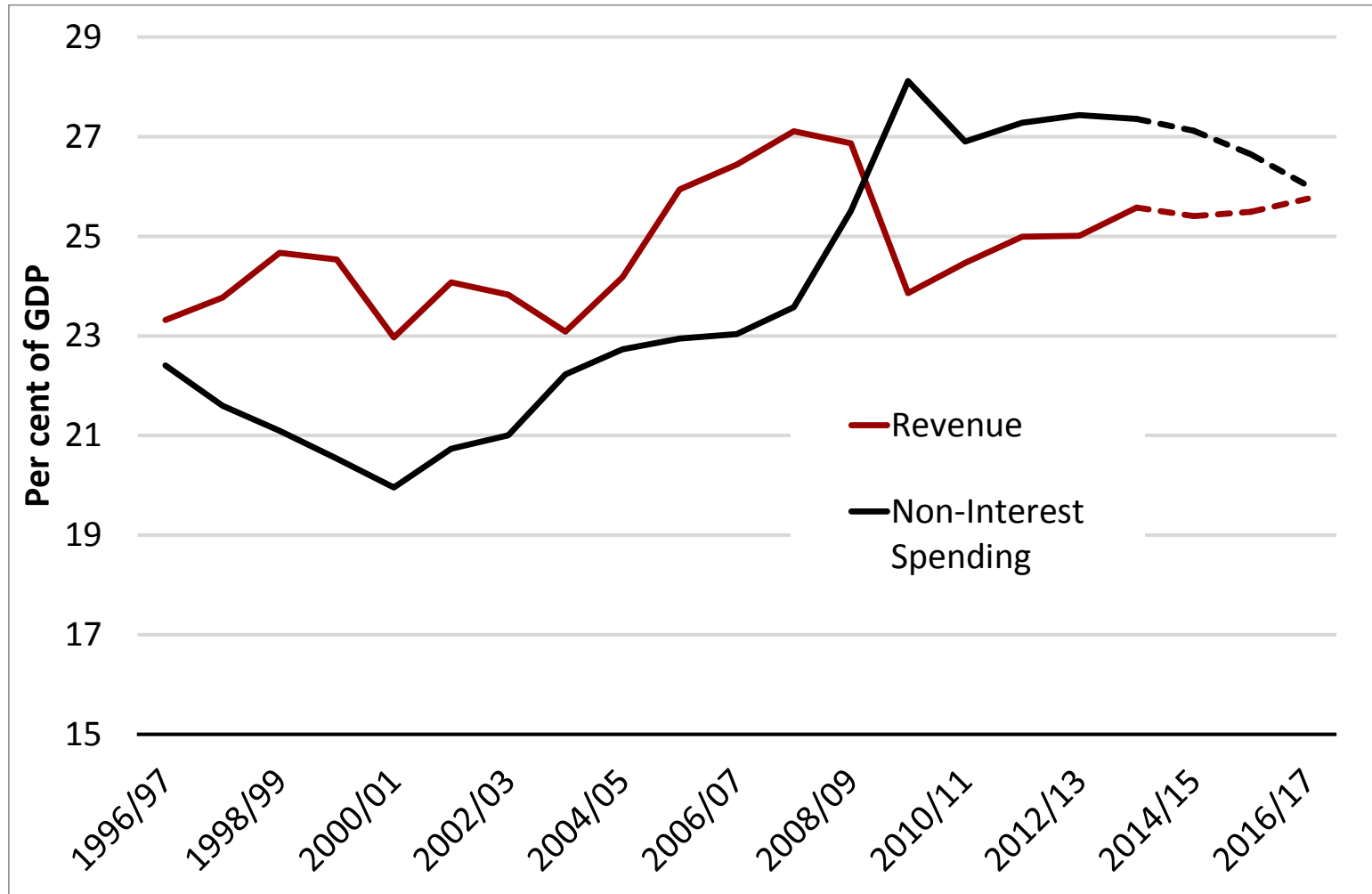
The increasing role of social spending in our lives has been linked to three other great social transformations: the transition to fuller democracy, the demographic transition towards fewer births and longer life, and the onset of sustained economic growth.

Social spending’s share of national product derives its permanence from the likely permanence (we hope) of these three great transformations – that is, of democracy, of human longevity, and of prosperity.”

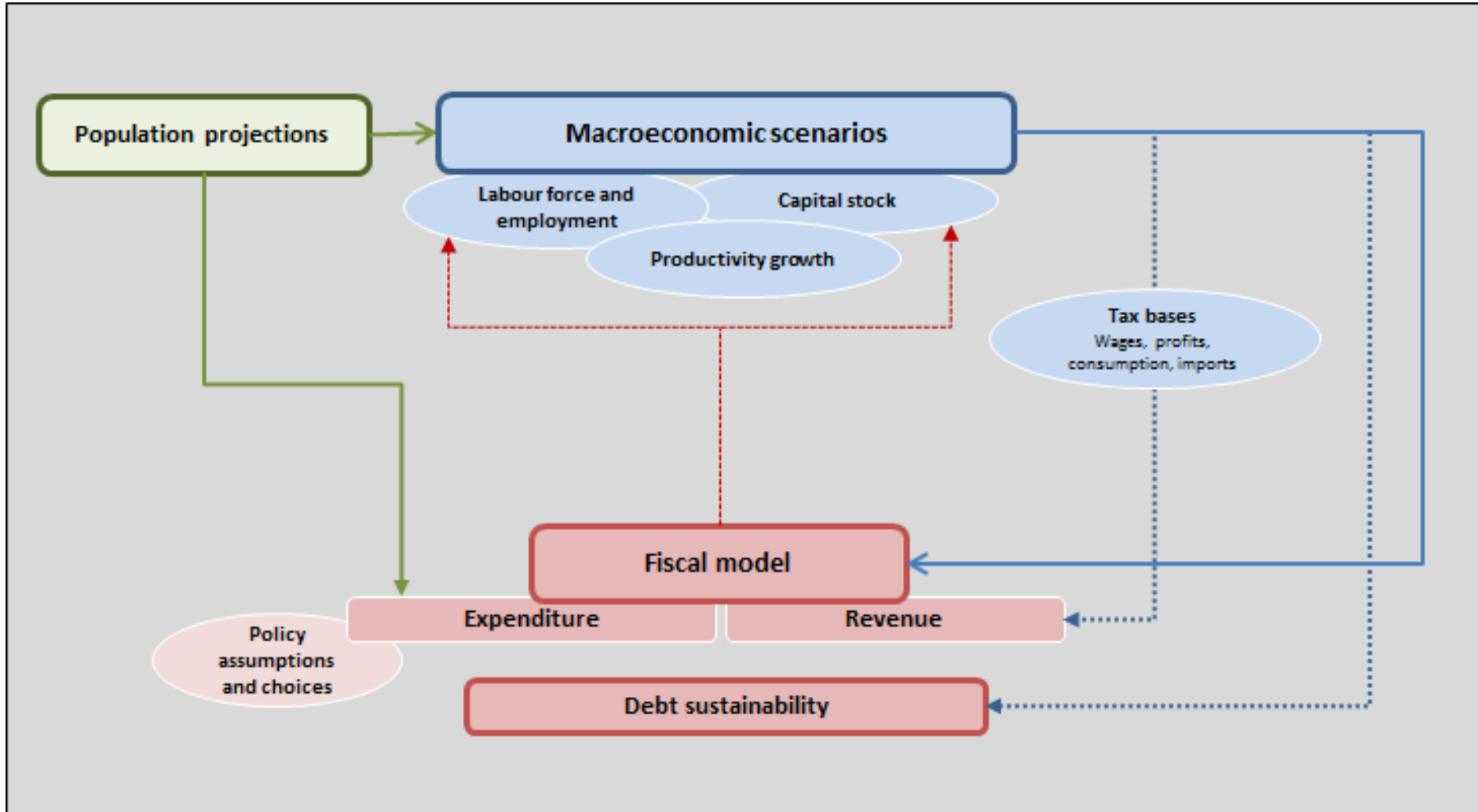
Peter Lindert, *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (2004)



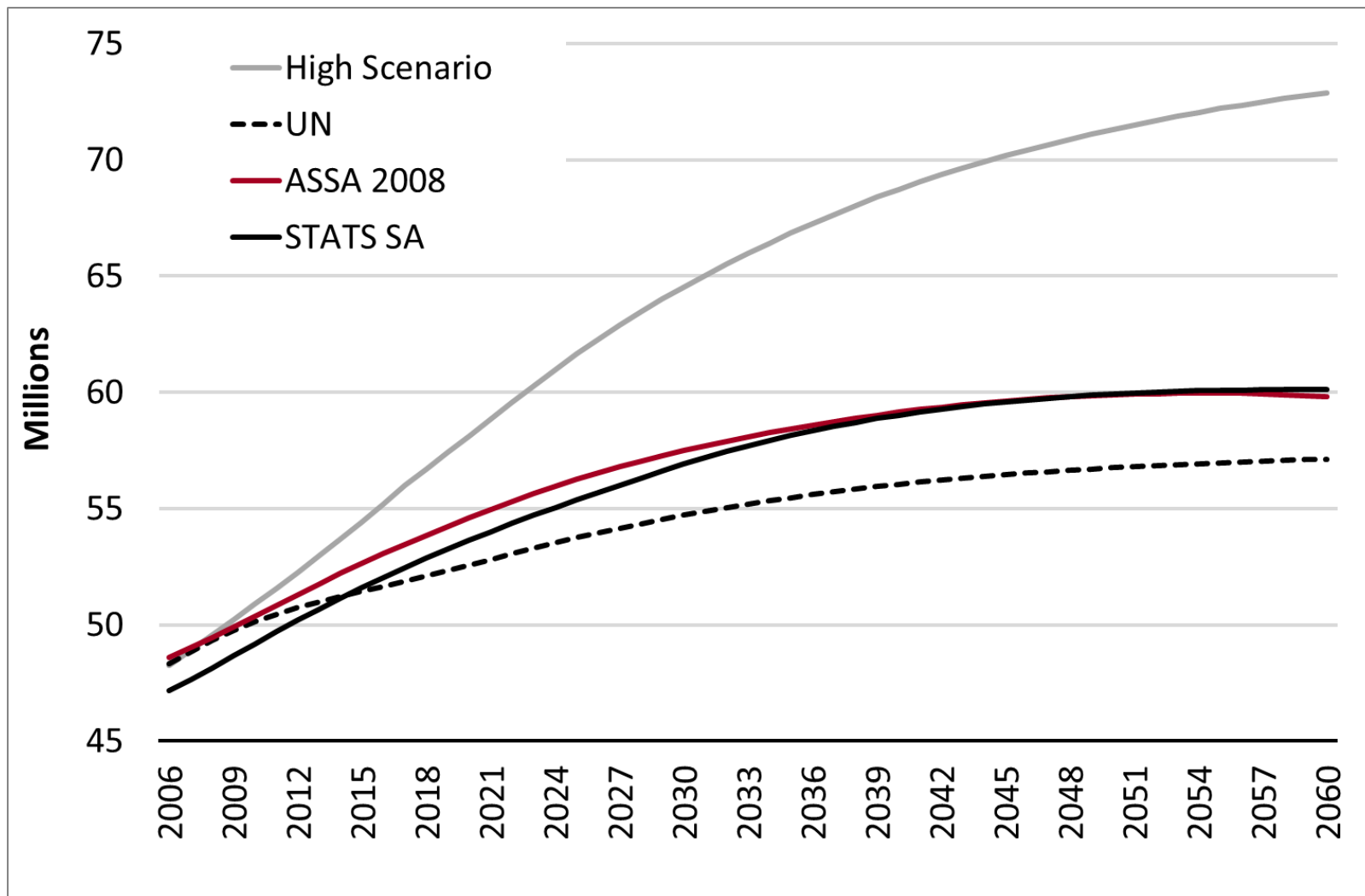
Government spending has grown sharply since the turn of the century



Modelling approach



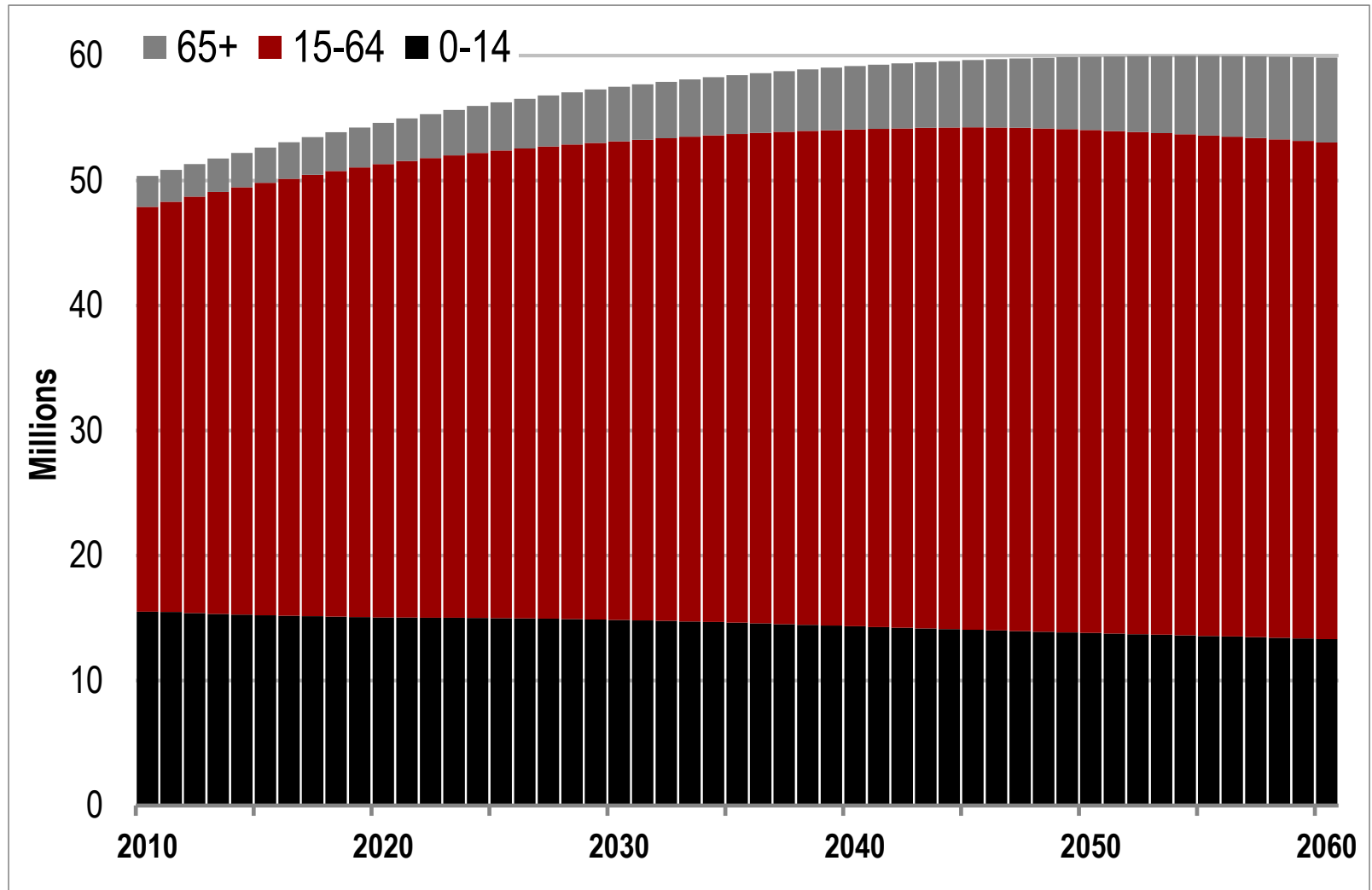
Population projections



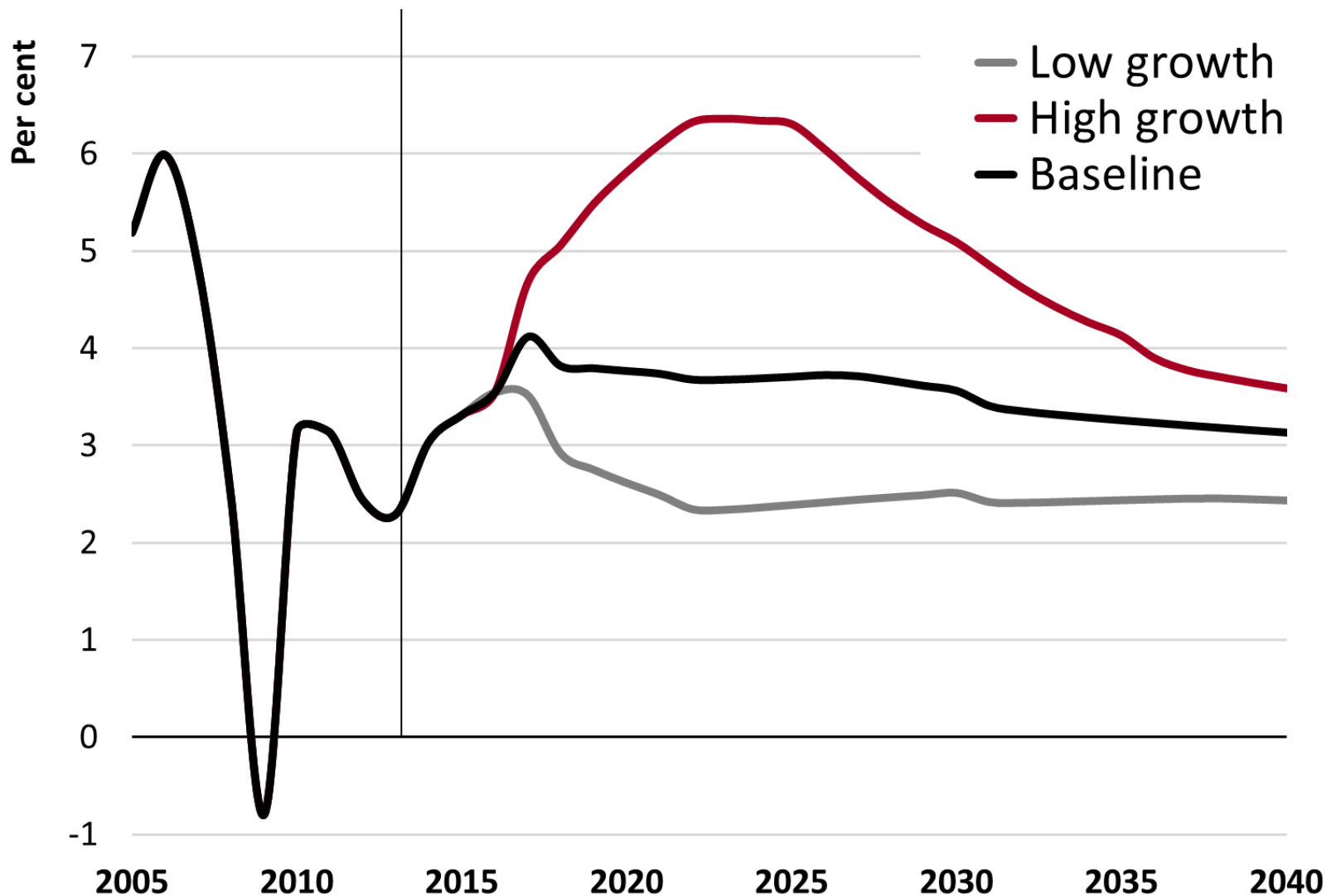
Forecasts, models and their assumptions

- Any forecast is conditional on its assumptions
- Long term projections (both economic and demographic) are highly uncertain
- The ASSA2008 model has not taken account of Census 2011
- Long-term projections “take off” from medium-term forecasts
- In addition to assumptions about growth, demographic change and policy stances, sustainability can be affected by:
 - Adverse macroeconomic conditions
 - Revenue collection
 - Public-sector wages
 - Feedback effects
 - Local government sustainability
 - Public-sector sustainability

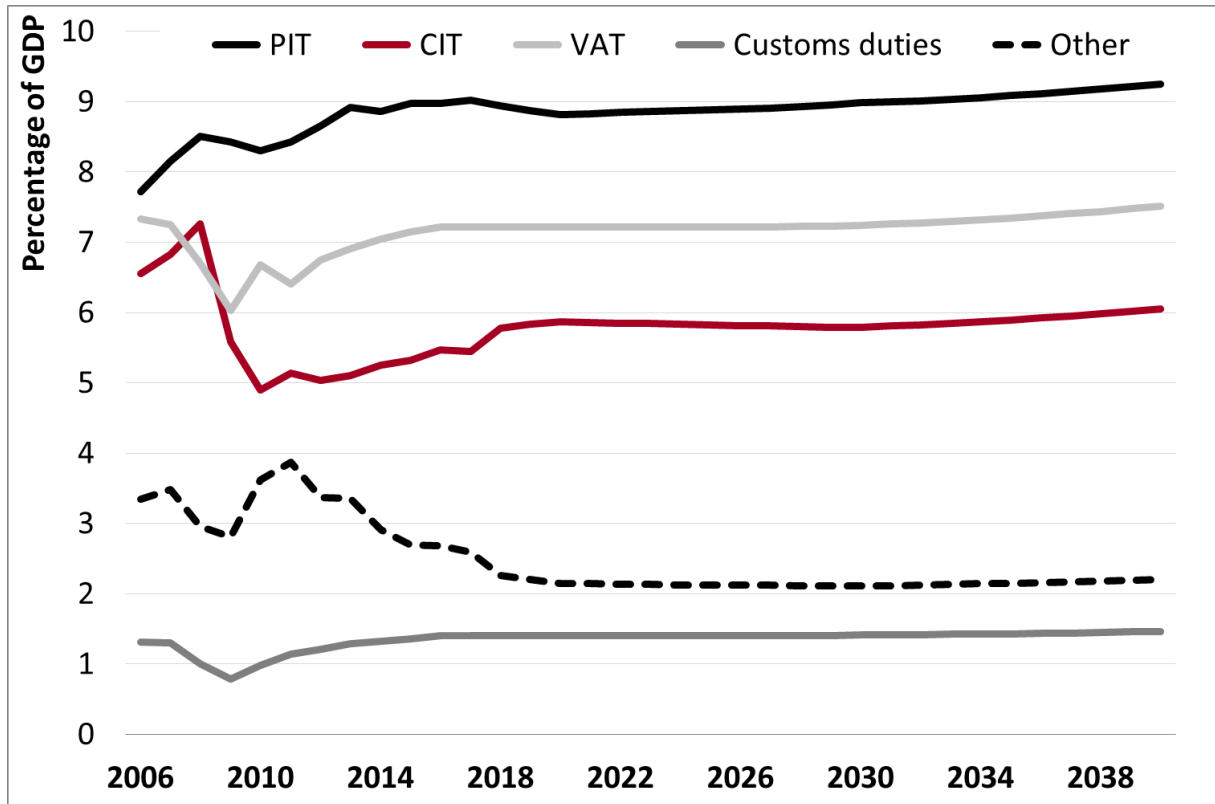
Population projections (ASSA2008)



Three economic scenarios



Tax Revenue

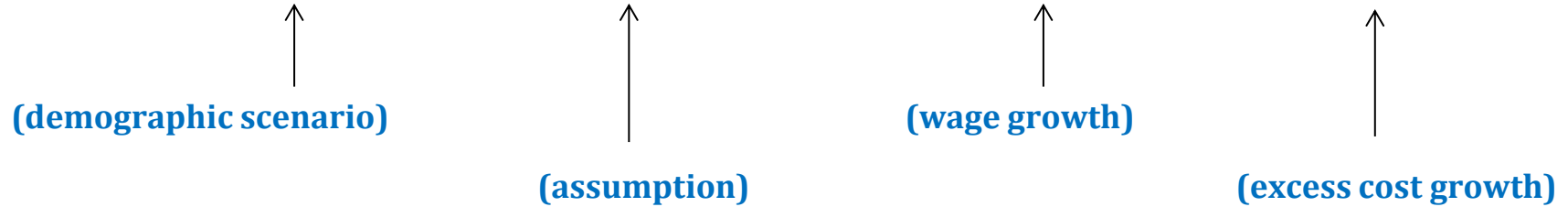


The model assumes that taxes remain relatively stable as a percentage of GDP over the long term. This is a strong assumption for an economy undergoing structural change.

Social expenditure models

Basic education

$$\text{BasicEd} = (\text{Number of pupils})(\text{average teacher:pupil ratio})(\text{average wage}) + (\text{nonwage component})$$



Social grants

$$\text{Grant expenditure} = (\text{Grant})(\text{Uptake rate})(\text{Grant value})$$

Higher education

$$\begin{aligned} \text{HigherEd} = & (\text{Number of university students})(\text{Average cost per university student}) \\ & + (\text{Number of vocational students})(\text{Average cost per vocational students}) \\ & - (\text{Direct charges}) + (\text{Other expenditure}) \end{aligned}$$

Health

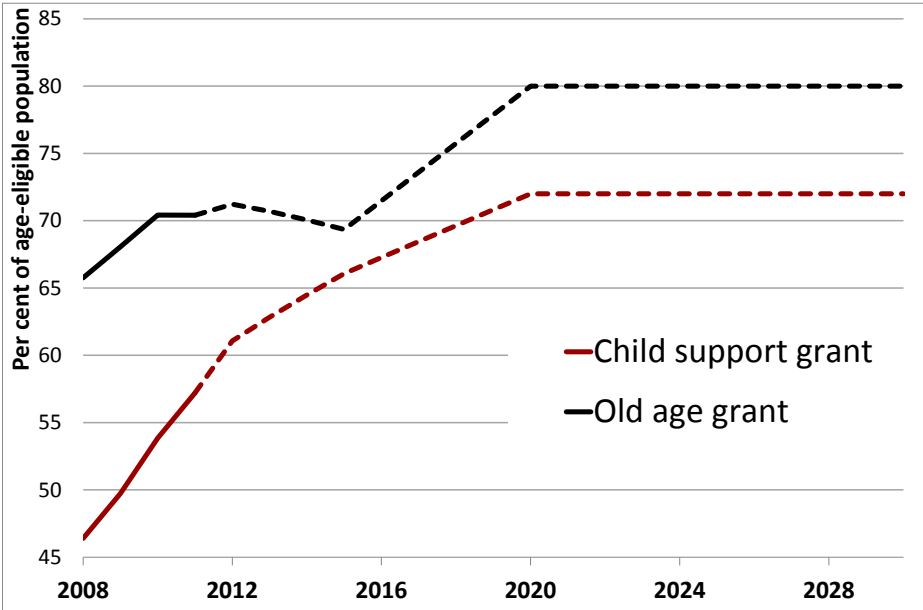
$$\text{Health expenditure} = (\text{Age cohort by gender} - \text{insured population})(\text{Cost per service})(\text{Utilisation})$$

Policy scenarios

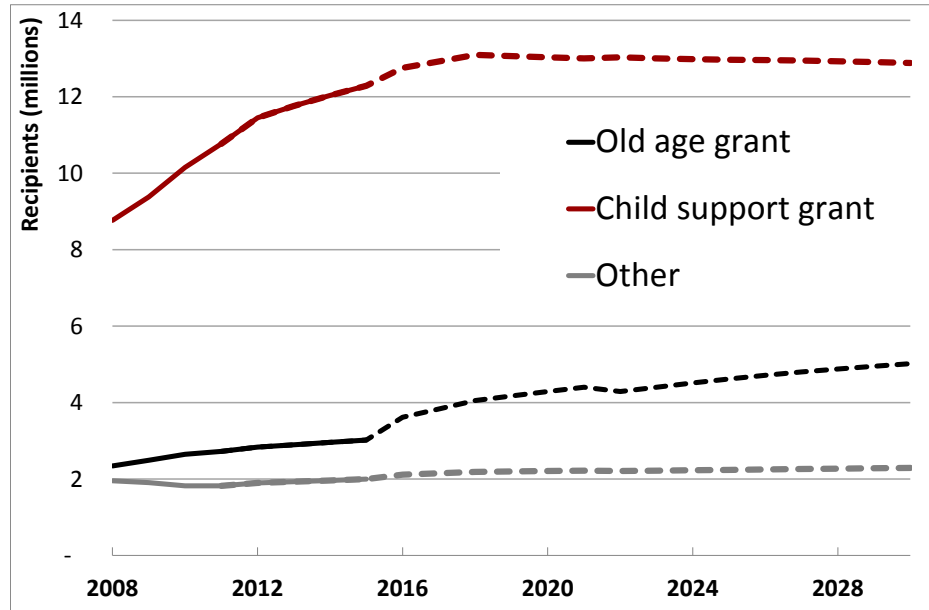
	“No policy change” scenario	Policy change scenario
Social grants	<ul style="list-style-type: none"> Take-up rates increase as access improves, and then stabilise. 	<ul style="list-style-type: none"> Universalisation: raising of means test to tax threshold Take-up rates increase further to threshold rates.
Health	<ul style="list-style-type: none"> Utilisation rates per age group grow moderately 	<ul style="list-style-type: none"> National Health Insurance: significant increases in utilisation rates
Basic education	<ul style="list-style-type: none"> Learner-education ratios decline with falling number of school children 	<ul style="list-style-type: none"> No major policy changes
Post school education	<ul style="list-style-type: none"> Enrolment ratios increase moderately in line with recent trends from 2012 until 2030 	<ul style="list-style-type: none"> Green Paper on post-school education and training; significant increase in enrolment rates

Social grants: assumptions

Take-up rate of age-eligible population



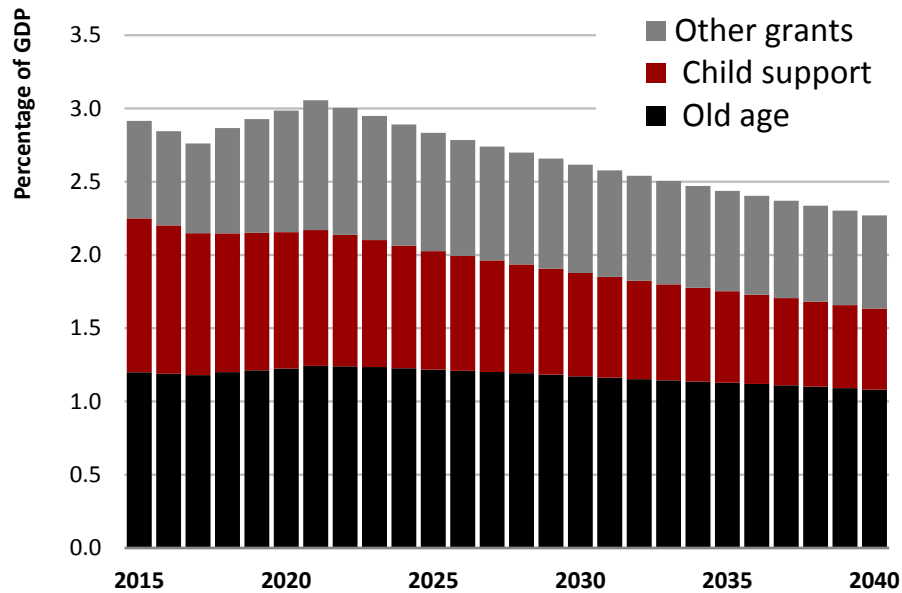
Headcount of recipients of main social grants (actual and projected)



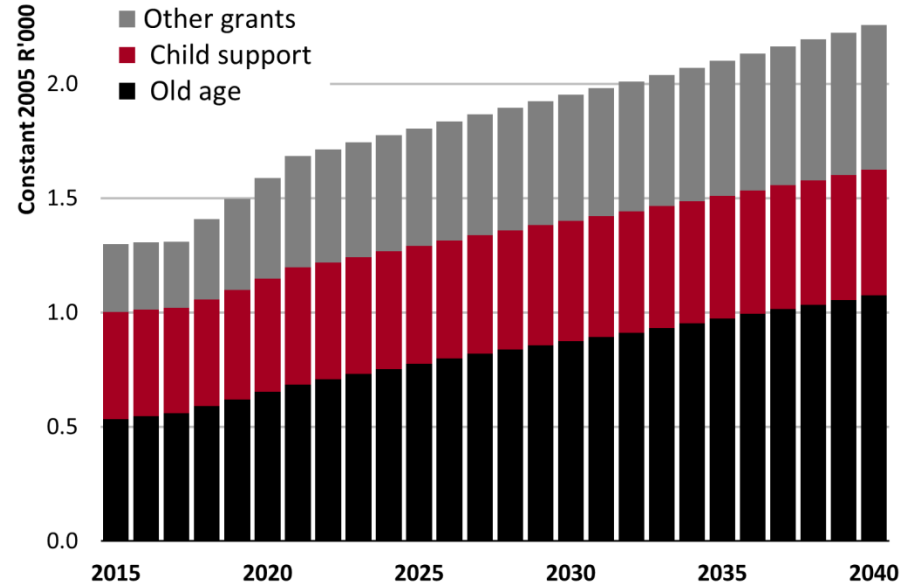
- Current policy: grants have grown at around CPI for the last decade
- Take-up rates of CSG have expanded rapidly, but are stabilising
- In a “universalisation” scenario, take-up rates are assumed to rise even higher

Social grant projection

Projected grant expenditure as a percentage of GDP

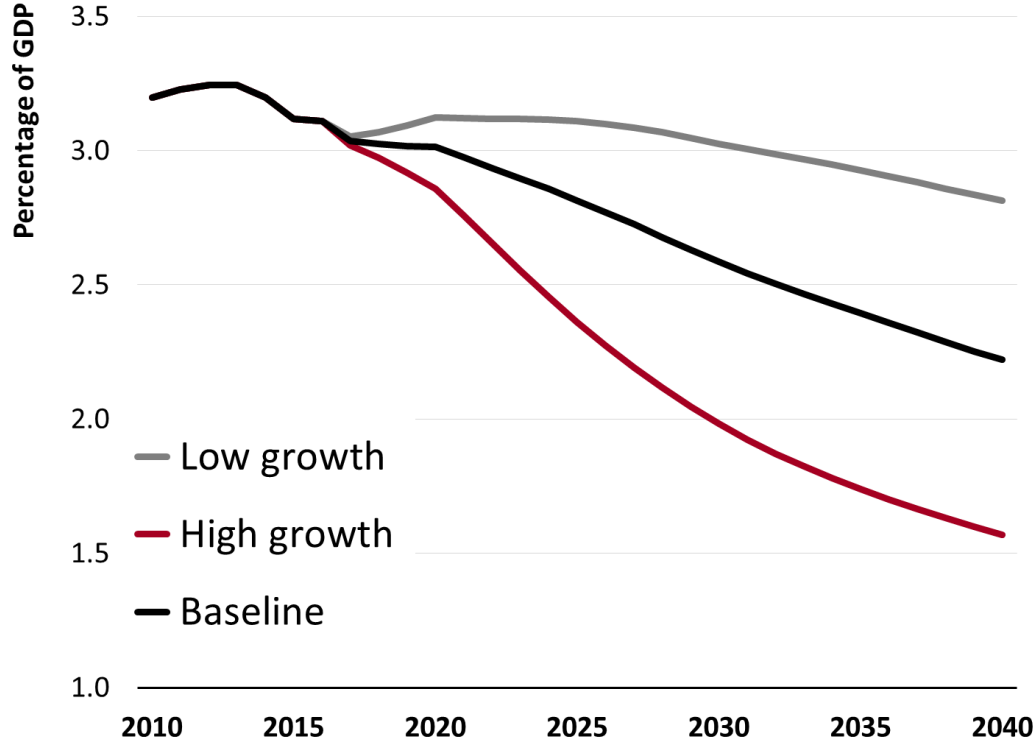


Real grant expenditure per capita

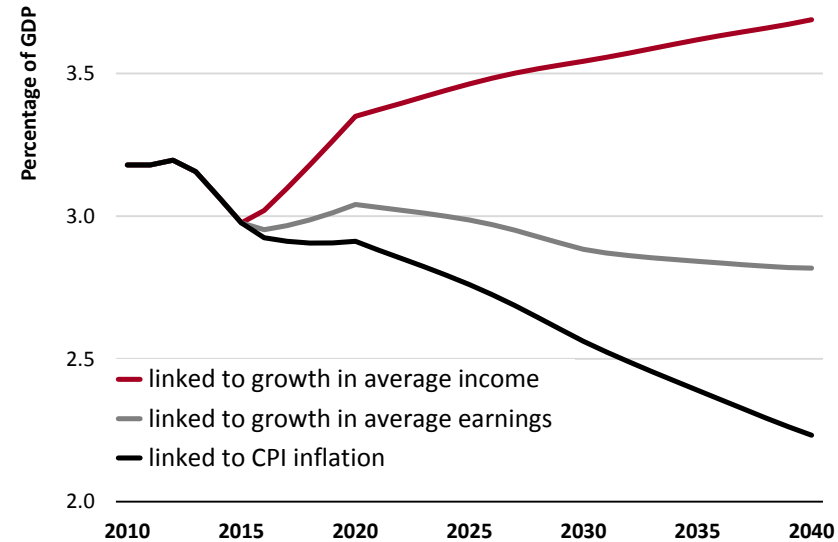


Social grants scenarios

Spending in three economic scenarios

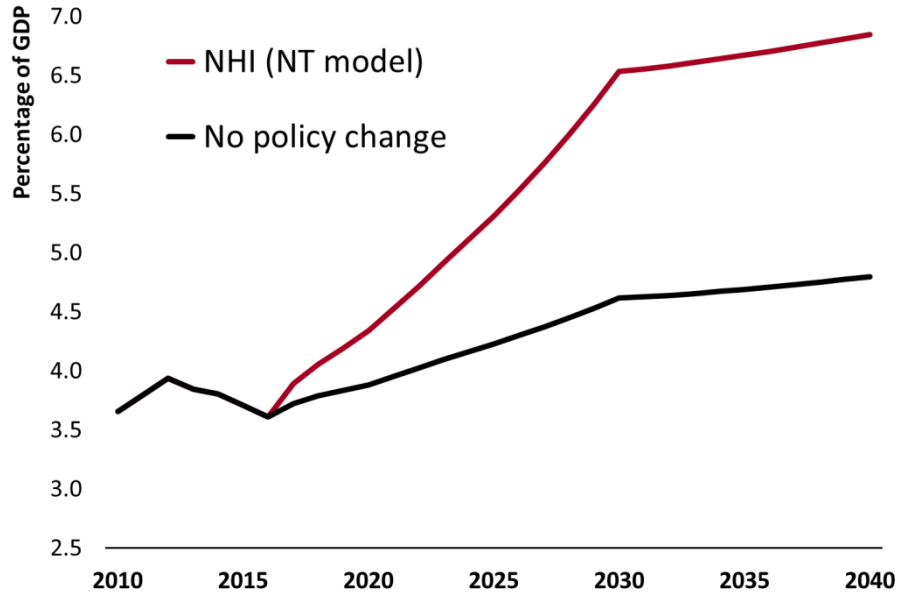


Varying policy on grant increases (in baseline scenario)

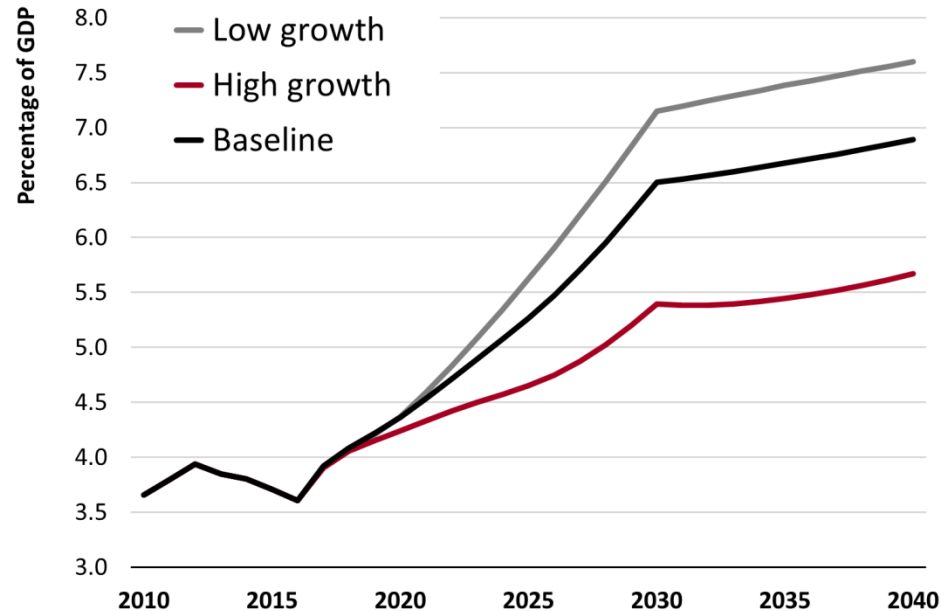


Health care with and without NHI

Public health spending as a share of GDP

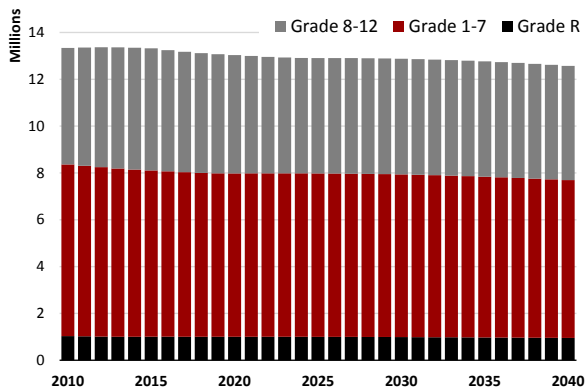


NHI under three economic scenarios

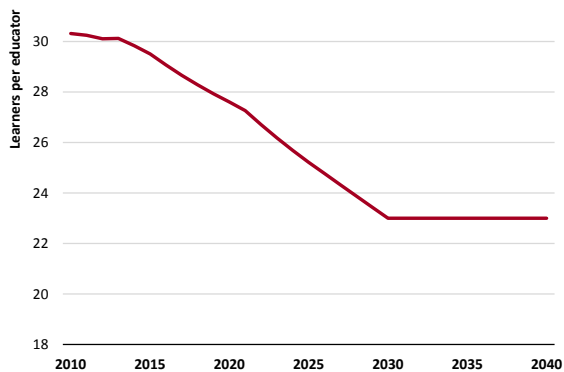


Basic education

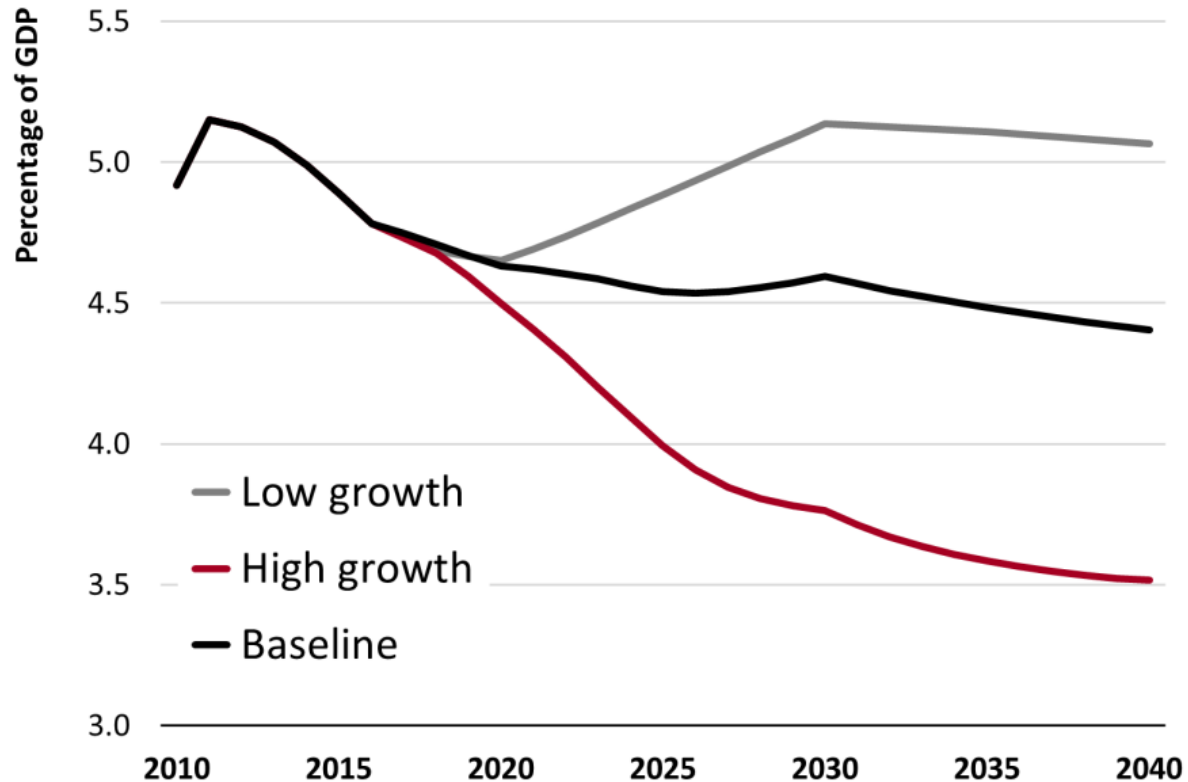
Projected school-age population, 2010 - 2040



Average learner-educator ratio, actual and projected

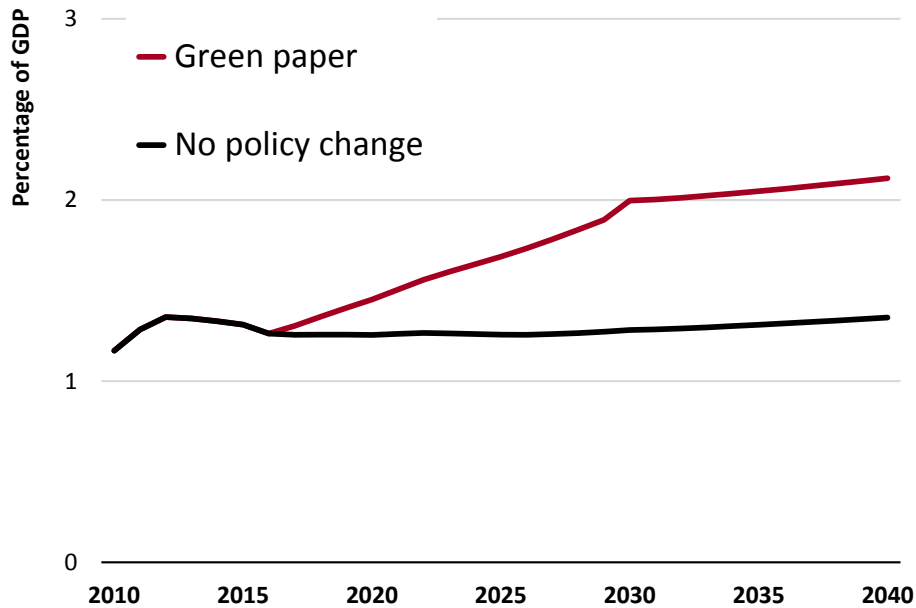


Basic education expenditure in three economic scenarios

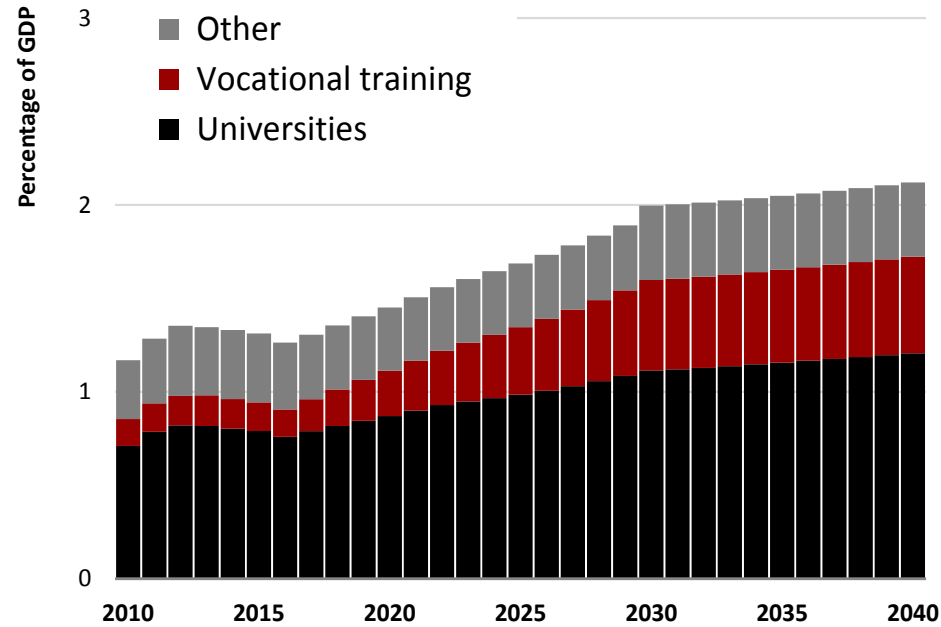


Post-school education

Projected post-school education spending

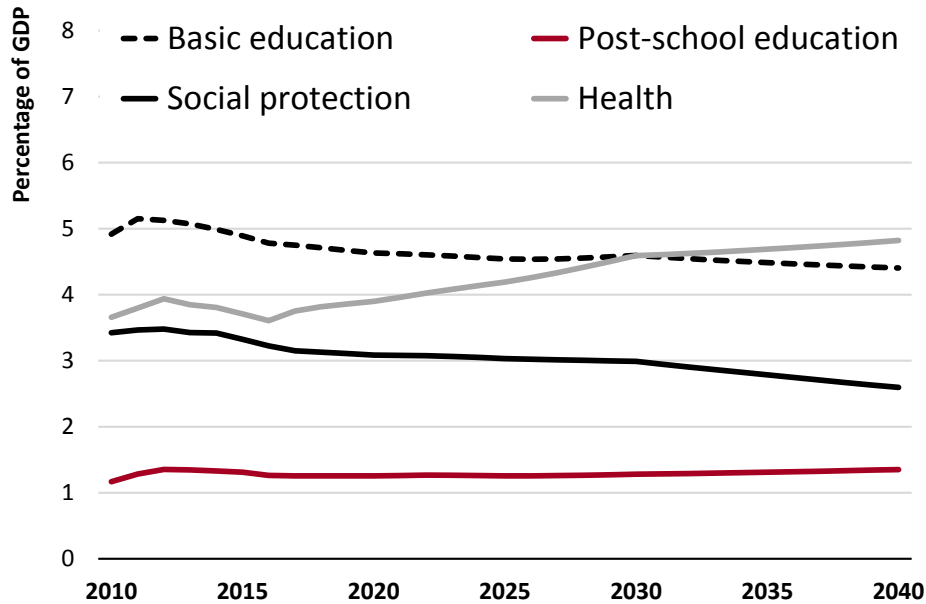


Drivers in growth in spending in the NDP scenario

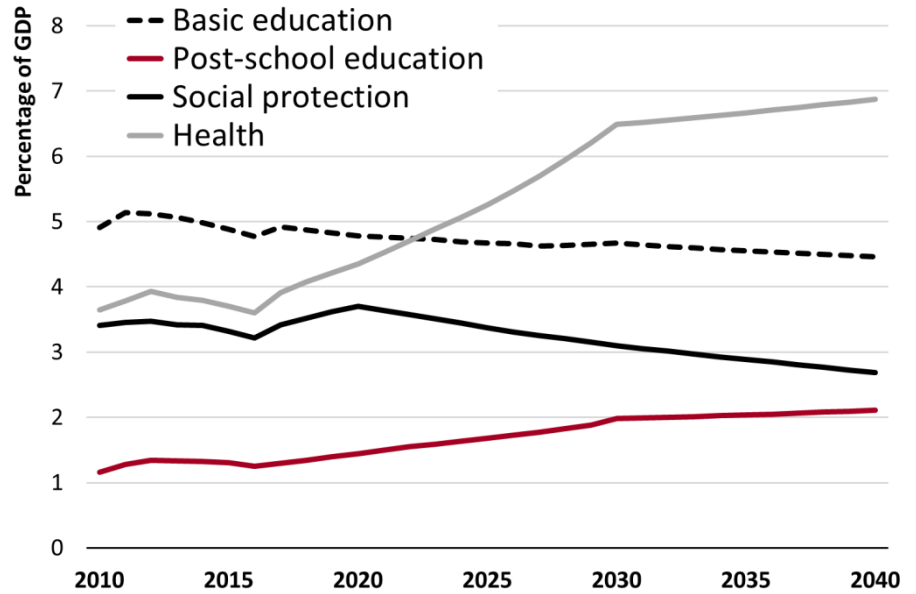


Summary of projections

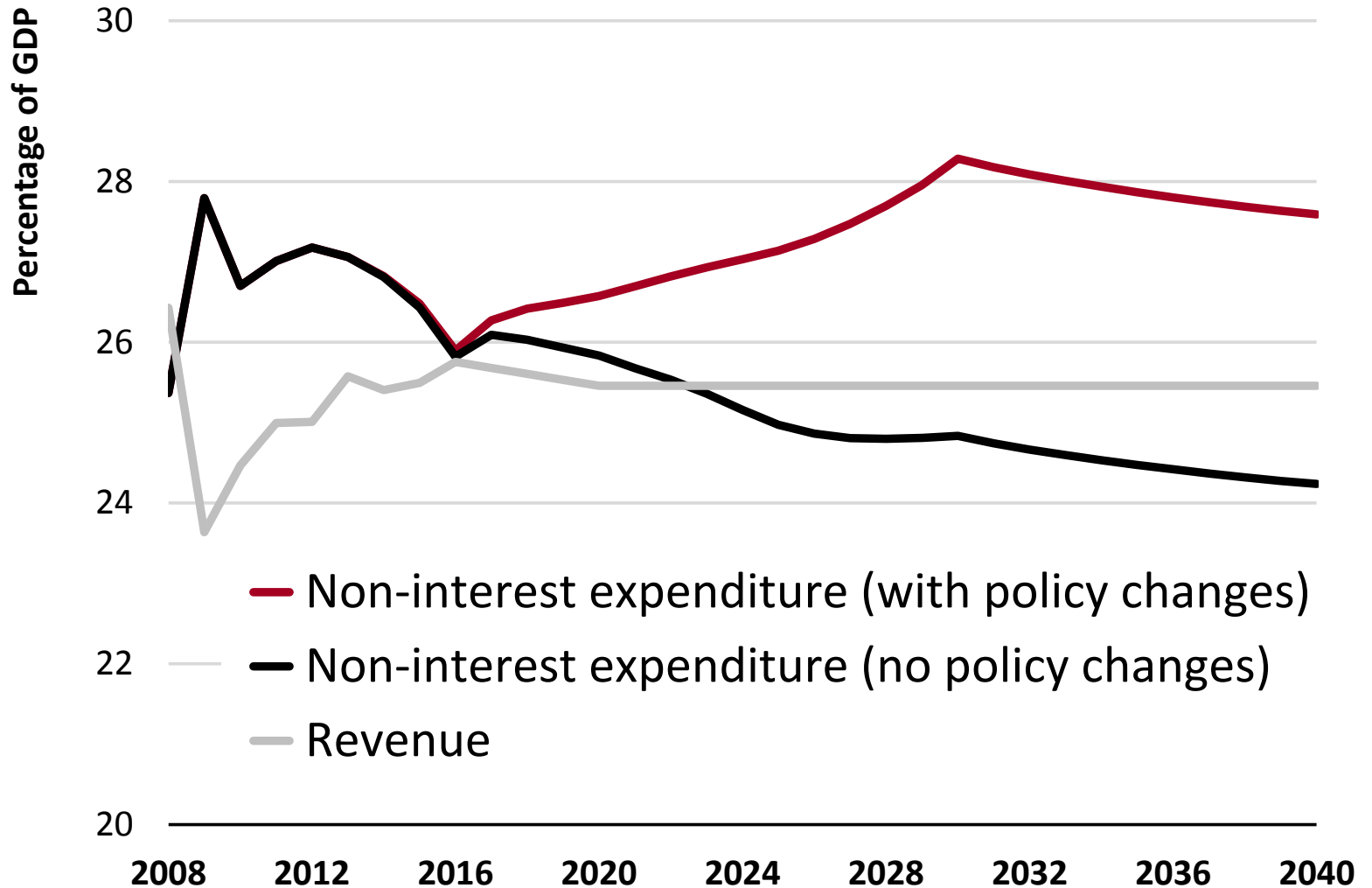
Projected spending assuming no policy change



Projected spending with new policies

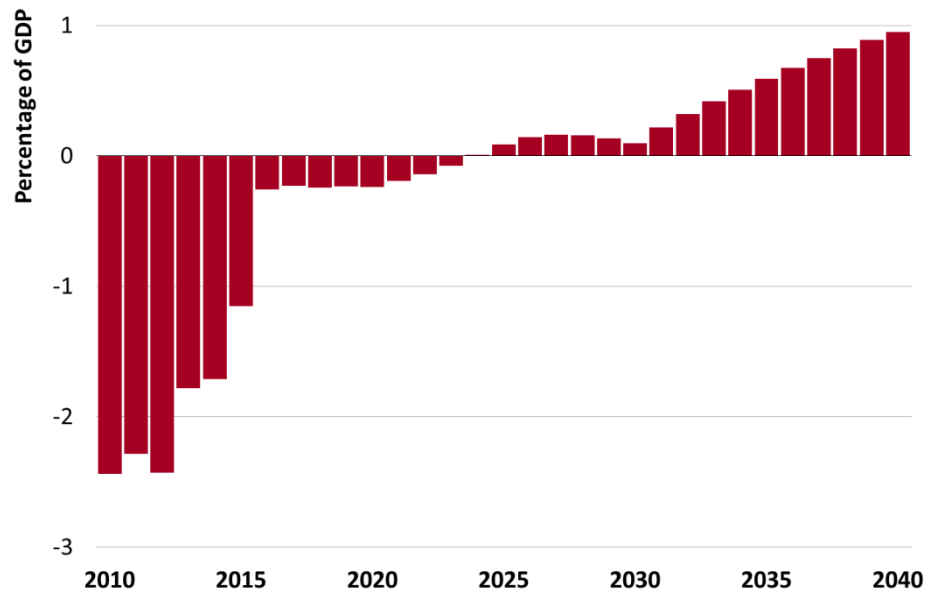


Sustainability with and without new policies

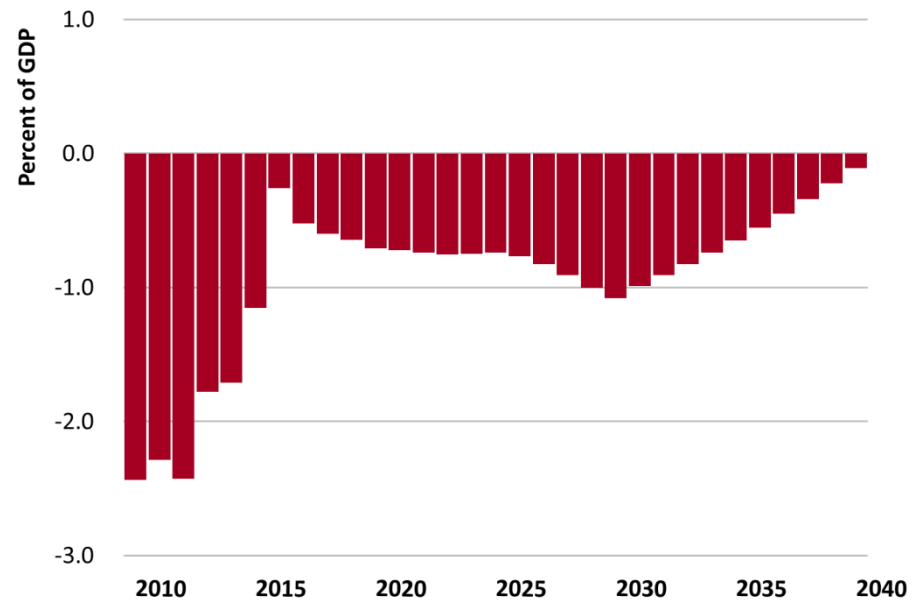


Primary balance

Primary balance (ASSA 2008)



Primary balance (High population growth scenario)



Key conclusions

- Economic and demographic developments are unlikely to render the current level of social spending unsustainable.
- Assuming that policy practice remains consistent with recent years:
 - Social grants will not place significant pressure on fiscal sustainability; in fact they could diminish in fiscal importance.
 - Declining school-age population implies the resources currently allocated to basic education will become increasingly sufficient.
 - Demographic pressures on health-care spending and high growth of utilisation will require greater resources to sustain the current level of service provision
- This implies that government can sustain the (current) social wage beyond the medium term projection.
- However, without faster growth, the path of debt-reduction will not be ideal and the country will remain vulnerable to shocks for years to come.

Key conclusions

- New social policies proposed in the NDP – including NHI, the expansion of vocation training and significant growth of public works employment – will place significant pressure on the fiscus in the coming decades.
- Fiscal sustainability requires that one (or a combination) of the following factors should accommodate structural increases in spending:
 - Acceleration of economic growth
 - Increases in the structural level of taxation
 - Shifting resources from other priorities
- The age-incidence of fiscal policy combined with demographic trends suggest favourable dynamics. However, new spending pressures are most likely to emerge for the young unemployed. Adjustments currently on the public agenda include:
 - Significant expansion of public works
 - Absorbing youth into vocational training
 - Reforms to social grants to include young unemployed.

An annual growth of 1 percent implies major social change

“In my view, the most important point – more important than the specific growth rate prediction... - is that a per capita output growth rate on the order of 1 percent is in fact extremely rapid, much more rapid than most people think.

The right way to look at the problem is ... in generational terms. Over a period of thirty years, a growth rate of 1 percent per year corresponds to cumulative growth of more than 35 per cent...

A society that grows at 1 percent per year, as the most advanced societies have done since the turn of the nineteenth century, is a society that undergoes deep and permanent change.”

Thomas Piketty, *Capital in the Twenty First Century* (2014)

Thank you



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Issues and drivers of spending projections

- **Key drivers of spending projections**
 - Population growth and demographic structure
 - Take-up rates, enrolment, utilisation and access
 - Economic growth and per capita income
 - Wages, prices and excess cost growth

- **Difficult issues**
 - Census, 2011
 - Forecasts vs. projections
 - Projecting from a time of deep structural change
 - Medium-term forecasts and transition to long term projections
 - Defining ‘unchanged policy’ assumption
 - Policy intent vs. policy practice
 - Recent growth rates or share of income
 - Time horizons: ‘short long-term’ vs. ‘long long-term’
 - Feedback effects
 - Income distribution and poverty levels

Economic assumptions

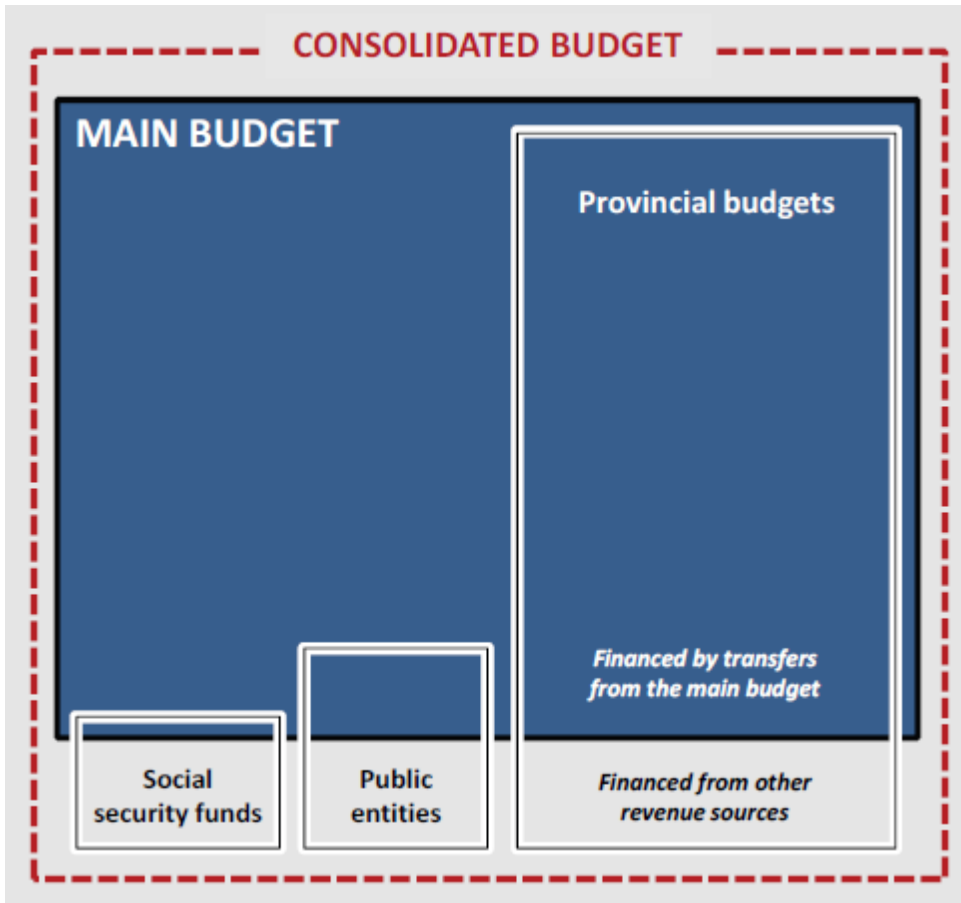
Cobb-Douglas production function used to calculate GDP

$$Y = A \cdot L^{\alpha} \cdot K^{\beta} \quad (\alpha = 0.55; \beta = 0.45)$$

Baseline real GDP growth is roughly 3.5%, reflecting historical trends:

	Baseline	High	Low
Total Factor Productivity (TFP) growth	1.3%	1.5%	0.8%
Private-sector gross investment	13%	20%	11%
CPI inflation	4.5%	4.5%	4.5%
GDP inflation	4.5%	4.5%	4.5%
Real interest rate	3.5%	4.0%	3.0%
Labour intensity of growth	0.45	0.65	0.4
Labour force participation rate	58%	65%	58%
Long-run structural rate of unemployment	7%	3%	7%

Fiscal coverage



- Report covers the **main budget** or expenditure funded from the national revenue fund
- Excludes local government and entity expenditure not funded from national revenue (small percentage of total)
- State-owned company investment and borrowings are calculated separately

Main budget revenue

- Taxes are estimated using a 'bottom up' approach

$$Gross\ tax_t = \Sigma (tax\ base * historical\ effective\ tax\ rate)_{i,j}$$

- Tax base forecasts come from simplified national accounts
 - Compensation of employees (PIT)
 - Gross operating surplus (CIT)
 - Household consumption (VAT)
 - Imports (customs duties)
- All other taxes remain constant as a percentage of GDP

Tax bases

- **Compensation of employees (PIT)**

Wage bill = Average wage * number of employed

- **Gross operating surplus (CIT)**

GOS = NOS + depreciation

NOS = GVA – compensation of employees – depreciation

- **Household consumption (VAT)**

Marginal propensity to consume * GDP

- **Imports (customs duties)**

Grown in line with GDP

- **Total tax stabilises at roughly 25.5 per cent of GDP**



Fiscal sustainability

- National debt-to-GDP (d_t) projected using the standard debt dynamics equation:

$$d_t = \frac{(1+r_t)}{(1+g_t)} d_{(t-1)} - pb_{(t)}$$

- We will assume that real interest rates (r) are roughly in line with real GDP growth, meaning that the debt trajectory will be driven by changes in the primary balance (pb). The primary balance is calculated by differencing revenue and non-interest expenditure.
- Beyond national debt, we have projections of:
 - Contingent liabilities of state-owned companies
 - Balances of our social security funds
 - Size of the current account balance

Fiscal sustainability: Net debt trajectories under baseline growth

