

# **MDG SCENARIOS TO 2015 AND BEYOND: AN INTEGRATED MICRO-MACRO MODELLING APPROACH**

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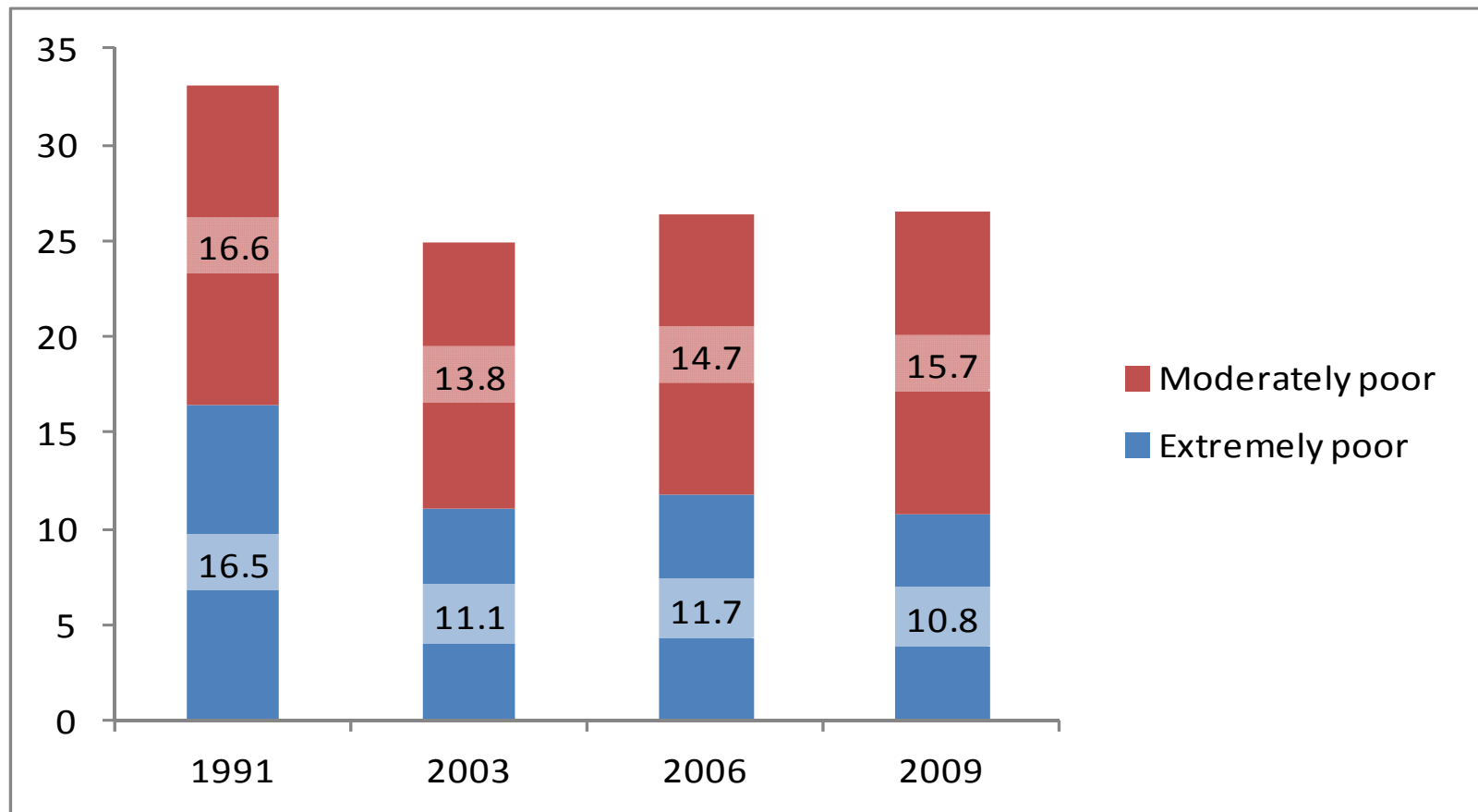
# What to expect

- Overview
- Challenges and questions
- Method
- Results
- Conclusions

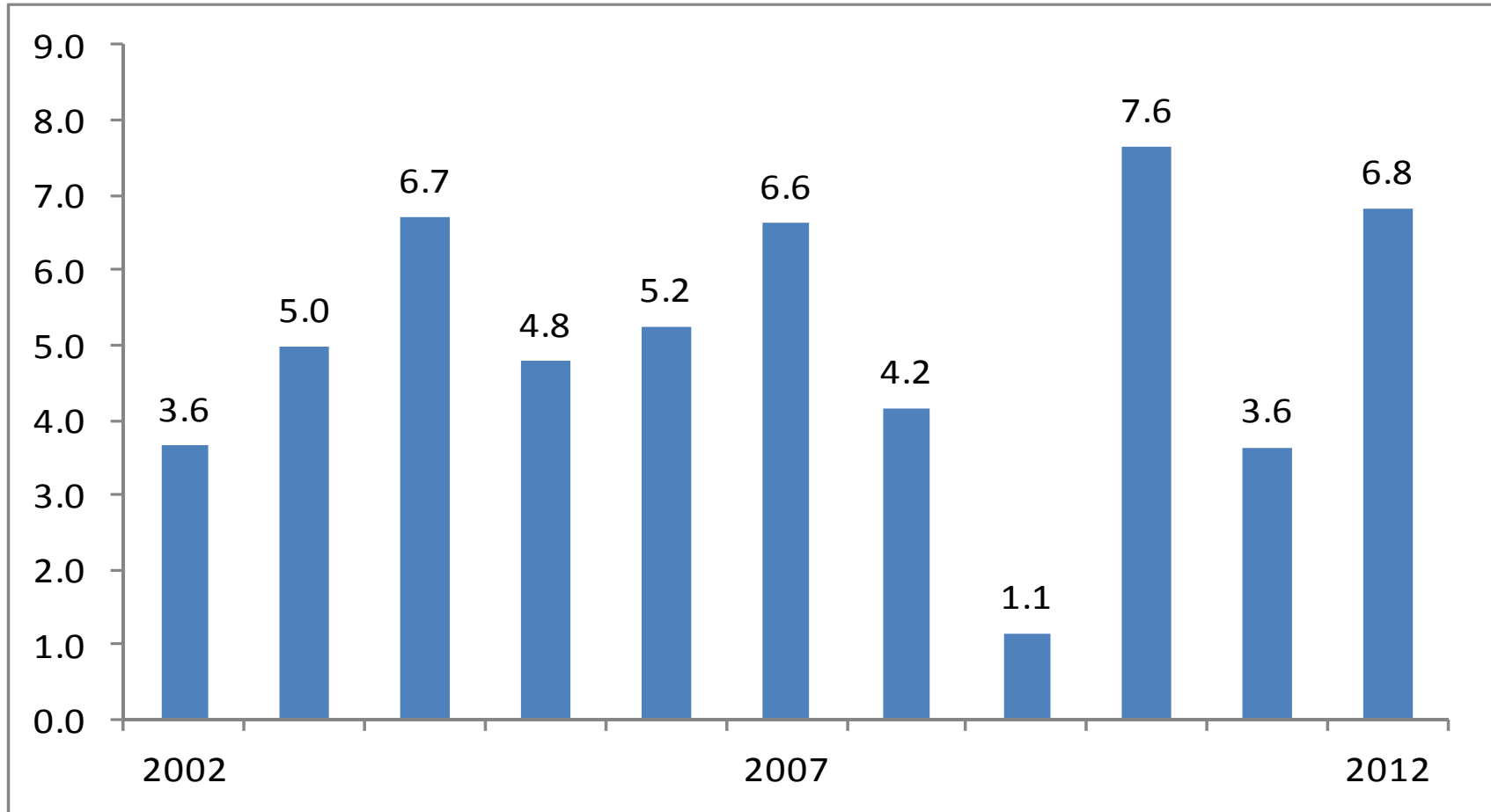
# MDG Status

	1990	2009	Target
Cohort survival rate at primary level (%)	66.5	75.4	84.7
Under-5 mortality rate (per 1,000 live births)	80.0	30.0	26.7
Maternal mortality rate (per 100,000 live births)	209.0	130.0	52.2
Households with access to potable water (%)	73.8	88.6	86.9
Households with sanitary toilet (%)	71.8	81.4	85.9

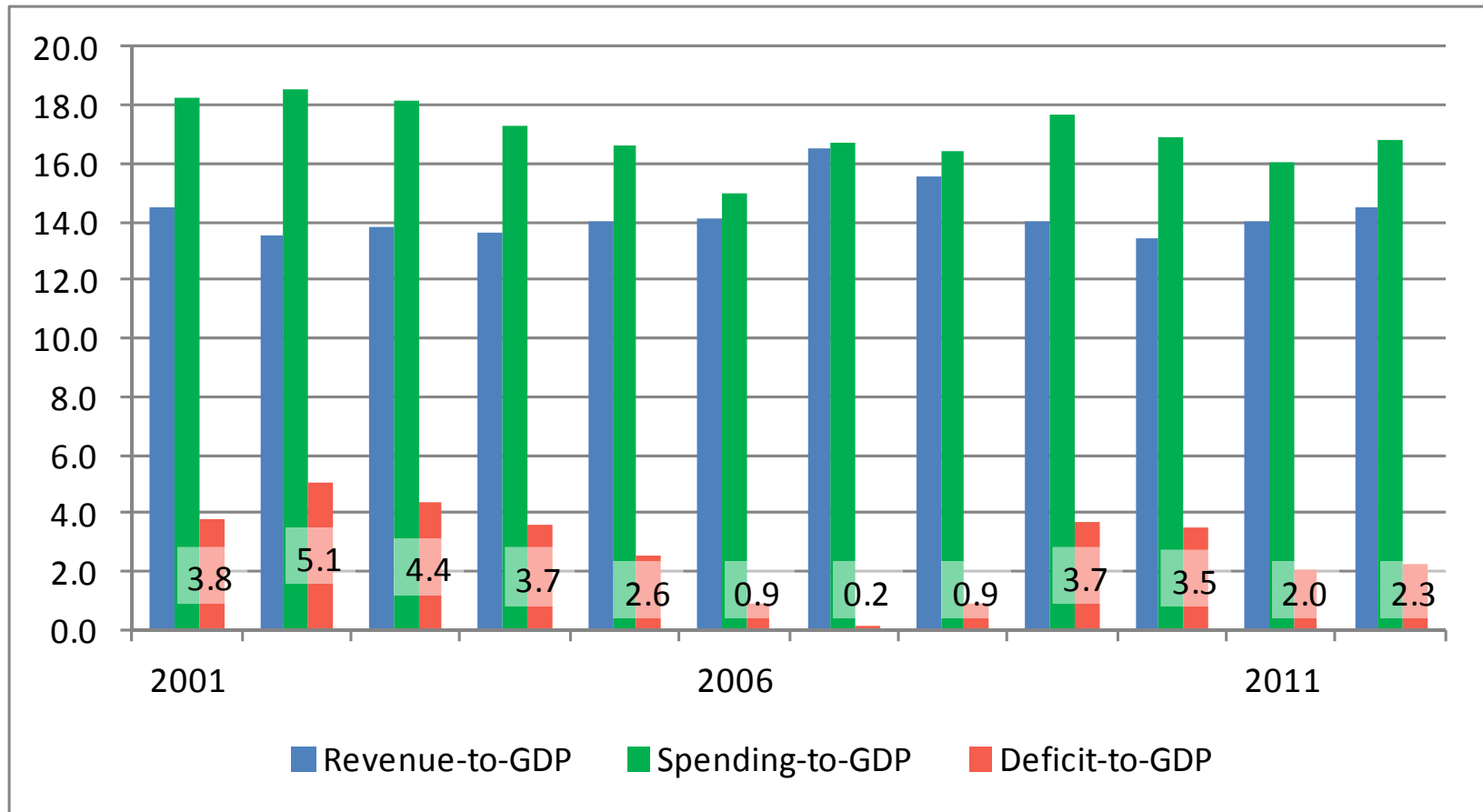
# Poverty trends



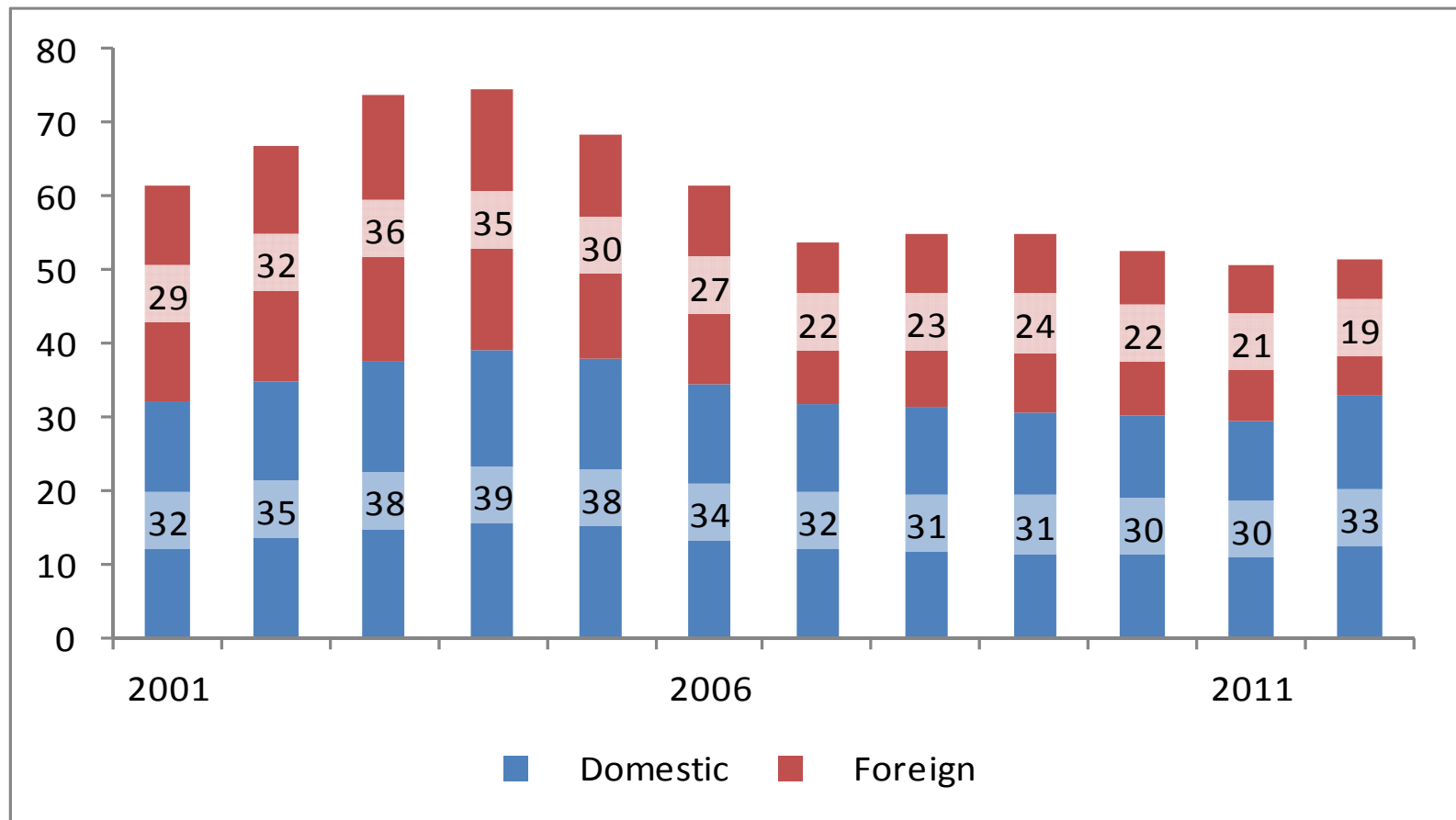
# GDP Growth



# Deficit – GDP ratio



# Debt – to – GDP ratio



## In short...

- Likely to achieve MDGs for child mortality, household sanitation and safe water, extreme poverty
- After erratic growth and BOP crisis of 1990s:
  - Moderate growth in 2000s
  - Rapid growth in 2010s (?)
- Reaped a “governance dividend”: more spending on social programs and infrastructure



# Challenges and questions

- Poverty, education, and maternal mortality MDGs will not be met
- Aside from sustaining growth, need to make it inclusive
- *Projecting from current trends, what is scenarios for MDGs to 2015 and beyond?*
- *What targets will likely be missed? When will they likely be achieved?*
- *Can government increase outlays on social spending and public infrastructure even further?*

# Method

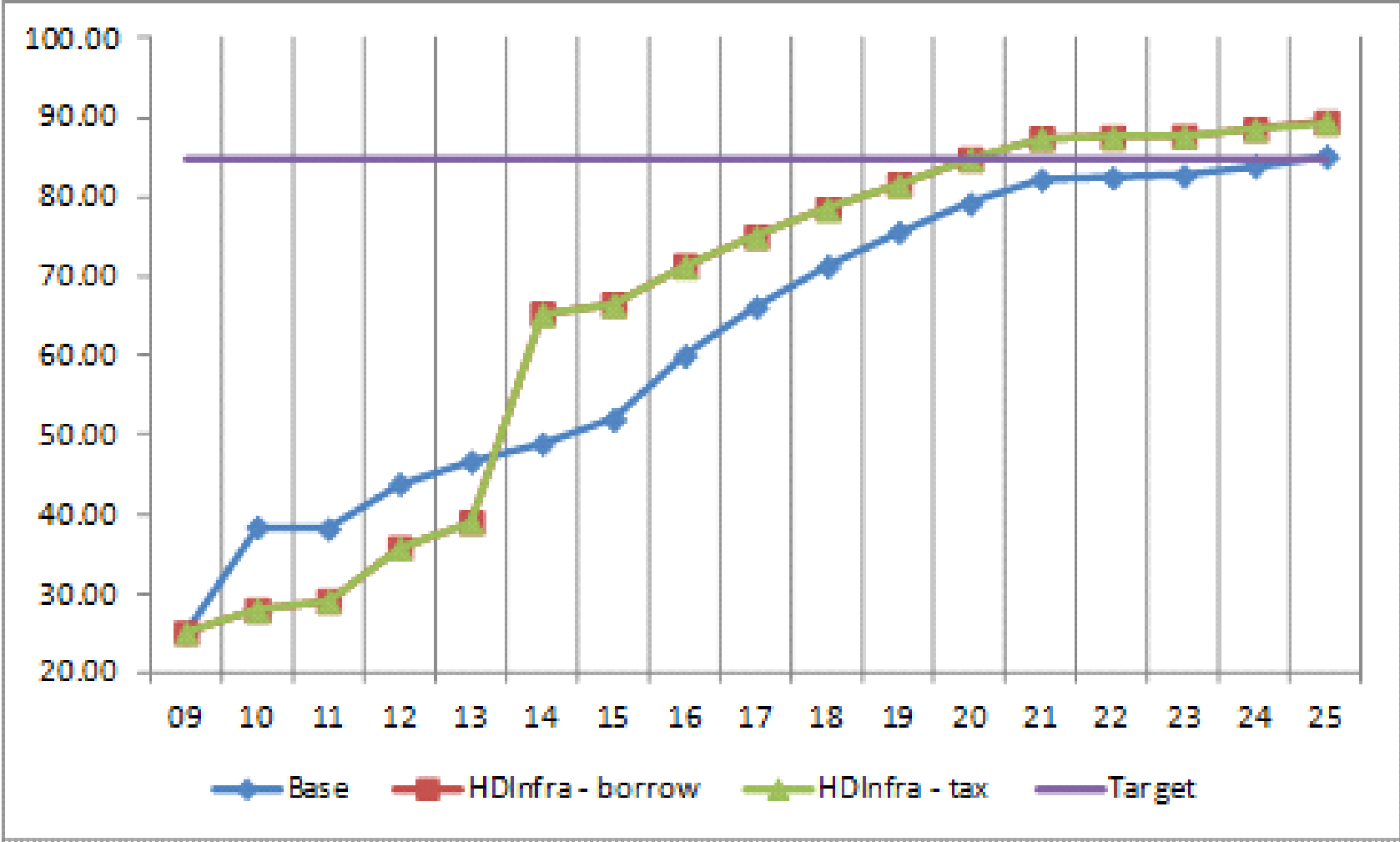
- Integrated macro-micro modeling approach using MAMS
- First applied to the Philippines in 2006, updated to 2009; 42-sector model
- Scenarios: 2009 – 2025
- Scenarios:
  - Base
  - HDInfra-borrow:
  - HDInfra-tax

# Scenarios and assumptions

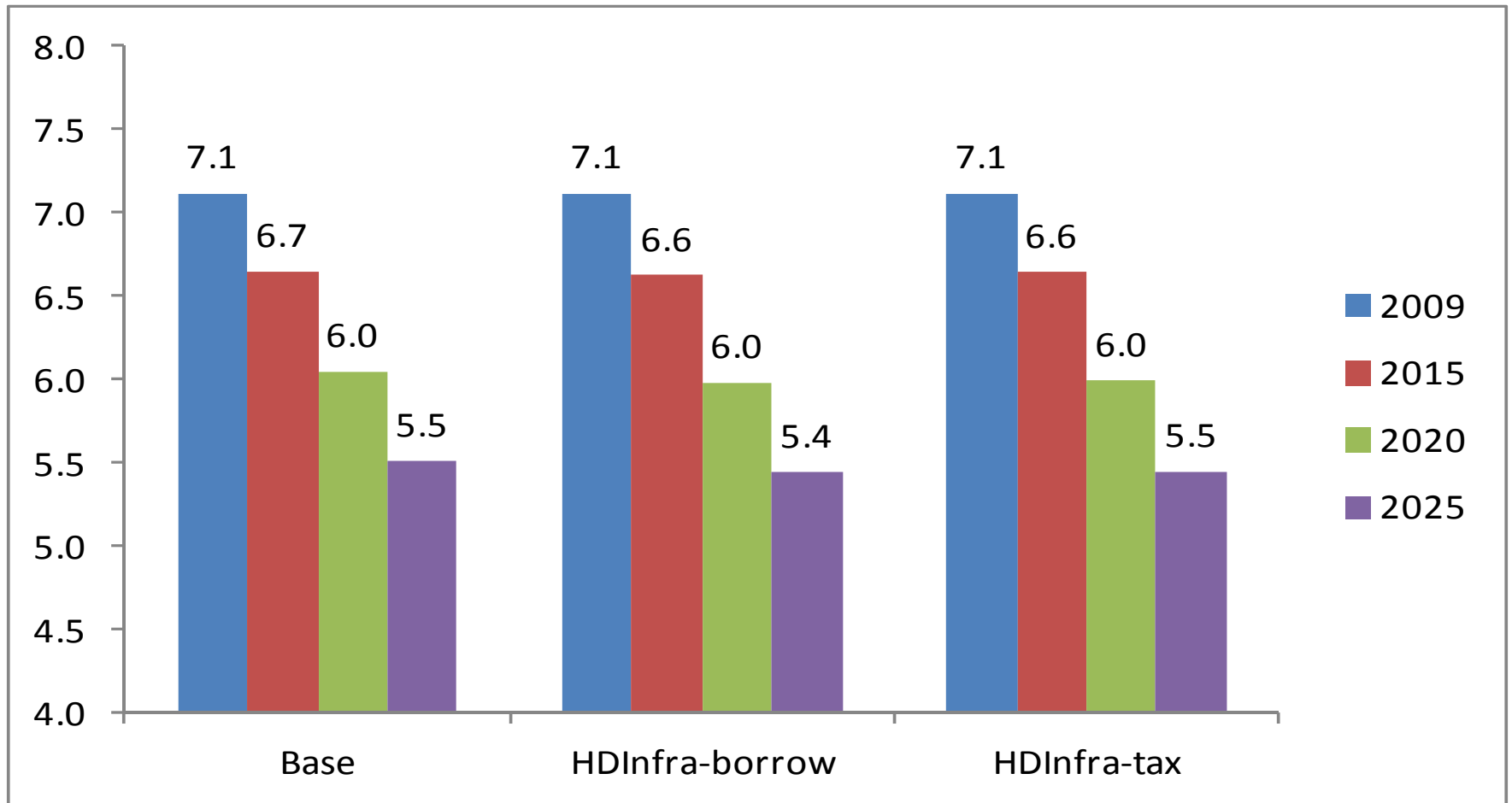
	2009	2010	2011	2012	2013	2014	2015	2016-25 (average)
GDP growth (Base, in %)	7.6	3.9	6.6	6.2	6.4	6.3	6.3	7.6
Base (% of GDP)								
Education, primary, government	0.99	0.95	0.90	0.94	0.96	0.97	0.98	1.00
Health, government	0.39	0.38	0.36	0.37	0.38	0.38	0.39	0.40
Investment in education, primary	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Investment in infrastructure	4.02	3.84	3.64	3.82	3.87	3.93	3.98	4.04
Direct taxes	6.41	0.00	0.00	0.00	7.14	7.14	7.14	7.14
Indirect taxes (except import taxes)	3.96	0.00	0.00	0.00	3.99	3.99	3.99	3.99
HDInfra-borrow (% of GDP)								
Education, primary, government	0.99	0.95	0.90	0.94	0.95	1.45	1.45	1.45
Health, government	0.39	0.38	0.36	0.37	0.38	0.63	0.63	0.63
Investment in education, primary	0.05	0.05	0.05	0.05	0.05	0.30	0.30	0.30
Investment in infrastructure	4.02	3.84	3.64	3.82	3.86	4.86	4.86	4.86

# RESULTS

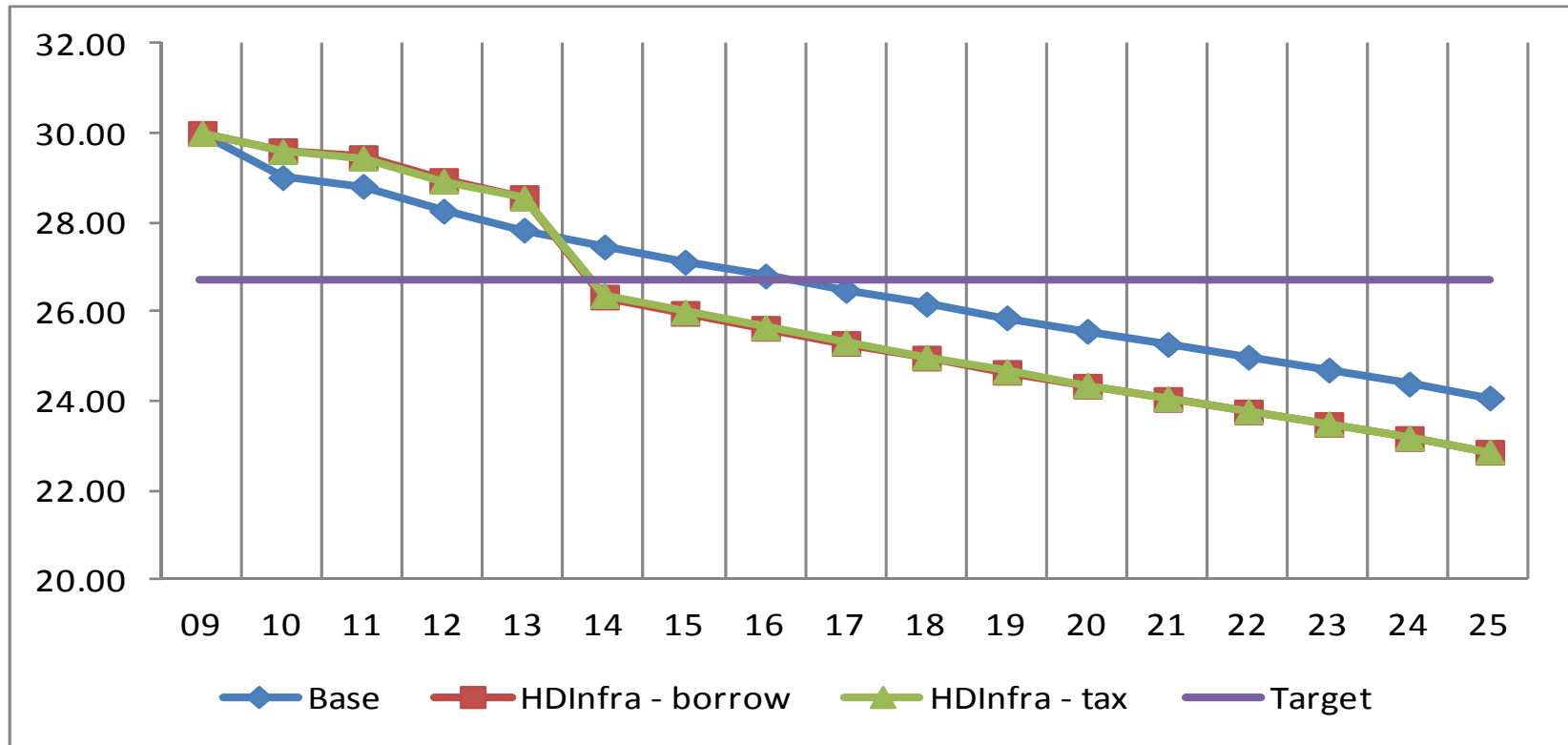
# On-time primary completion rate



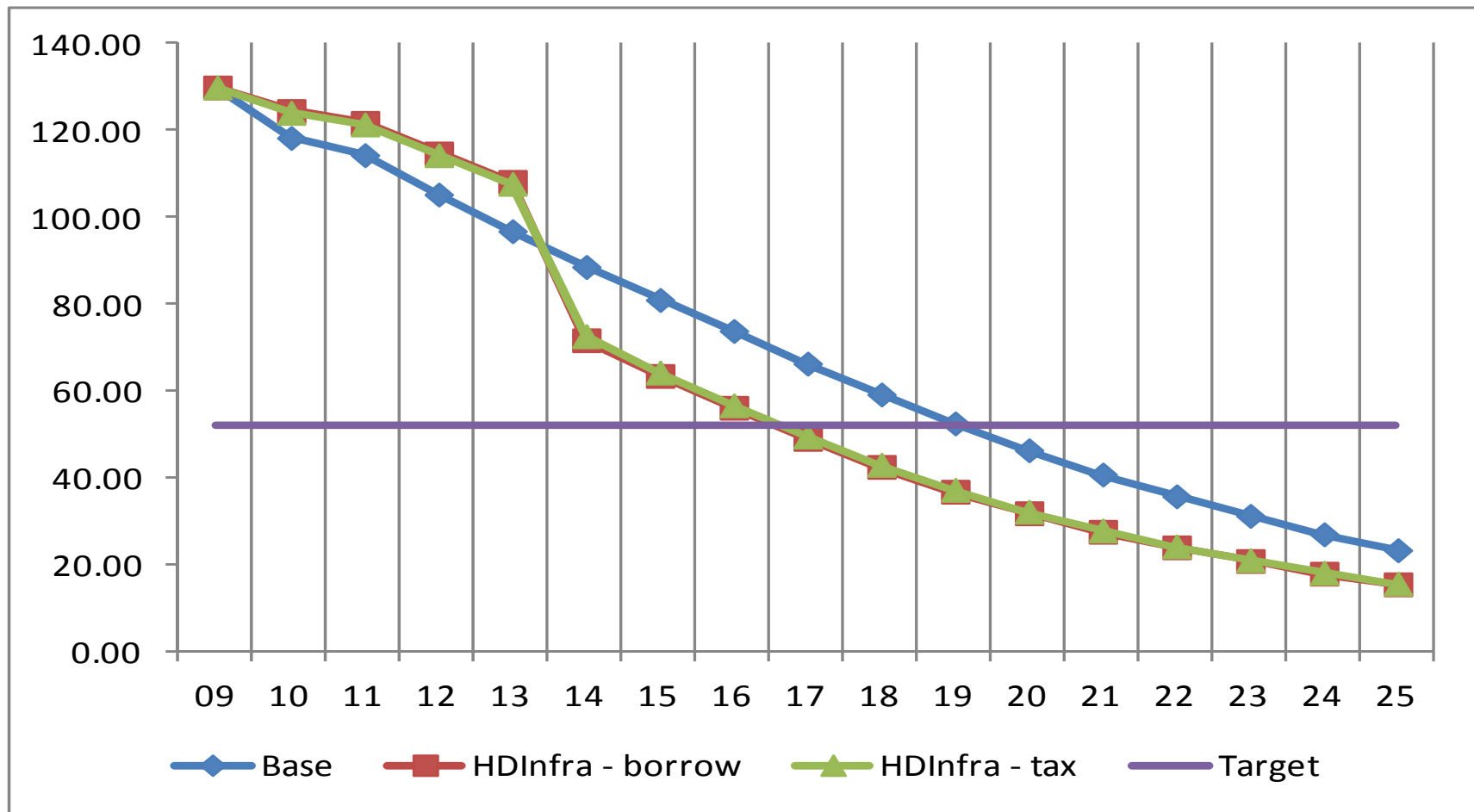
# Labor market: unemployment rate



# Child mortality rate

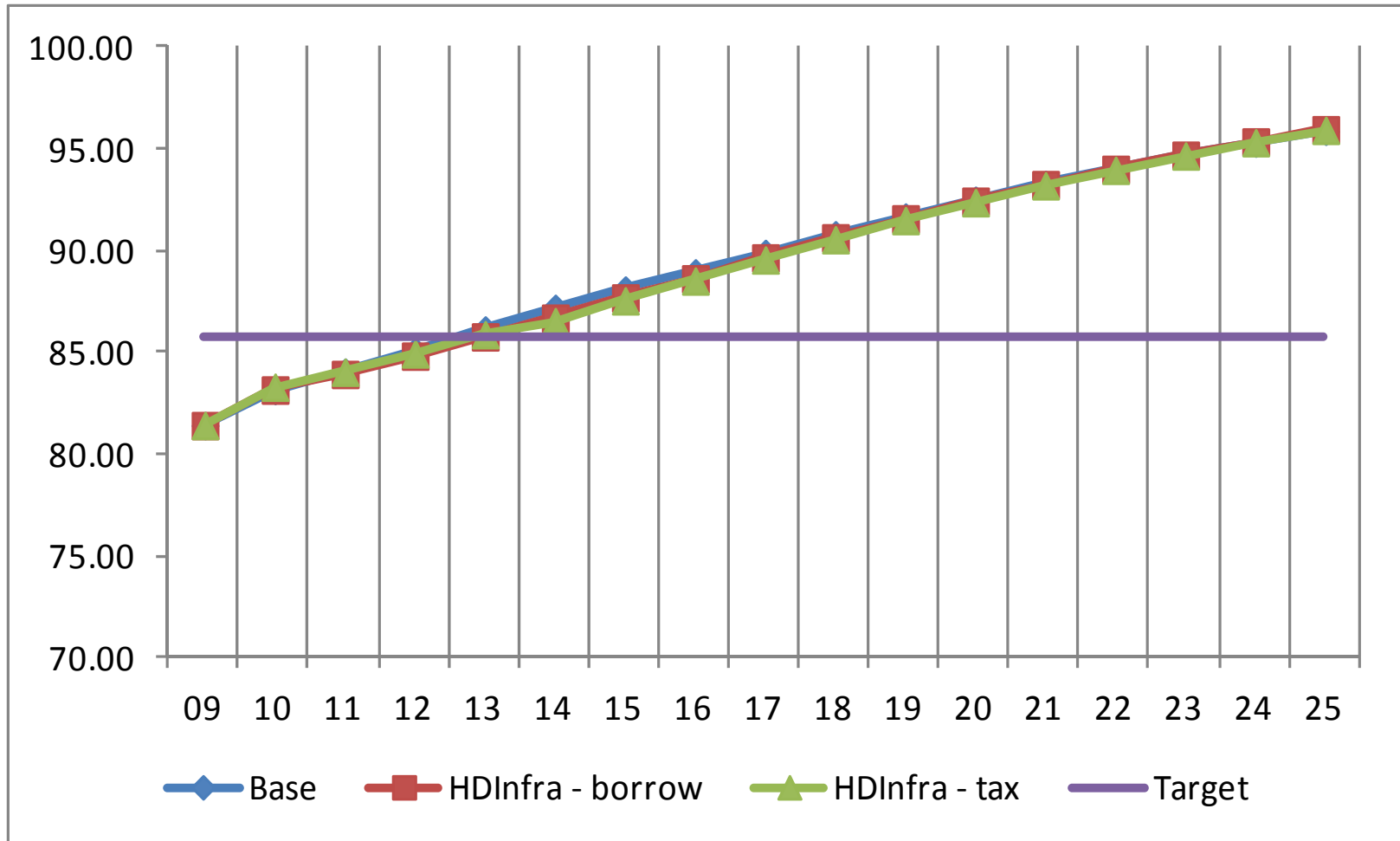


# Maternal mortality rate

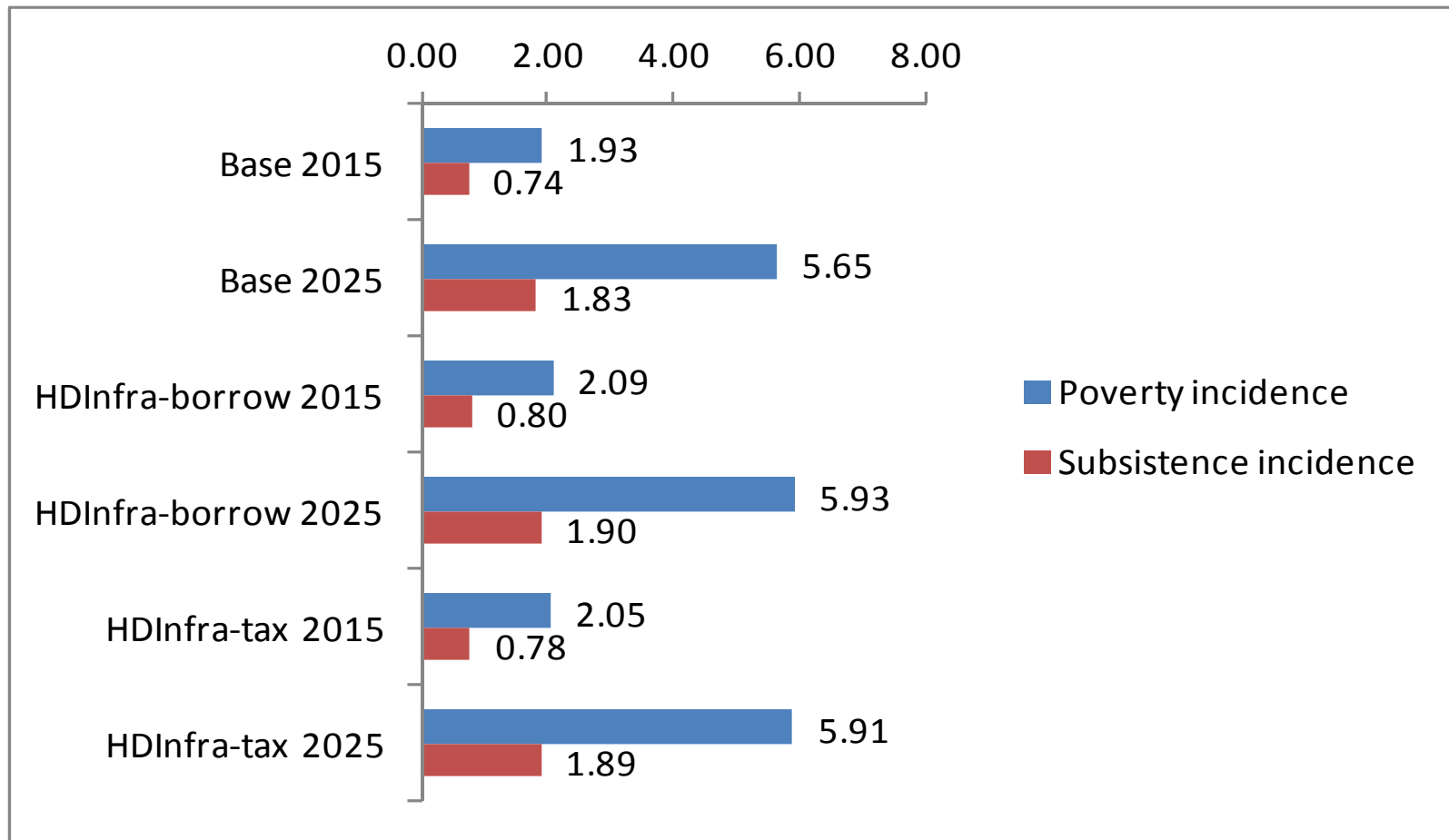




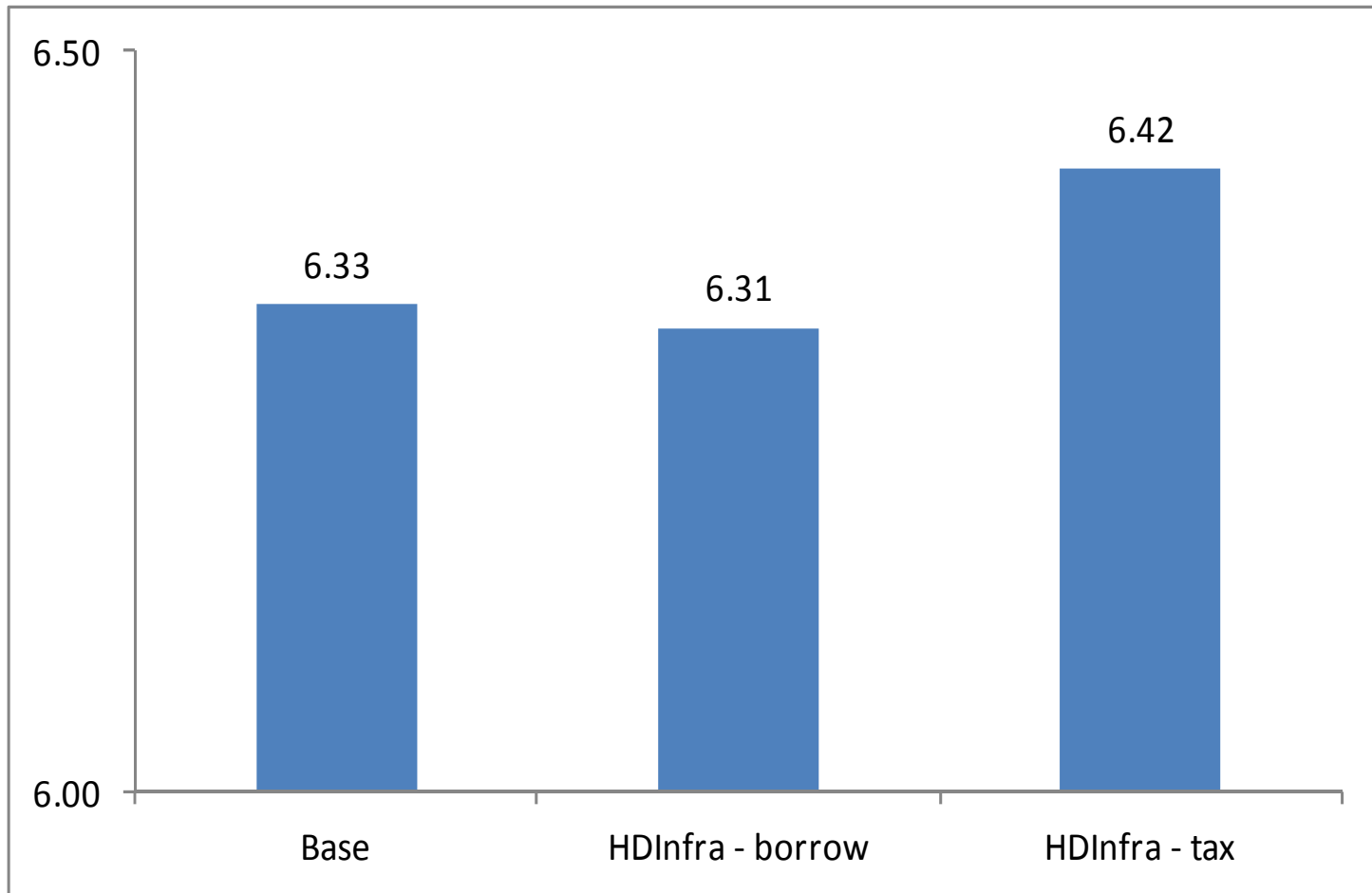
# Sanitary toilet



# Poverty change



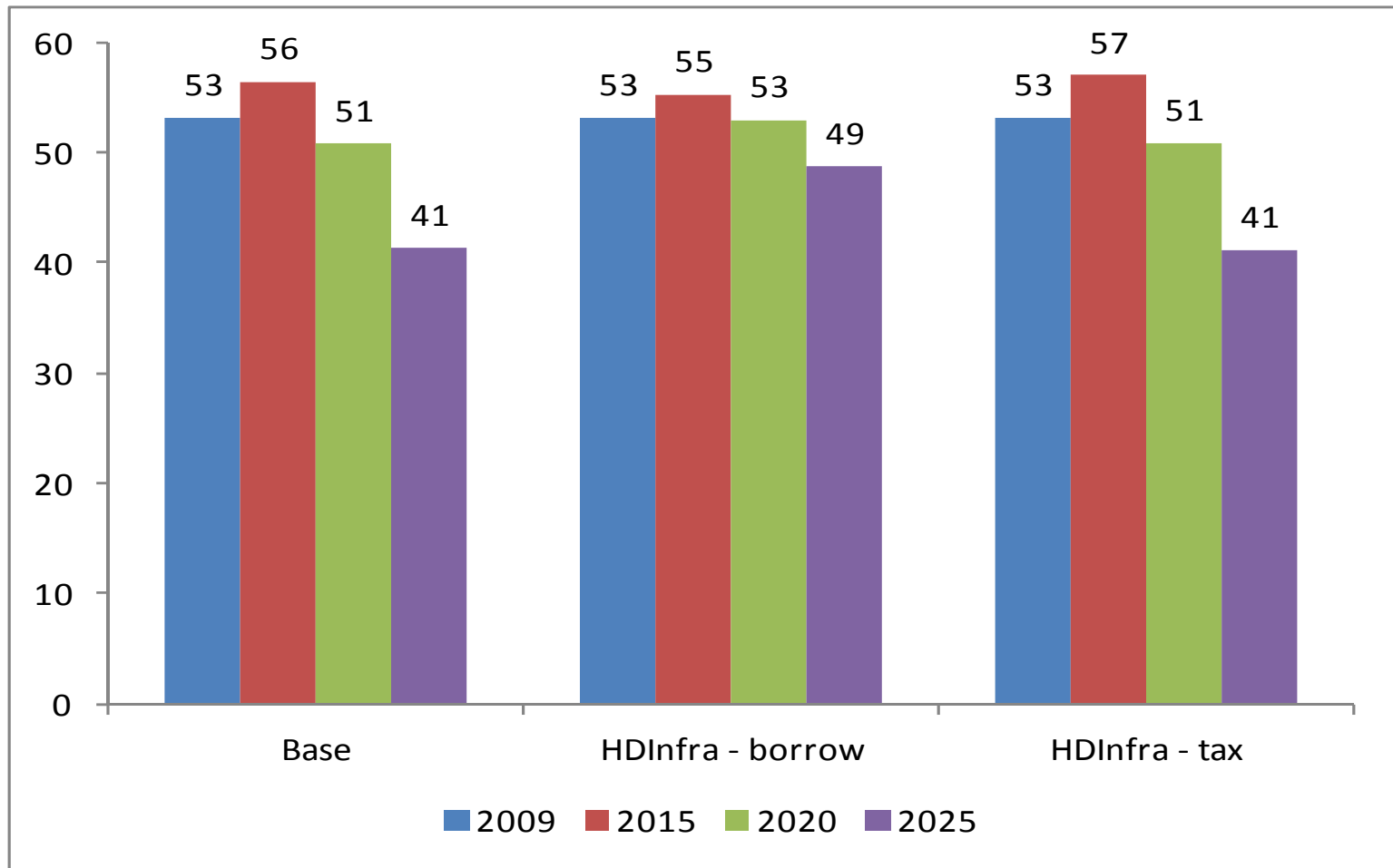
# GDP growth



# Shares to GDP

		2009	2015	2020	2025
Tax revenue	Base	13.6	14.6	15.6	15.6
	HDInfra - borrow	13.6	14.6	15.6	15.6
	HDInfra - tax	13.6	15.7	16.4	16.4
Government consumption spending	Base	6.0	6.7	6.7	6.7
	HDInfra - borrow	6.0	7.3	7.3	7.3
	HDInfra - tax	6.0	7.3	7.3	7.3
Government investment spending	Base	4.8	5.2	5.1	5.1
	HDInfra - borrow	4.8	5.7	5.4	5.4
	HDInfra - tax	4.8	5.7	5.4	5.4
Government borrowing	Base	2.6	3.0	1.6	1.1
	HDInfra - borrow	2.6	4.0	2.6	2.4
	HDInfra - tax	2.6	3.1	1.6	1.1
Domestic government debt	Base	29.5	30.4	31.7	33.3
	HDInfra - borrow	29.5	30.7	31.8	33.2
	HDInfra - tax	29.5	30.7	31.8	33.2
Foreign government debt	Base	23.7	26.1	19.1	8.0
	HDInfra - borrow	23.7	24.7	21.2	15.5
	HDInfra - tax	23.7	26.3	19.1	8.0

# Total debt-GDP ratio



# Summary and conclusion

- To summarize: the country is on track to attaining several MDGs, namely: safe drinking water (attained), sanitary toilet (2013), and child mortality (2015-2016).
- However, it will likely miss targets for the education and maternal health MDGs, as well the target for poverty incidence.
- Estimated attainment dates are: 2025 for the education and 2020 for the maternal health.

# Summary and conclusion

- Larger outlays for MDG-related expenditure, as well as for infrastructure, will have the desired effect of hastening attainment of MDGs and accelerating growth.
- Under the higher spending scenario, education MDG can be attained in 2020, maternal mortality in 2017.
- The growth rate is only slightly higher even with greater outlays for infrastructure spending. Moreover, poverty reduction is not fast enough to attain the MDG target by 2015, nor even by 2025, even with greater outlays for infrastructure spending.

# Summary and conclusion

- Under business-as-usual, the national debt (as a share of GDP) is expected to track a downward trajectory in the long run (to 2025), primarily due to declining foreign debt. Higher spending keeps the national debt to about half of GDP by 2025, i.e. at similar levels as in 2009. Tax financing of increased spending allows the economy to maintain the original debt reduction path projected at the Base.
- The analysis suggests that government can afford more aggressive spending for human development and infrastructure without serious stress on public finance, particularly if tax reforms are pursued.