

Where is the Wealth of Nations?

Measuring capital for the 21st century

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Motivation – Mauritanian fishery

- During the first half of the 1980s fish catch in Mauritania grew strongly from around 20,000 tons in 1980 to nearly 90,000 tons in 1987.
- Current indicators – employment, foreign exchange earnings, and budget revenues – all grew strongly.
- But the fishery collapsed from over-exploitation: exports grew at a real 7.5% per year over 1980-87, but shrank -2.3% per year from 1987-2000.
- The wellbeing of Mauritians benefiting from the export fishery could not be sustained.
- Measuring assets – fish stocks – could have signaled the impending collapse.

Other reasons to measure wealth

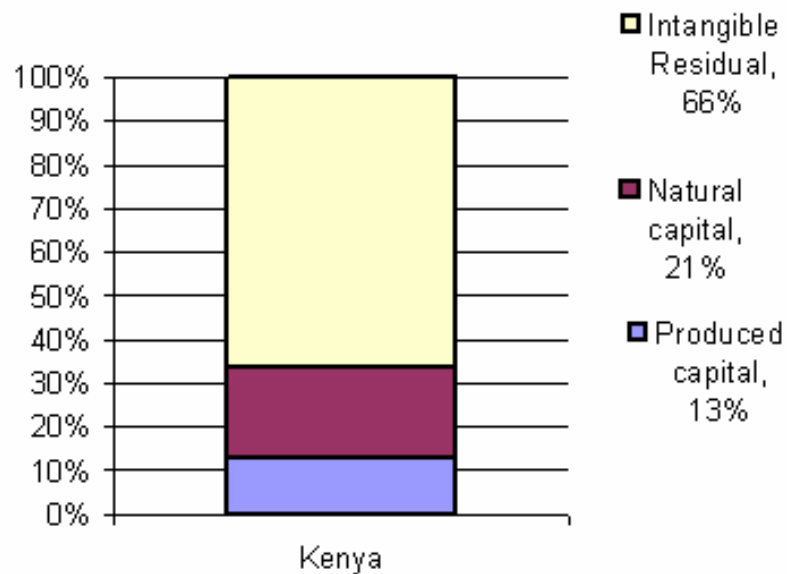
- A useful model: Development as portfolio management
 - What is the composition of the portfolio (produced / natural / human capital)?
 - How efficiently is each element of the portfolio being managed?
 - How rapidly is wealth being accumulated?

Country examples

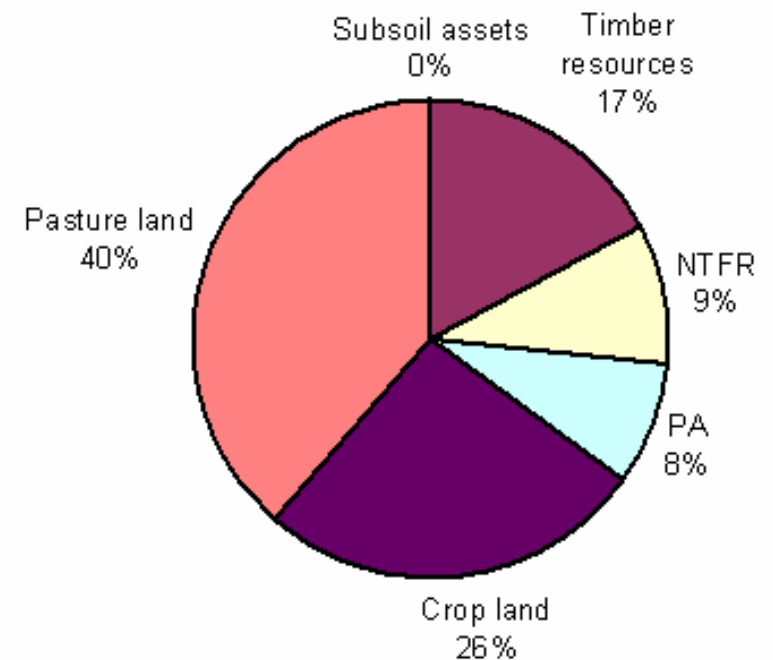
Where is the wealth of Kenya? (\$/capita)

Produced capital	Natural capital	Intangible Residual	Total	Subsoil assets	Timber resources	NTFR	PA	Crop land	Pasture land
868	1,368	4,374	6,609	1	235	129	113	361	529
13%	21%	66%							

Total wealth



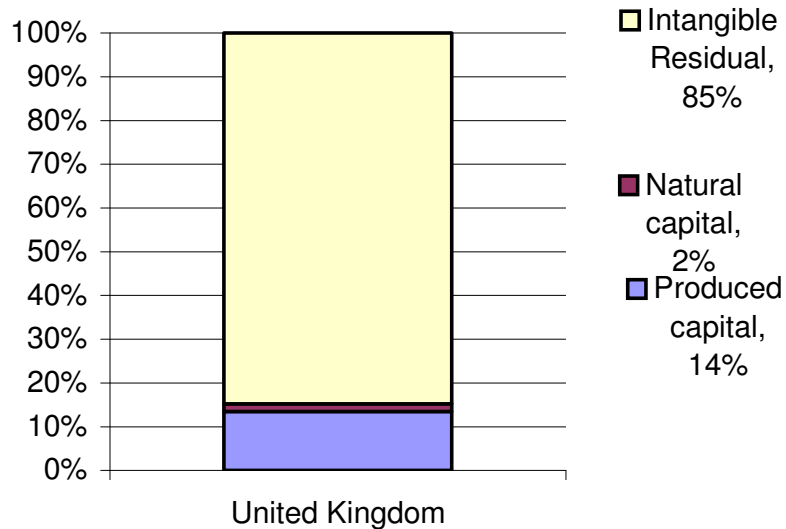
Natural capital



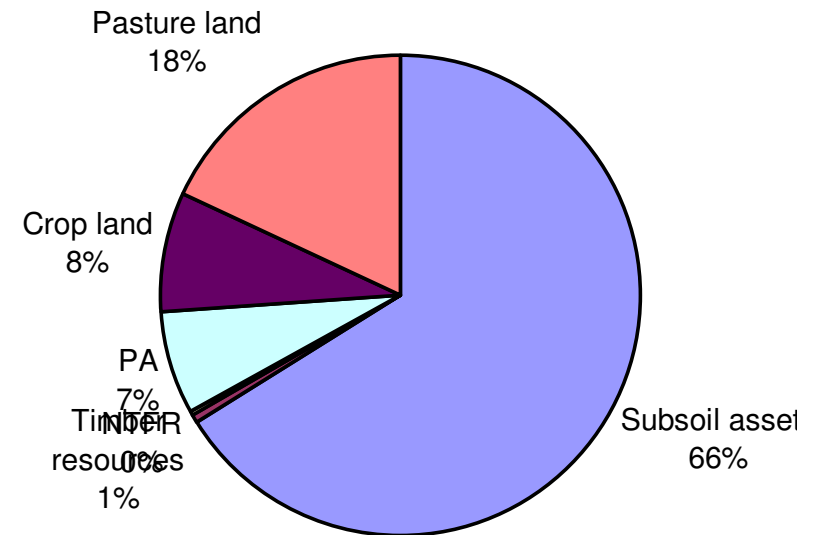
Where is the wealth of the UK? (\$/capita)

Produced capital	Natural capital	Intangible Residual	Total	Subsoil assets	Timber resources	NTFR	PA	Crop land	Pasture land
55,239	7,167	346,347	408,753	4,739	44	14	495	583	1,291
14%	2%	85%							

Total wealth

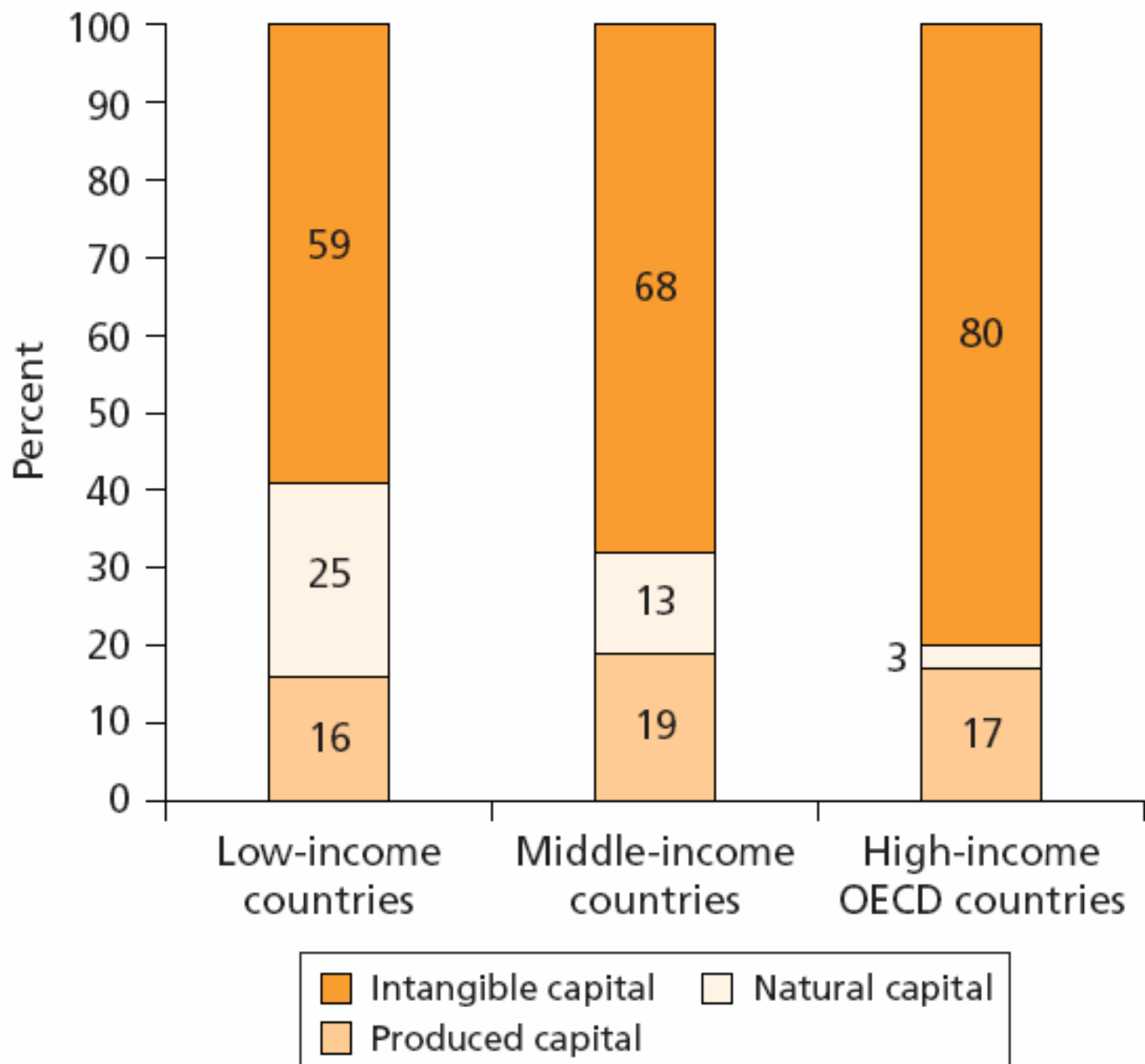


Natural capital

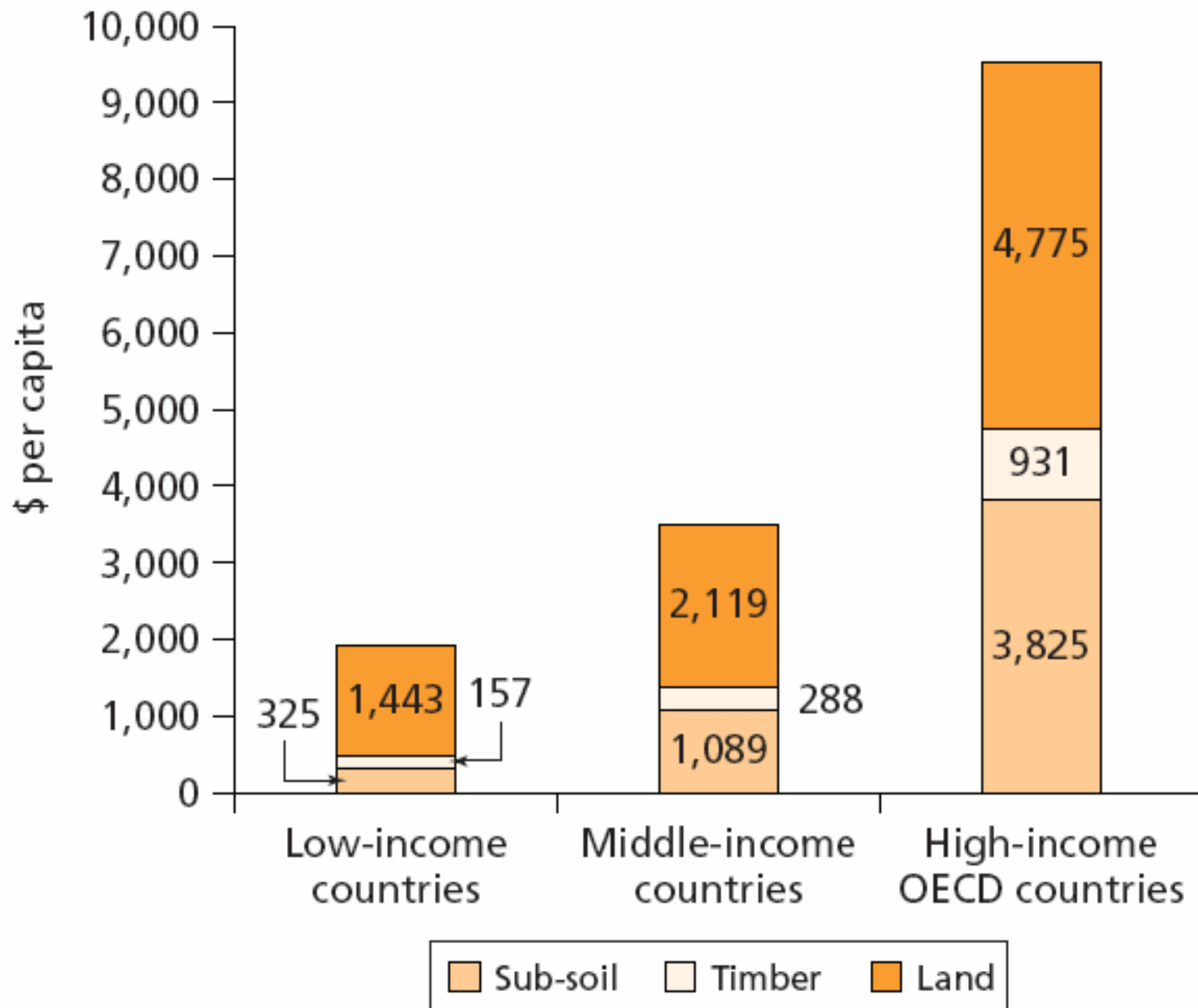


Wealth estimates (income aggregates)

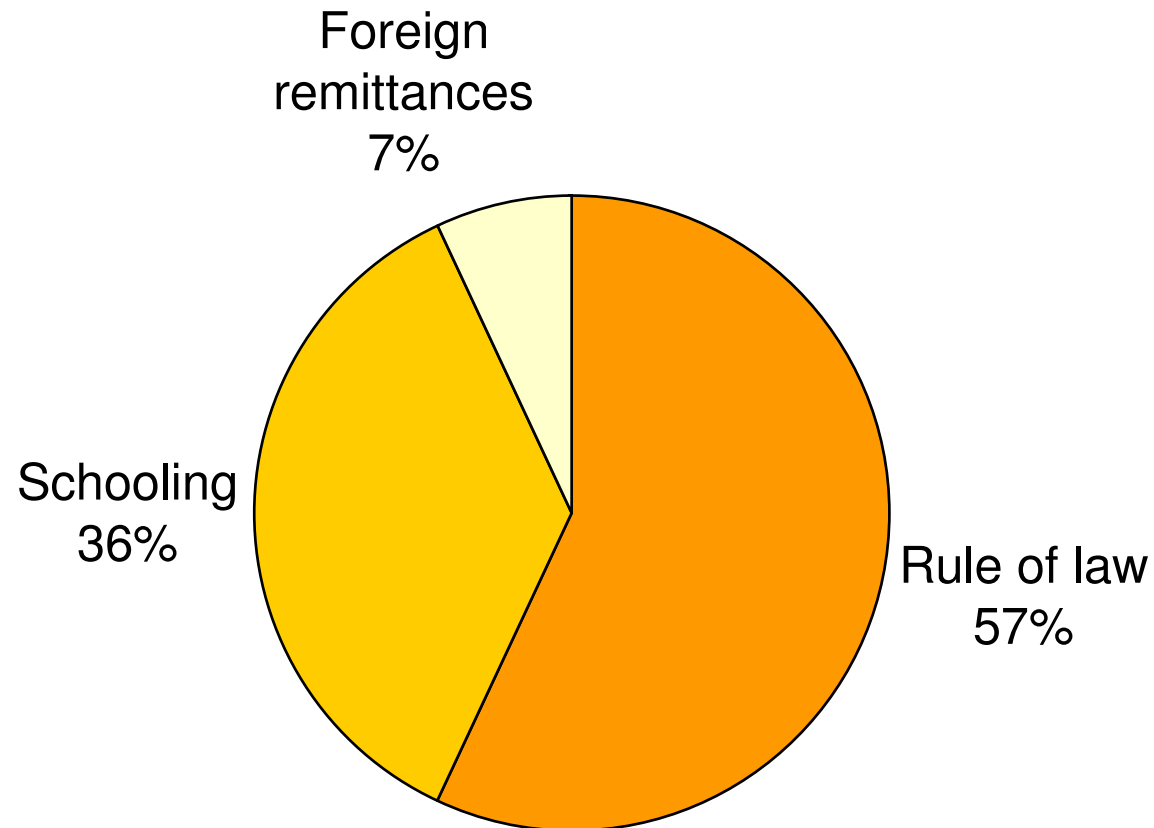
Shares of Wealth by Income Group, 2000



Value of Natural Resources Per Person, 2000



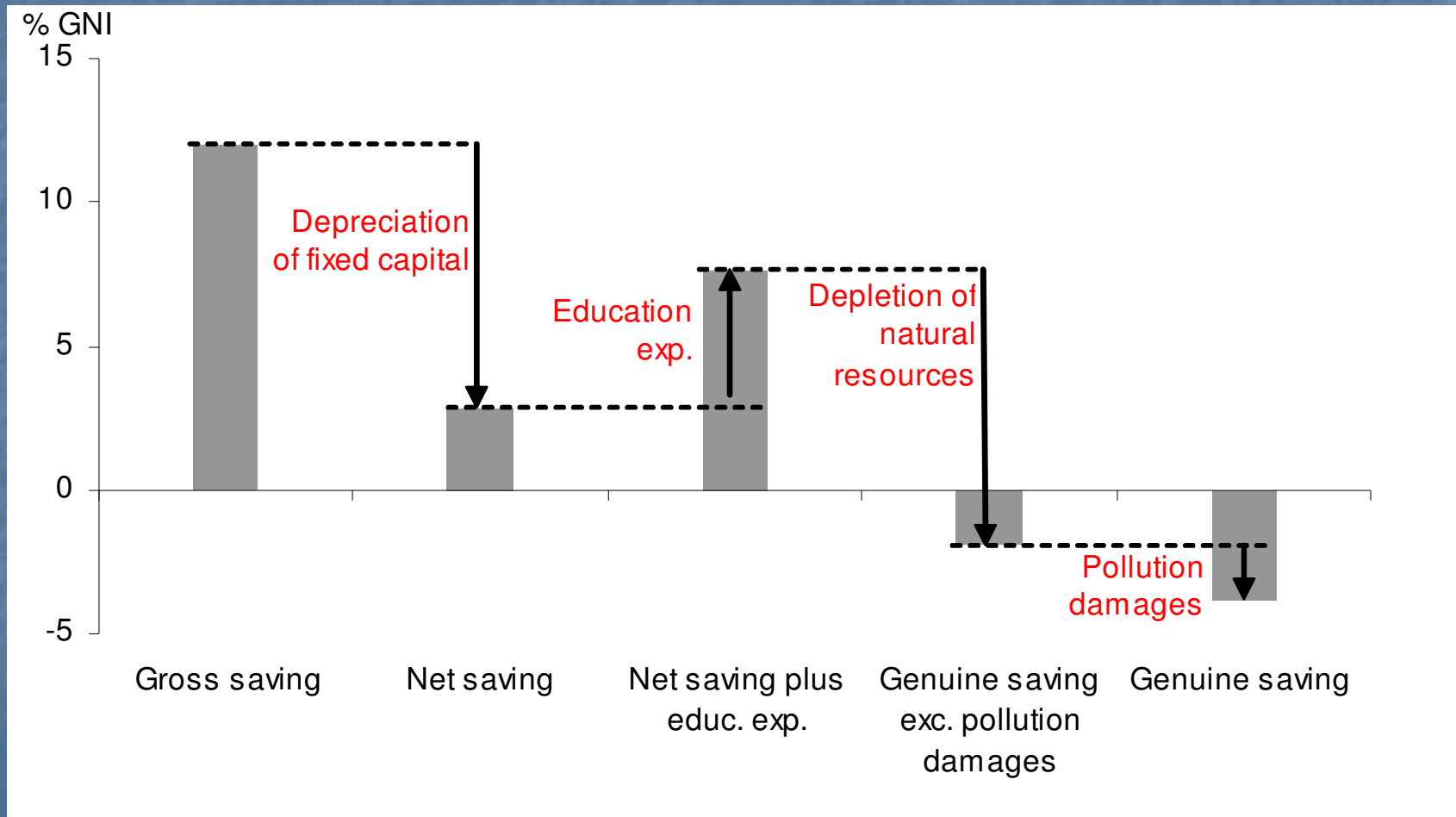
Factors explaining intangible capital



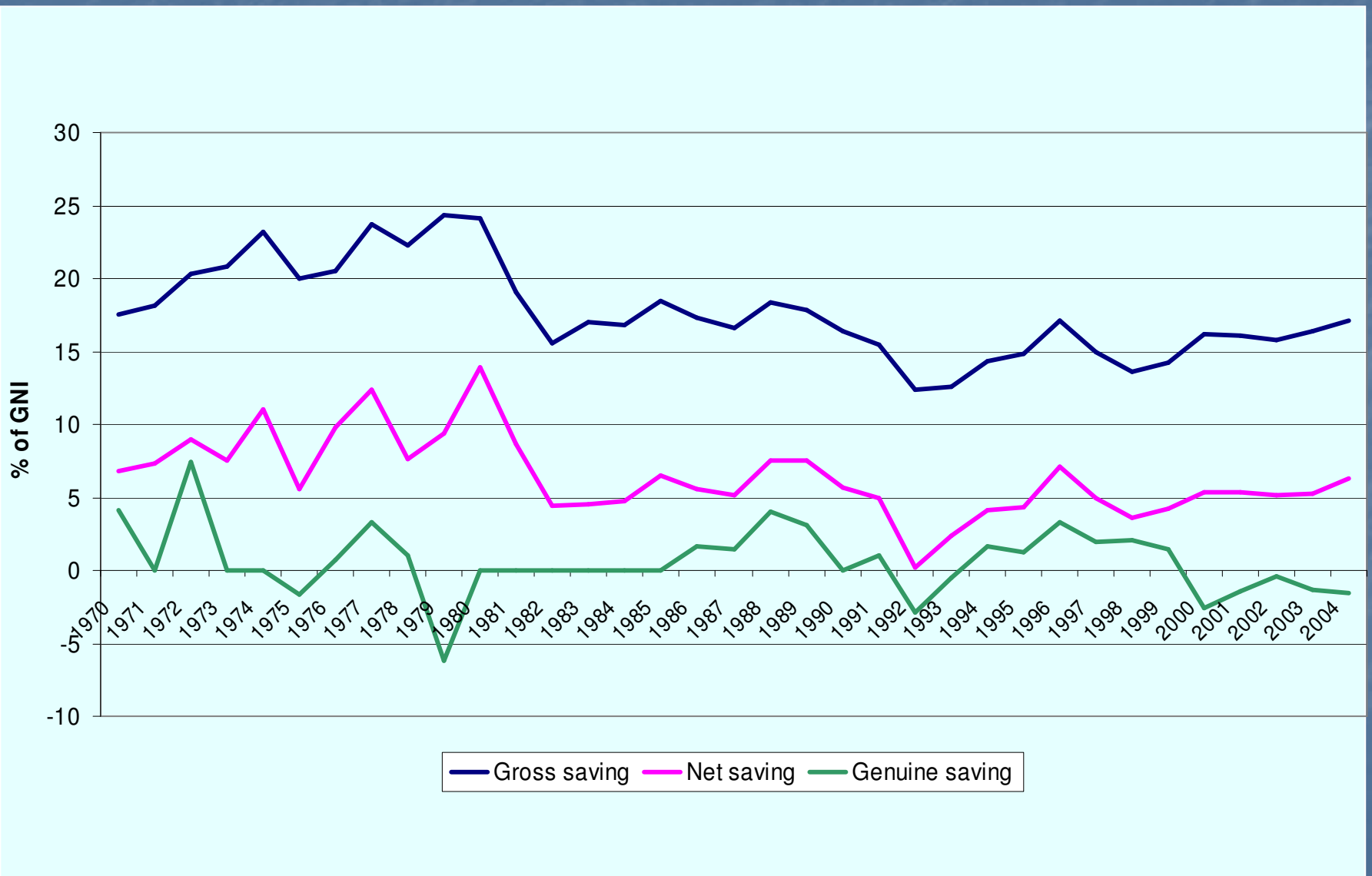
Saving estimates

Adjusted net (genuine) saving

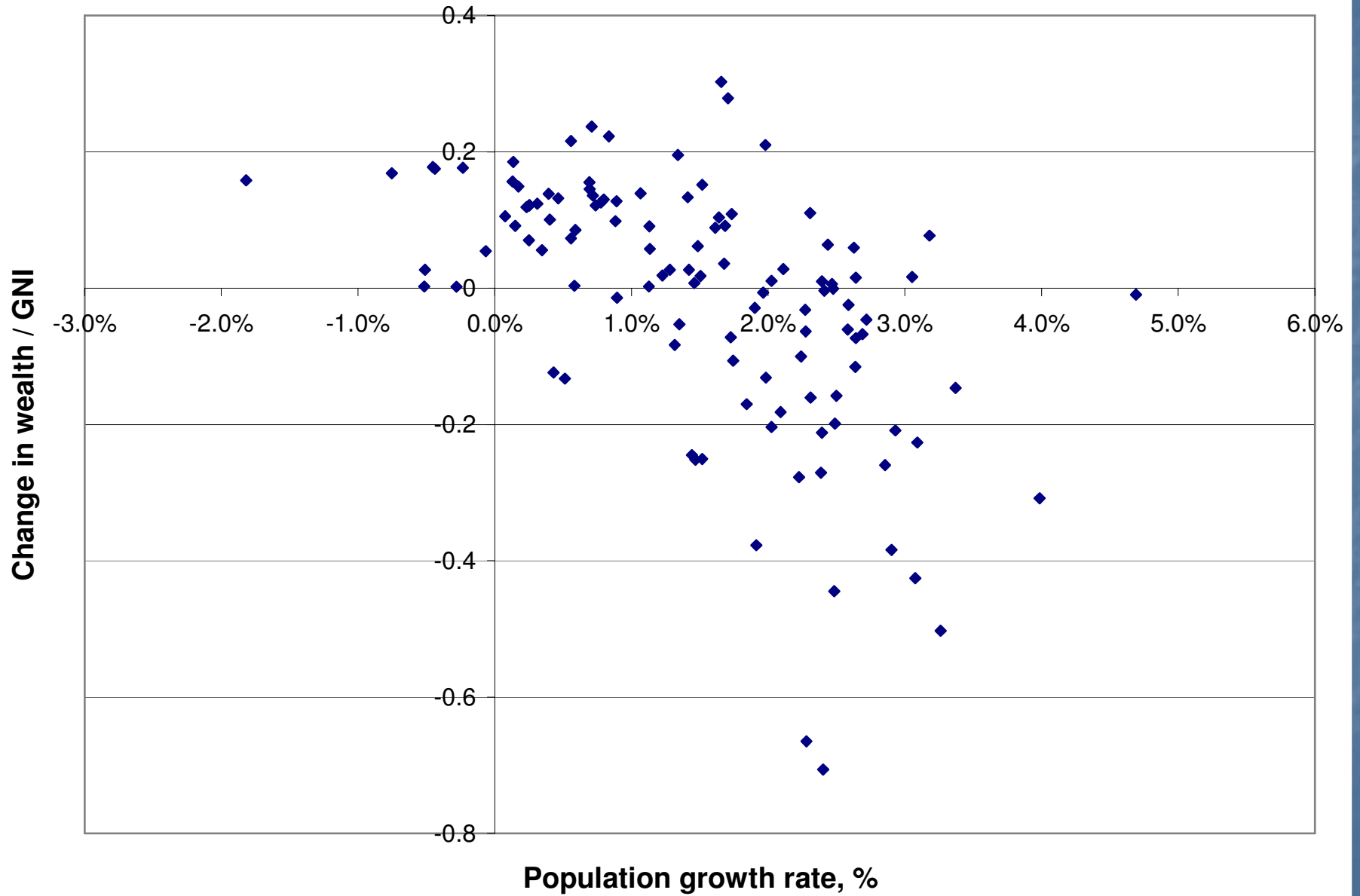
Bolivia, 2003



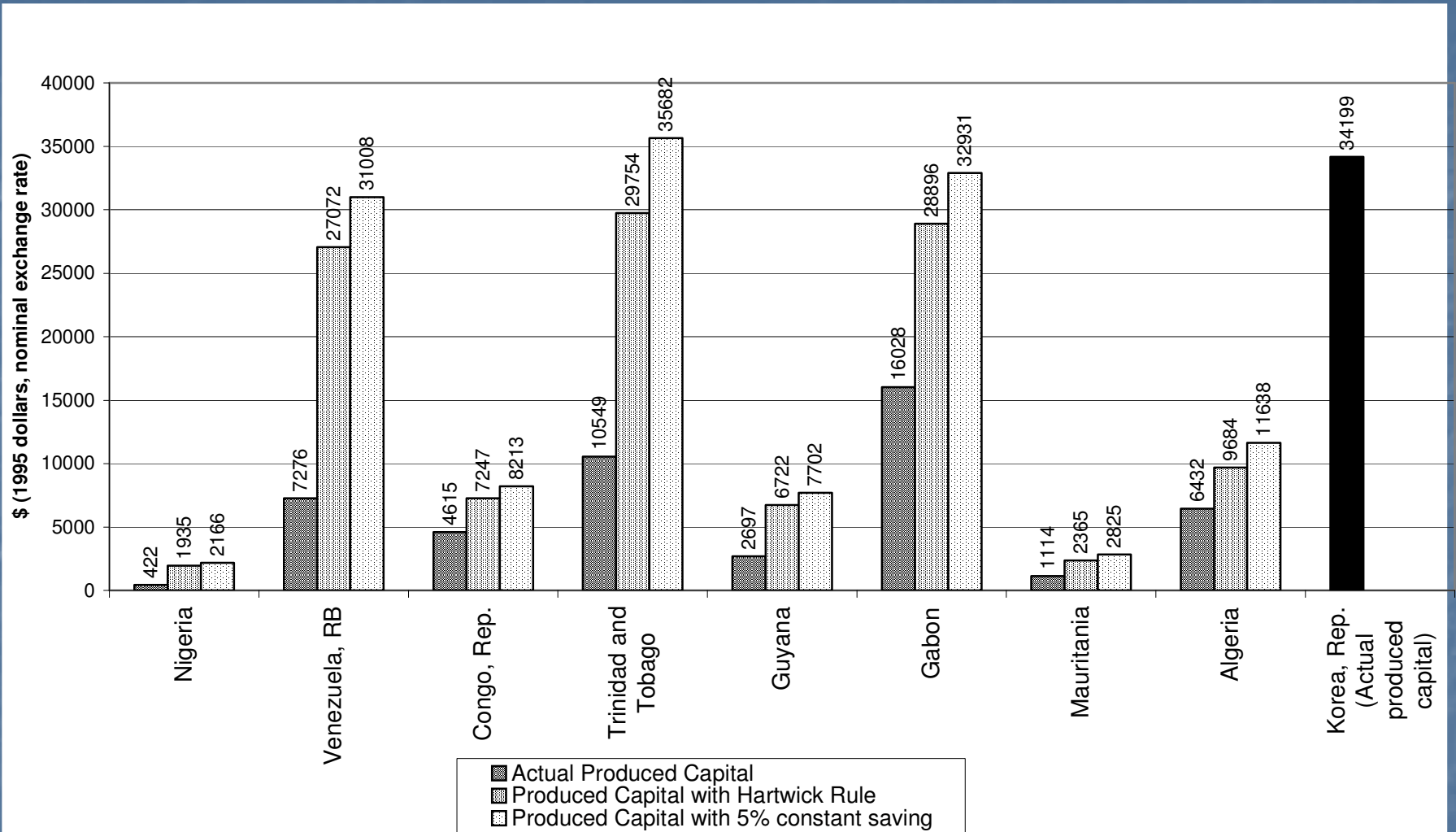
Genuine saving in Sub-Saharan Africa



Genuine Saving / capita vs. Population growth rate



Counterfactual wealth



The link to growth

- Recent research on the theory of sustainability (Hamilton and Withagen (forthcoming CdnJEcon)) shows that adopting policies for sustainability in a 'typical' developing country can yield growth:
 - Each 10% increase in genuine saving will boost the growth rate of net income by 1%

Conclusions

- Natural capital is a larger share of total wealth than produced capital in low income countries
- Nearly 70% of natural capital in low income countries is agricultural land
- The value of total *natural* wealth per person actually rises with income
- When resource depletion and population growth is taken into account, most poor countries face declining wealth per capita

What should we do?

- Support improved natural resource management in low income countries
- Programs to maintain soil quality
- Reduce incentives to over-exploit natural resources, particularly living resources
- Assist the poorest countries with economic reforms – increased efficiency will boost both GDP and saving for the future
- Help build human capital and stronger institutions