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OECD 50-YEAR GLOBAL SCENARIO

Policy Challenges for the Next 50 Years

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OECD
BETTER POLICIES FOR BETTER LIVES

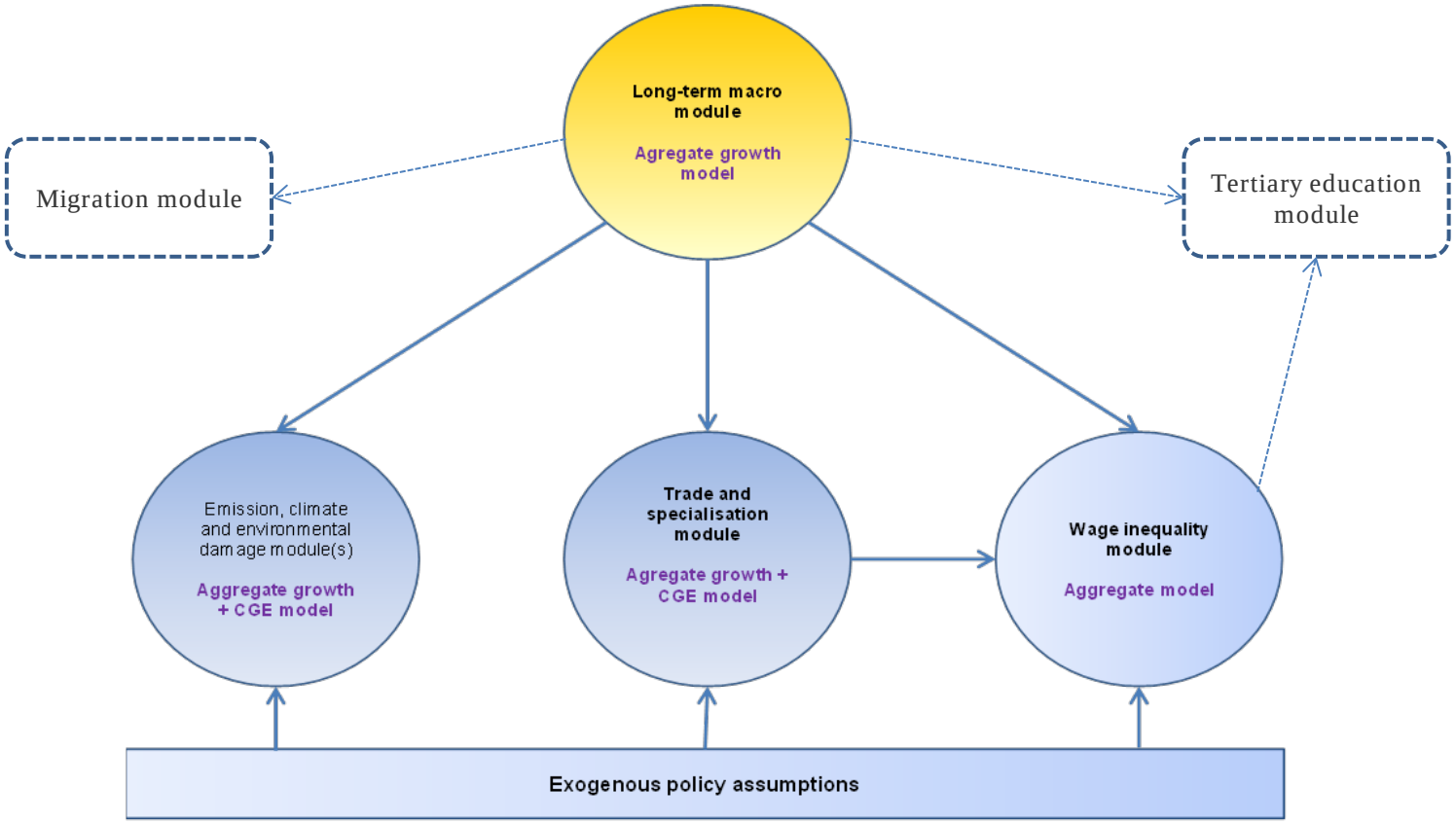
Policy Challenges for the Next 50 Years

The OECD will be 100-years old in 2060

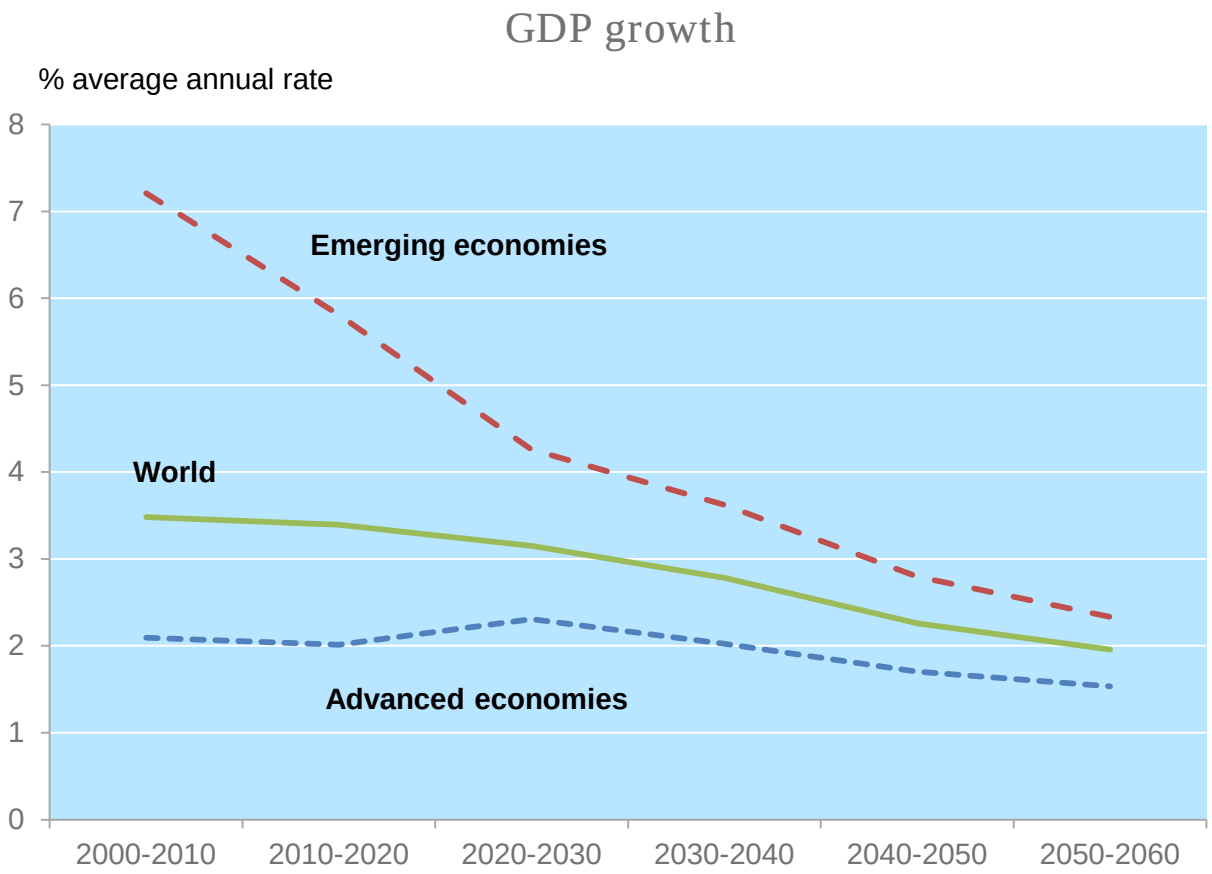
What are the policy challenges for the next 50 years?

The OECD 50-Year Global Scenario helps to highlight key global challenges and how they are connected

OECD 50-Year Global Scenario framework

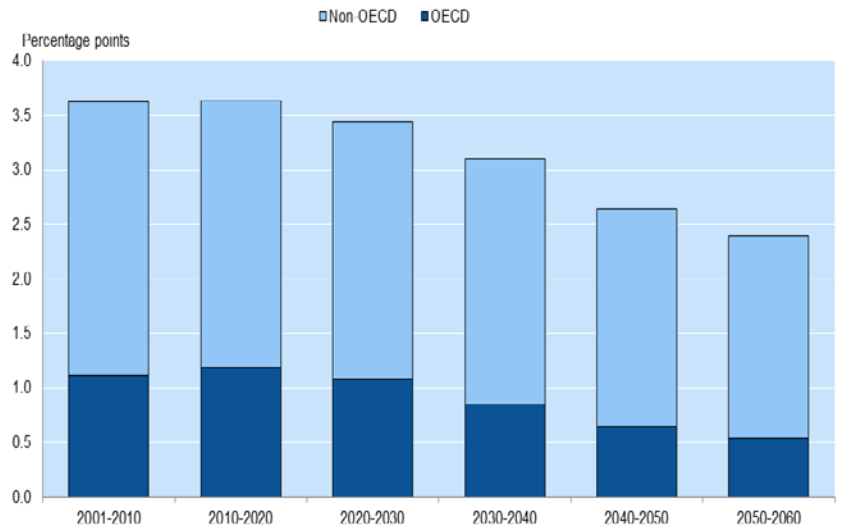


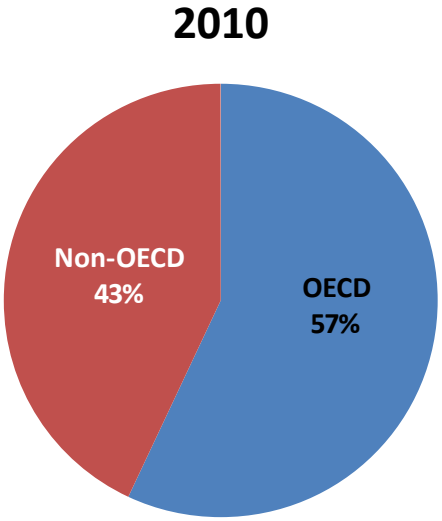
Global economic growth will slow

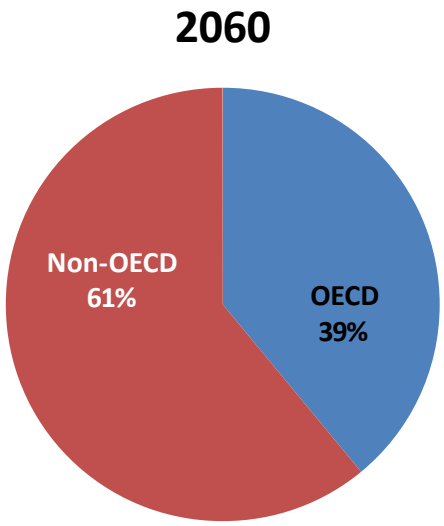


Contribution of OECD to global activity and growth will decline

Contributions to global growth



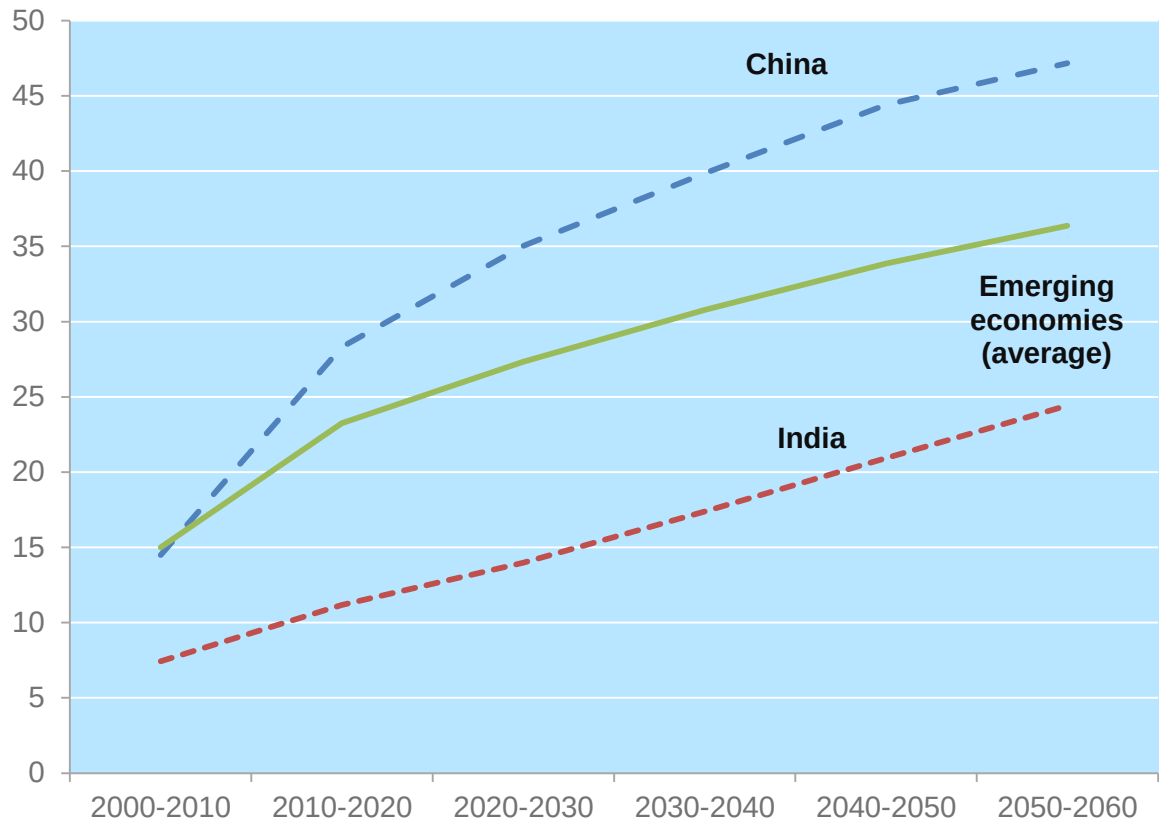




Shares in global GDP (current PPPs)

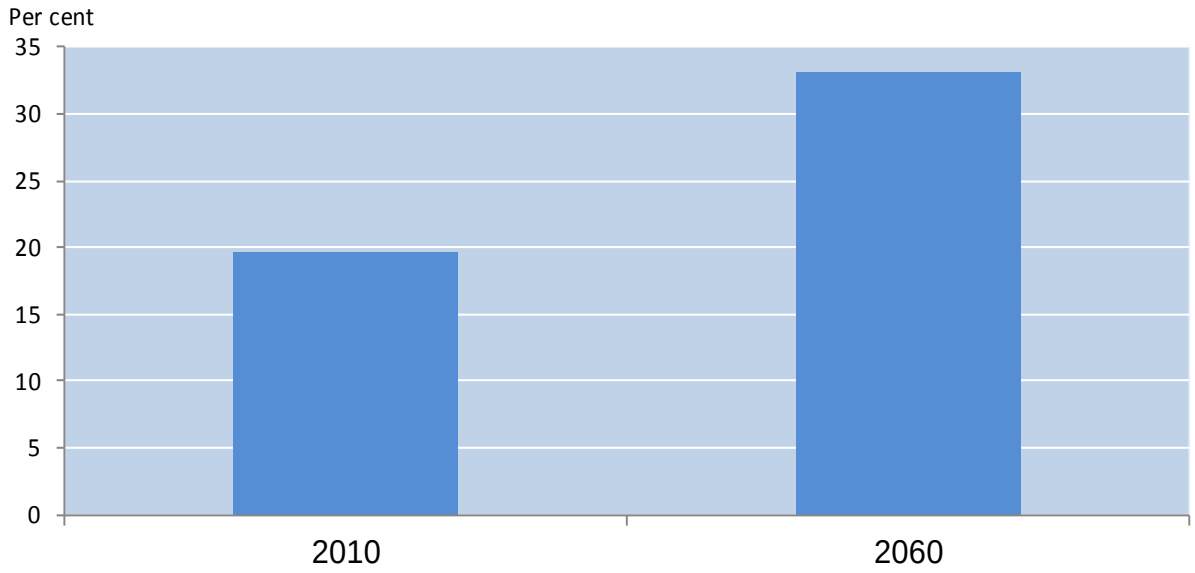
Incomes of EMEs will increase, but will not have converged by 2060

GDP per capita as a share of advanced economies' average level

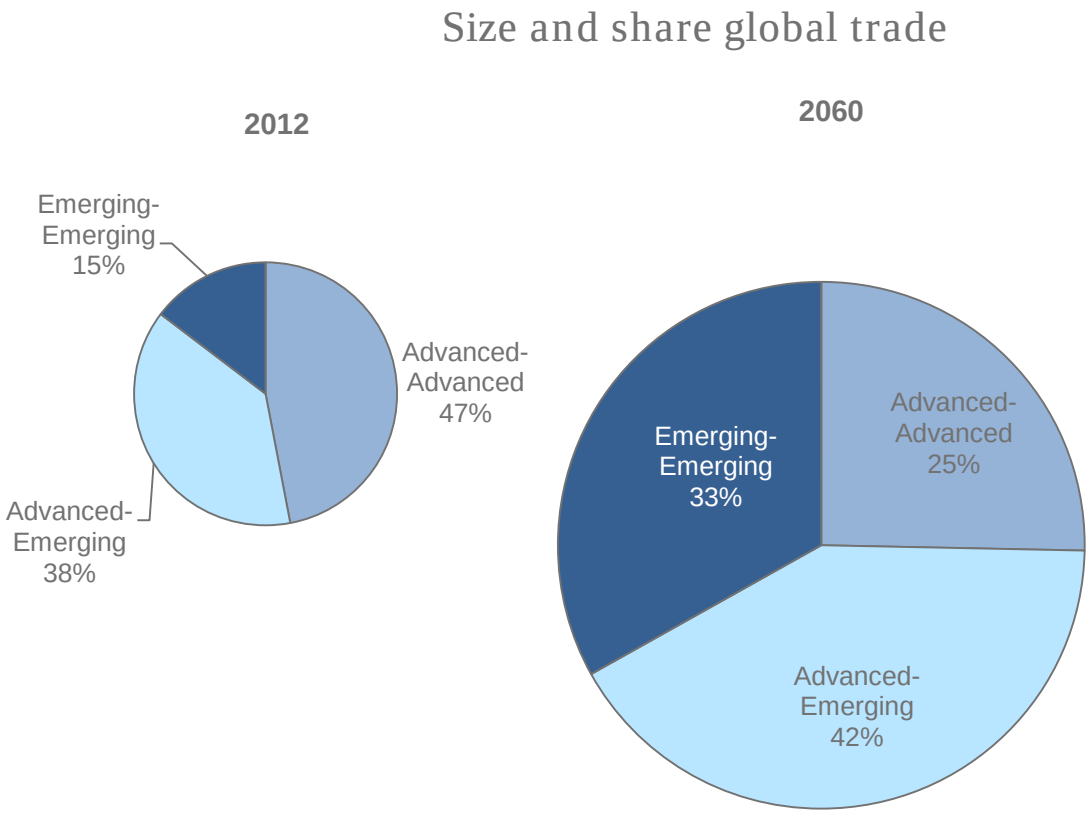


The global economy will become more interdependent …

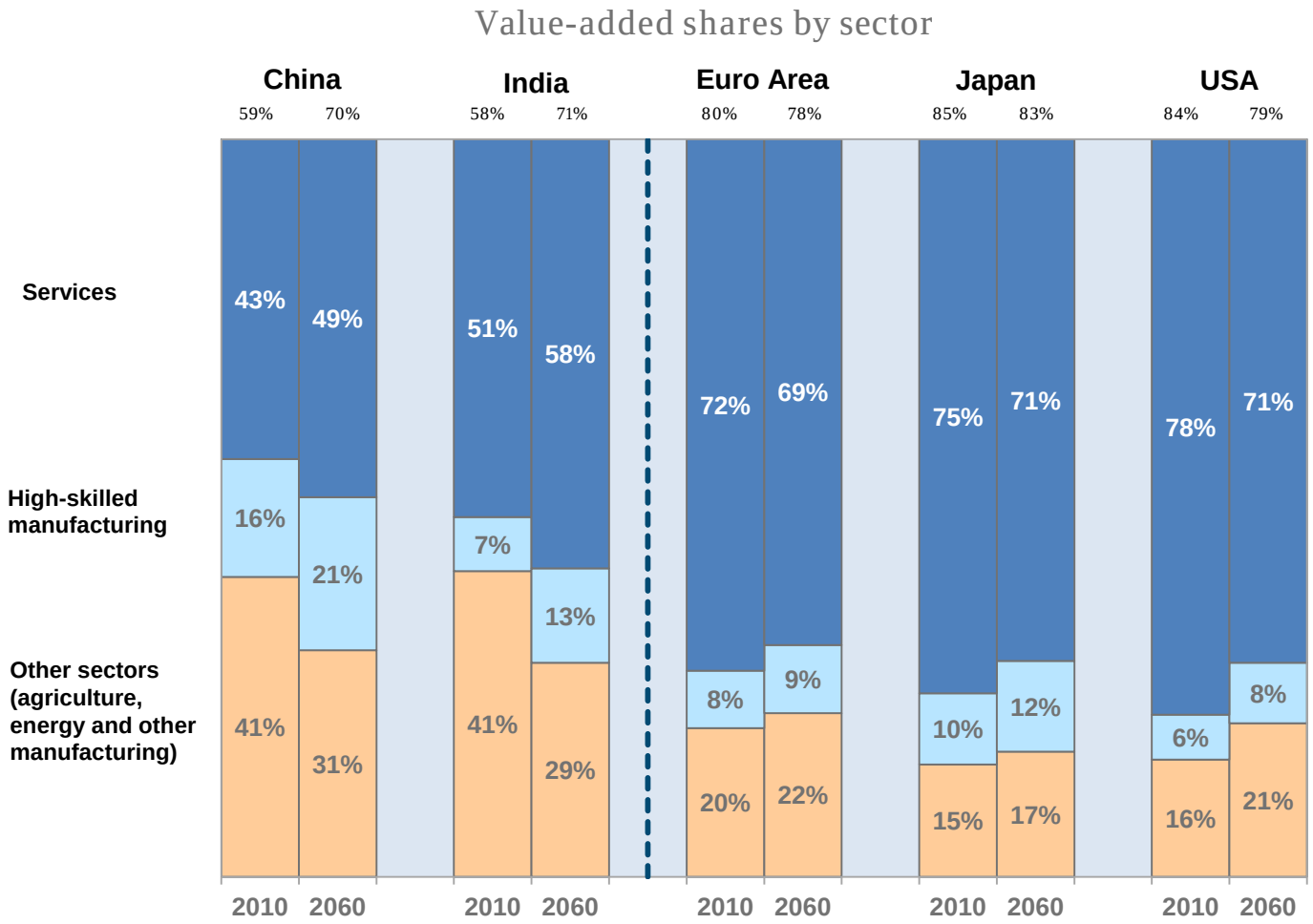
Exports as a share of global GDP



…and multipolar as activity and trade shift to EMEs, and especially to Asia



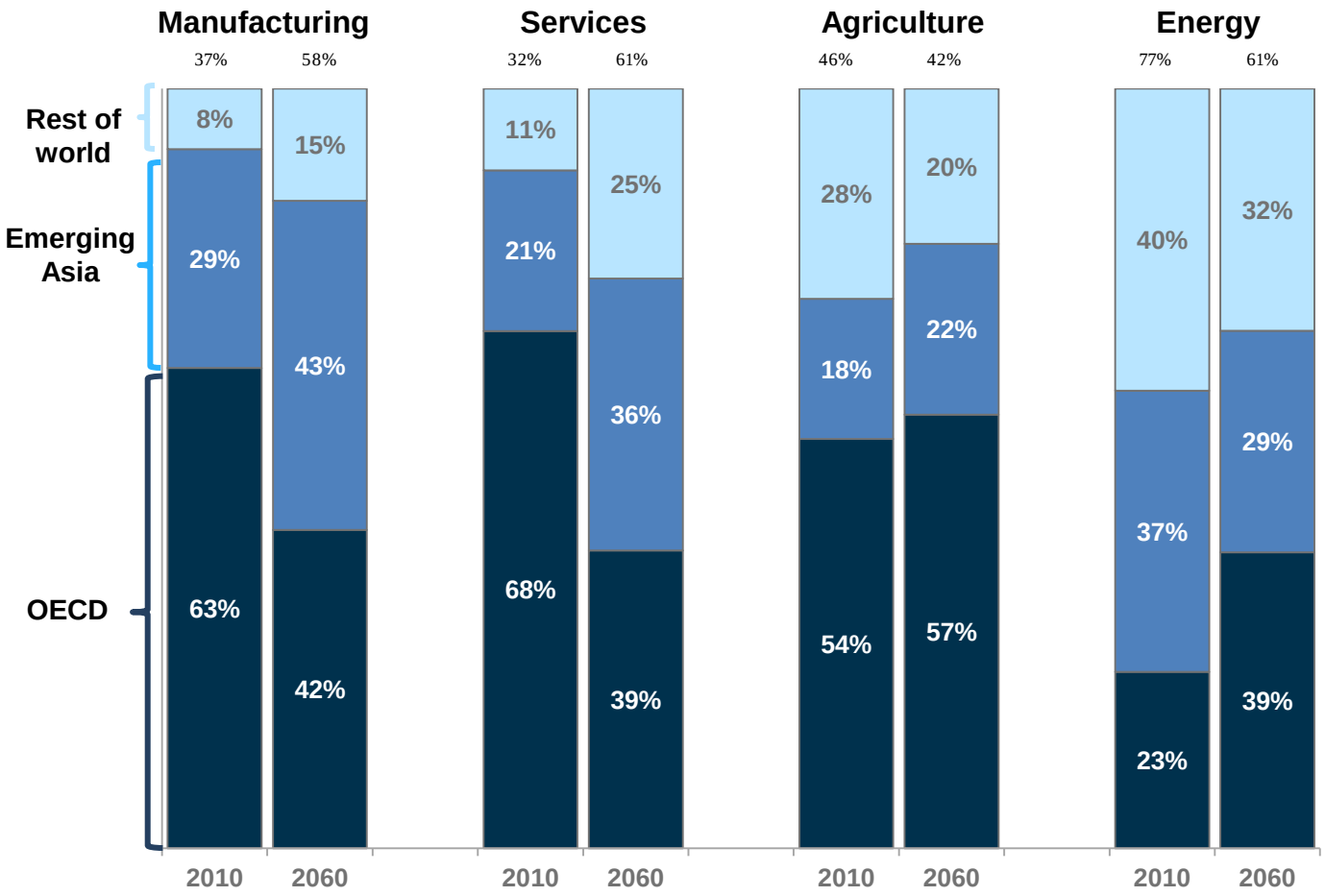
Emerging economies will move into higher value-add activities



Changes in industry structure...

There will be major shifts in specialisation

Shares of global exports by sector

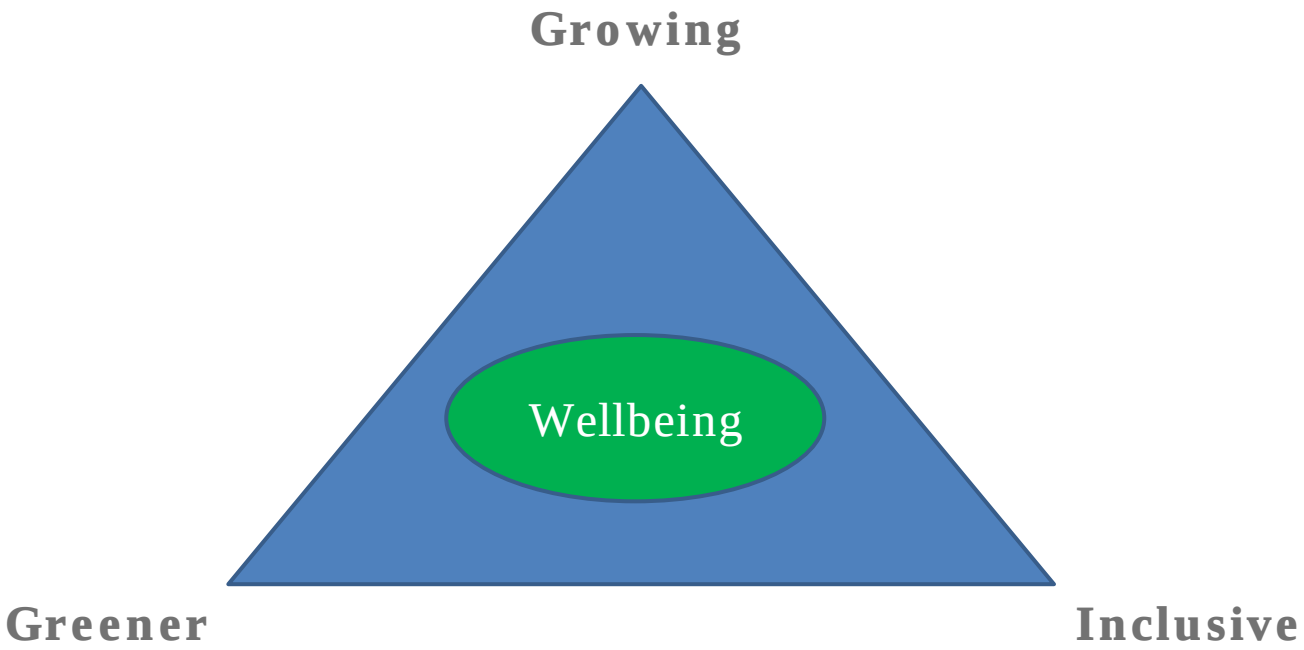


...reflecting changes in trade specialisation

4 policy challenges

- Sustaining growth
- Tackling rising inequality
- Protecting the environment
- All this in the context of strong fiscal pressures

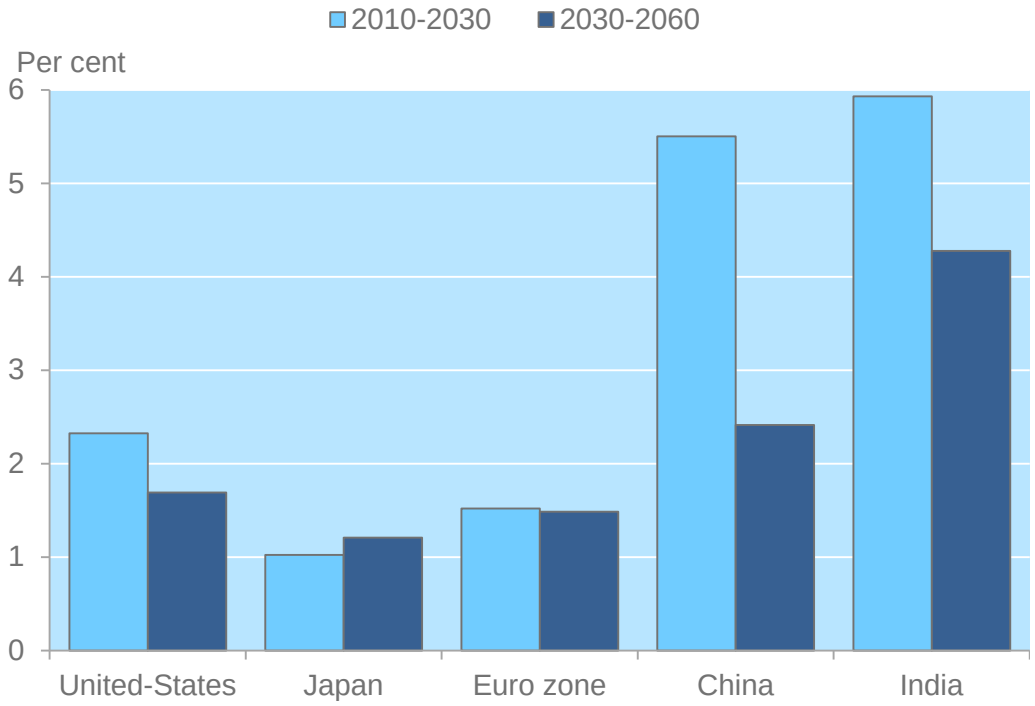
The magic triangle



- We know something about the effects of growth on inequality and the environment
- We know a little about the effects of inequality and environment on growth
- We know very little on the effects of the environment on inequality

Growth can increase inequality and worsen the environment - but it doesn't have to…

1. The Growth Challenge

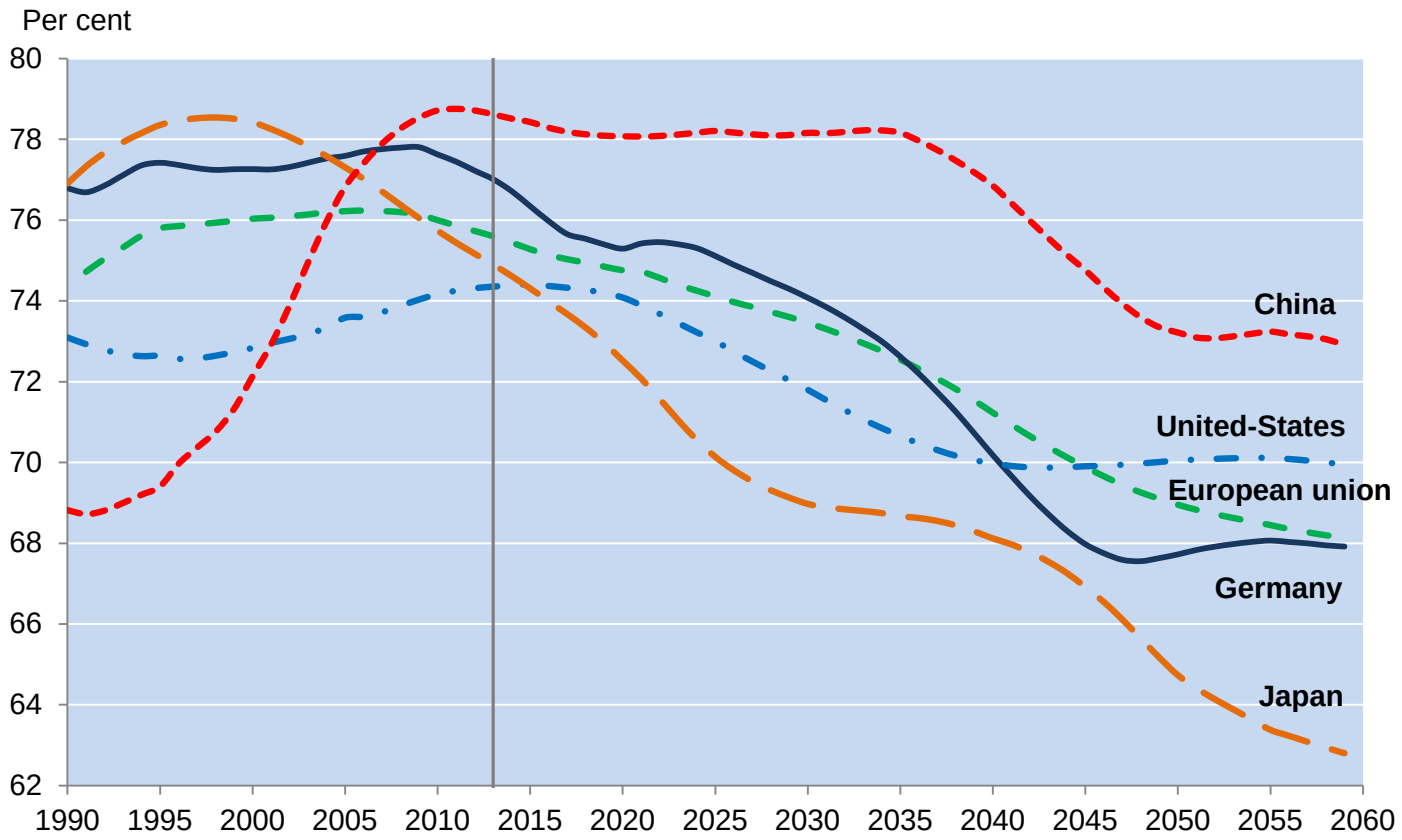


The double demographic shock: ageing and perhaps lower immigration will reduce the scope to grow through an increasing labour force

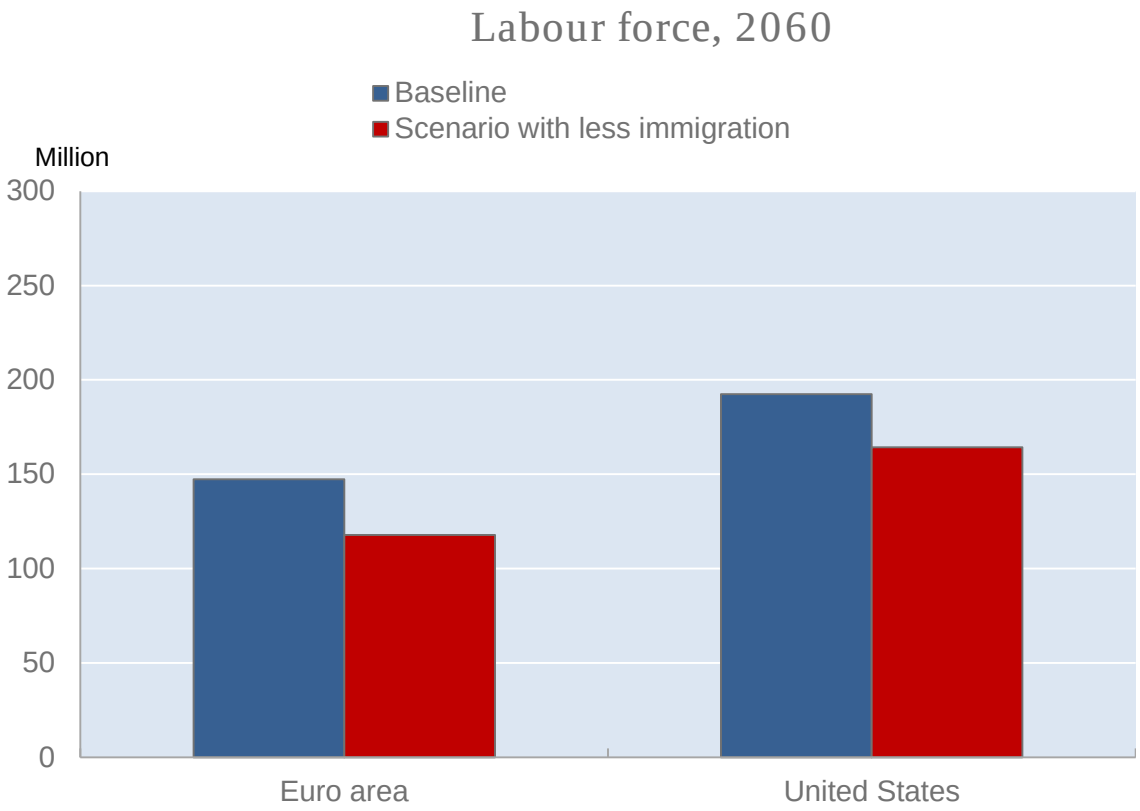
Productivity will drive growth in dynamic, knowledge-based high value-added economies

Ageing makes it harder to sustain growth

Population aged 15-74 as a share of the total



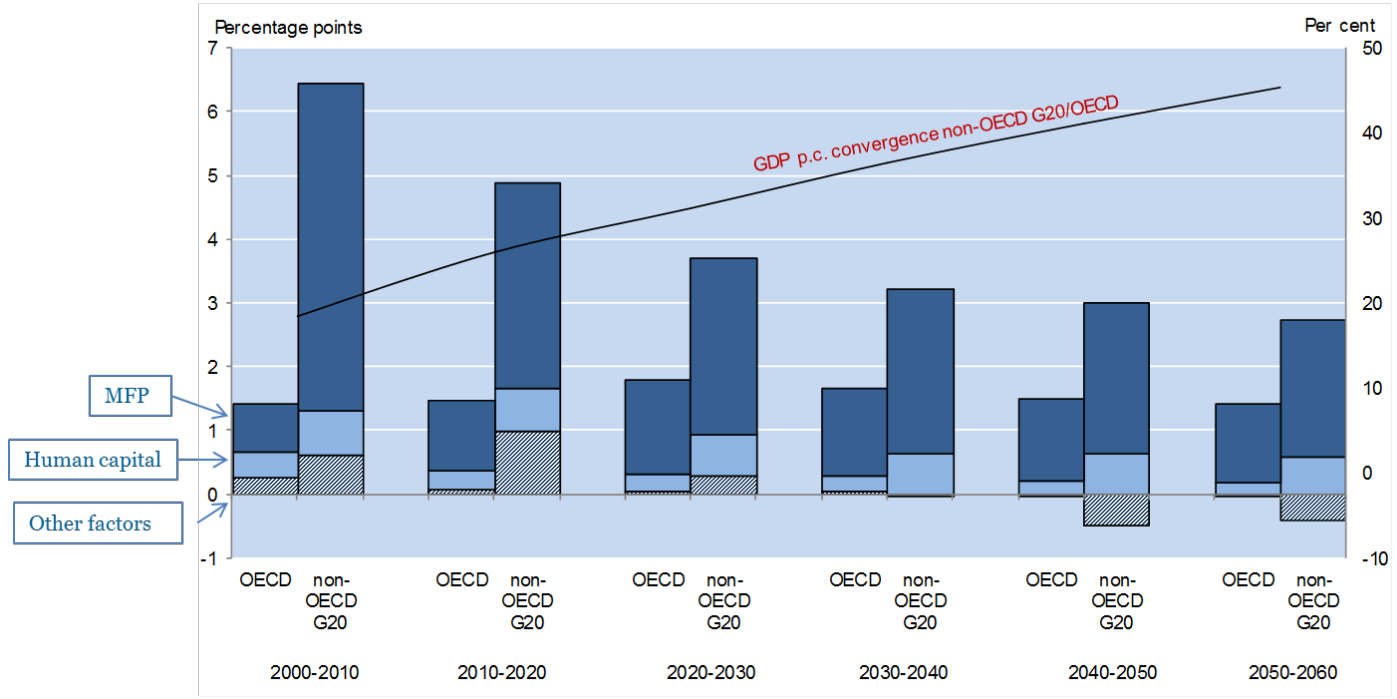
Using migration to offset the effects of ageing will become harder



* Scenario where migration falls due to narrowing income differentials

Productivity and innovation more than jobs will be the key driver of growth

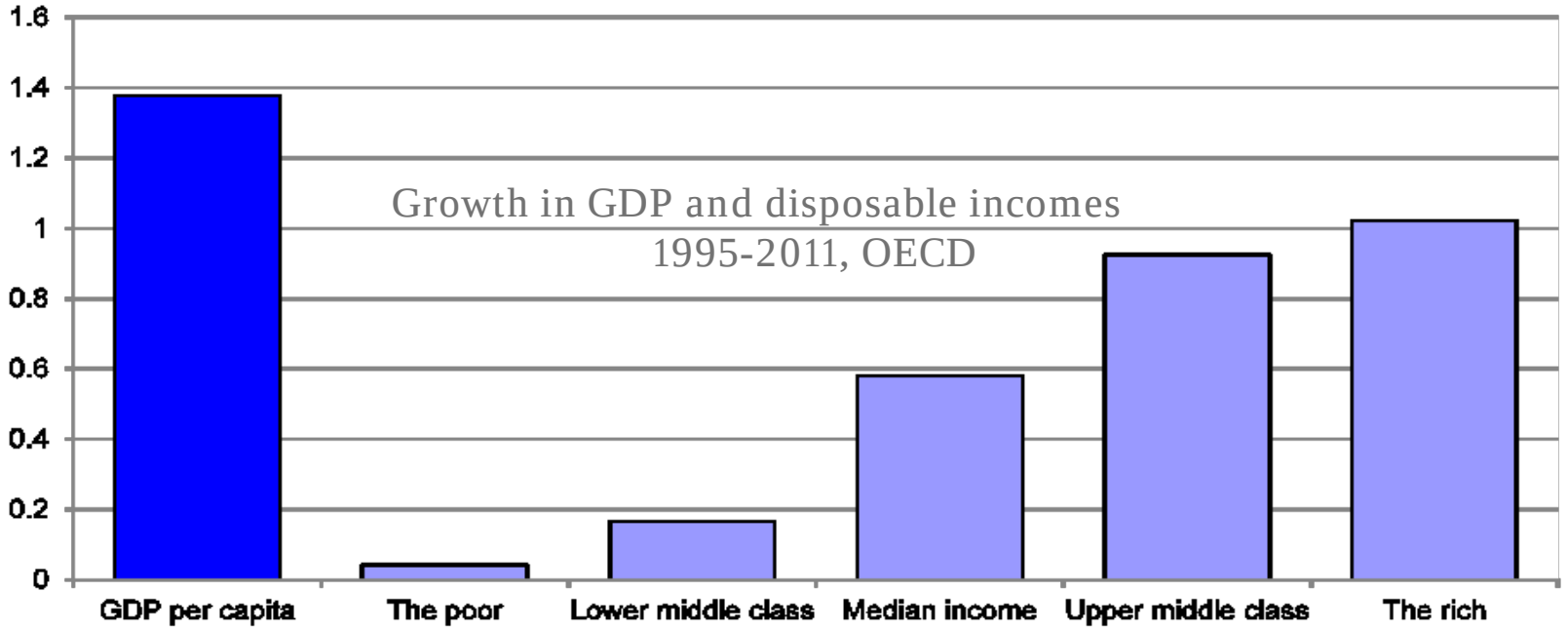
Contribution to growth and convergence in GDP per capita, 42 countries, 2000-2060



- Innovation, technology spillovers and diffusion will increasingly drive growth
- Increasing complementary skills of the population will be key
- Allocating resources to high productivity firms and matching skills to jobs (using talents) will also be crucial

2. The Inequality Challenge: rising income gaps in advanced countries

- Over past decades growth has not benefitted all in the same way

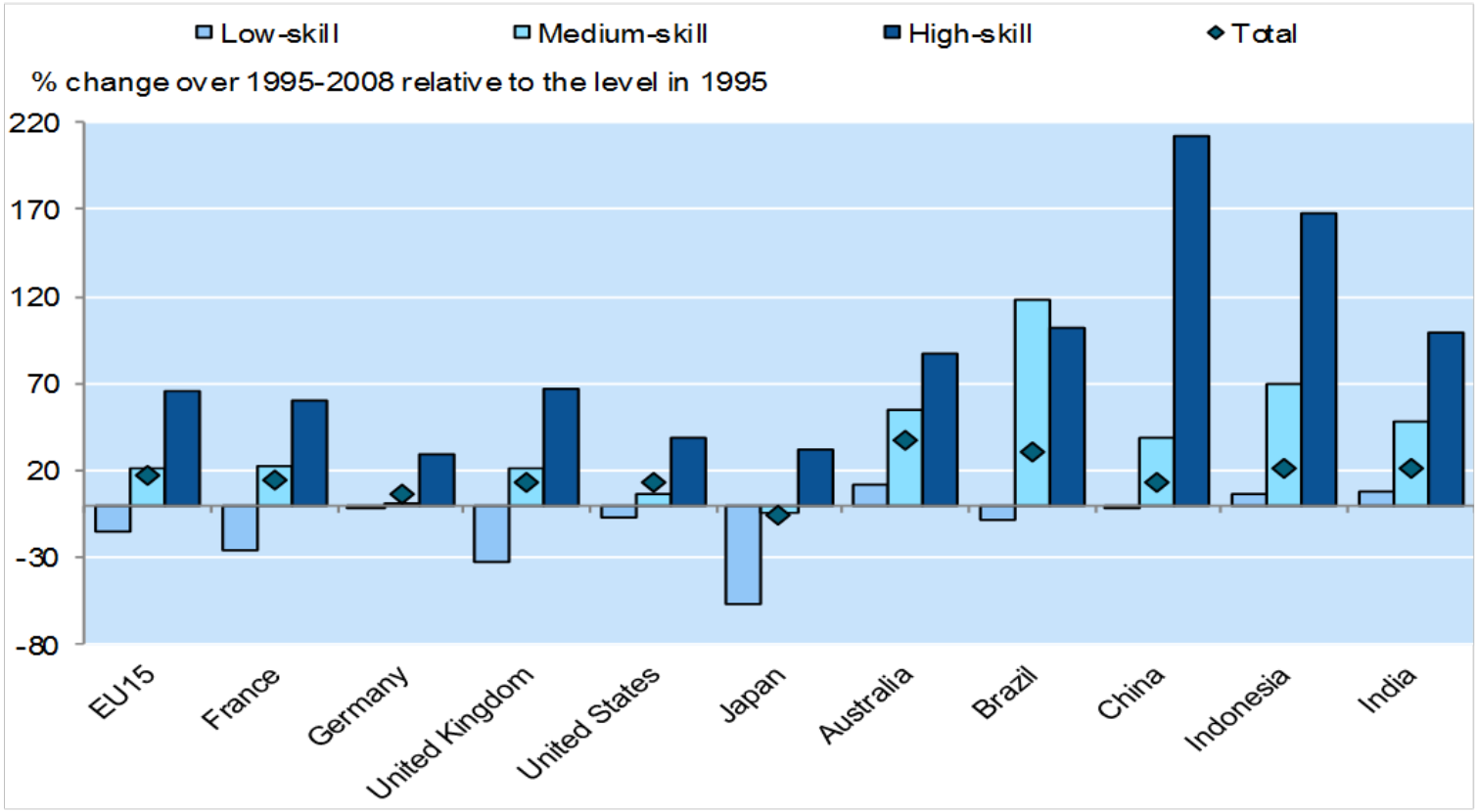


- Income inequality has often increased sharply

- and redistributive policies have become less effective in some countries

Income gaps are partly driven by skilled-biased growth

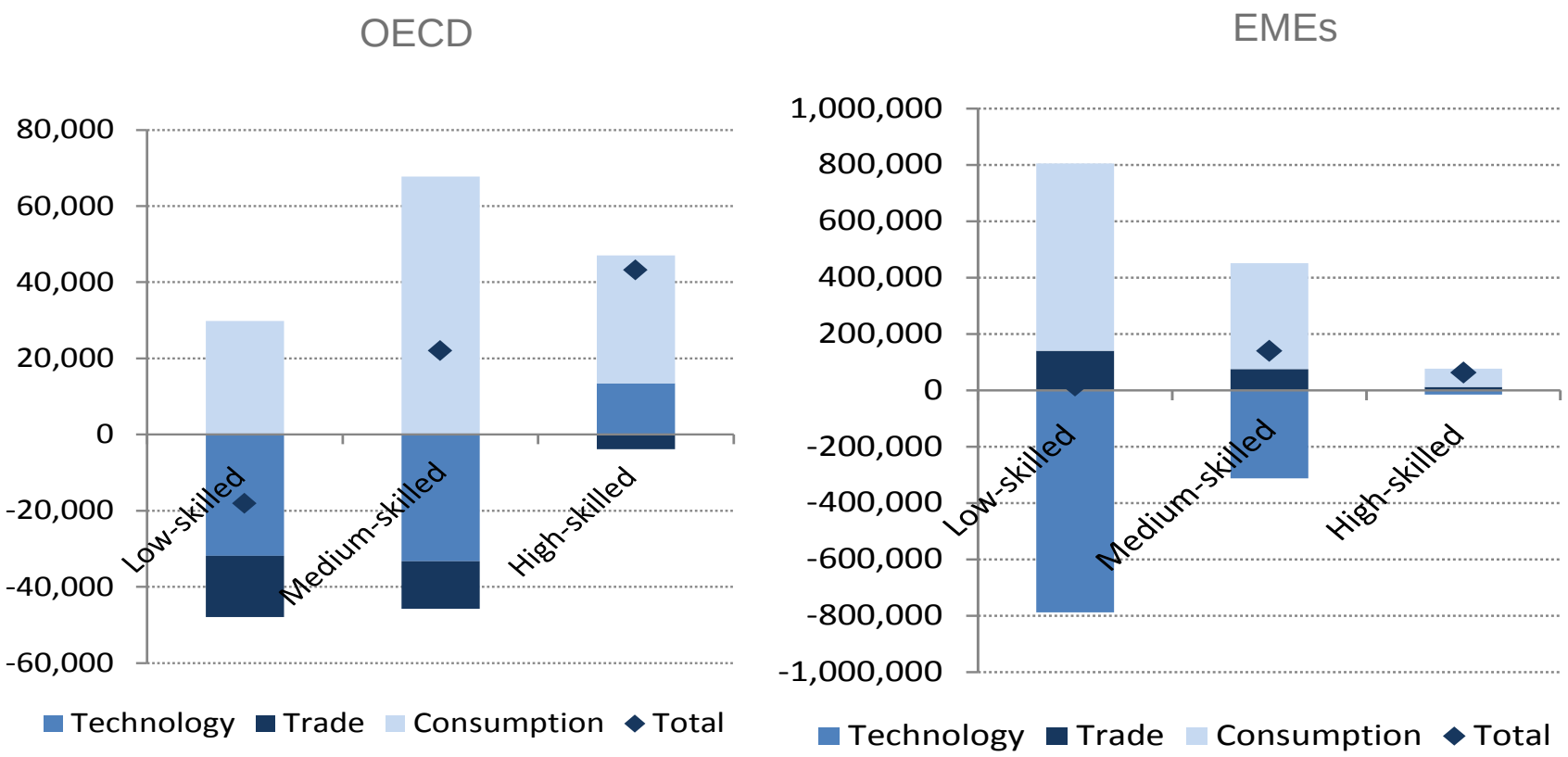
The demand for the high-skilled has risen everywhere



Note: Low -skill refers to completed primary and/or low er-secondary education (ISCED 1 and 2); medium-skill refers to completed upper-secondary and/or non-tertiary education (ISCED 3 and 4); and high-skill refers to completed tertiary education (ISCED 5 and 6).

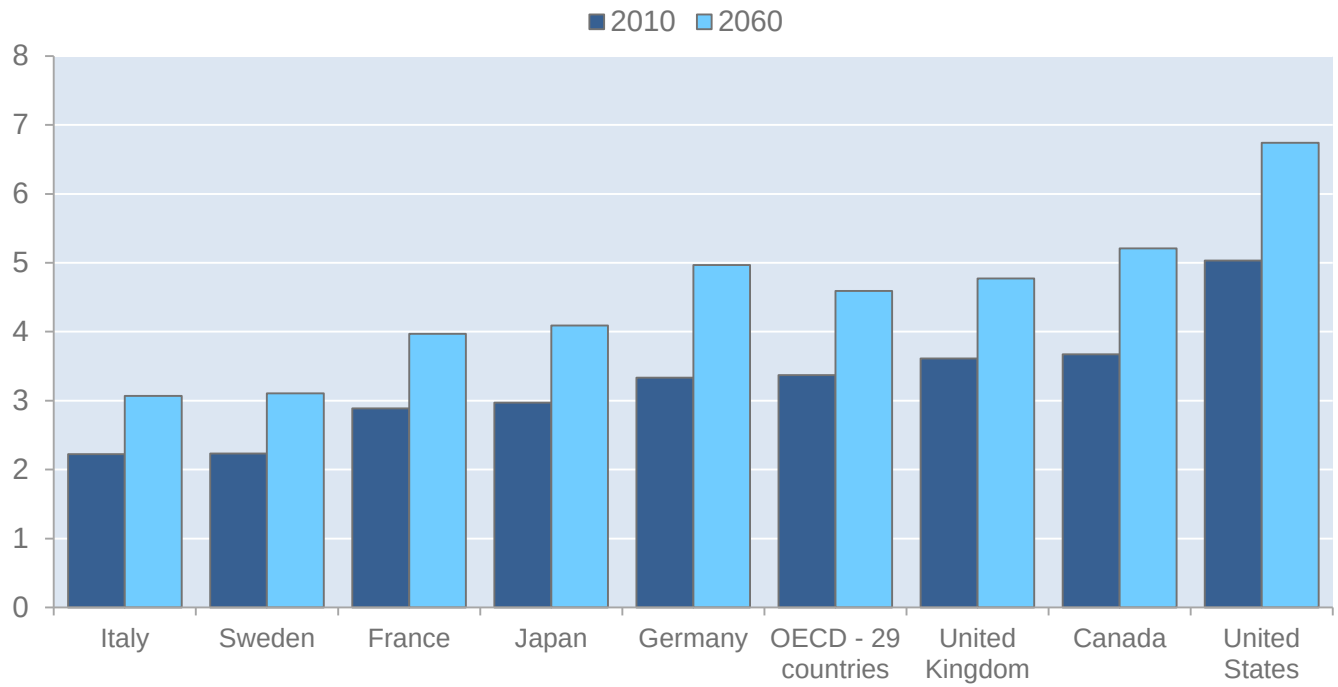
Changing economic patterns are globally generating jobs for the medium-high skilled

Change in jobs by skills, 1995-2008 ('000)



Earnings gaps will continue to widen in advanced countries

Ratio of **gross** wages of the top 90th to the bottom 10th percentile



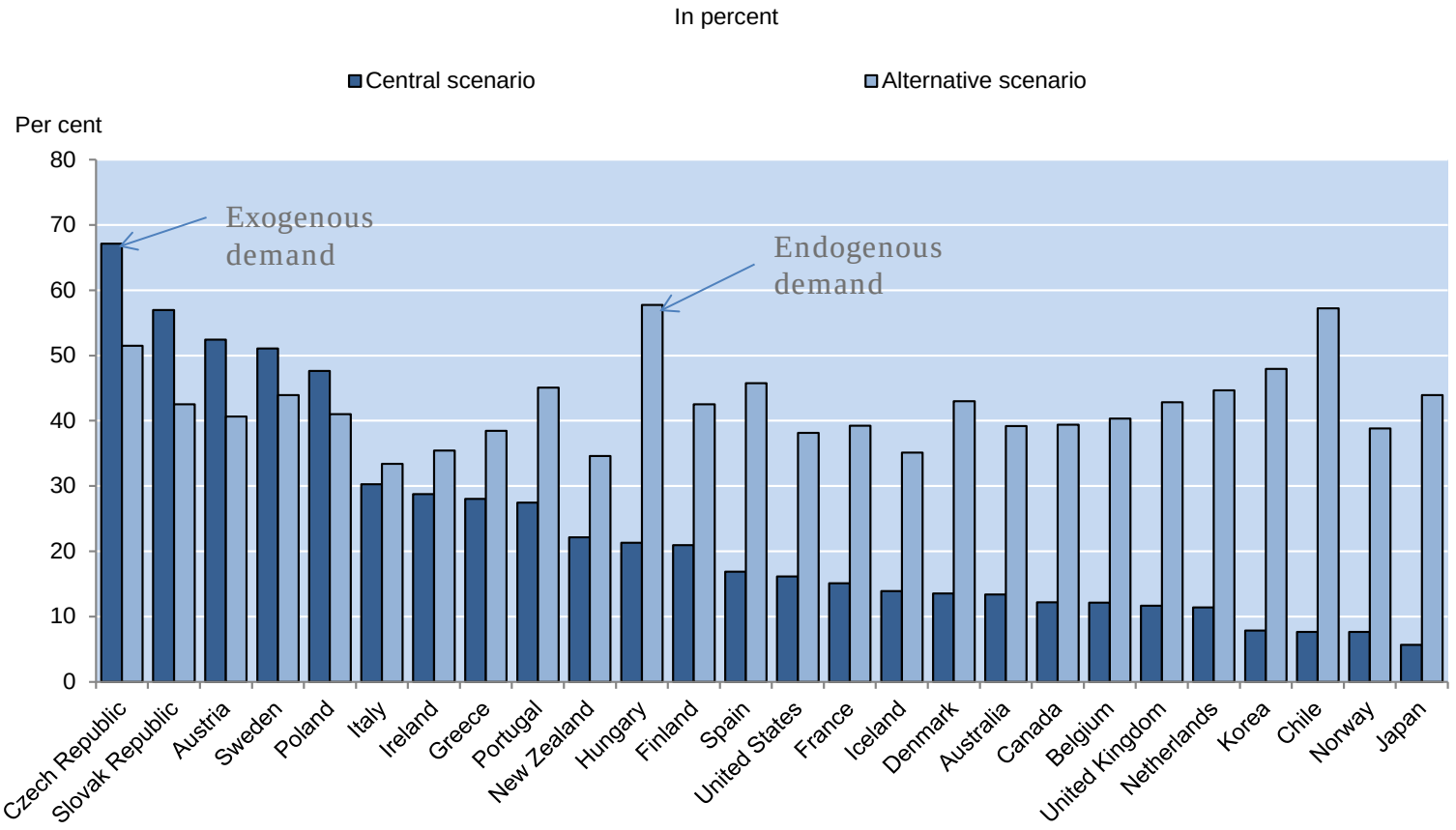
This is just factoring in continuing skill biased technological change and skill supply stickiness (Tinbergen model)...

...but other exacerbating factors could also be at play (rising cross-firm wage gaps, r>g, lower returns to housing)

Sizes of the redistribution, education and matching challenges are set to increase dramatically

Rising skill demand and skill premia will raise demand for education

Growth in demand for tertiary education between 2010 and 2060



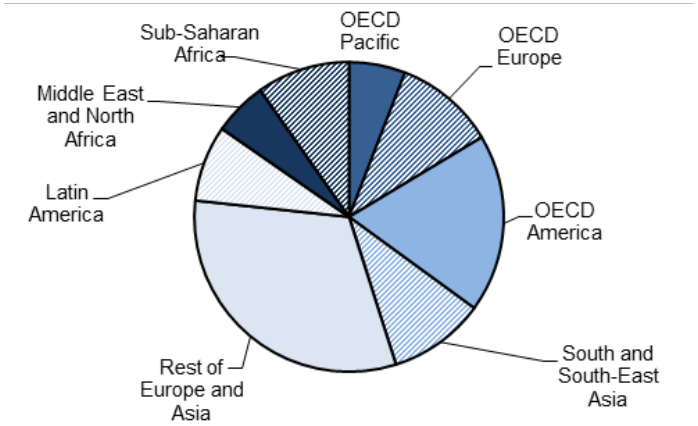
Growth will reduce income differences between countries and reduce poverty.

But, by 2060, average inequality in the OECD area would be close to current US levels.

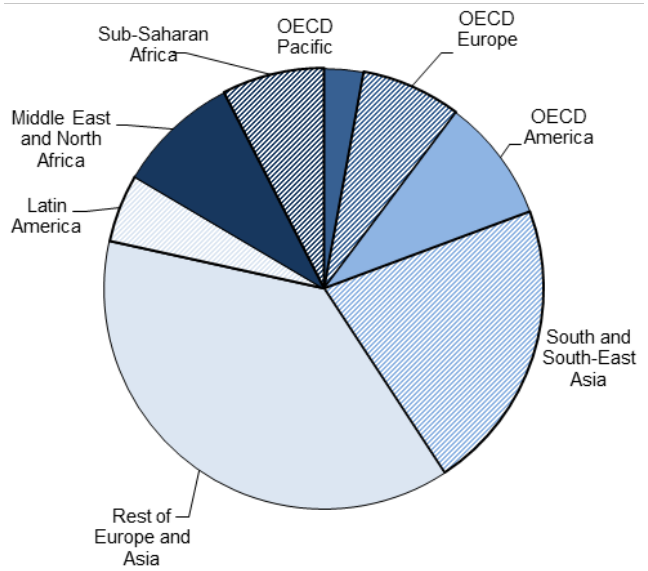
- More investment in education, skills and life-long learning is needed
- Better use of talent pool via equal opportunity and matching
- There will be more demand for progressive/redistributive policies, to balance against sustaining growth

3. The Environment Challenge: GHG emissions

Million tonnes, CO_2 equivalent



2010
45 000 million tonnes



2060
95 000 million tonnes

GDP will increase to four times its current level

The resource pressures will be huge, even if intensity falls

Climate change will begin hitting GDP sooner than expected

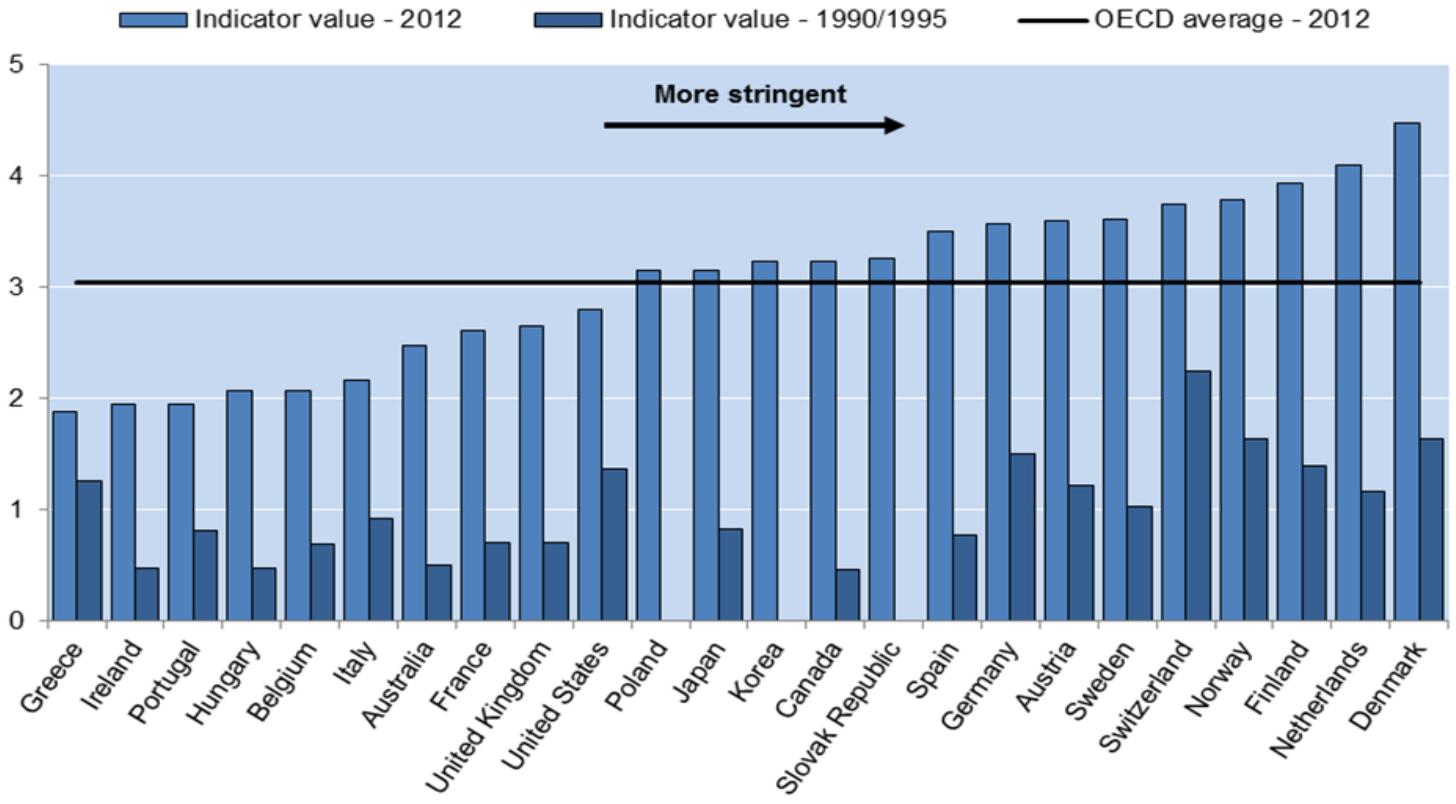
Climate change will lower GDP, especially in Africa and parts of Asia, slowing down catch up

Losses are estimated to be accelerating over time and reach 2% globally by 2060

- Losses in Africa and South and South-East Asia will be double the global losses
- Losses in Latin America, Russia and China will be close to global losses
- Losses in North America, the Pacific region and Europe will be minor

Some hope from policy developments, but not enough

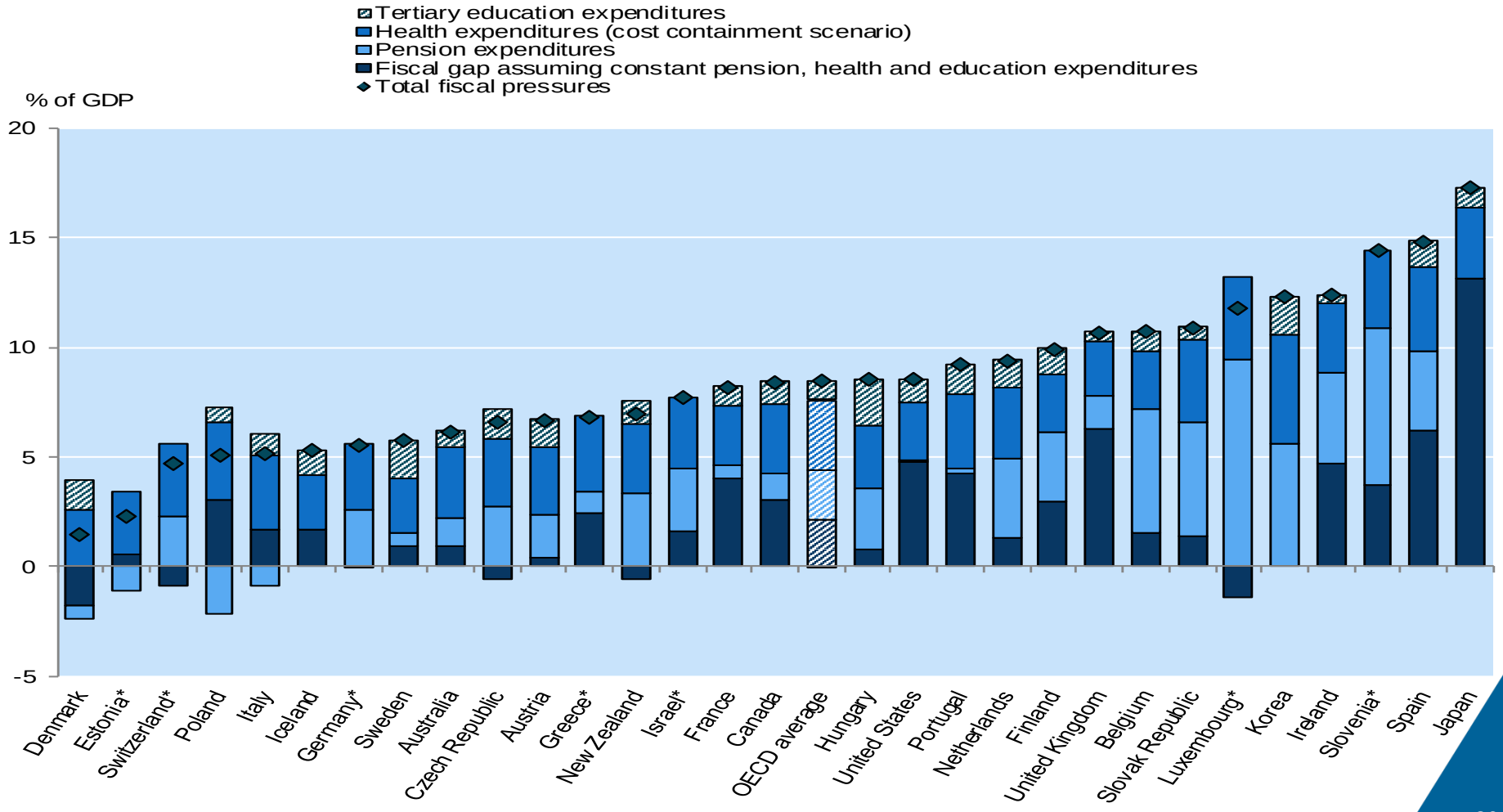
Environmental policies have become more stringent



4. The fiscal constraint

Public budgets will be hard-pressed for facing future policy challenges

Budget adjustment needed as of 2014 to stabilise debt ratios at 60% of GDP by 2060



* Tertiary education spending projections not available.

Summing up on policy requirements

- Face ageing
- Encourage innovation and knowledge-driven growth
- Meet the inequality challenge
- Adapt to and limit climate changes and its damages
- All this with public resources that are under increasing stress

A new approach is needed

- Policies need to look ahead and prepare for a shifting world
- The case for structural reform is stronger and more urgent with new challenges
- All dimensions of well-being will be more connected
- Given the headwinds, the challenges for growth-enhancing, redistributive and environmental policies will be huge

The “globalisation paradox”

The global economy will be more integrated so closer cooperation is needed

- Further global trade integration
- More cooperation in global public goods (innovation, competition policy, environment)
- Corporate income taxation (factors and tax bases more mobile)

The world will be multipolar so cooperation could be harder to achieve

Further reading

[OECD 50-year Global Scenario website]

[OECD Economic Policy Notes series]

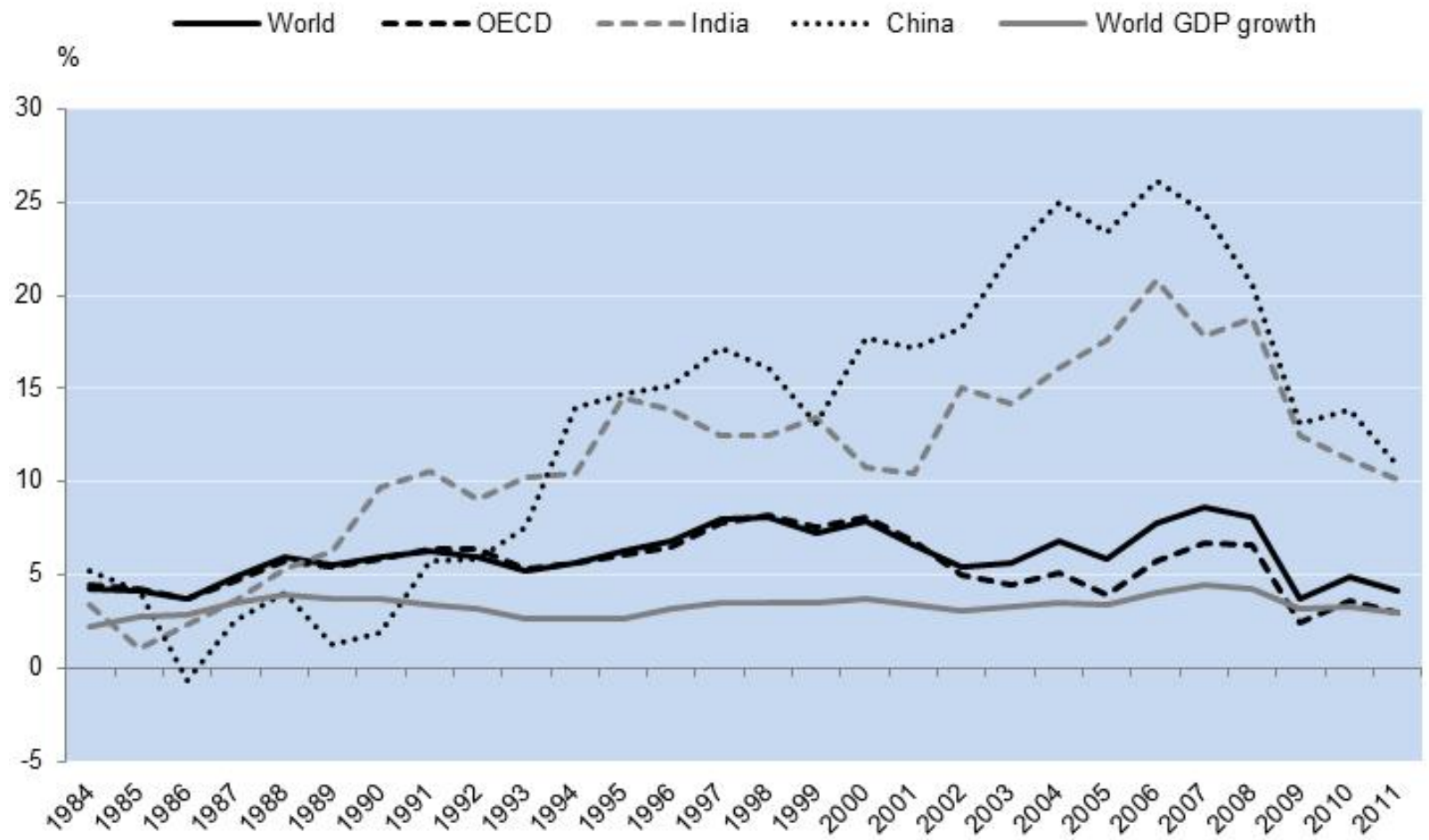
[OECD Economic Policy Paper series]

[OECD Economics Department working paper series]

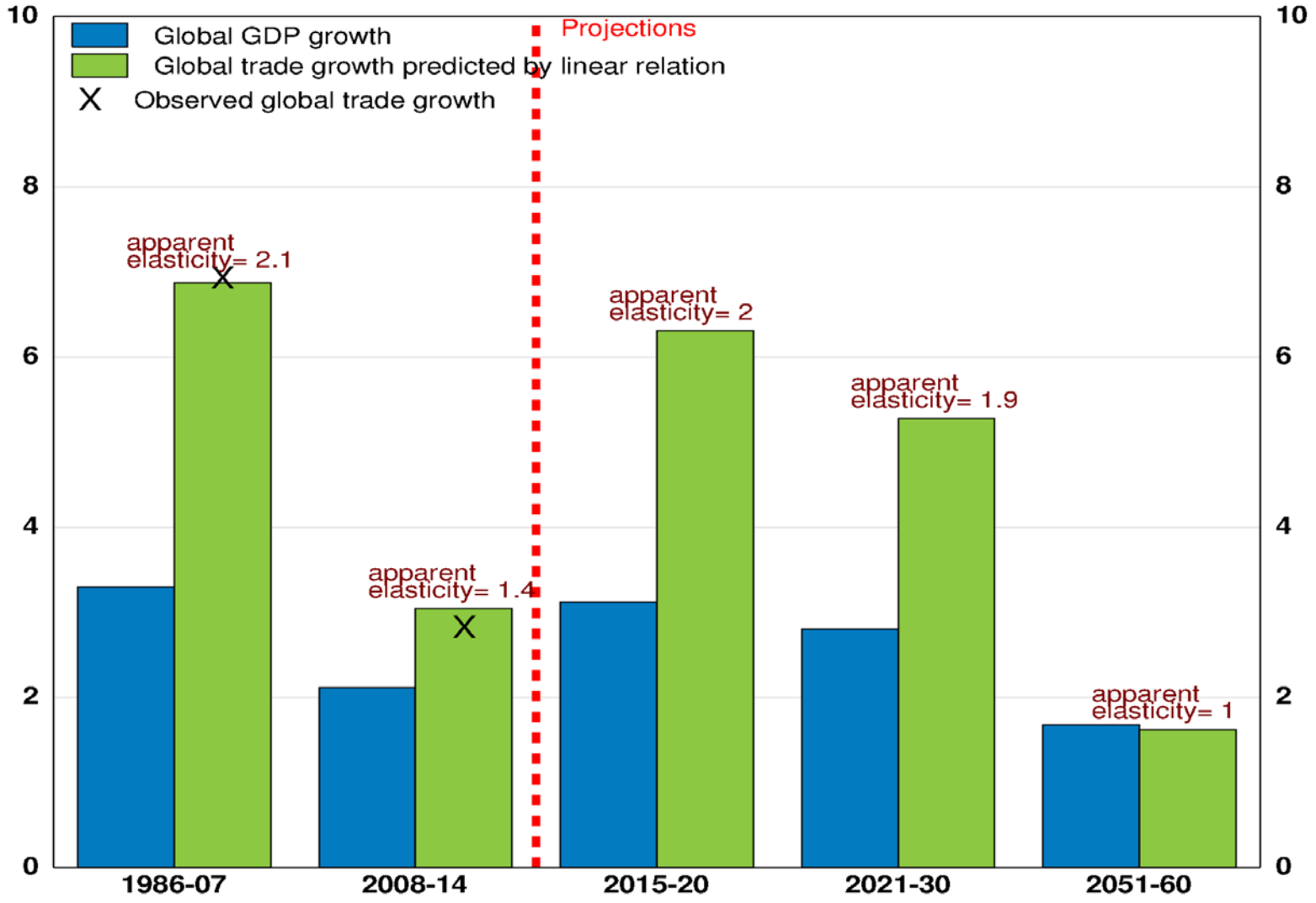
Further background slides

Global trade 1984-2011

Growth of exports and GDP

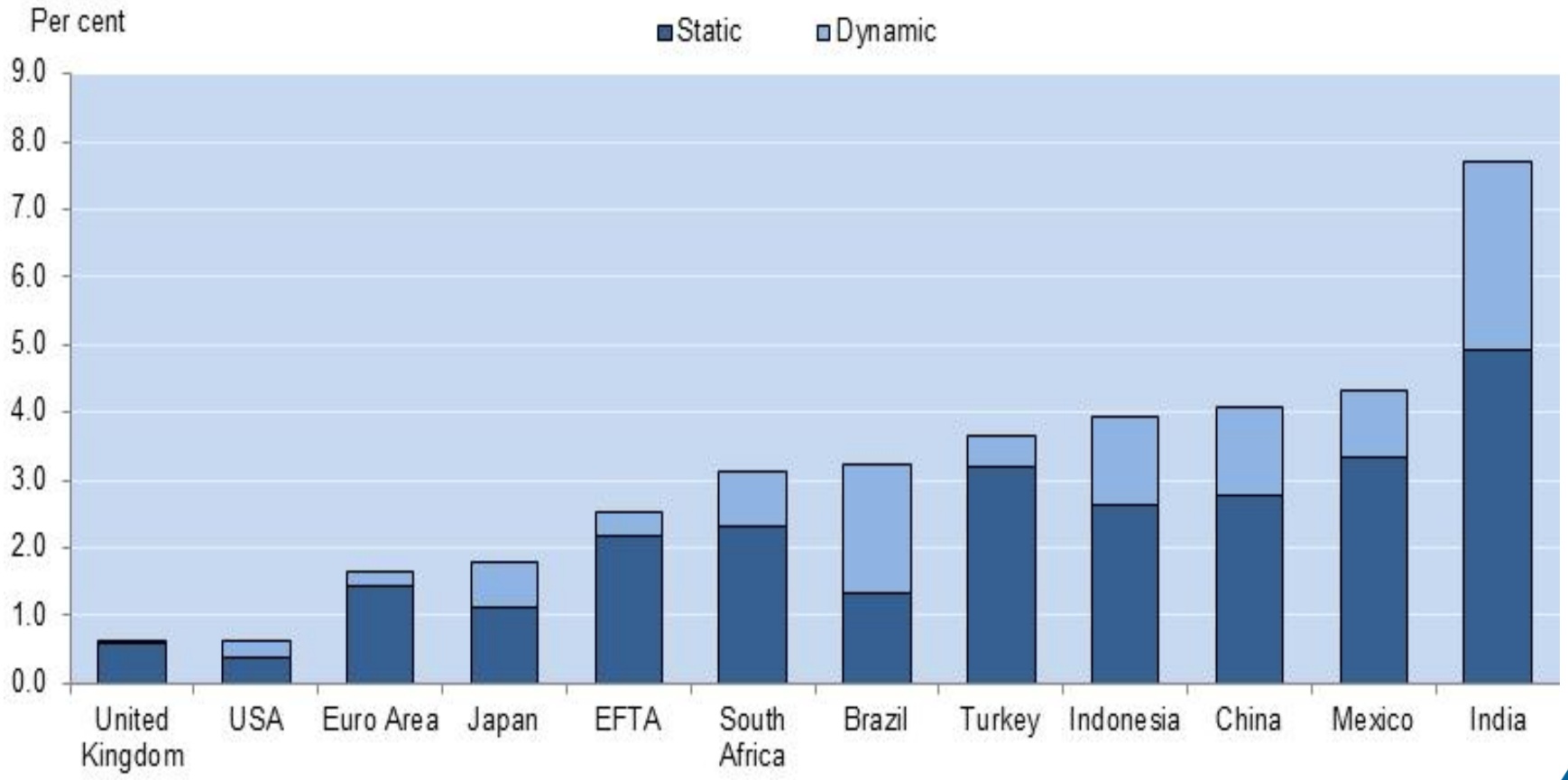


Trade elasticity to GDP 1986-2060

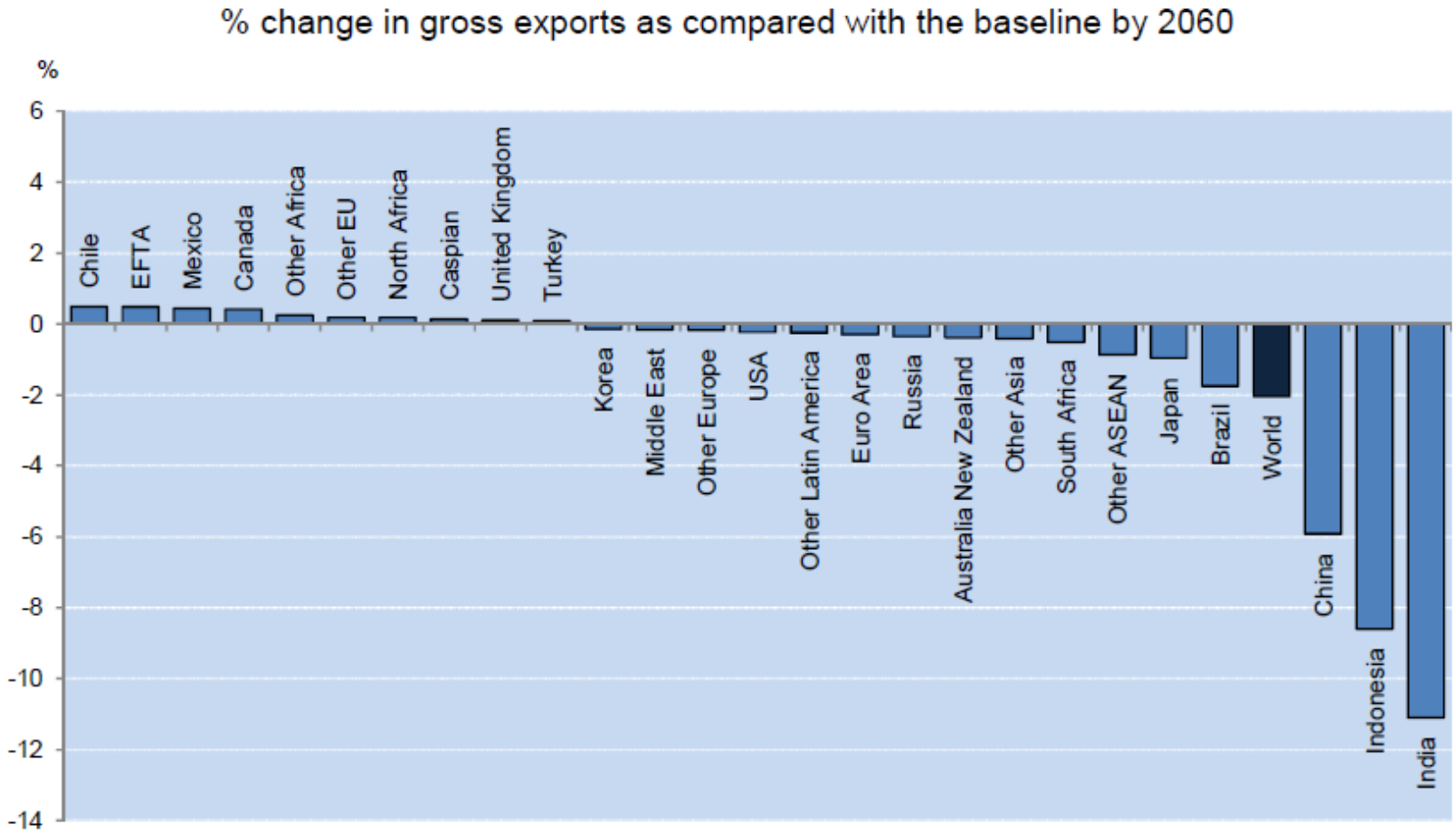


Further trade liberalisation would help reach higher GDP levels

Increase in GDP relative to baseline, 2060

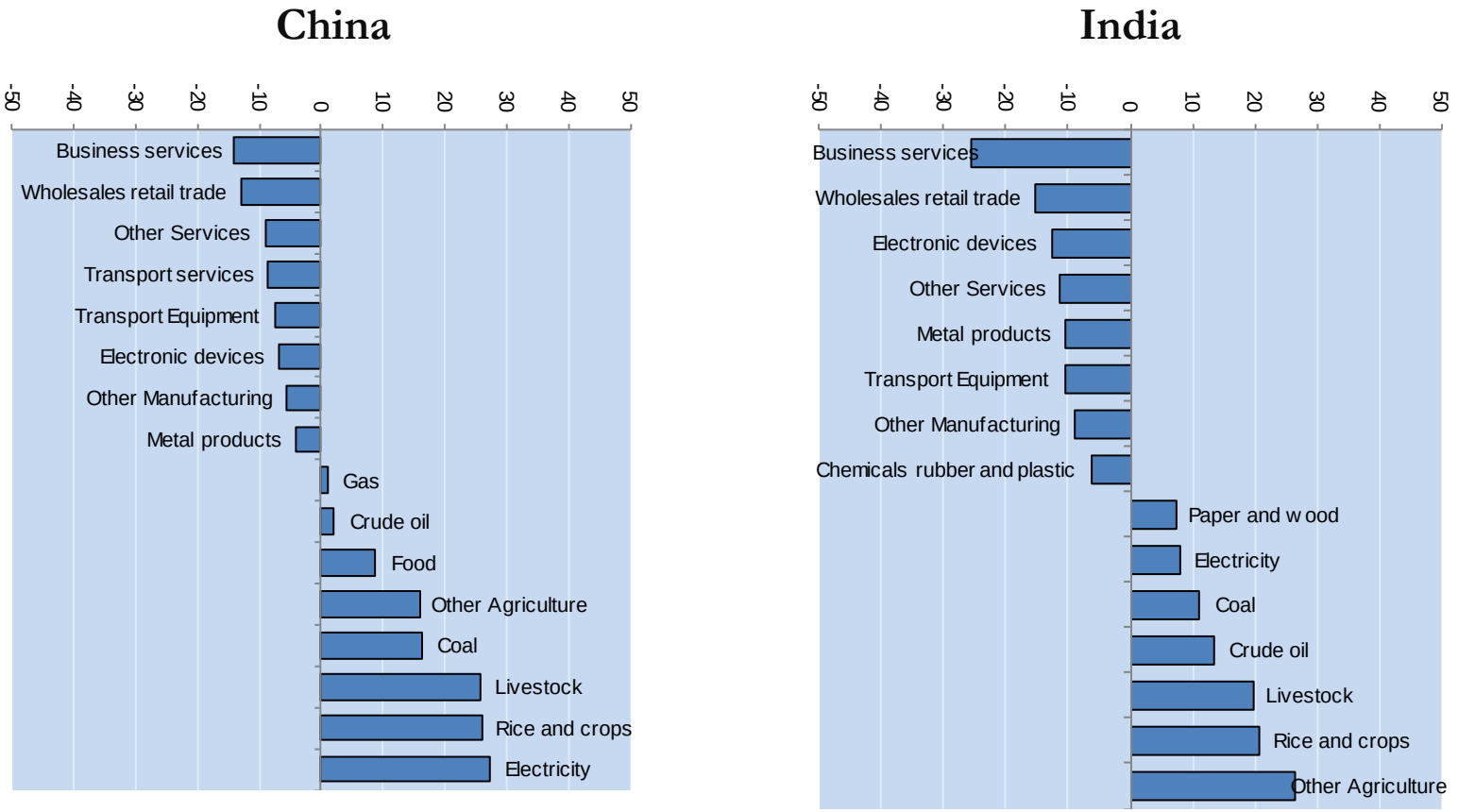


If human capital investment was slower than expected in Asia, trade would suffer



If human capital investment was slower than expected in Asia, specialisation in high VA activities would suffer

Exports compared to baseline scenario (% difference in 2060)



Measures included in the OECD Environmental Policy Stringency (EPS) indicator

Table 3. Instruments included in the energy sector indicator

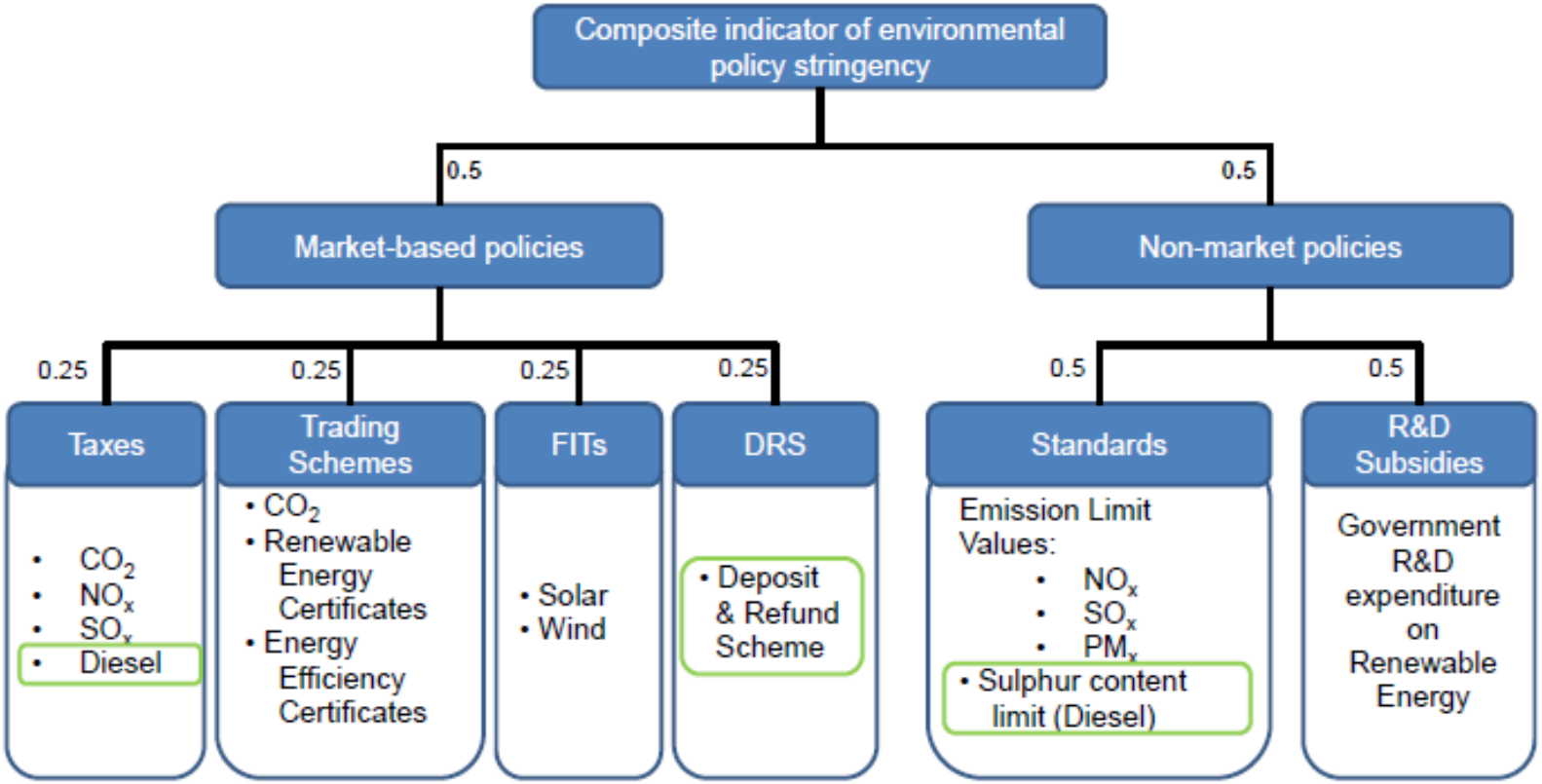
Instrument	Information considered for scoring	Rules for addressing capital vintage or technological composition
Emission Trading Scheme(CO_2)	Price of one CO_2 allowance	n.a.
Renewable Energy Certificates Trading Scheme	% of renewable electricity that has to be procured annually	n.a.
Energy Certificate Emission trading Scheme	% of electricity saving that has to be delivered annually	n.a.
Emission trading Scheme for SO_2	Price of one SO_2 allowance	n.a.
CO_2 tax	Tax rate in EUR/ tonne	n.a.
NO_x Tax	Tax rate in EUR/ tonne	n.a.
SO_x Tax	Tax rate in EUR/ tonne	n.a.
Feed In Tariff for wind	EUR/kWh	n.a.
Feed In Premium for wind	EUR/kWh	n.a.
Feed In Tariff for solar	EUR/kWh	n.a.
Feed In Premium for solar	EUR/kWh	n.a.
Particulate Matter Emission Limit Value for newly built coal-fired plant	Value of Emission Limit in mg/m^3	ELV for newly built large scale coal fired plants
SO_x Emission Limit Value for newly built coal-fired plant	Value of Emission Limit in mg/m^3	ELV for newly built large scale coal fired plants
NO_x Emission Limit Value for newly built coal-fired plant	Value of Emission Limit in mg/m^3	ELV for newly built large scale coal fired plants
Government R&D expenditures for renewable energy technologies	Expressed as % of GDP	n.a.

Table 4. Additional policy instruments included in the economy-wide indicator

Instrument	Information considered for scoring	Rules for addressing capital vintage or technological composition
Tax on diesel for industry	Total tax for a litre of diesel used in transport for industry	n.a.
Deposit & refund scheme	Dummy for presence of a Deposit Refund Scheme	n.a.
Maximum content of sulphur allowed in diesel	Value dictated by the standard	n.a.

The structure of the EPS

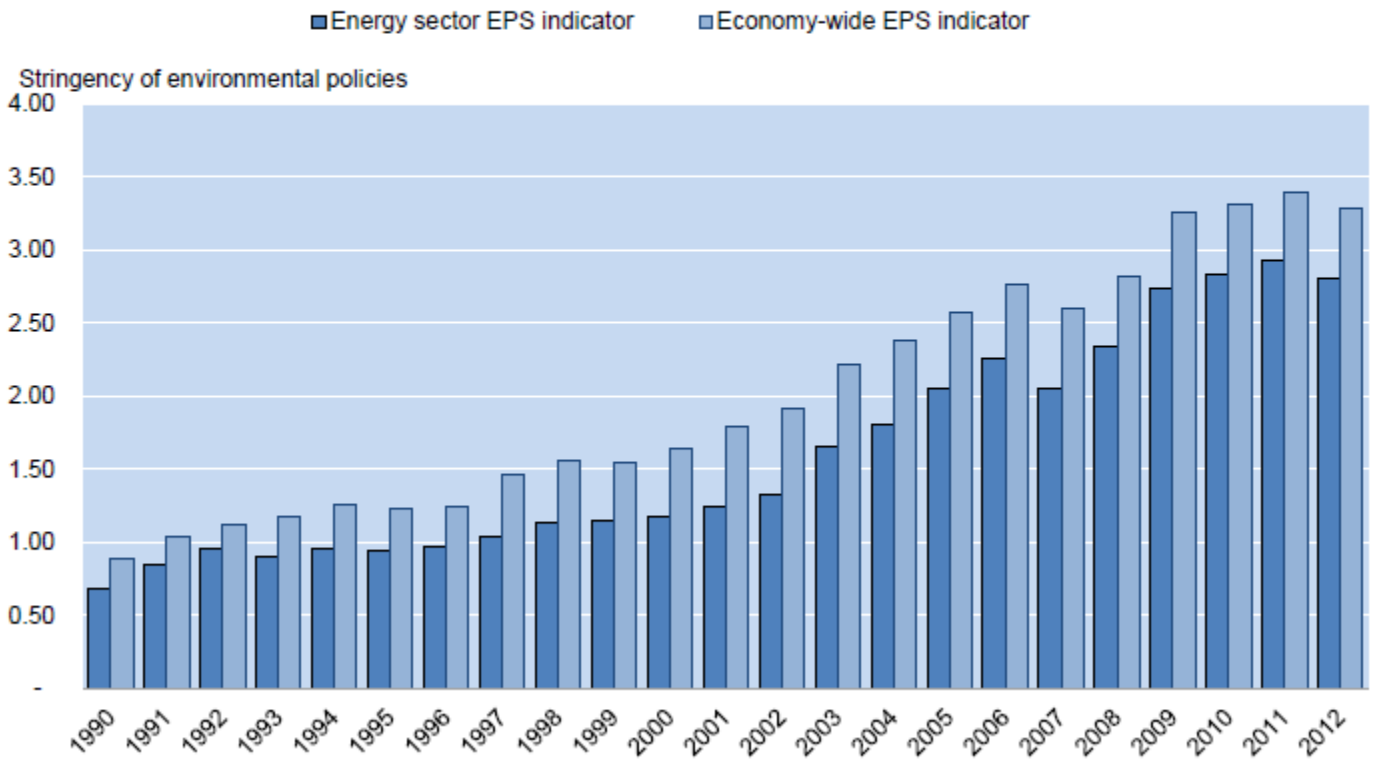
Figure 4. Structure of the extended (economy-wide) indicator



Environmental policy stringency has gone up…

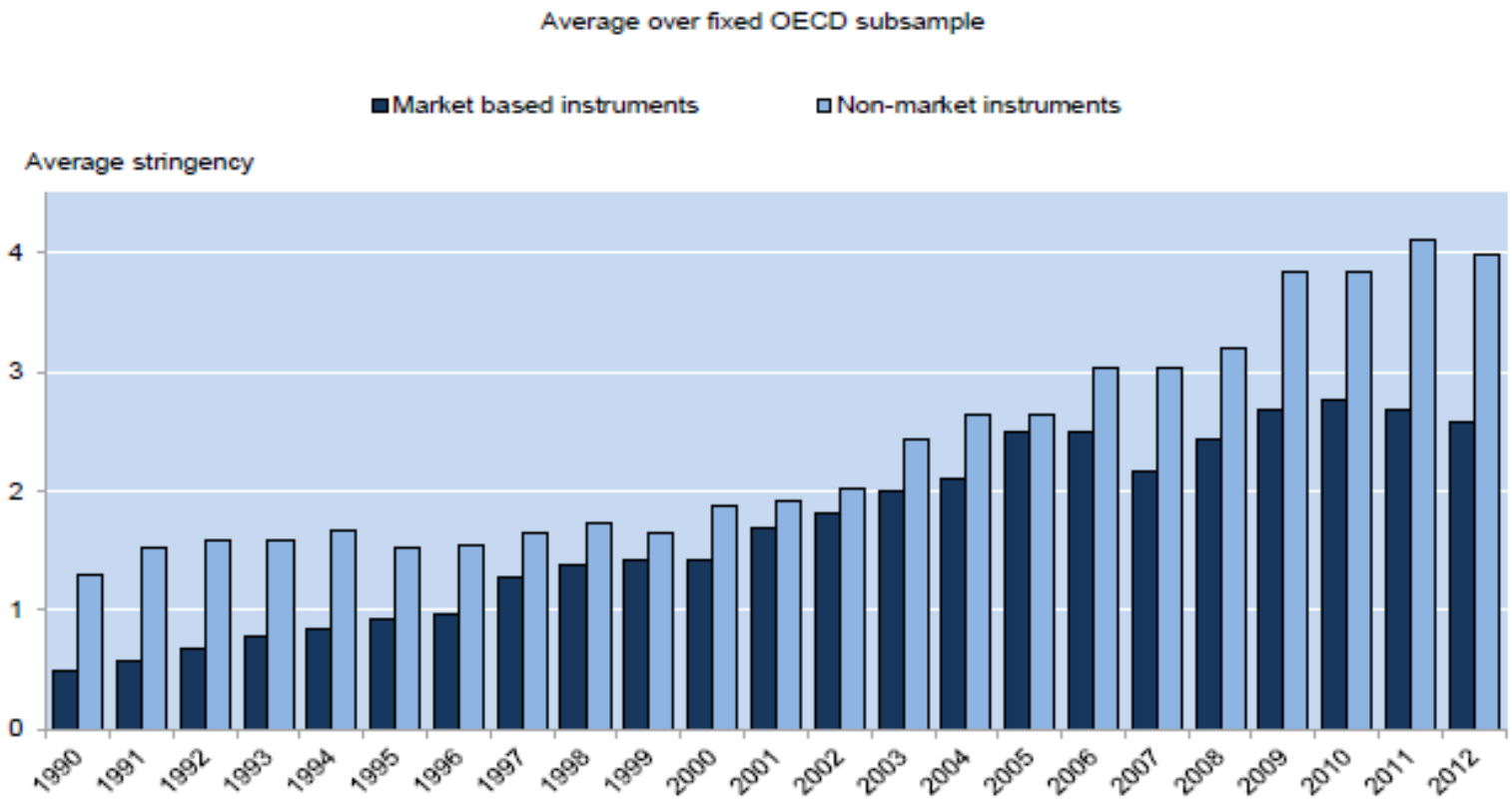
Figure 11. Average environmental policy stringency over time

Fixed subsample of OECD countries



… largely driven by non-market measures

Figure 13. Average stringency per component – Economy wide



Economic impacts of climate change

Table 1. Overview of key climate impacts

AGRICULTURE	Changes in crop yields (incl. cropland productivity and water stress) Livestock mortality and morbidity from heat and cold exposure Changes in pasture- and rangeland productivity Changes in aquaculture productivity
COASTAL ZONES	Loss of land and capital from sea level rise Non-market impacts in coastal zones
ECOSYSTEMS	Loss of ecosystems and biodiversity Changes in forest plantation yields Changes in fisheries catches
EXTREME EVENTS	Mortality, land and capital damages from hurricanes Mortality, land and capital damages from floods
HEALTH	Mortality and morbidity from heat and cold exposure Mortality and morbidity from infectious diseases, cardiovascular and respiratory diseases
LIVELIHOOD	Changes in energy demand for cooling and heating Changes in tourism flows and services Migration Armed conflict
WATER STRESS	Changes in energy supply Changes in irrigation water availability Changes in availability of drinking water to end users (incl. households)
TIPPING POINTS	Large scale disruptive events

Not covered in the CIRCLE analysis

Source: Authors' elaboration.