



Department of Educational Research, Lancaster University  
Seminar Series 11 March 2015

# **High Participation higher education Systems:**

## **Evidence, interpretations, implications**

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## [seminar coverage]

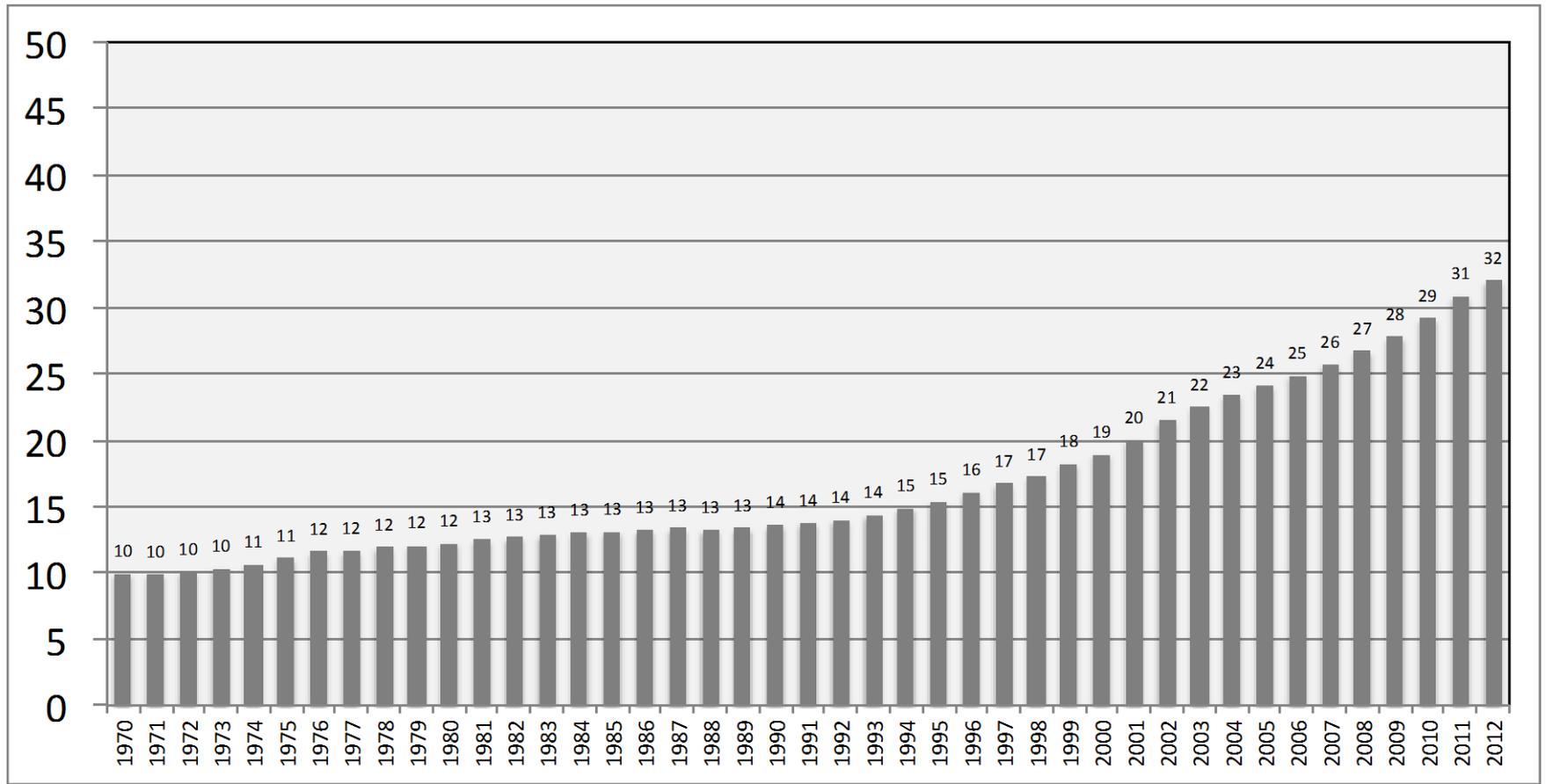
- The common tendency to high participation systems of higher education (HPS)
- Participation is stratified in value
- What are the drivers of participation growth?
- What is a high participation society?



**1. The common tendency to high participation systems (HPS)**

Worldwide we see an accelerating growth of participation in tertiary (and higher) education

# World Gross Tertiary Enrolment Ratio, 1970-2012 (UNESCO Institute of Statistics)



# The Gross Tertiary Enrolment **Ratio** exaggerates age-cohort participation

**Total enrolment** in tertiary education

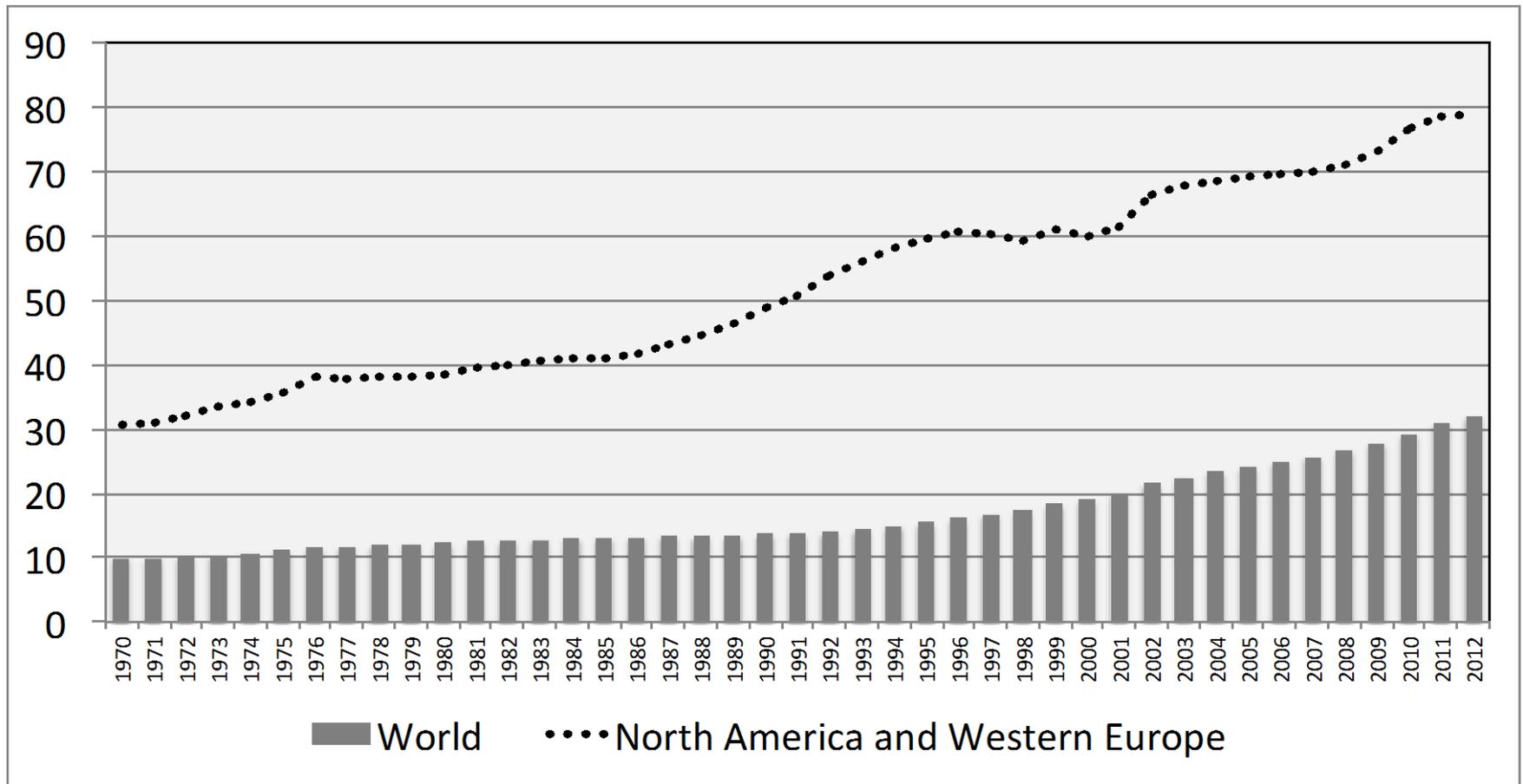
(in addition to school leaver age-cohort, includes mature age students and all migrants, including international students)

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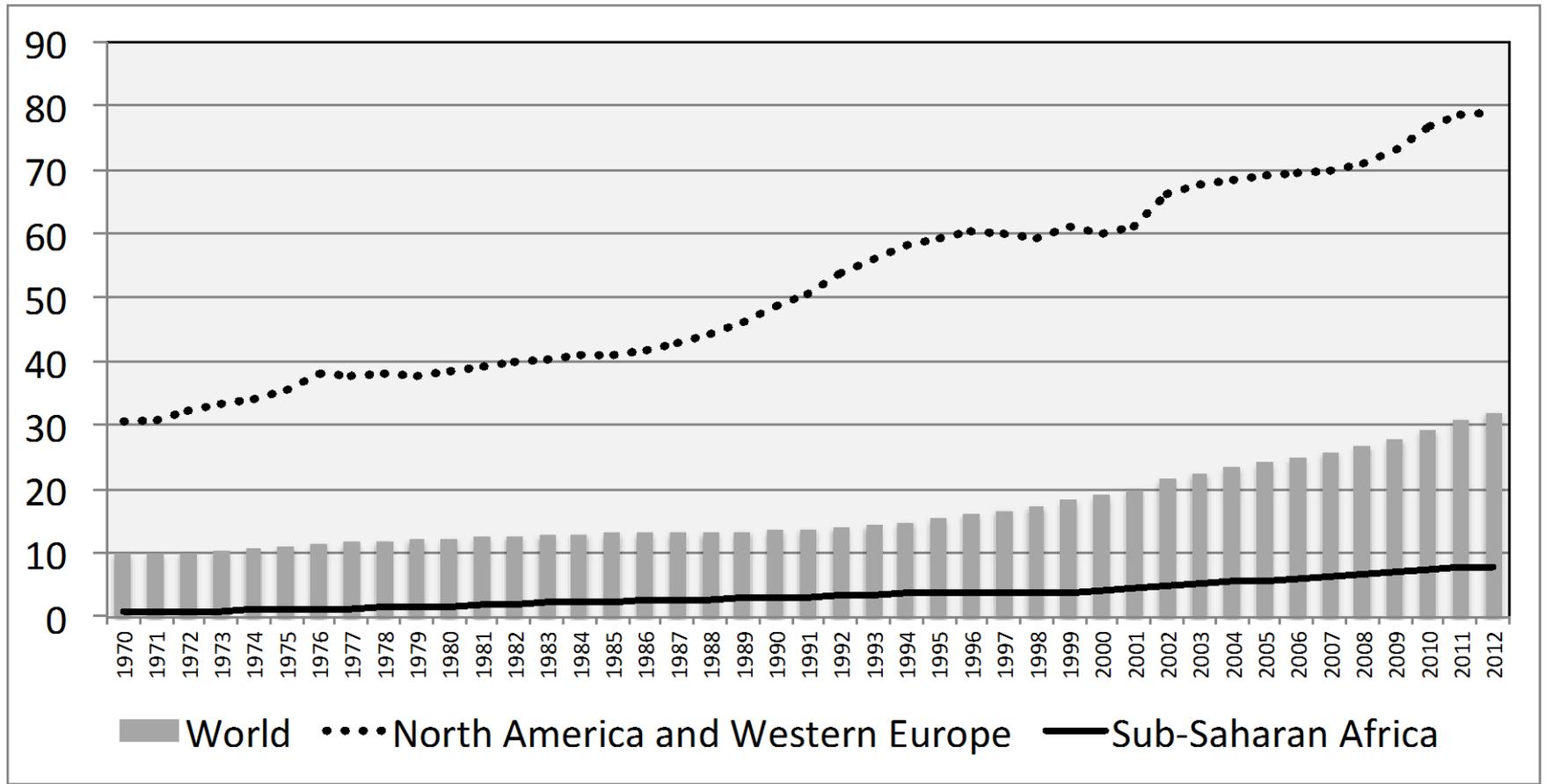
**Total school leaver age-cohort**

The pattern of rapid growth is worldwide, but world regions started the period of high growth from different points and are currently at differing levels of participation

# GTER World and North America/Western Europe, 1970-2012

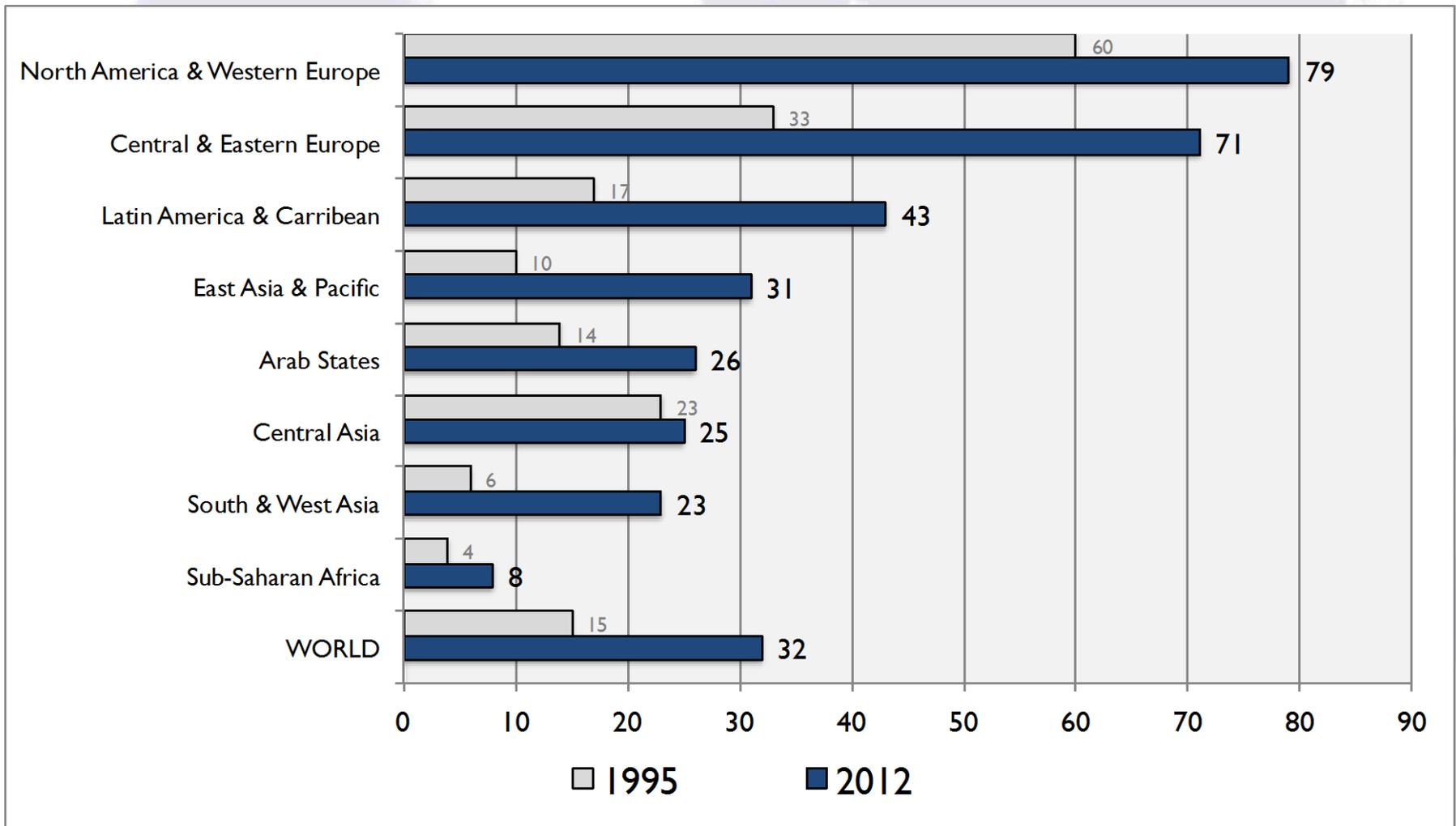


# GTER World, North America/Western Europe, Sub-Saharan Africa, 1970-2012



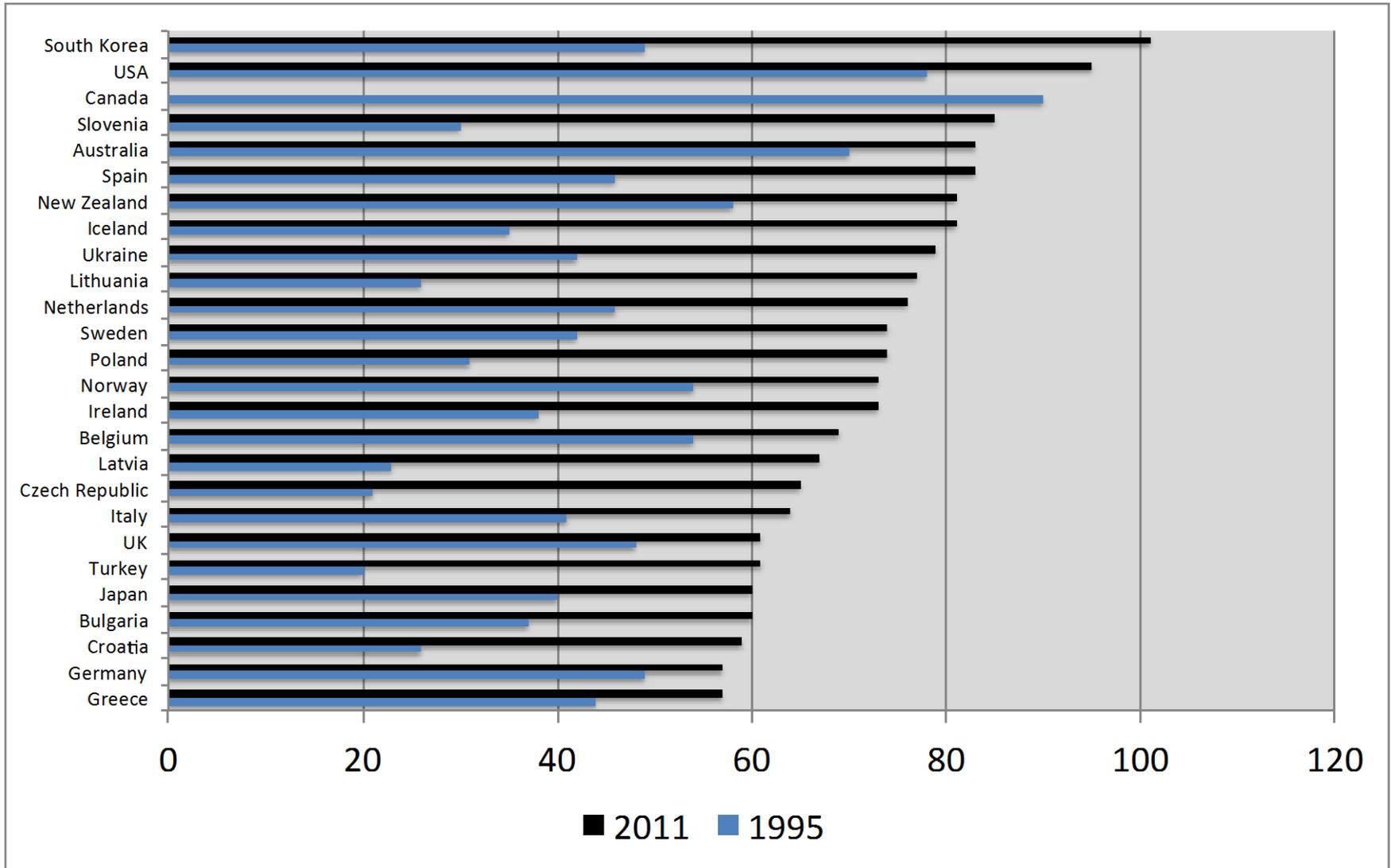
# Gross Tertiary Enrolment Ratio 1995/2012

World regions, UNESCO Institute for Statistics data 2015



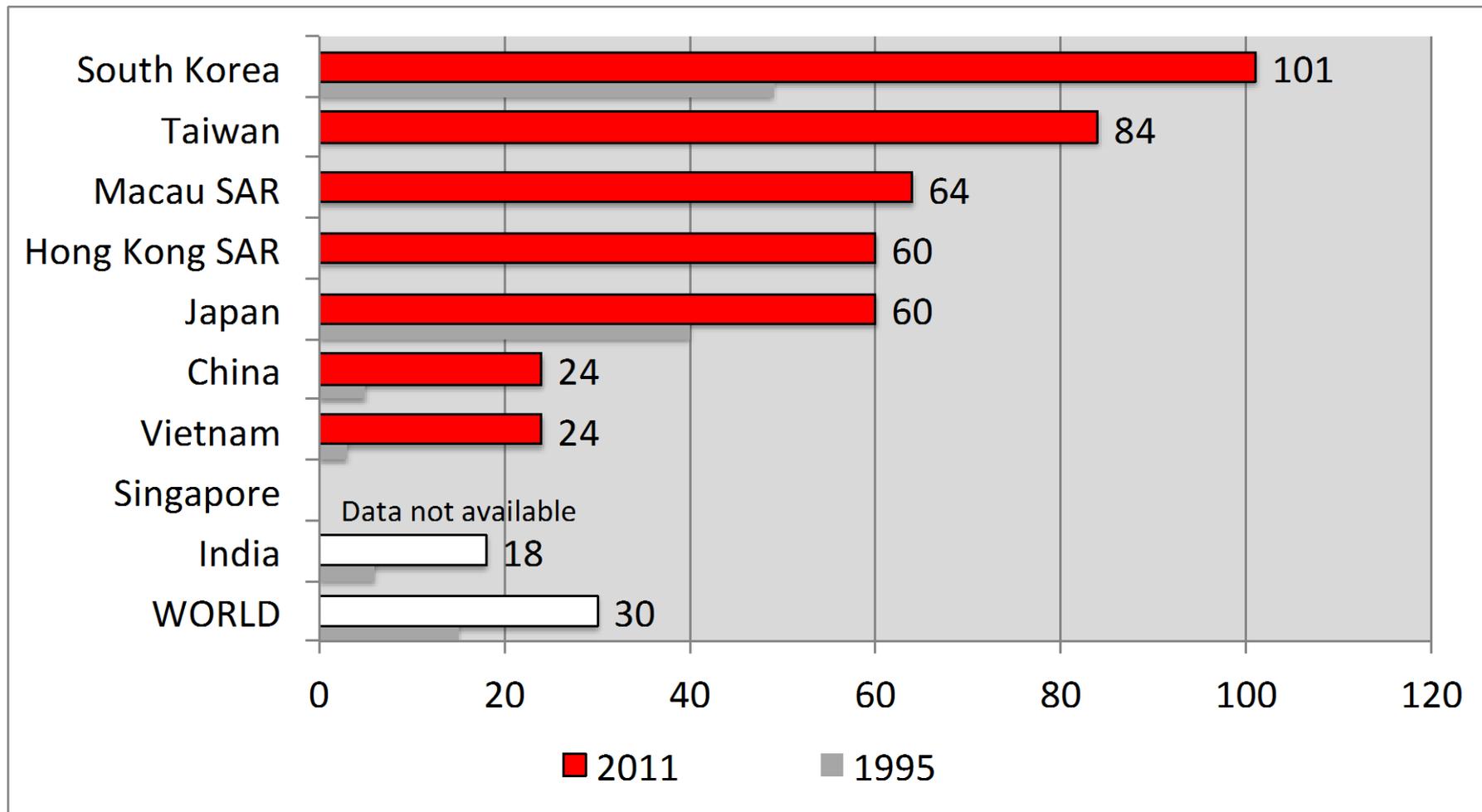
# Gross Tertiary Enrolment Ratio 1995/2011

Selected OECD and European systems, UNESCO Institute for Statistics data  
2014



# GTERs in East Asia and Singapore, 2011

UNESCO Institute for Statistics & Taiwan Ministry of Education



# Remember the Gross Tertiary Enrolment Ratio is a ratio ...

## **Total enrolment in tertiary education**

(in addition to school leaver age-cohort, includes mature age students and all migrants, including international students)

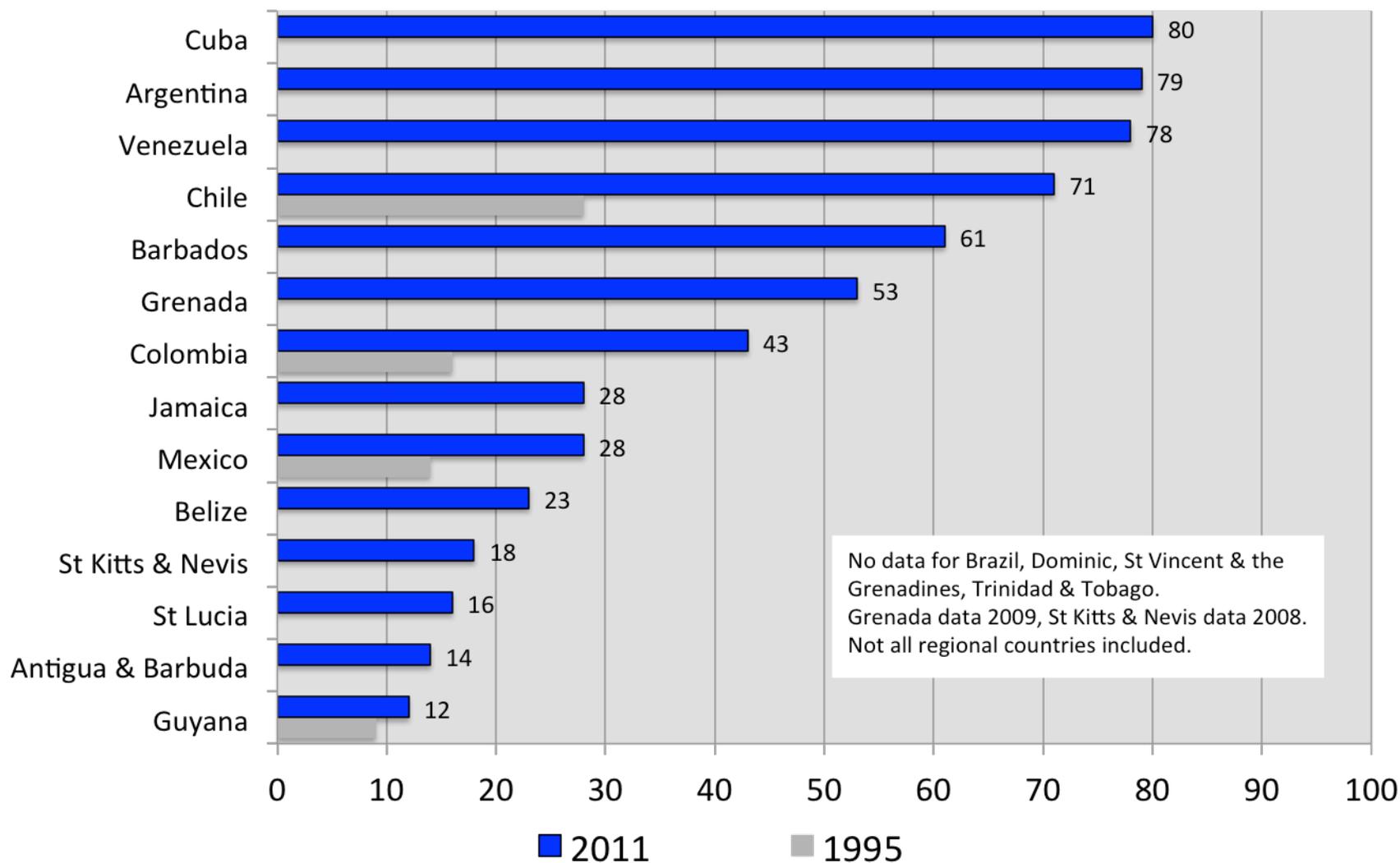
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## **Total school leaver age-cohort**

# GTERs Latin America & Caribbean 2011

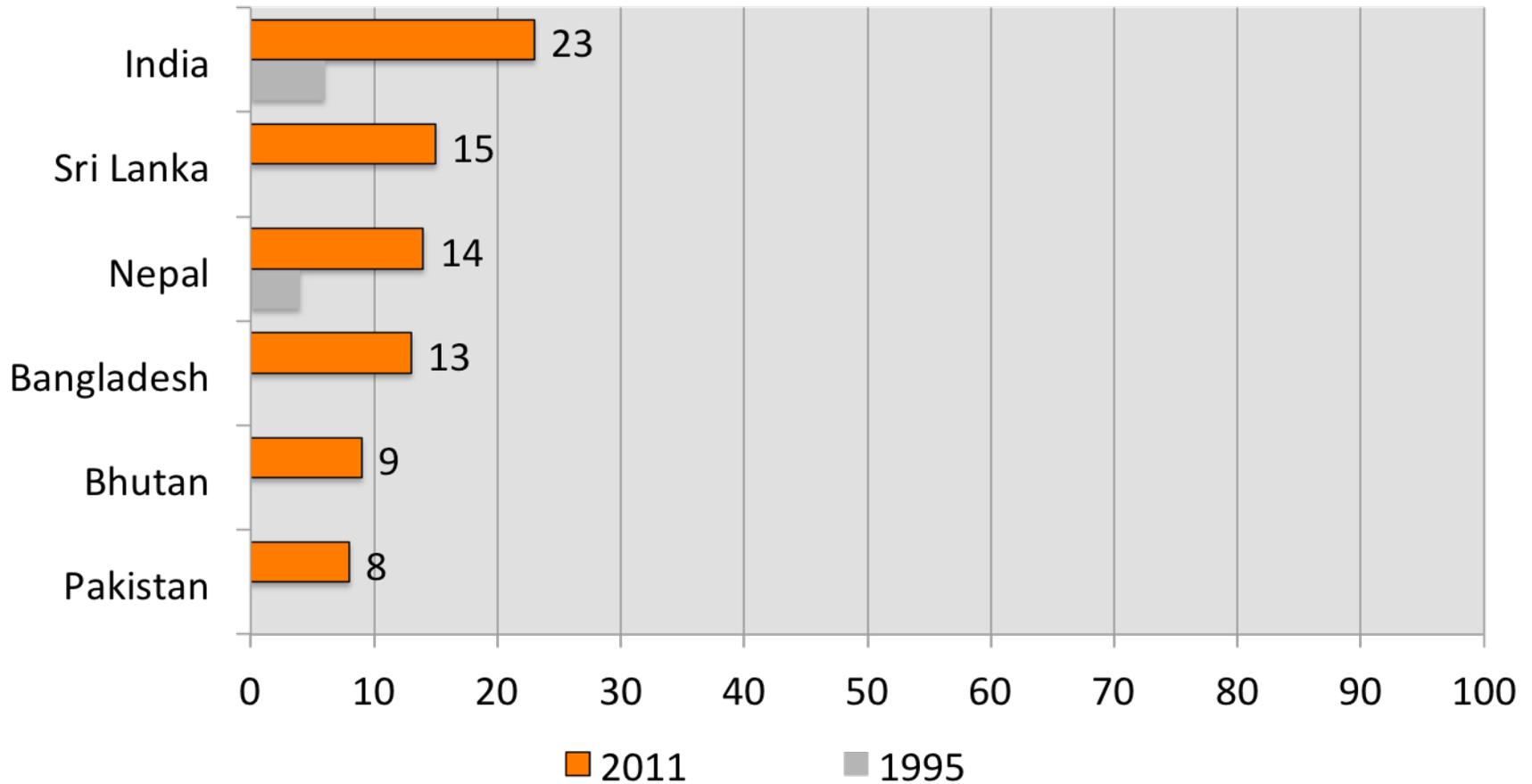
## (%)

UNESCO Institute for Statistics data 2014



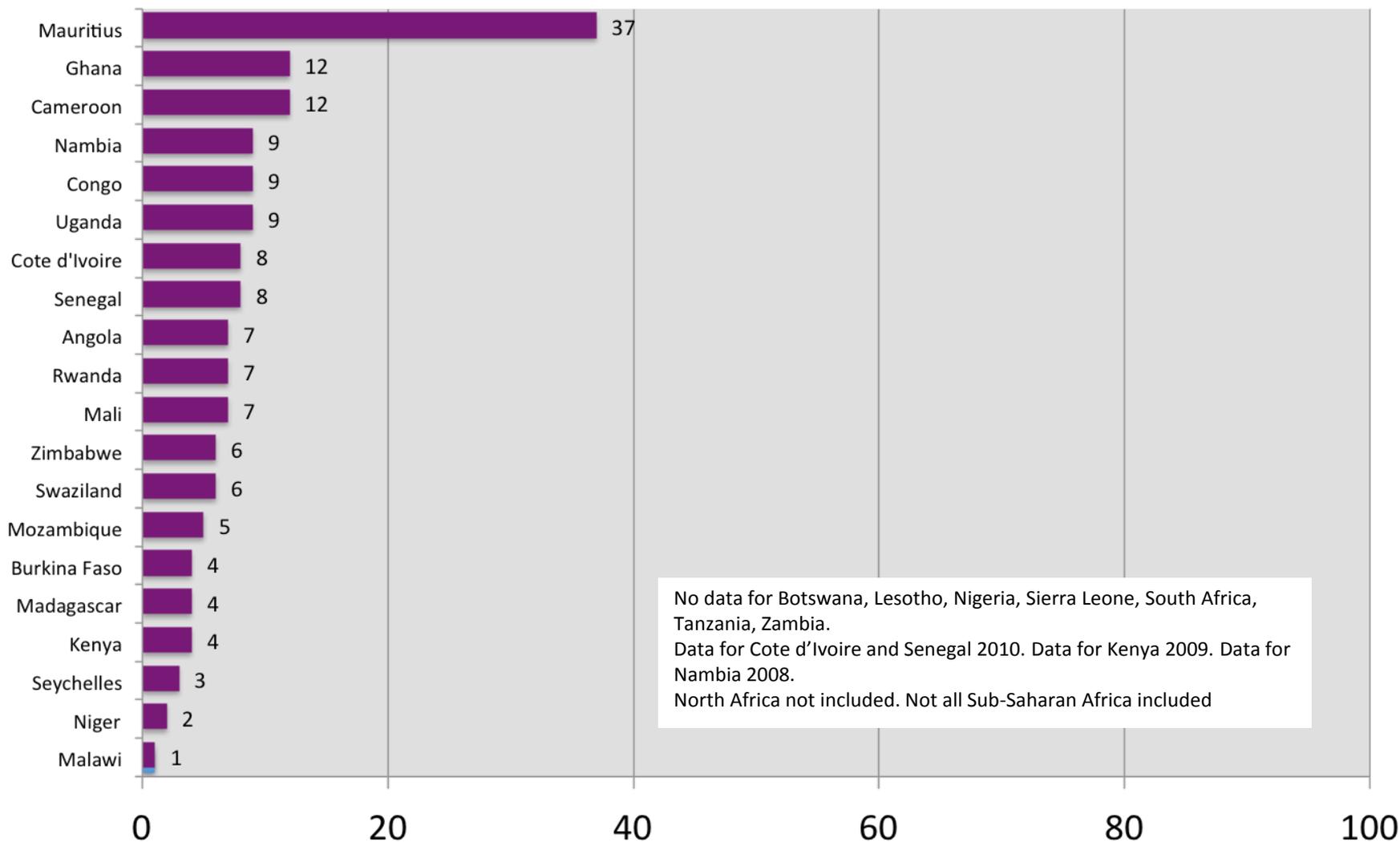
# GTERs in South Asia 2011 (%)

UNESCO Institute for Statistics data 2014



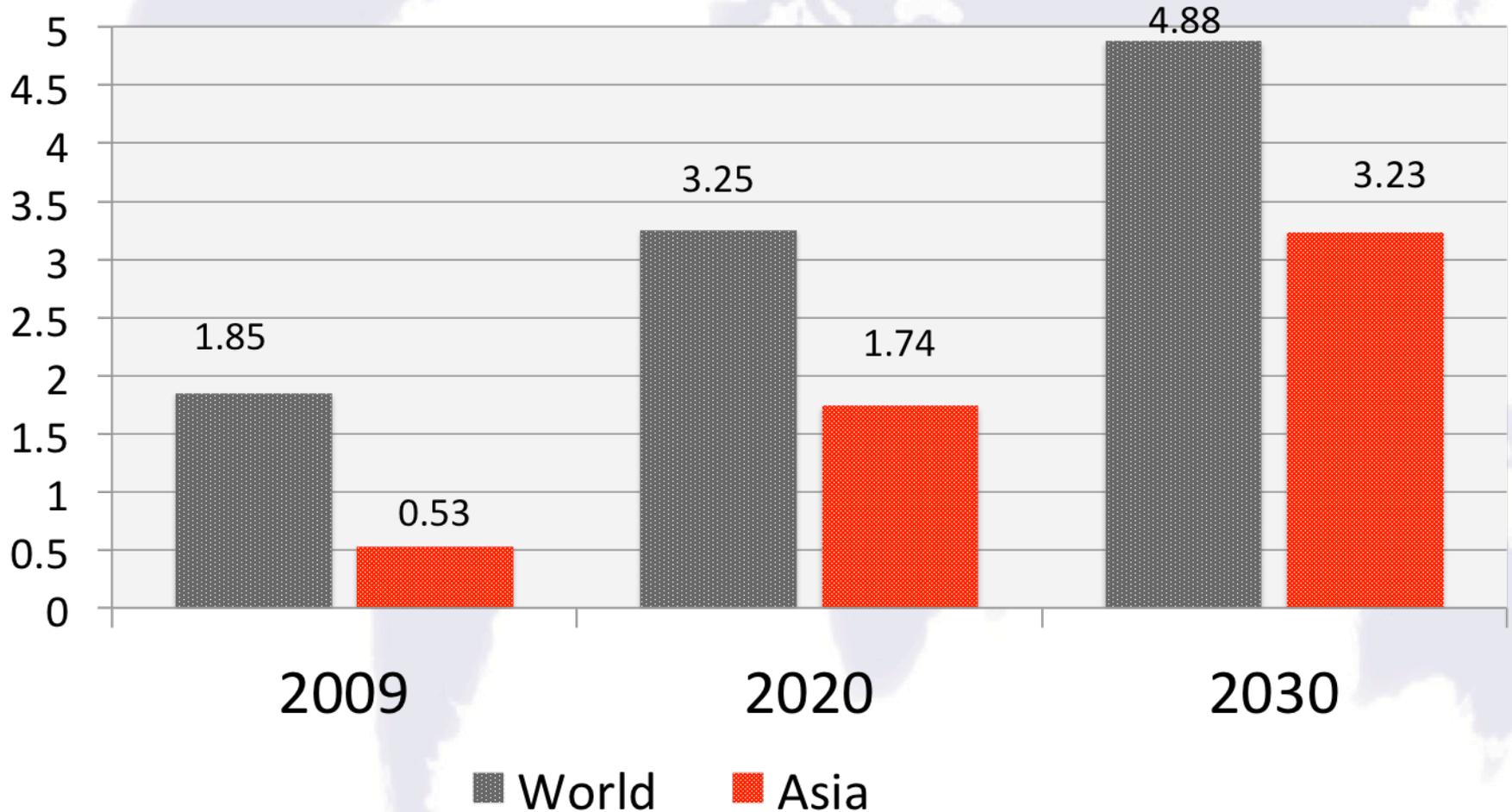
# GTERs in Sub-Saharan Africa 2011 (%)

UNESCO Institute for Statistics data 2014



# Growth in educational participation to come...

World and Asian middle class 2009-2030 (billions), Brookings / OECD 2010

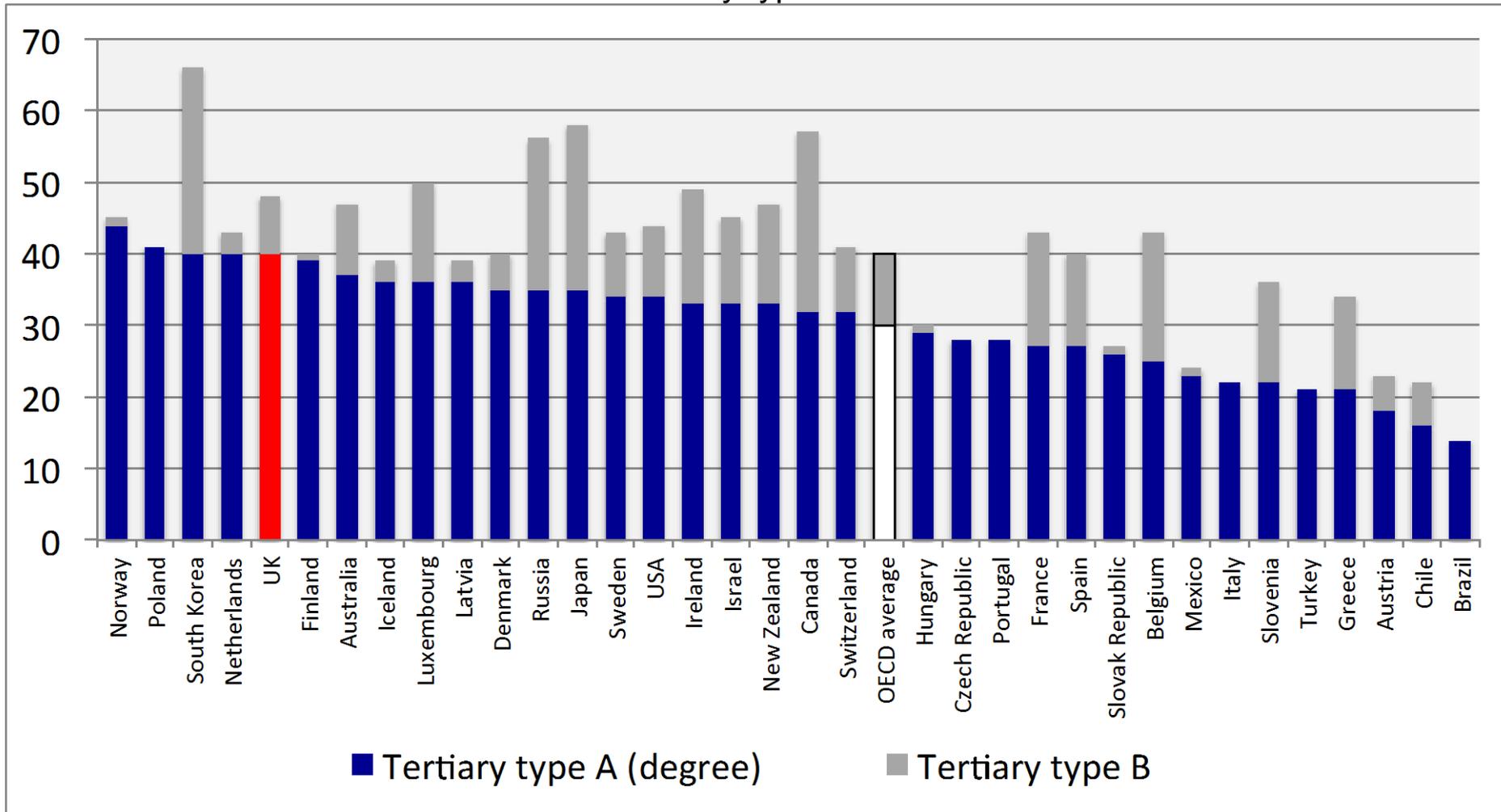


Middle class persons are defined as persons living on USD \$10-100 per day PPP

There are significant differences in participation in tertiary education –  
within regions and within countries

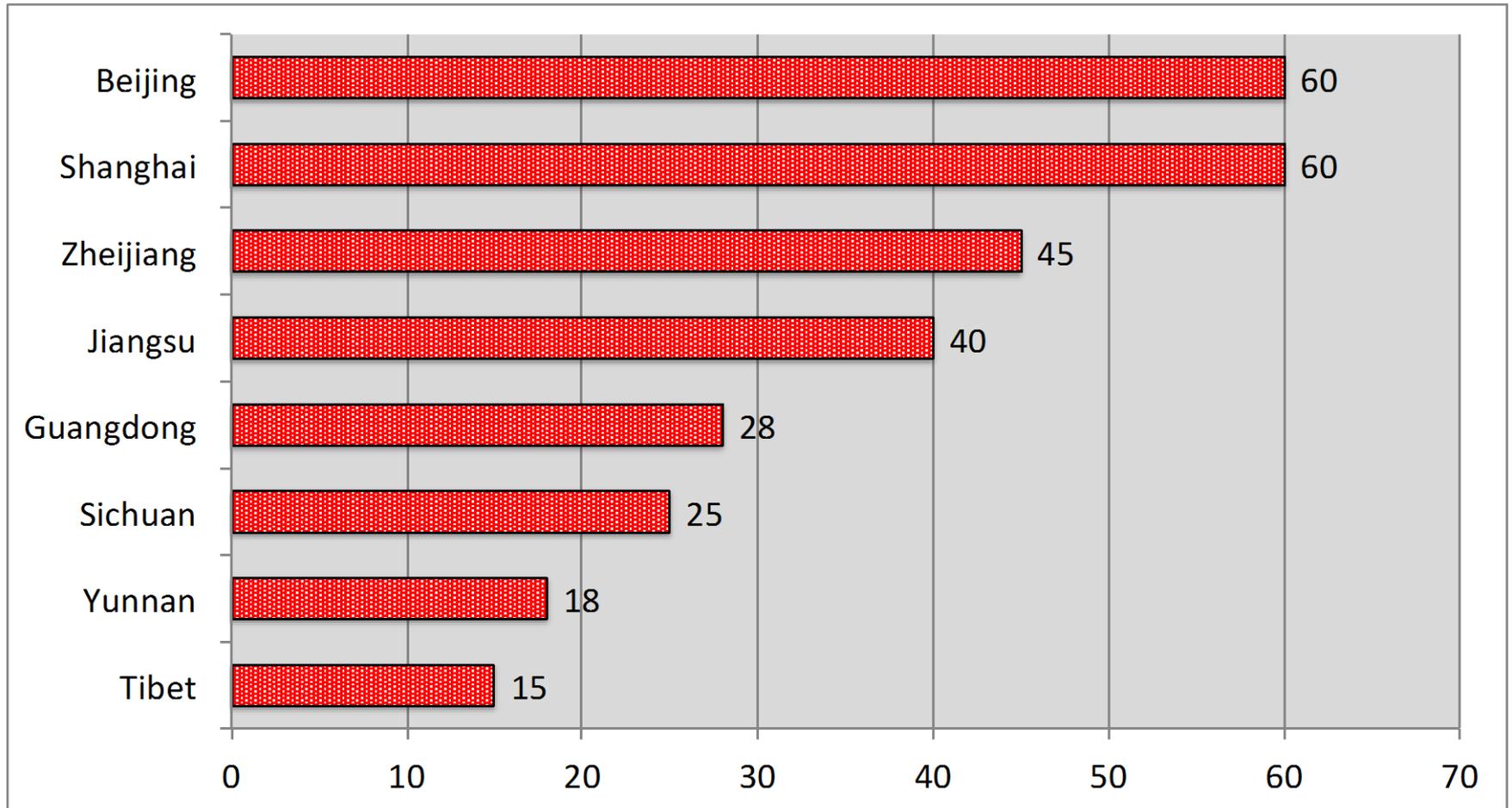
# Percentage 25-34 year olds with degrees, 2012

OECD data 2014. Data for Tertiary type B not available for all countries



# Regional variation in GTER (%) in China

Gross Tertiary Enrolment Rate, 2010. Source: Po Yang, Peking University



## 2. Participation is stratified in value

Participation in higher education is structured and uneven.

In many countries, some forms of participation scarcely add value at all, labour market value or learning value

- Global stratification between countries (which might be reducing)
- Stratification within national HPS (which might be increasing)

At global level we see continued English language and Western European domination of research, but there is some good news

Research capacity is spreading to the richest one third of nations, and some others. And there are new research powers. In that respect disparities at global level are being reduced, at the top of systems

# 51 countries with 1000 science papers a year

US National Science Foundation data for 2011

ANGLO-SPHERE	EUROPE EU NATIONS		EUROPE NON-EU	ASIA	LATIN AMERICA
Australia	Austria	Italy	Croatia*	China	Argentina
Canada	Belgium	Netherlands	Norway	India	Brazil
N. Zealand	Czech Rep.	Poland	Russia	Japan	Chile*
UK	Denmark	Portugal*	Serbia*	Malaysia*	Mexico
USA	Finland	Romania*	Switzerland	Pakistan*	<b>M.EAST /AF</b>
	France	Slovakia	Turkey	Singapore	Iran
	Germany	Slovenia*	Ukraine	South Korea	Israel
	Greece	Sweden		Taiwan	Saudi Arab.*
	Hungary	Spain		Thailand*	Sth. Africa
	Ireland	Sweden			Egypt
					Tunisia*

\* Reached 1000 papers since 1997 (11 out of 51 nations)

# An increasingly plural top 500 universities 1

	2004	2014
<b>East and SE Asia (excludes Japan) in ARWU top 500</b>	<b>26:</b> China 8, Hong Kong SAR 5, Korea 8, Taiwan 3, Singapore 2	<b>58:</b> China 32, Hong Kong SAR 5, South Korea 10, Taiwan 7, Singapore 2, Malaysia 2
<b>East and SE Asian (excludes Japan) in ARWU top 200</b>	<b>3:</b> Singapore 1, South Korea 1, Taiwan 1  Nat U Singapore SNG*, Seoul Nat KOR, Nat Taiwan TWN  <i>* in 101-150 range</i>	<b>12:</b> China 6, Hong Kong SAR 2, Singapore 2, South Korea 1, Taiwan 1  Tsinghua CHN*, Peking CHN*, Shanghai JT CHN*, Fudan CHN, Zhejiang CHN, Science & Technology CHN, Chinese U Hong Kong HK, Hong Kong HK, Nat U Singapore SNG*, Nanyang SNG, Seoul Nat KOR*, Nat Taiwan TWN*

# An increasingly plural top 500 universities 2

	2004	2014
<b>Middle East, Africa, Latin America in ARWU top 500</b>	<b>18:</b> Israel 7, Brazil 4, South Africa 4, Chile 1, Argentina 1, Mexico 1	<b>27:</b> Israel 6, Brazil 6, South Africa 4, Saudi Arabia 4, Chile 2, Argentina 1, Mexico 1, Iran 1, Egypt 1, Turkey 1
<b>Other (Middle East, Africa, Latin America) in ARWU top 200</b>	<b>5:</b> Israel 3, Brazil 1, Mexico 1  Hebrew U Jerusalem ISR 90, Tel Aviv ISR*, Weizmann IS ISR*, UNAM MEX ,Sao Paulo BRZ  <i>* in 101-150 range</i>	<b>8:</b> Israel 4, Saudi Arabia 2, Brazil 1, Argentina 1  Hebrew U Jerusalem ISR 70, Technion-Israel ISR 78, Weizmann IS ISR*, Tel Aviv ISR, King Abdulaziz SAU, King Saud SAU, Sao Paulo BRZ*, Buenos Aires ARG  <b>Shanghai ARWU data 2004</b>

But the spread of world class universities to more countries can be associated with greater disparities *within* countries

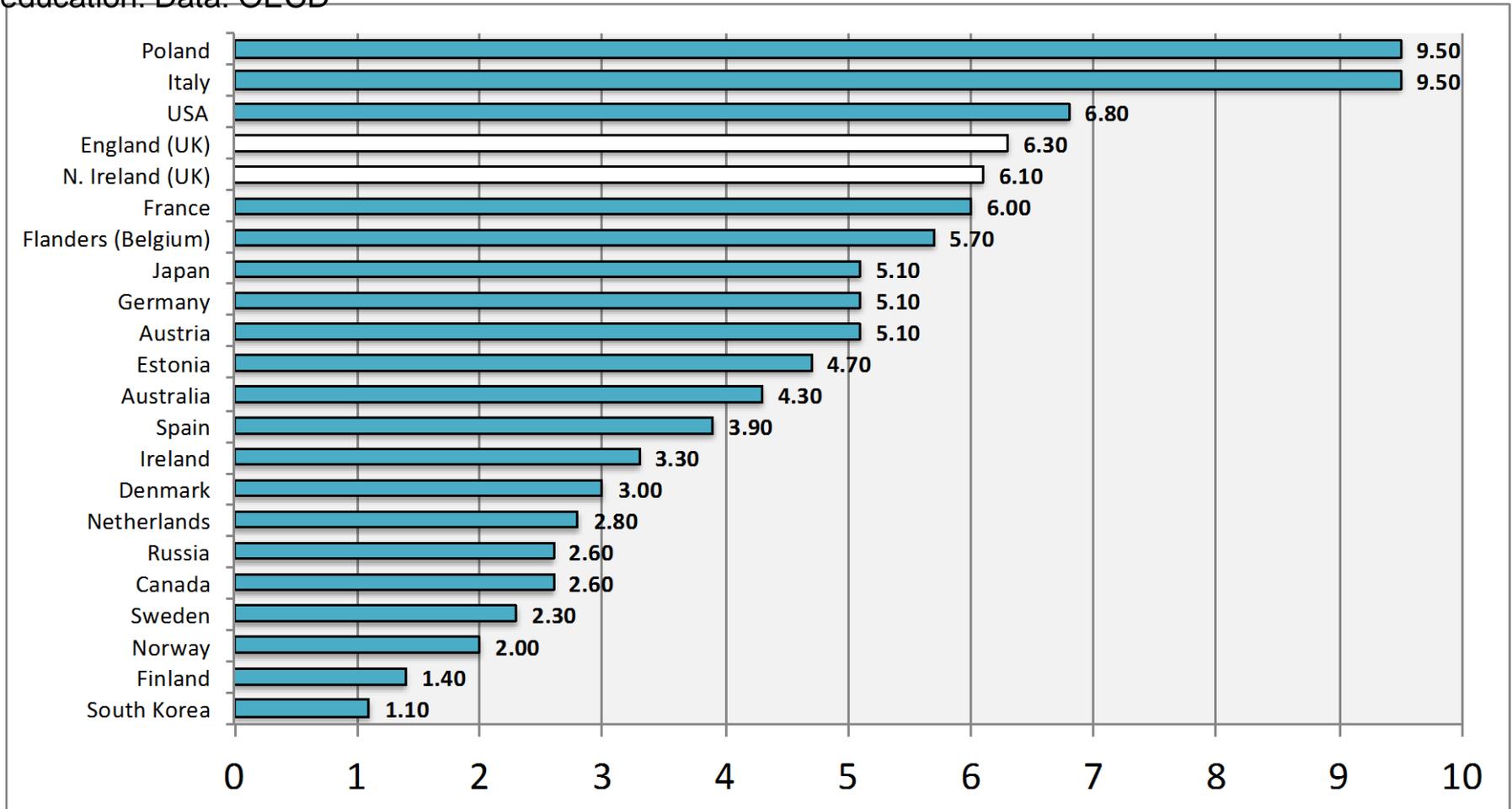
Systems are stratified between high demand/well resourced institutions, and mass higher education, where quality varies greatly ...

HPS are not the same in the degree of access they provide to students from families new to HE (inter-generational mobility)

and for those that get in, systems are not the same in the degree of social mobility that participation in mass education provides, because of the stratification of systems

# Social mobility? Advantage held by 20-34 year olds with tertiary-educated parents, 2012

For example in Poland, a 20-34 year old person with at least one tertiary-educated parent is 9.5 times as likely to participate in tertiary education, as a person whose parents had less than upper secondary education. Data: OECD



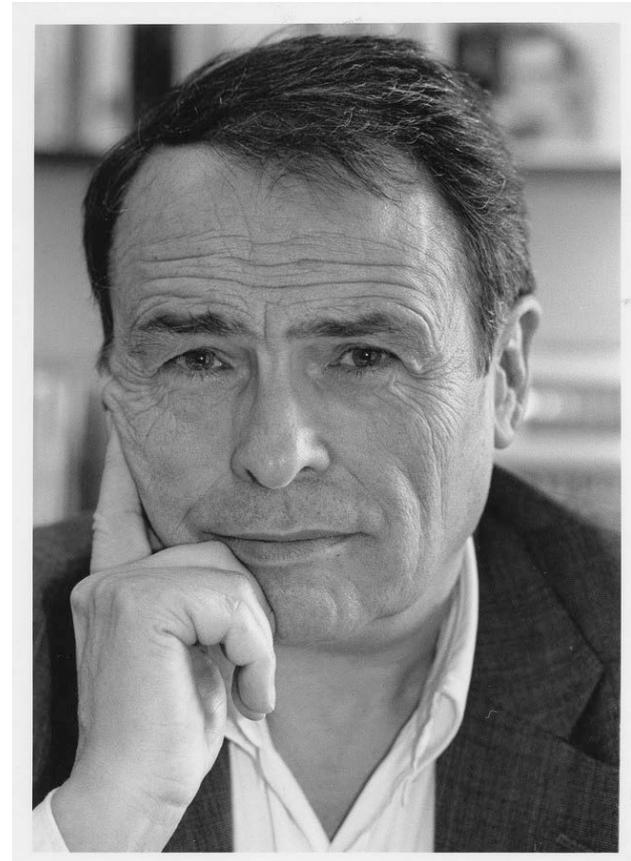
# Entrenched social disparities in access to tertiary opportunities in the United States

- In *Degrees of Inequality* (2014) Suzanne Mettler shows that in the United States in 2011, of persons in the top income quartile, 71 per cent completed college by early adulthood. This had increased from 40 per cent in 1970.
- In the bottom quartile the completion rate had also increased—but only from 6 to 10 per cent. In the second bottom quartile it rose from 11 to 15 per cent. Half the population is almost shut out of early degree completion.
- The higher education system turns over ‘something that increasingly resembles a caste system: it takes Americans who grew up in different social strata and it widens the divisions between them and makes them more rigid.’

# For those who get in, HEIs, and the value of participation, are stratified Pierre Bourdieu and the bifurcation of national systems

The equality of opportunity question shifts from *access?* to *access to what?*

- Systems are divided between elite sub-sector of HEIs and demand responsive mass sub-sector of HEIs - Bourdieu
- Though not all systems are stratified to the same extent or in the same ways, and a sometimes large middle layer of HEIs complicates Bourdieu's picture



# There is a crisis in the quality of mass higher education in many countries

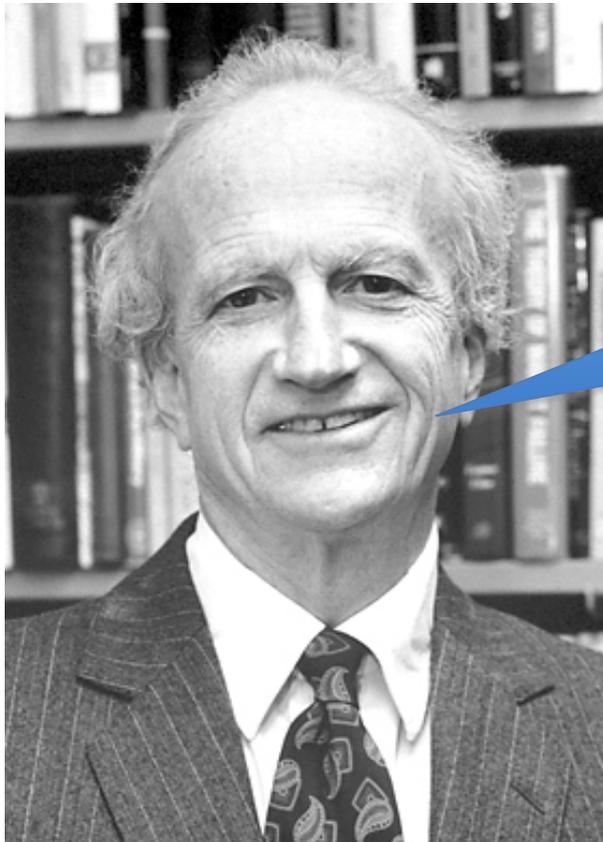
- Mass public higher education is severely under-funded in many countries such as (to name some of many) the USA, UK, Australia and Russia. In California, which long provided universal access, the community colleges now turn away 250,000 students
- Large private sectors in countries such as India and Brazil , largely not commercial providers, are poor quality, under-provided with qualified teaching and with low transfer rates into bona fide higher education.
- The for-profit sector is increasingly seen by governments as the alternative but many for-profits in emerging systems are diploma mills (e.g. Philippines). In the United States for-profit students experience the highest average loan debt in any sector, the lowest and slowest completion rates (about 15 per cent overall), questionable job prospects if they do graduate, and much the highest default rates on student loans. For-profits enroll one in ten college students but utilize one dollar in four of federal student aid. Public support provides 86 per cent of their revenue. The subsidy is \$32 billion a year. It would be better spent on struggling public community colleges.
- Many politicians now see MOOCs as the ultimate way of providing for access.
- ***Much of what is called 'participation in higher education is scarcely that.***
- ***Only state provision can ensure good quality higher education for all, and many state-provided sub-sectors are impoverished***



### **3. What are the drivers of participation growth?**

Economic development? Labour markets?  
States? Popular demand?

Policy driven, social demand or economic demand for higher education? Which is the most plausible explanation of growth?



I say growth is fully explained by ECONOMIC demand. Don't listen to Marginson!

Gary Becker, author of *Human Capital* (1964)

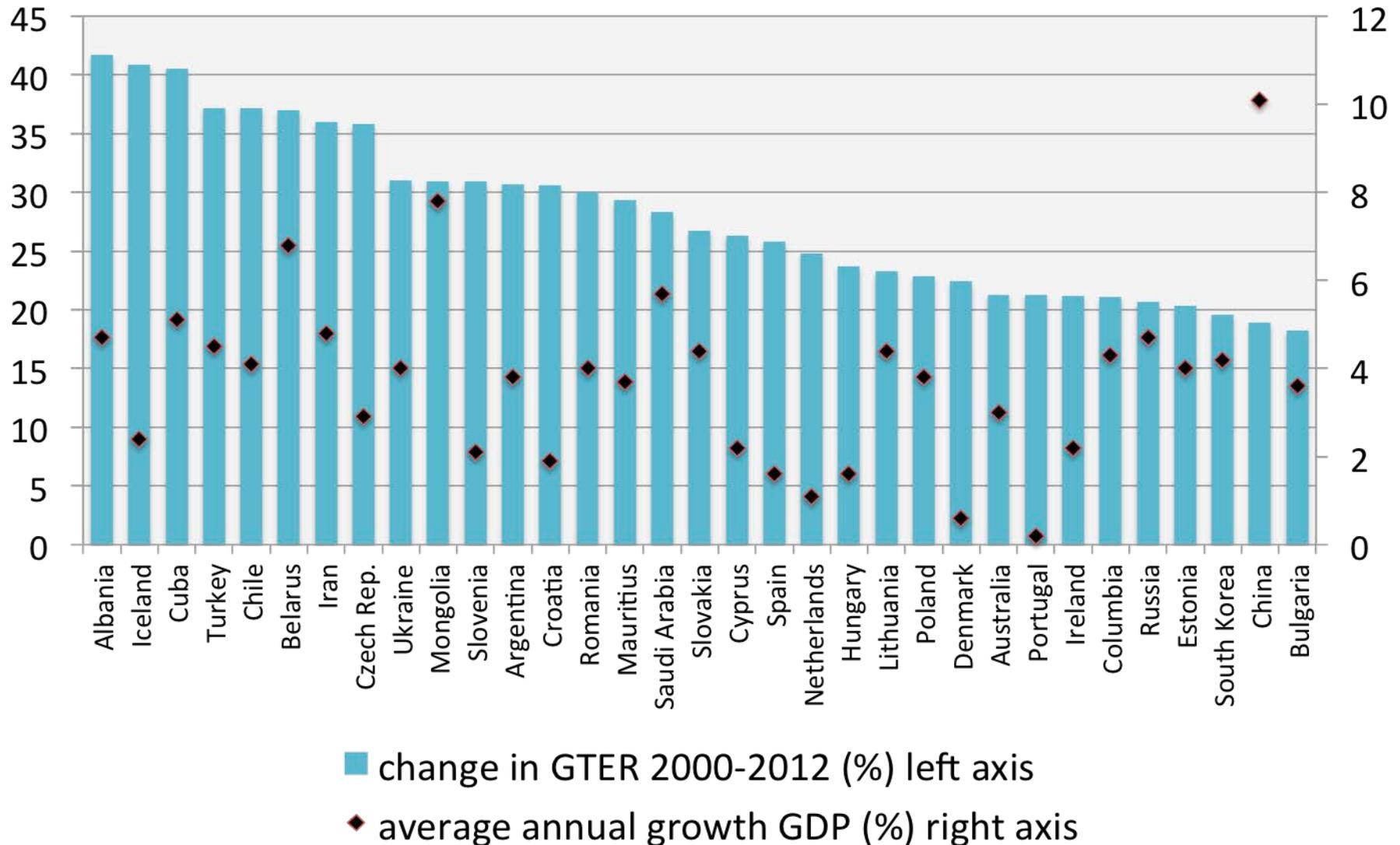
# Driven by the economy?

- In the last 25 years the tendency to expansion of participation in tertiary education (albeit in fits and starts), and acceleration of growth since the late 1990s, has been near universal in countries with over \$3000 USD per capita. *Regardless of economic growth rates in each country.*
- While economic demand fosters expansion of student places in particular fields short of labour (e.g. mining engineers in a mining boom), there is no clear evidence economic demand consistently drives participation growth. The relationship between higher education and the economy is incoherent:
  - many graduates do not work in fields in which they are trained. This is not a pathology, it is the way labour markets work. Note that much graduate labour is generic in character
  - phenomena such as credentialism, signalling behaviour and graduates working in non-graduate jobs seem at least as prominent as the expansion of high-skill work
  - there is no guarantee graduates generate higher productivity—that is a function of work organization
  - the perennial debate about over-education versus overall shortage of skills is never settled because neither generalization can be true—the education/economy relationship is not direct or instrumental

# Sociology versus economics

- ‘A match between the number of graduates and the corresponding positions, or between the competences acquired during study and job requirements, cannot be expected’
  - Ulrich Teichler 2009
- ‘The rapid expansion of higher education in the 1960s does not coincide with especially large historical changes in occupational structures, job skill requirements, or labour market demands that would create a need for massive expansion of higher education’. [and since the 1960s the statistical connection has been weaker]
  - Evan Schofer and John Meyer 2005

# Systems with high GTER growth 2000-12



# Martin Trow and the social drivers of participation

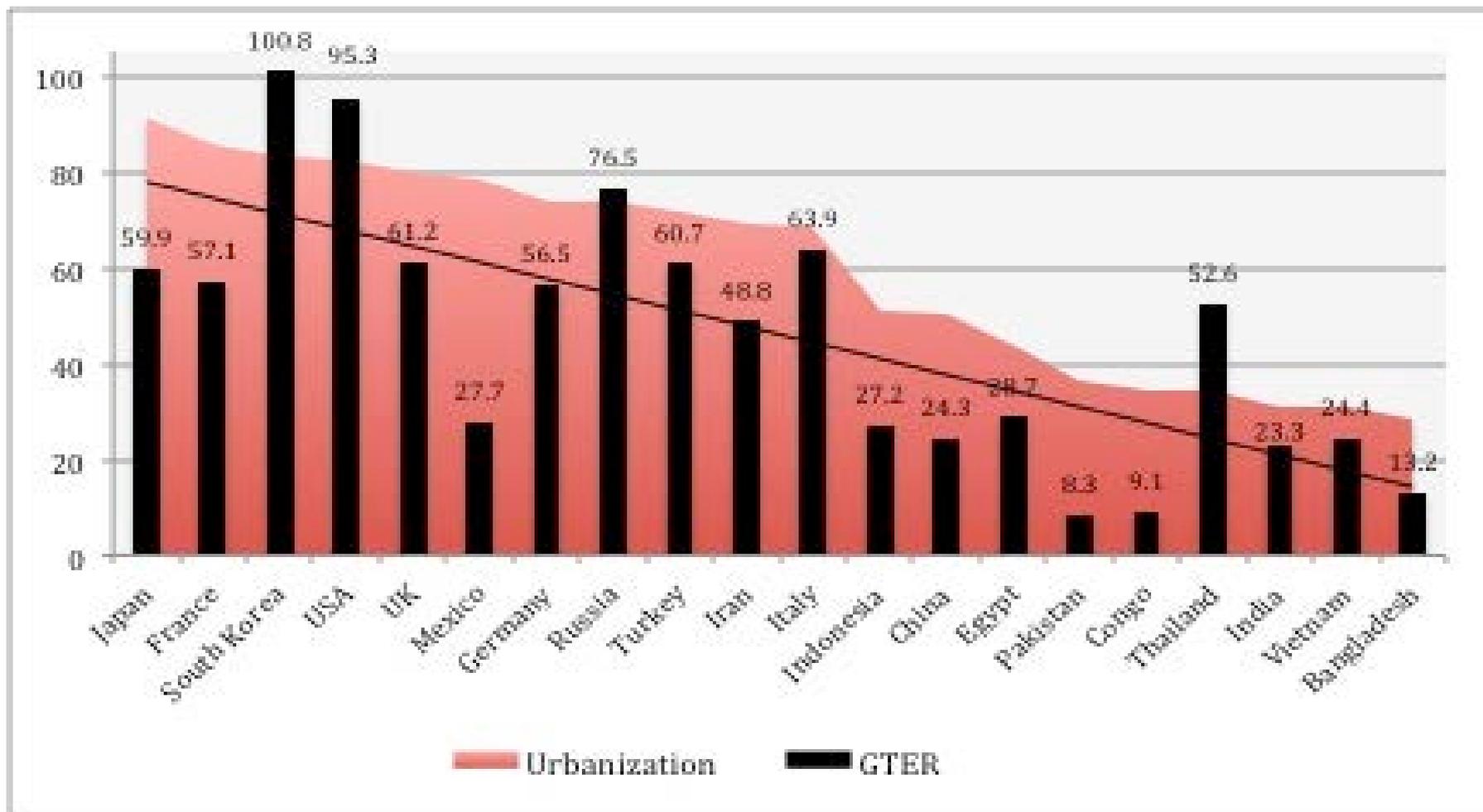
- ‘There will be continued popular demand for an increase in the number of places in colleges and universities. It seems to me very unlikely that any advanced industrial society can or will be able to stabilize the numbers’
- Despite ‘loose talk about graduate unemployment or of an oversupply ... it is still clear that people who have gone on to higher education thereby increase their chances for having more secure, more interesting, and better paid work throughout their lives’
- Graduate unemployment is not a problem because of the ‘educational inflation of occupations’ (Trow, 1974, pp. 40-41)



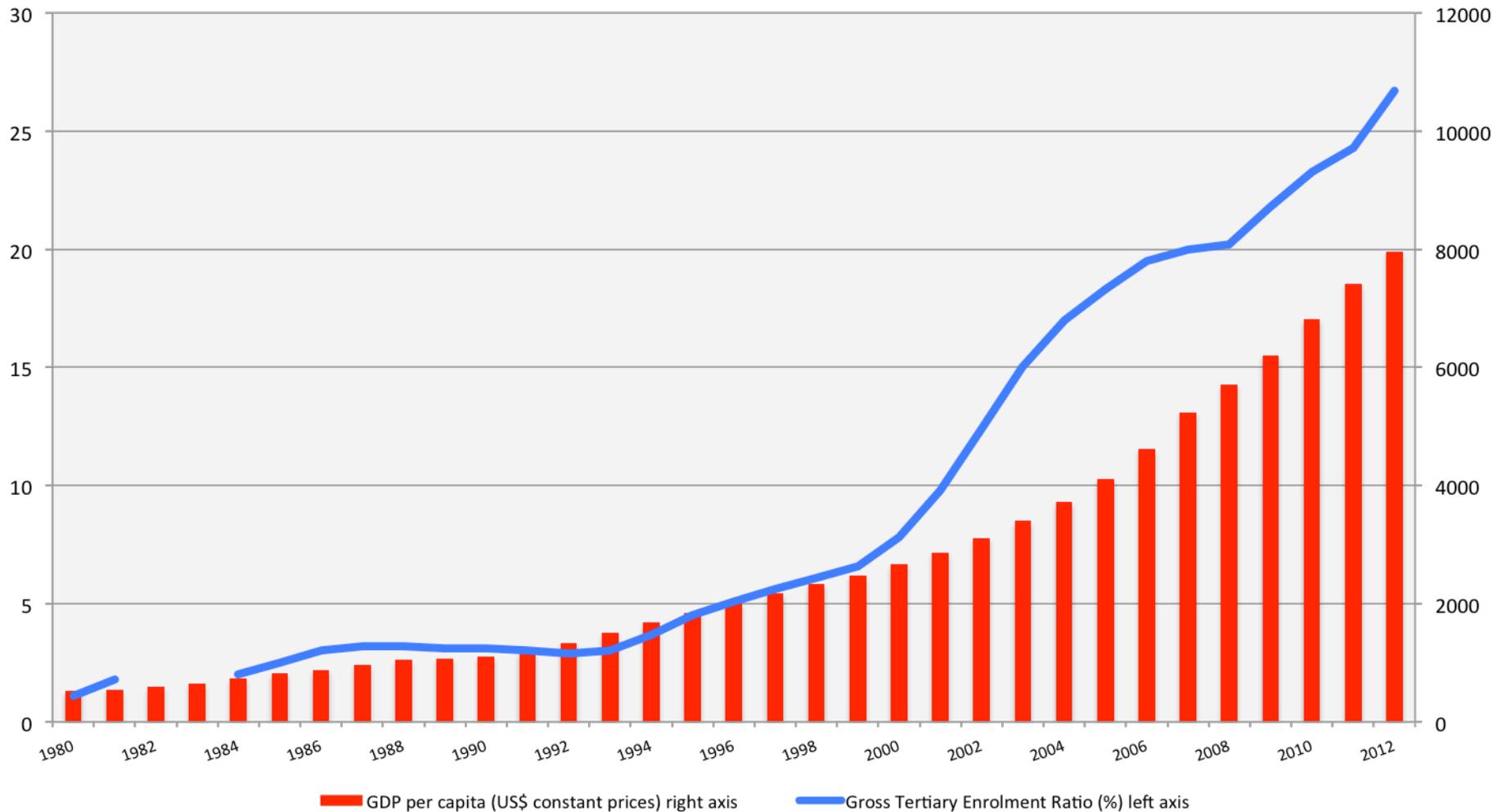
# Urbanisation and the GTER

Proportion of population living in urban areas (%) and Gross Tertiary Enrolment Ratio (%), World's 20 largest nations by population, arranged in order of intensity of urbanization, 2011

GTER data not available for Brazil, Nigeria, Philippines and Ethiopia so next available country used



# The state steps in: GTER and GDP per capita, China 1980-2012





States enable and facilitate the take-off of participation in tertiary education, but they never reverse it. Once the flood gates of middle class demand are opened ...

A faint, light-colored world map is visible in the background, showing the continents of North America, South America, Europe, Africa, Asia, and Australia. The map is centered and serves as a backdrop for the text.

**4. What is a  
high participation society?**

# What is a high participation society?

- The capabilities of persons are advanced. As the GTER rises more people will become more effective in consumer and financial markets, using technology, dealing with large corporations and state bureaucracies, and forward planning families and careers. Graduates are fluent in learning new skills.
- There is no automatic economic payoff. The extent that productivity gains are realized will depend on whether markets support self-enterprise, and enterprises deploy higher education-trained labour effectively.
- In conjunction with digital communications and data storage, HPS may narrow the information gap between population and political circles, enhancing governmental transparency, and creating more favourable conditions for participatory polities— but only if other conditions are right.
- Much depends on future patterns of social and economic equality and inequality, and their intersection with education. The higher the quality of mass education, the more it builds human agency, all else equal