



# Middle-income countries and innovation

Innovation and Access to Medical Technologies

*Joint Technical Symposium by WHO, WIPO, and WTO*

**Carsten Fink**

Chief Economist

Geneva  
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# Overview

- What are middle income countries?
- Middle income countries and innovation
- The Global Innovation Index
- Concluding thought

# What are middle income countries?

- Precise answer:

“As of 1 July 2014, [...] middle-income economies are those with a GNI per capita of more than \$1,045 but less than \$12,746 [...]”

Source: World Bank website

- Wide range, diverse set of countries

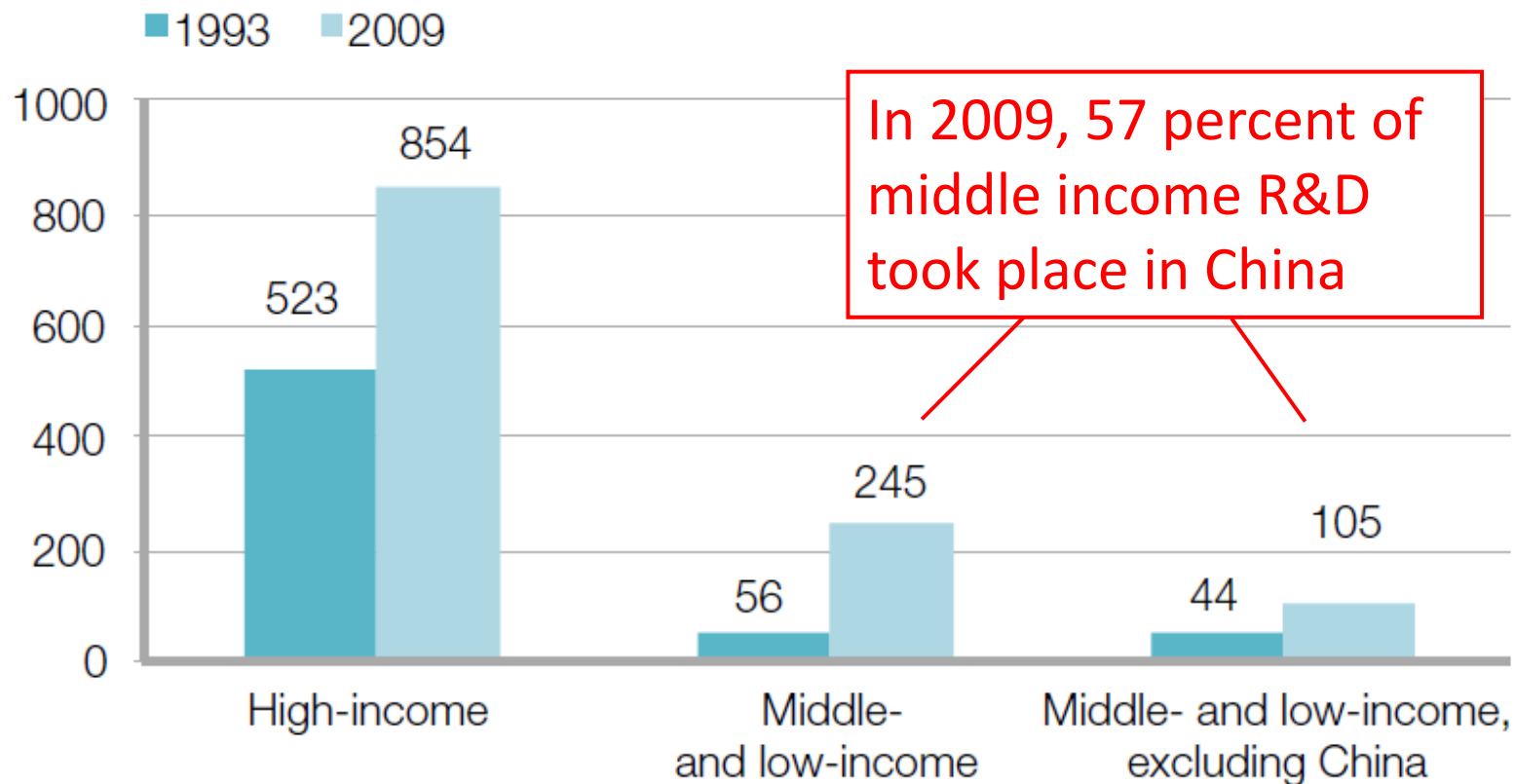
# For example

	GNI per capita (\$)	Total population (millions)	Below 2\$ a day poverty threshold (%)	Urban population (%)	Agriculture (% of GDP)	Mobile phones (% of population)
China	4,900	1,344.13	18.61	50.57	10.04	72.07
India	1,450	1,221.16	60.57	31.28	17.86	73.20
Lao PDR	1,090	6.52	n/a	34.25	29.52	84.05
Hungary	12,720	9.97	0.17	69.35	n/a	116.94
Mexico	9,000	119.36	n/a	78.12	3.35	79.24
Senegal	1,030	13.33	60.31	42.50	15.65	70.16

Source: World Bank World Development Indicators, data refer to 2011

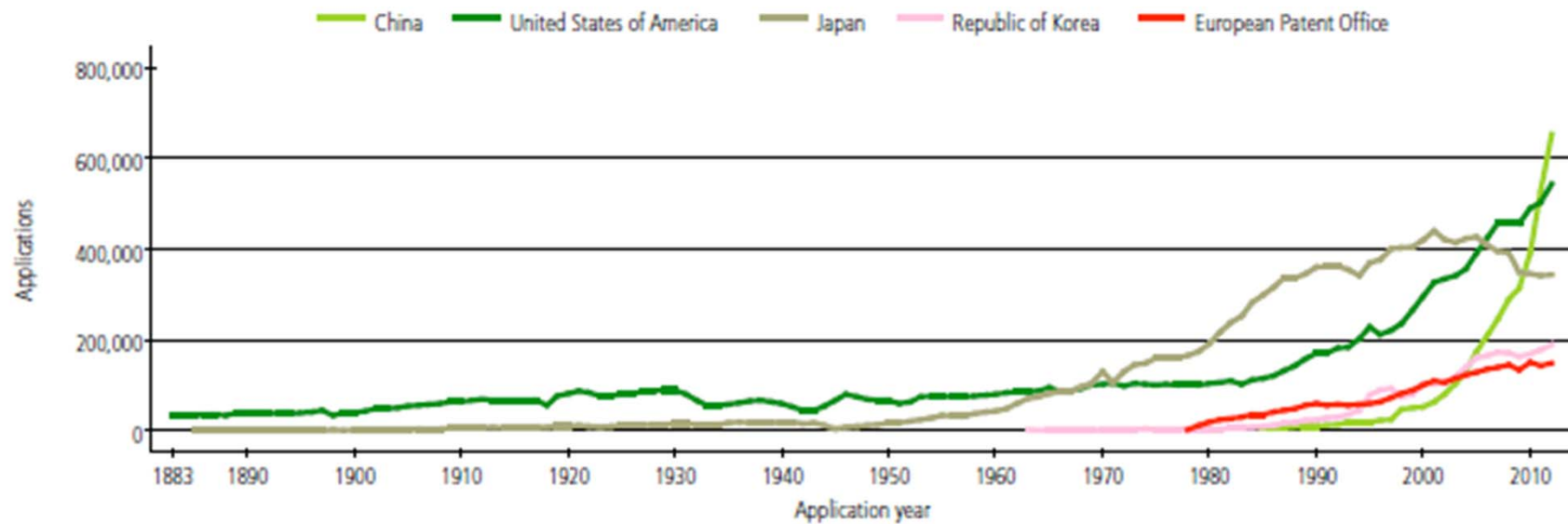
# Middle income countries & innovation

Worldwide R&D expenditure, by income group, in 2005 PPP Dollars, 1993 and 2009



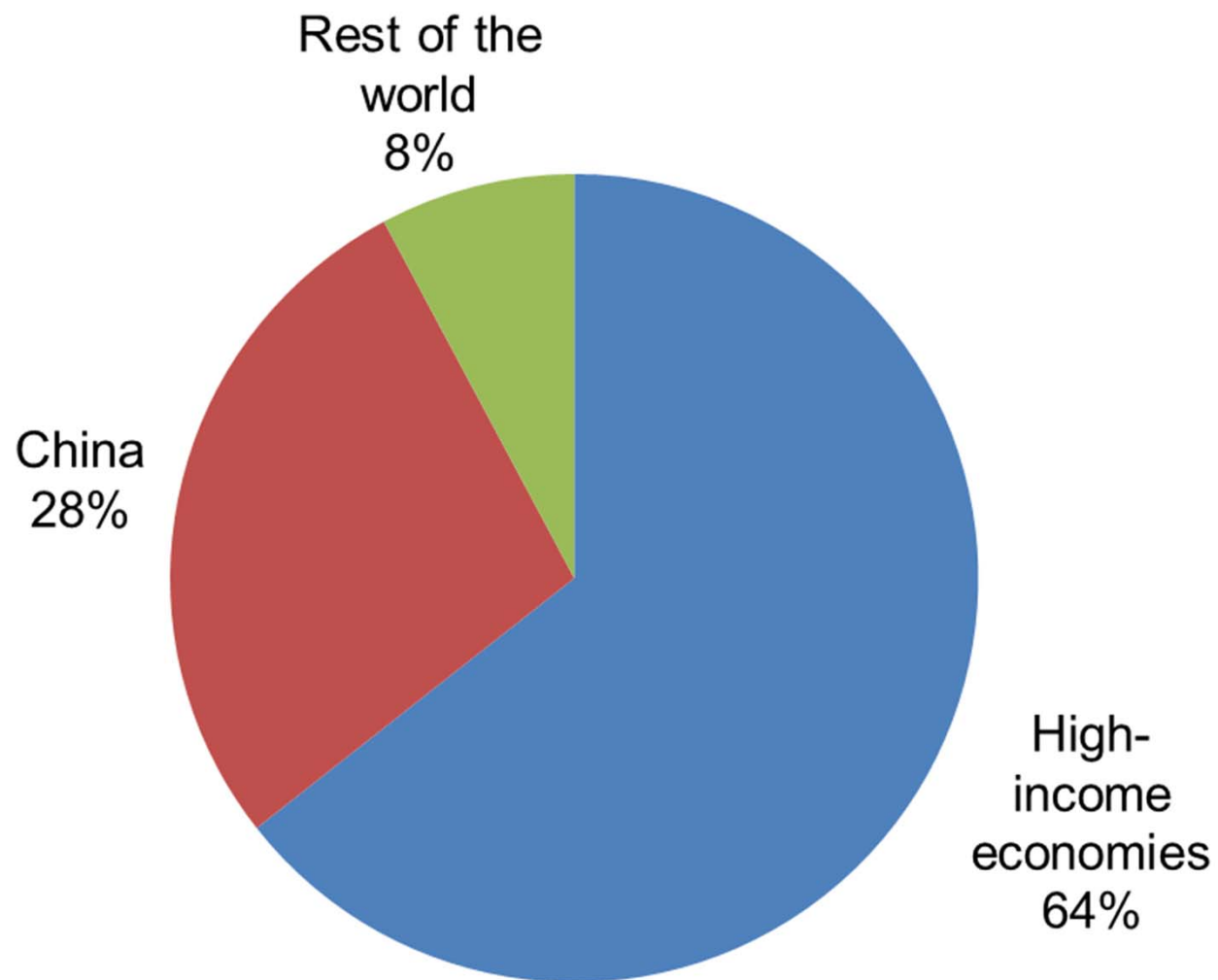
Source: WIPO estimates, based on data from UNESCO Institute for Statistics, Eurostat and OECD, September 2011

# Evolution of patent filings



Source: WIPO Statistics Database

# Distribution of patent filings in 2012



Source: WIPO Statistics Database



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# The Global Innovation Index 2014

The Human Factor in Innovation



Confederation of  
Indian Industry



WIPO  
WORLD  
INTELLECTUAL PROPERTY  
ORGANIZATION



# Introduction to the Global Innovation Index 2014

- Measuring innovation across more than 140 economies.
- Macro analysis tool based on country comparison
- Recognizes multifaceted nature of innovation & complexity of innovation systems
- A 'tool for action' for decision makers with the goal of improving countries' innovation performances.

# The GII is a multi-stakeholder effort

Co-published by Cornell University, INSEAD and WIPO



Three Knowledge Partners: the Confederation of Indian Industry, du, and Huawei



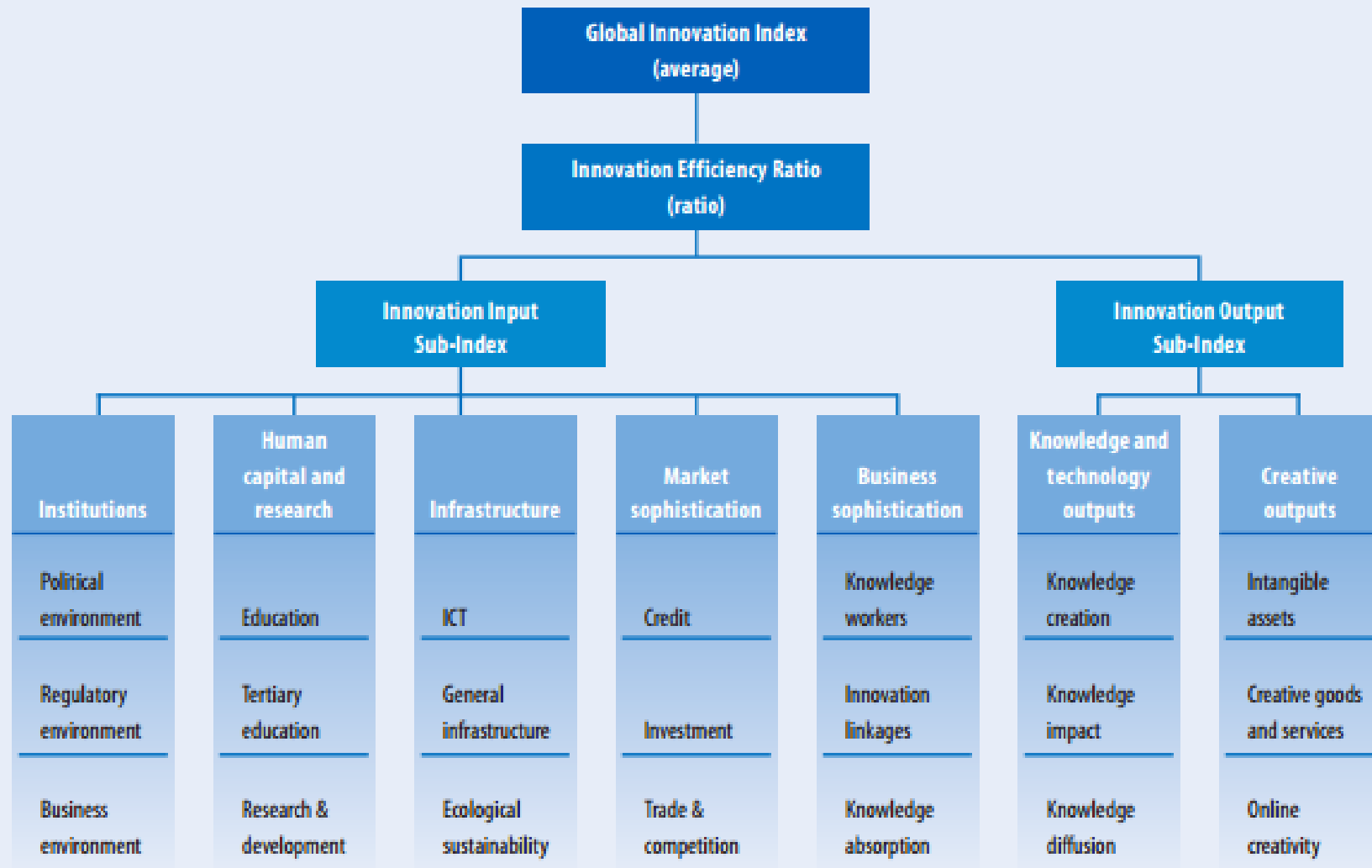
Independent statistical audit by the Joint Research Centre of the European Commission



International advisory board



# The GII model



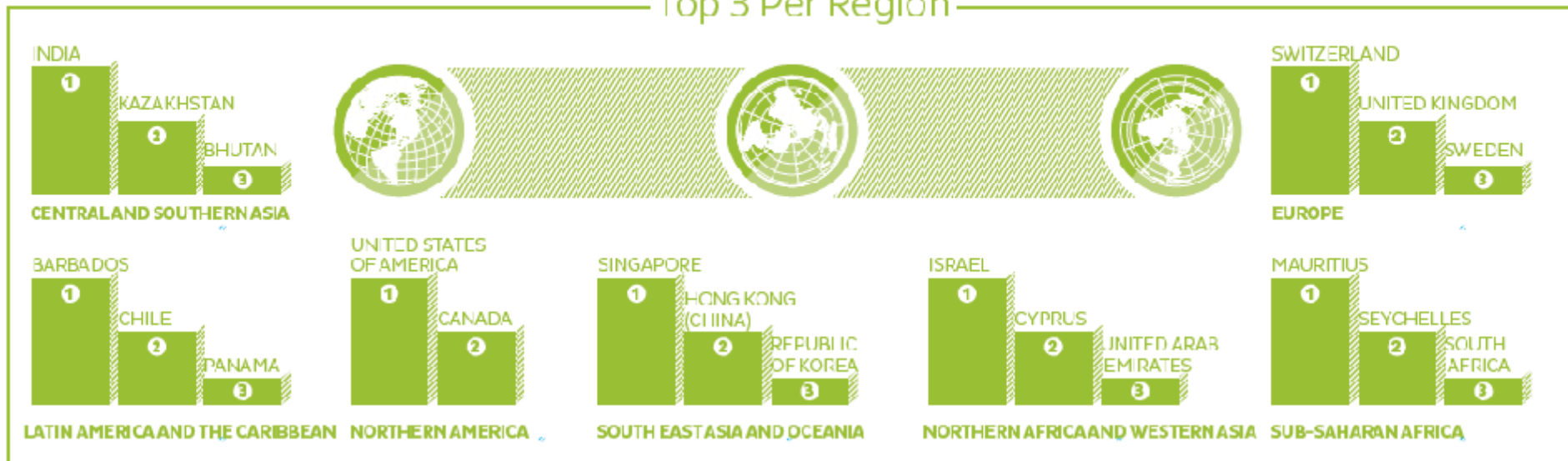
# GII 2014 rankings – Top 10

Input Sub-Index	Output Sub-Index	Efficiency Ratio
1. Singapore	1. Switzerland	1. Moldova
2. Hong Kong (China)	2. Netherlands	2. China
3. United Kingdom	3. Sweden	3. Malta
4. USA	4. United Kingdom	4. Indonesia
5. Finland	5. Luxembourg	5. Viet Nam
6. Sweden	6. Finland	6. Switzerland
7. Switzerland	7. USA	7. Venezuela
8. Canada	8. Germany	8. Nigeria
9. Denmark	9. Iceland	9. Luxembourg
10. Australia	10. Malta	10. Côte d'Ivoire

GII
1. Switzerland
2. United Kingdom
3. Sweden
4. Finland
5. Netherlands
6. USA
7. Singapore
8. Denmark
9. Luxembourg
10. Hong Kong (China)

# GII 2014 rankings – Top 3 per region and per income group

## Top 3 Per Region



## Top 3 Per Income Group





# Concluding thought

- One of the most important driving forces of growing world trade: production fragmentation and vertical specialization
- Is there a similar ‘fragmentation’ of innovation?
  - Open innovation & growing technology trade
  - Growing internationalization of R&D
  - Example: pharmaceutical industry
- Opportunities for middle income countries
  - New entry possibilities for specialized firms?
  - Increased scope for knowledge spillovers?

**Thank you!**

[carsten.fink@wipo.int](mailto:carsten.fink@wipo.int)