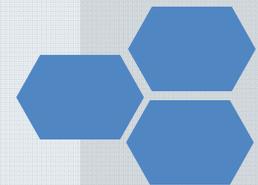




# Infrastructure Connectivity: Thinking big, Starting Small

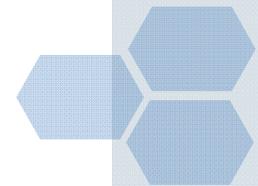
**Feng LI, Associate Professor**  
**China Foreign Affairs University**  
**[lifeng@cfau.edu.cn](mailto:lifeng@cfau.edu.cn)**





# Infrastructure Connectivity: Thinking big, Starting Small

- 1 **One Importance**
- 2 **Two Features**
- 3 **Three Challenges**
- 4 **Four Efforts**





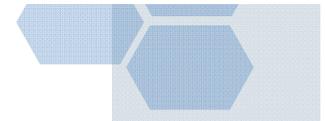
# One Importance

## ❖ Priority for development

**Table : Conventional Estimates of Aggregate Transportation and Irrigation Infrastructure Productivity in Elasticity of Output with respect to Infrastructure Access**

<b>Economy/Region</b>	<b>Infrastructure Type</b>	<b>Elasticity</b>	<b>Source</b>
Cross-country	Paved roads in agriculture	0.26	Binswanger (1990)
Cross-country	Rural road density in agriculture	0.12	Binswanger (1990)
Cross-country, OECD	Transportation	0.07	Canning and Fray (1993)
Cross-country, LDCs	Transportation	0.07	Canning and Fray (1993)
Cross-country, LDCs	Transportation and communication	0.16	Easterly and Rebelo (1993)
Cross-country	Irrigation in agriculture	1.62	Binswanger (1990)

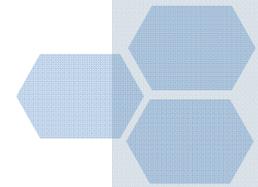
Source: Yasuyuki Sawada, The Impacts of Infrastructure in Development, ADBI Working Paper, 2015.





## One Importance

- ❖ Chinese: Build roads before you get rich.





## One Importance

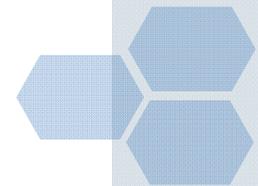
- ❖ Top one Importance of Infrastructure
  - Economic growth
  - Poverty reduction
  - Social employments
  - ....
  
- ❖ Infrastructure: precondition for connectivity
- ❖ High Quality: guarantee for connectivity



## Two Features

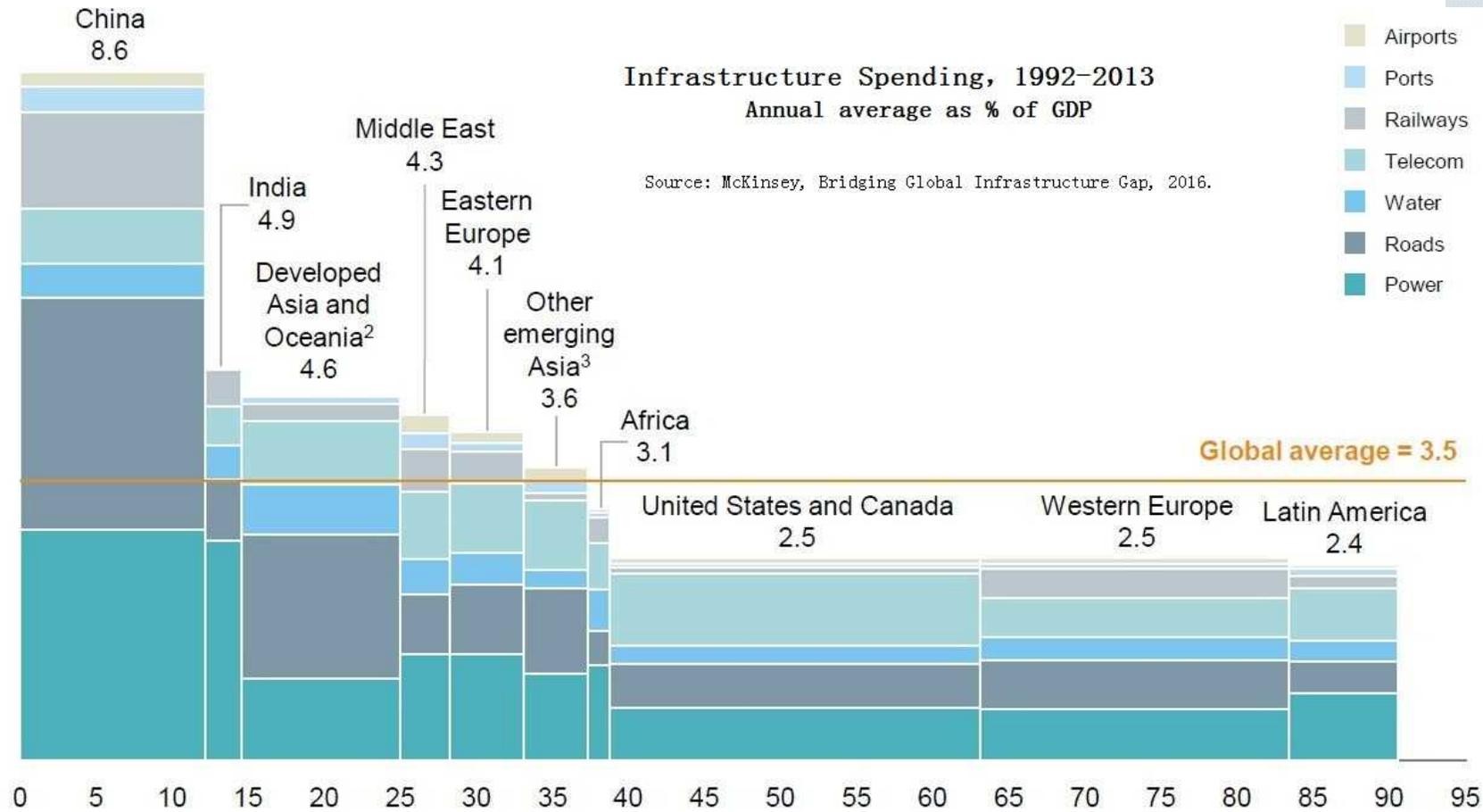
❖ 2.1 Unbalance

❖ 2.2 Insufficiency





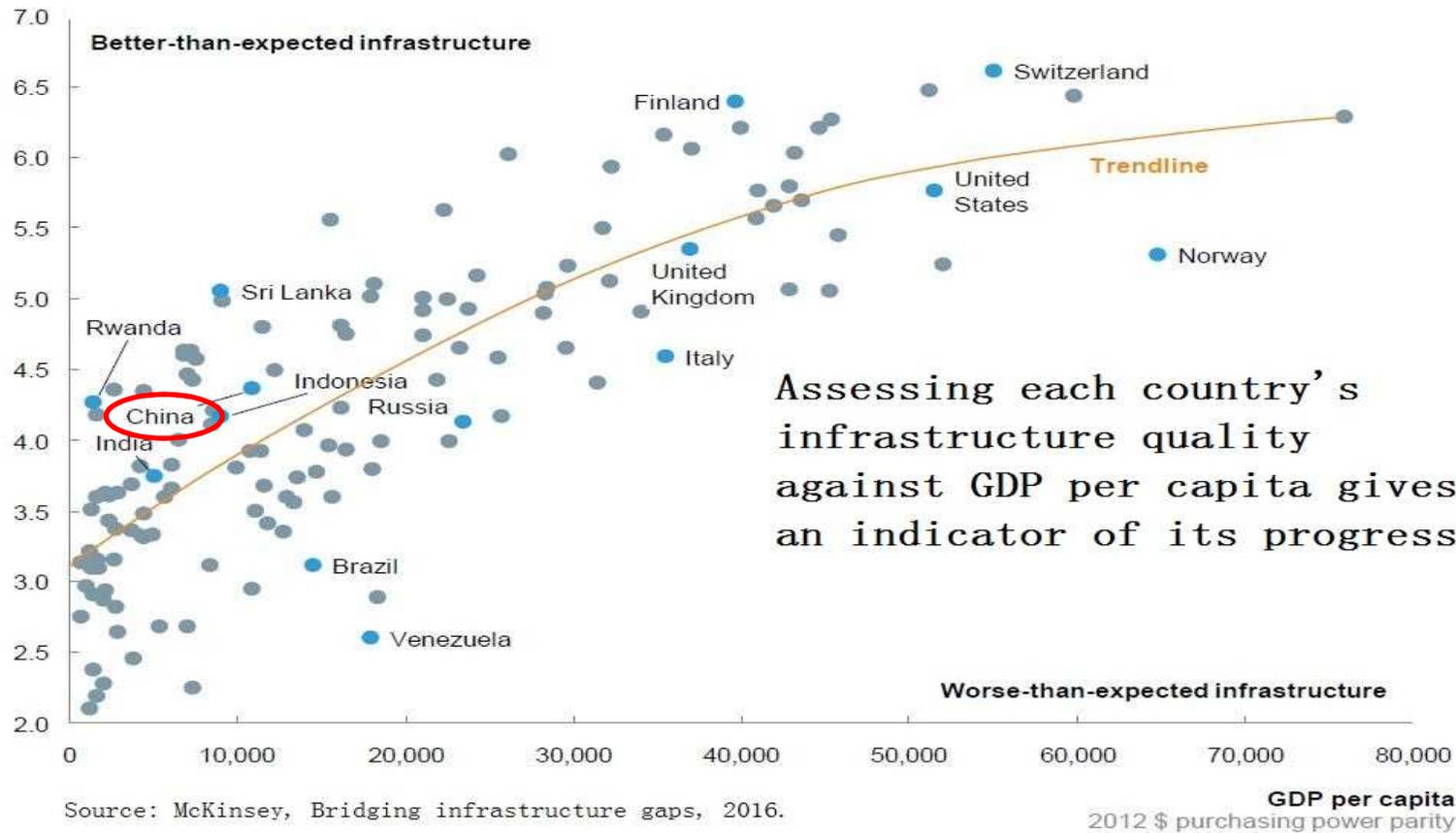
# Two Features





## Two Features

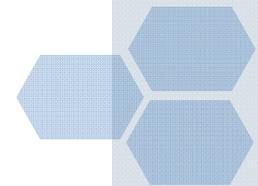
World Economic Forum (WEF) infrastructure quality  
Index (higher is better)





## Three Challenges

- ❖ 3.1 Physical Connectivity  
*different standards*
- ❖ 3.2 Institutional Connectivity  
*diverse policies*
- ❖ 3.3 Financing  
*huge gap*



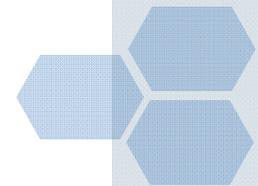


## Three Challenges

### ❖ 3.1 Physical Connectivity *different standards*

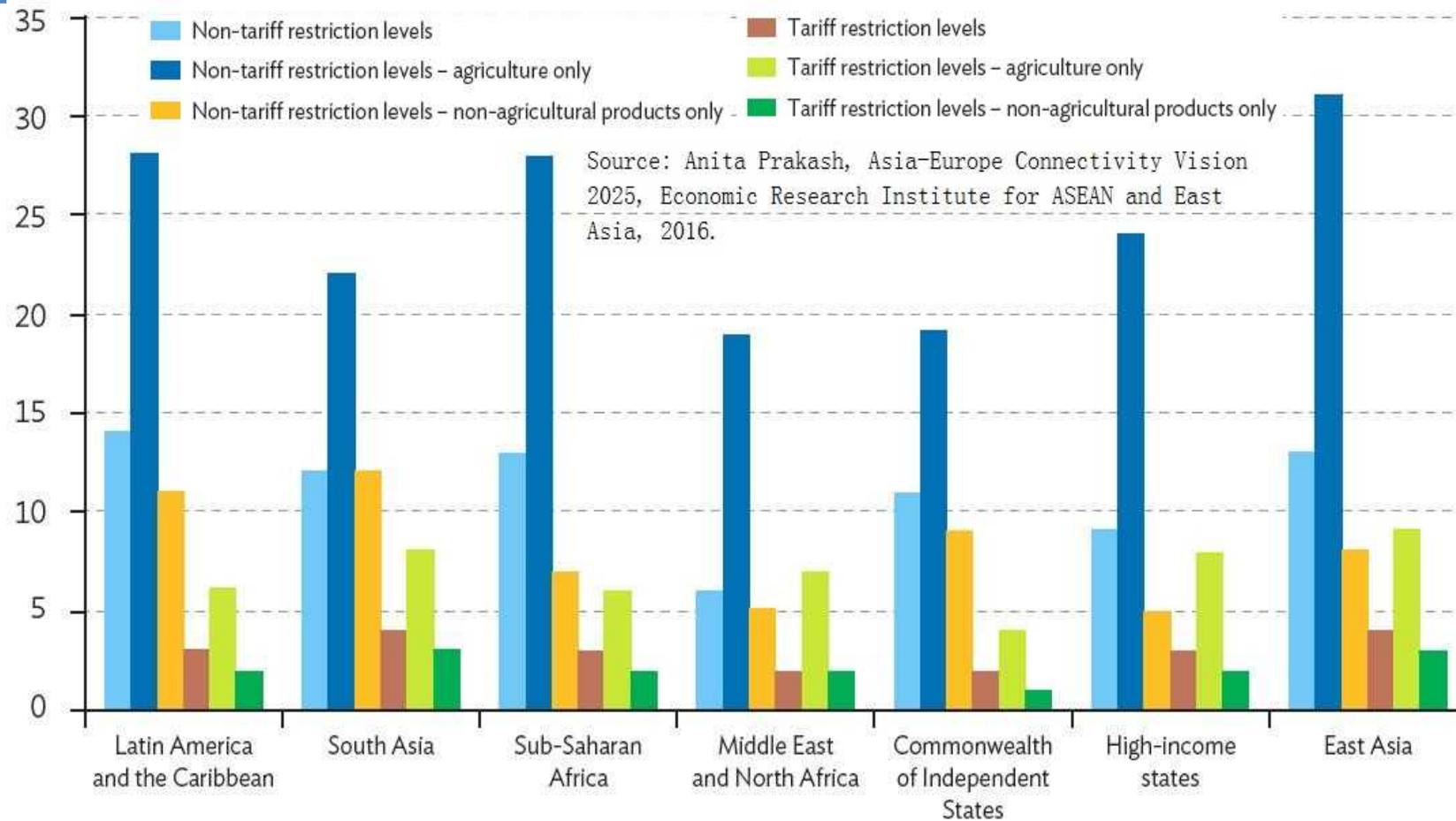
- The EN Eurocodes
- Japanese Industrial Standards
- Chinese Standards
- ....

*(incompatibility of rail gauges in different countries)*



# 3

## Three Challenges



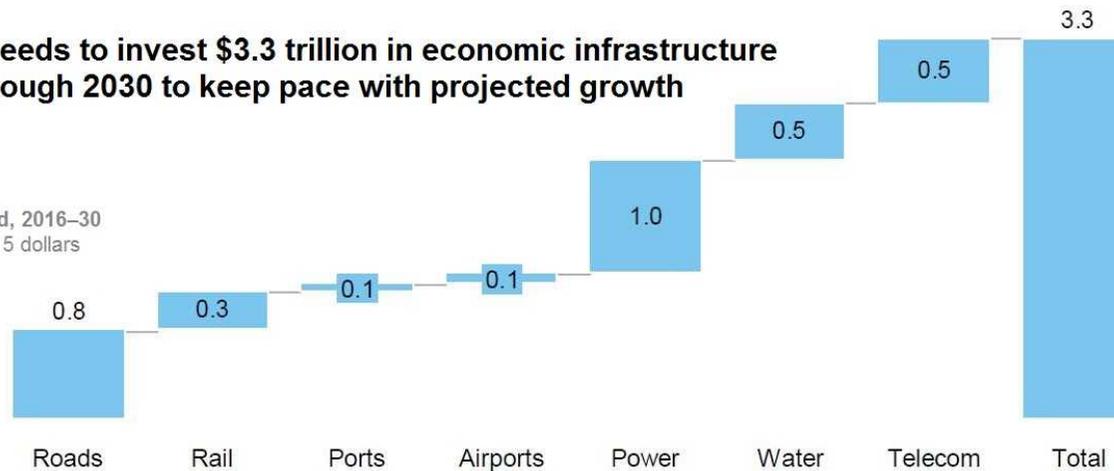


# Three Challenges

## ❖ 3.3 Financing *huge gap*

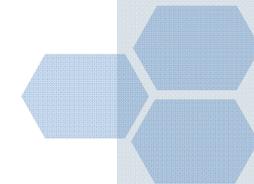
The world needs to invest \$3.3 trillion in economic infrastructure annually through 2030 to keep pace with projected growth

Average annual need, 2016–30  
\$ trillion, constant 2015 dollars



	Roads	Rail	Ports	Airports	Power	Water	Telecom	Total
<b>Annual spending</b> % of GDP	0.9	0.4	0.1	0.1	1.1	0.6	0.6	3.8
<b>Aggregate spending, 2016–30</b> \$ trillion	11.4	5.1	0.9	1.3	14.7	7.5	8.3	49.1 <sup>1</sup>

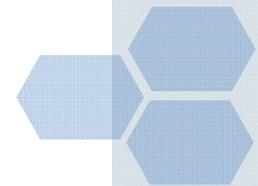
Source: McKinsey, Bridging global infrastructure gaps, 2016.





## Four Efforts

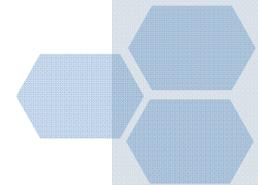
- ❖ 4.1 Recognition of diversification
- ❖ 4.2 Communication & coherence
- ❖ 4.3 Effective financing
- ❖ 4.4 Quality & sustainability



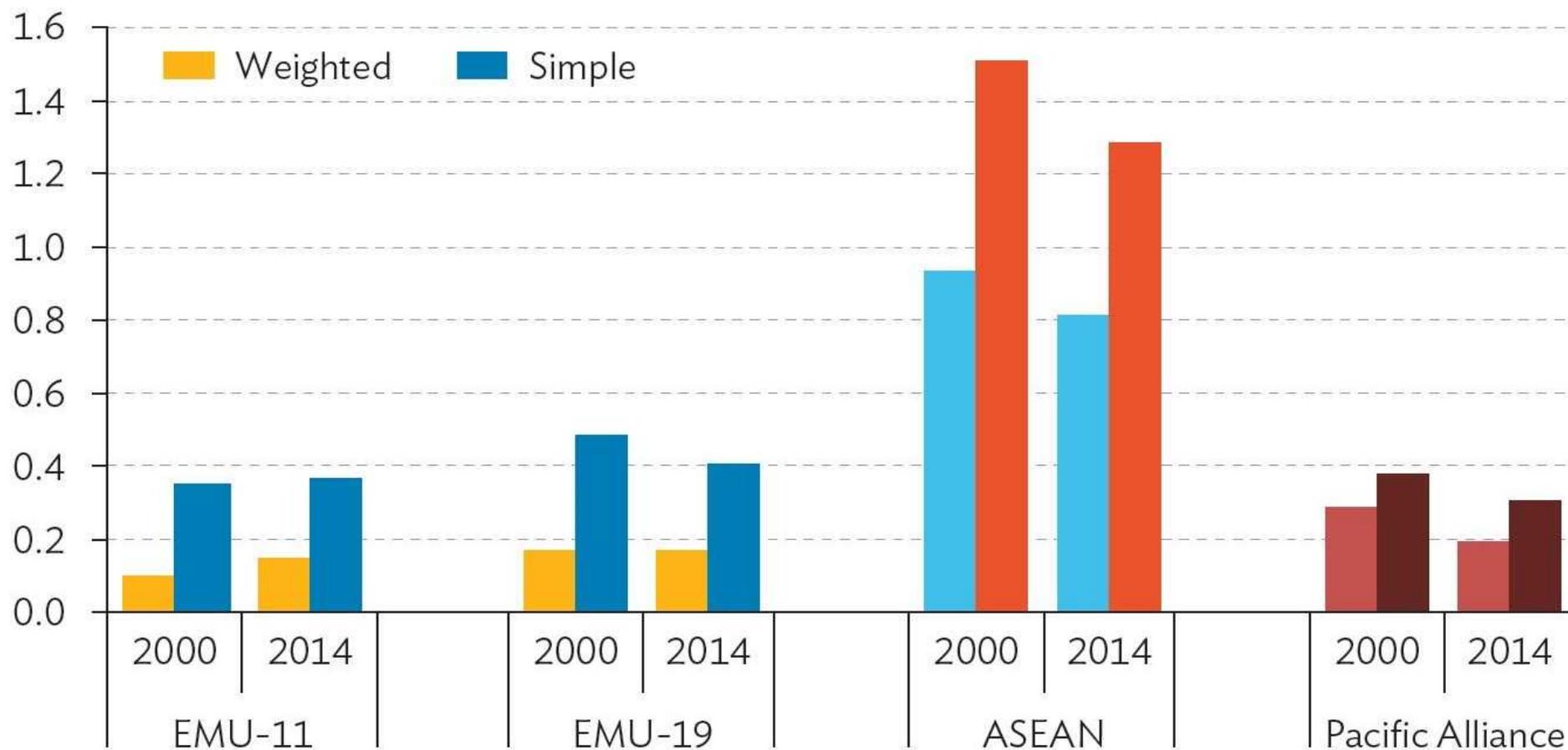


## Four Efforts

- ❖ 4.1 Recognition of diversification
  - Seek common points while reserving differences
  - Fully respect national attributes
  - Success of ASEAN
  - Lessons from TPP
  - Progress in BRI & RCEP



## Dispersion in Gross Domestic Product (GDP)



EMU : Economic and Monetary Union.

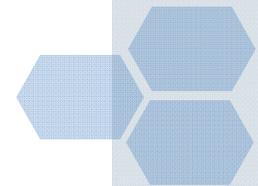
Source : Anita Prakash, Asia-Europe Connectivity Vision 2025, Economic Research Institute for ASEAN and East Asia, 2016.



## Four Efforts

### ❖ 4.2 Communication & coherence

- Market Access
- Trade Facilitation Agreement
  - Single window*
- Pre-establishment national treatment & negative list

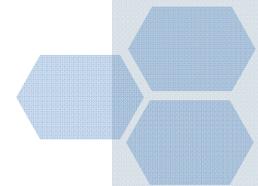




## Four Efforts

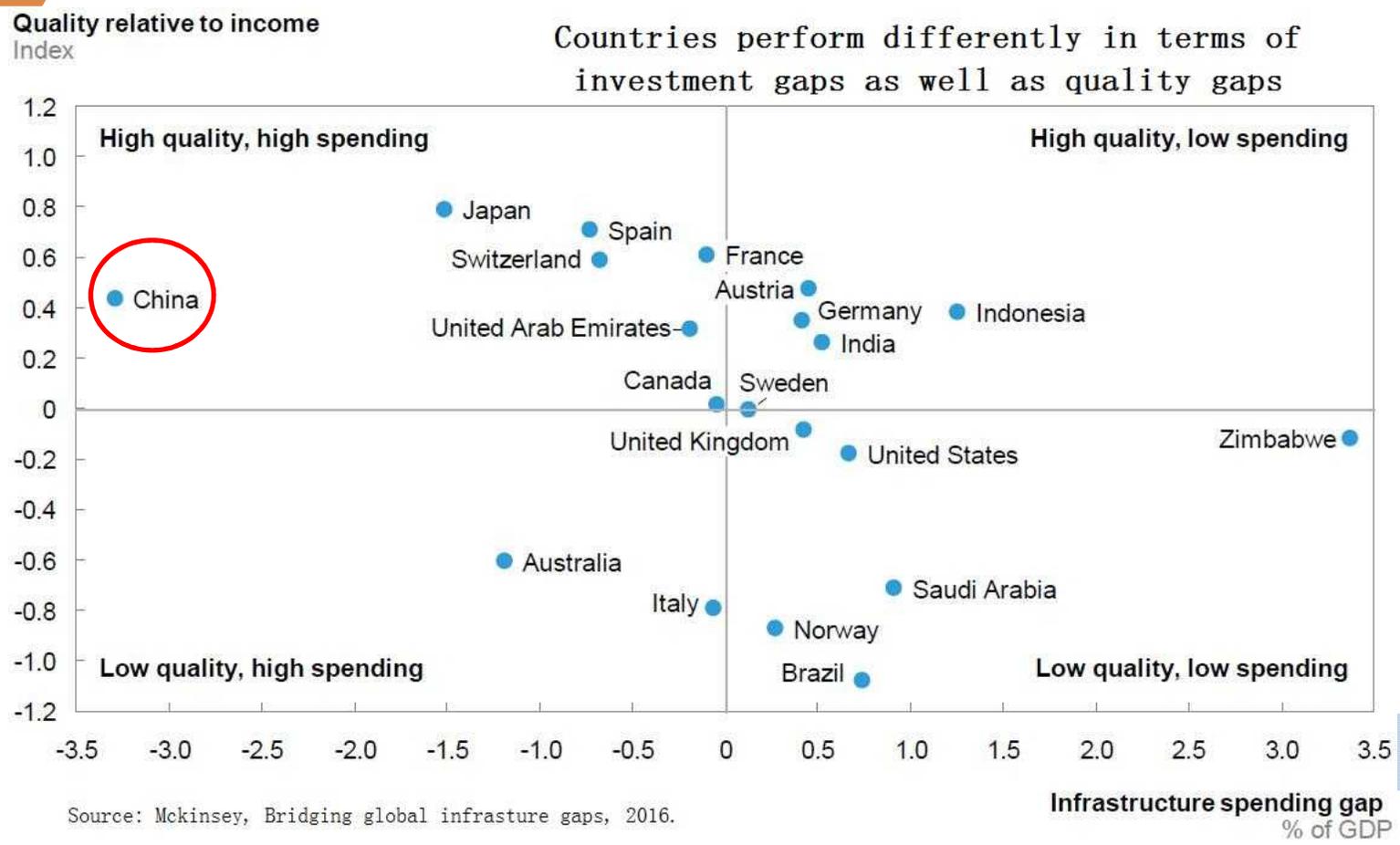
### ❖ 4.3 Effective financing

- Lean, Clean, Green (AIIB)
- PPP



4

# Four Efforts

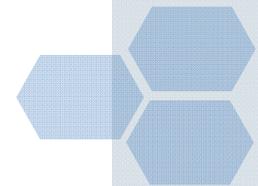




## Four Efforts

### ❖ 4.4 Quality & sustainability

- e.g.
  - Jakarta-Bandung High Speed Railway
  - China Railway Express
  - Port of Piraeus





The end !

