BIG PUSH THEORY AND MIDDLE-INCOME TRAP

EE 462 Development Macroeconomics

BIG PUSH MODEL

Underdevelopment as a Coordination Failure

- A newer school of thought on problems of economic development emphasized *complementarities* between several conditions necessary for successful development.

- A Coordination failure is a state of affairs in which agents' inability to coordinate their behavior (choices) leads to an outcome that makes all agents worse off.
  - Could be due to some difficulties or people hold different expectations.
  - This can occur when actions are complementary.
  - i.e. actions taken by one agent reinforces incentives for others to take similar actions.

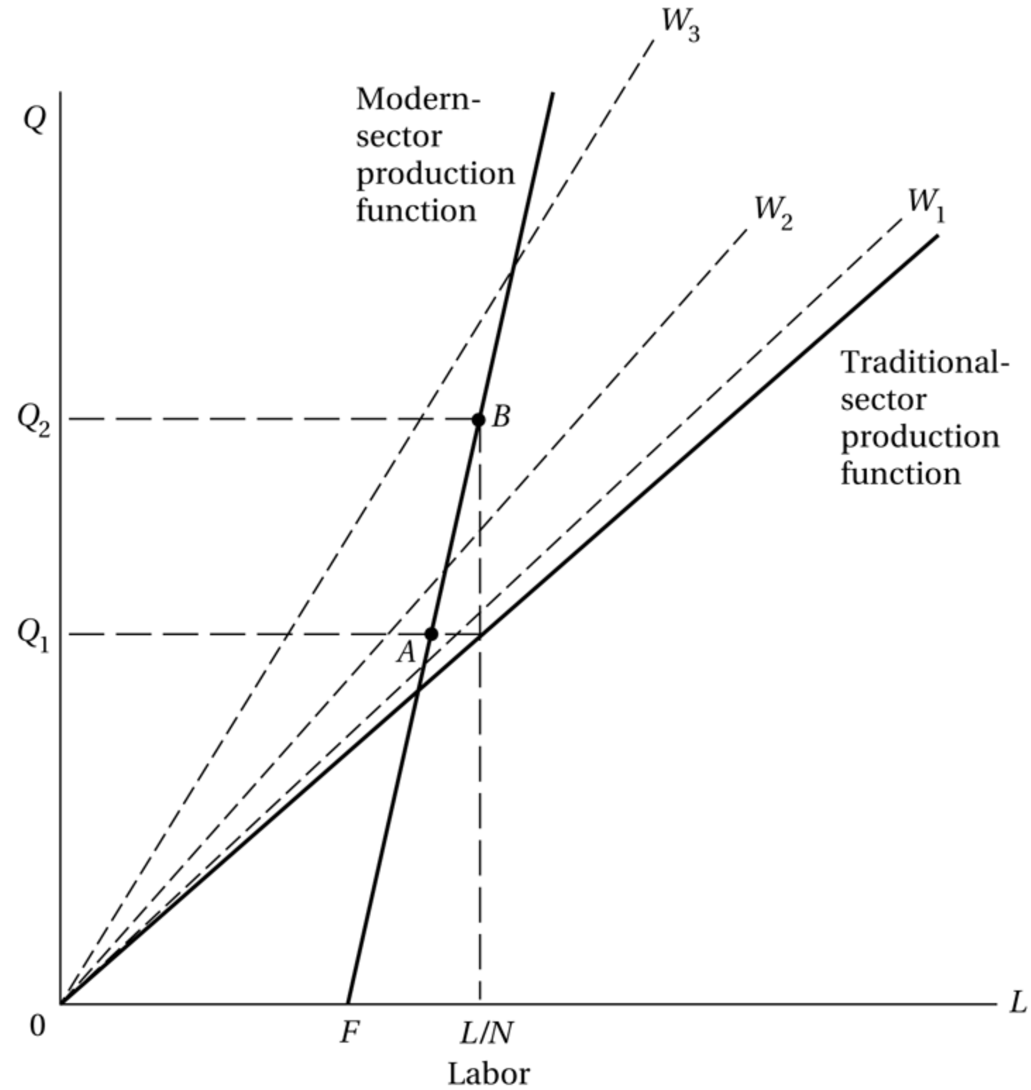
The Big Push Model: General Idea

- Originally proposed by Paul Rosenstein-Rodan in 1943.
- Basic idea:
  - A 'bit by bit' investment programme will not impact the process of growth as much as is required for developing countries. In fact, injections of small quantities of investments will merely lead to a resource waste.
  - Hence, we need a BIG injection to boost the country to achieve rapid growth.

The Big Push: A Graphical Model

- 6 assumptions
  - One factor of production
  - Two sectors
  - Same production function for each sector
  - Consumers spend an equal amount on each good
  - Closed economy
  - Perfect competition with traditional firms operating, limit pricing monopolist with a modern firm operating

The Big Push



Q
Modern-sector production function
W3
W2
W1
Traditional-sector production function
Q2
B
Q1
A
0
F
L/N
L
Labor

The Big Push Model (Cont'd)

- A big push may also be necessary when there are:
  - Intertemporal effects
  - Urbanization effects
  - Infrastructure effects
  - Training effects

Why the Problem Cannot be Solved by a Super-Entrepreneur

- Super Entrepreneur?
  - Capital market failures
  - Cost of monitoring managers- Asymmetric Information
  - Communication failures
  - Limits to knowledge
  - Lack of any empirical evidence that would suggest this is possible

Big Push Mechanisms

- Raising total demand
- Reducing fixed costs of later entrants
- Redistributing demand to later periods when other industrializing firms sell
- Shifting demand toward manufacturing goods (usually produced in urban areas)
- Help defray costs of essential infrastructure (a similar mechanism can hold when there are costs of training, and other shared intermediate inputs)

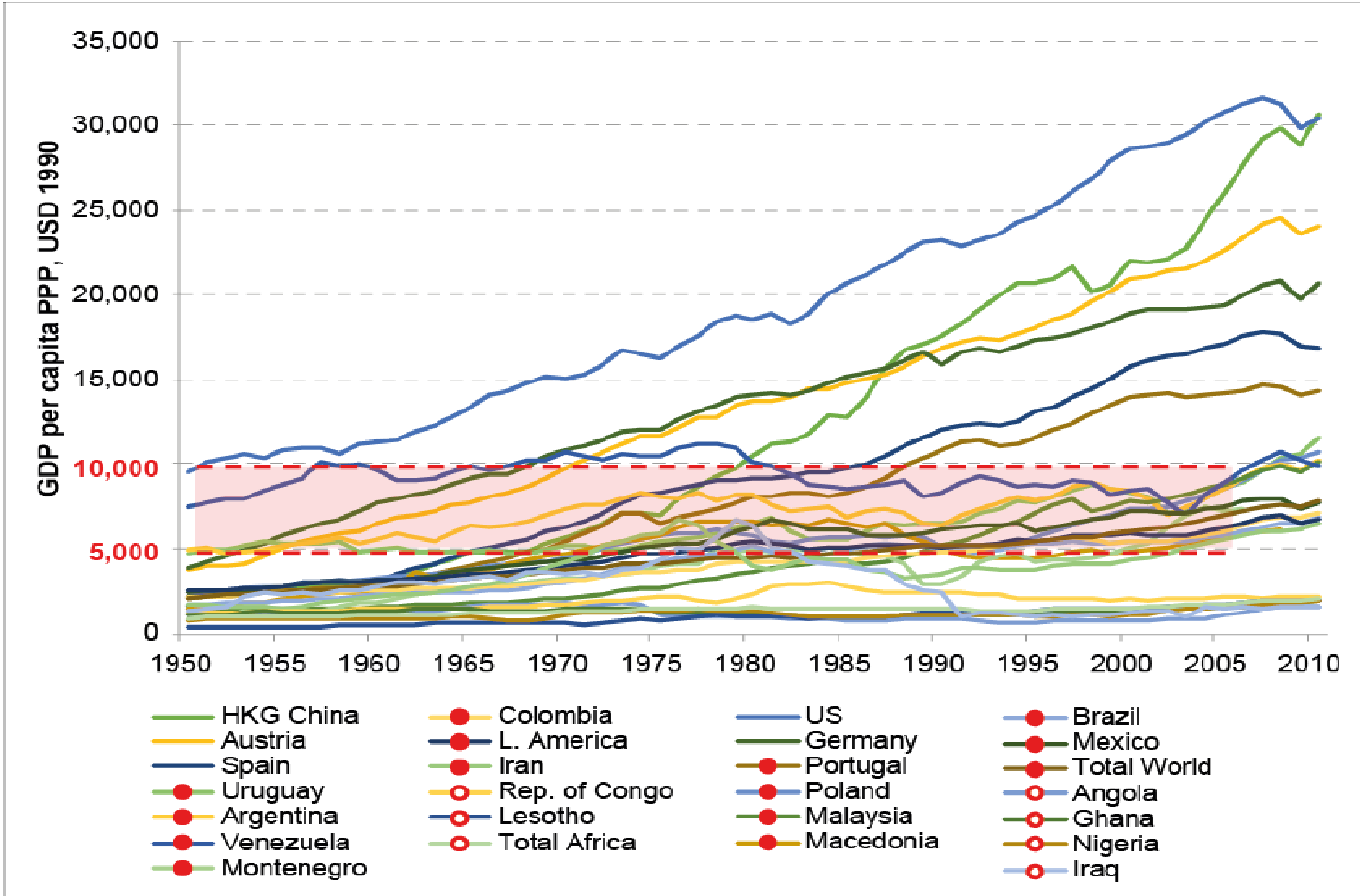
MIDDLE-INCOME TRAP

Source: Pruchnik, K. and J. Zowczak. 2017. Middle-Income Trap: Review of the Conceptual Framework. ADBI Working Paper 760. Tokyo: Asian Development Bank Institute. Available: https://www.adb.org/publications/middle-income-trap-mit-review-conceptual-framework

MIT definitions

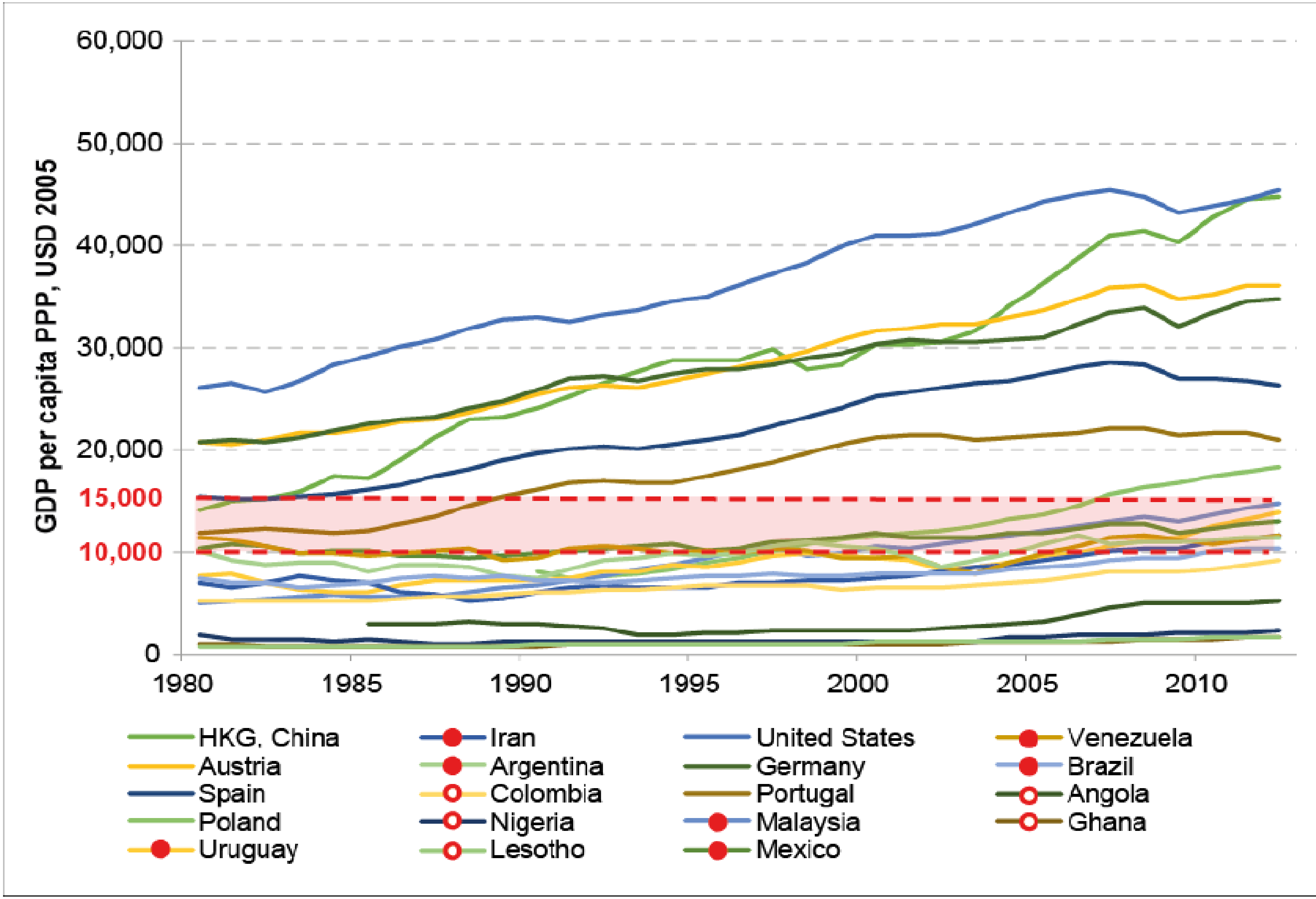
- There have been various definitions of MIT.
- The term has been used to described middle-income countries that have been "Trapped" between high-income economies (competing with innovations) and low-income economies (competing with cheap labors).
- Often used ratio of GDP per capita compared to US GDP per capita as criteria.

Figure 2: An Illustration of the MIT based on the Definition of Spence (2011)



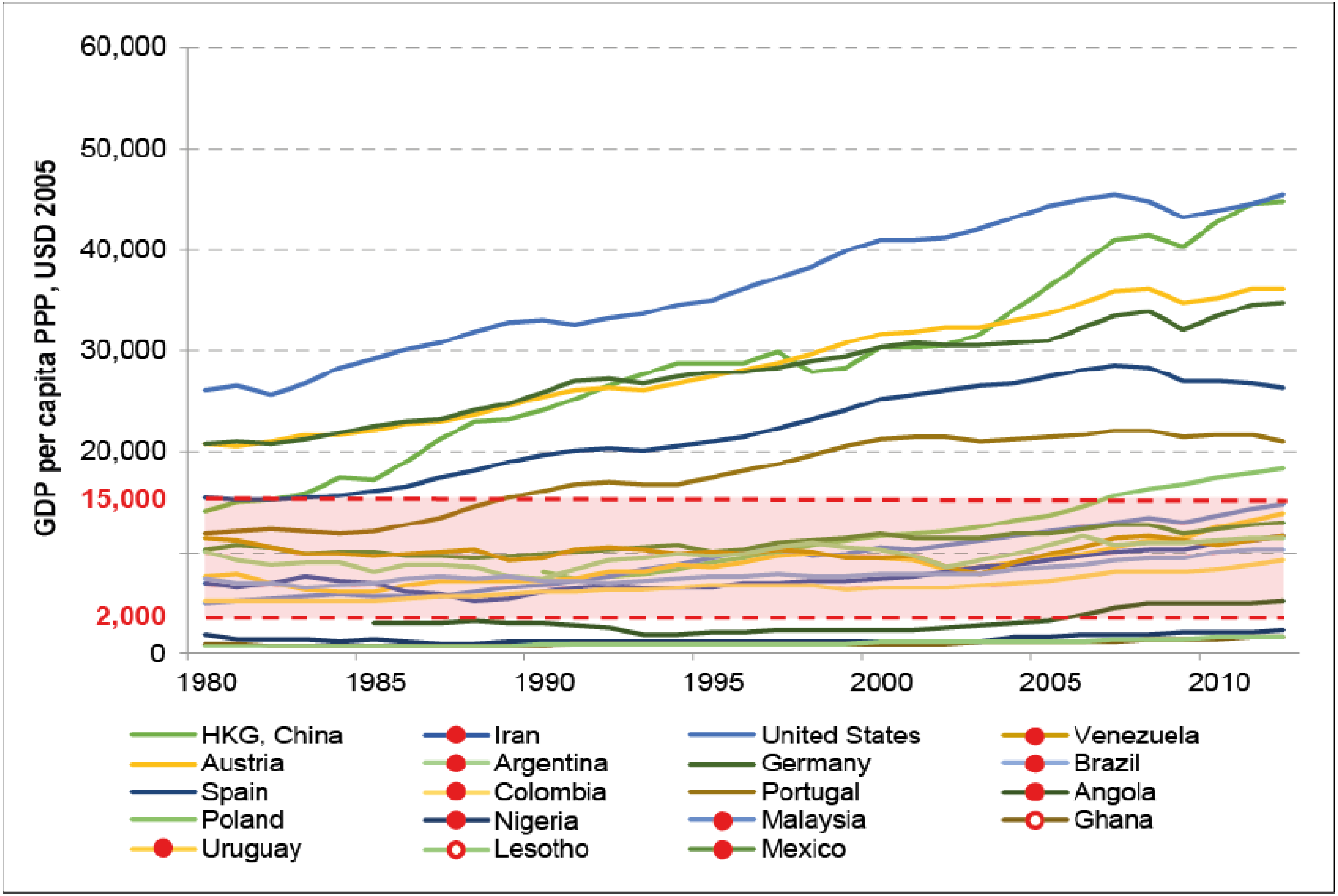
Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014). This is an updated version of a figure that appeared in Gill and Kharas (2015).

Figure 3: An Illustration of the MIT based on the Definition of Eichengreen, Park and Shin (2013)



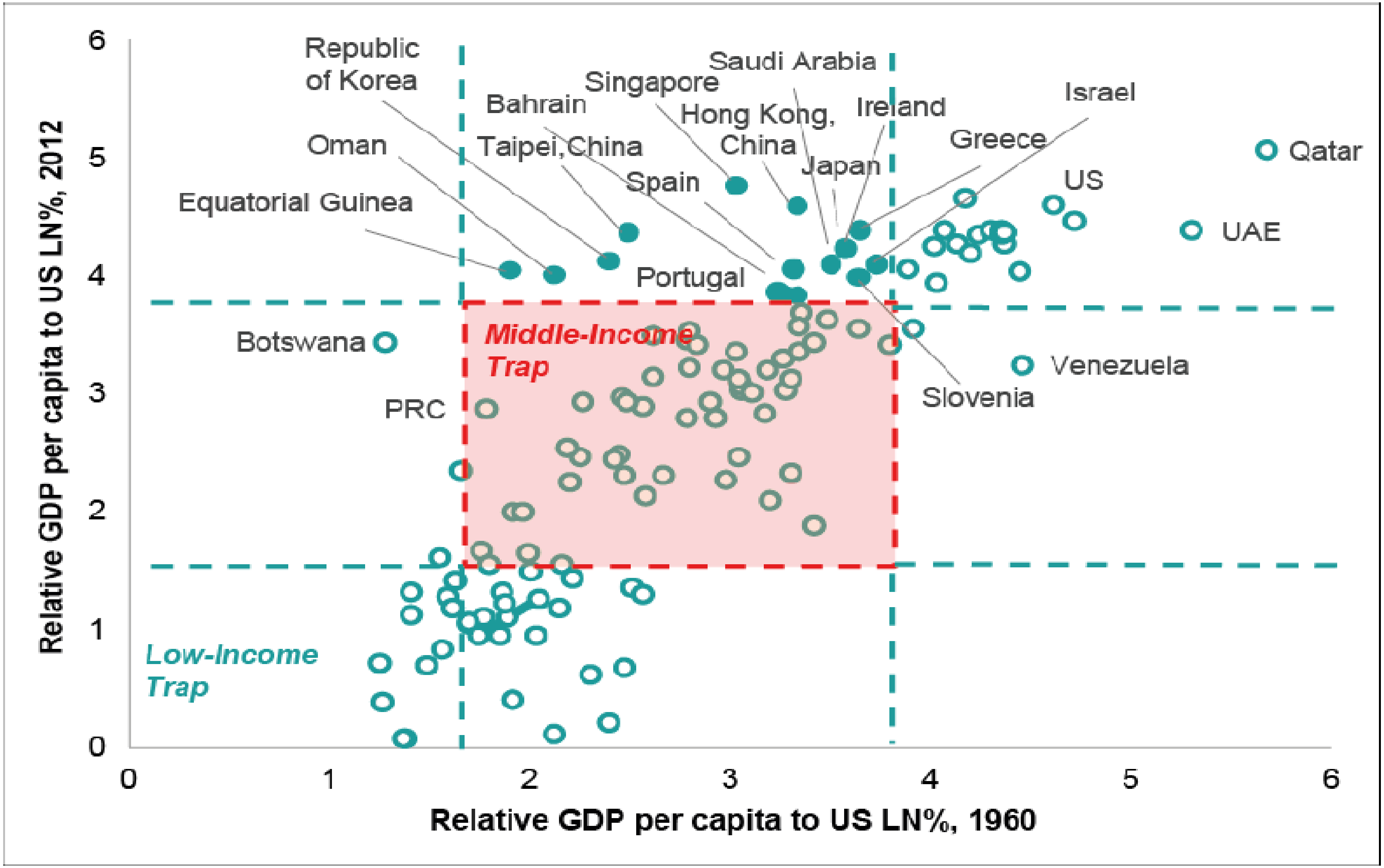
Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014).

Figure 4: An Illustration of the MIT based on the Definition of Ayiar et al. (2013)



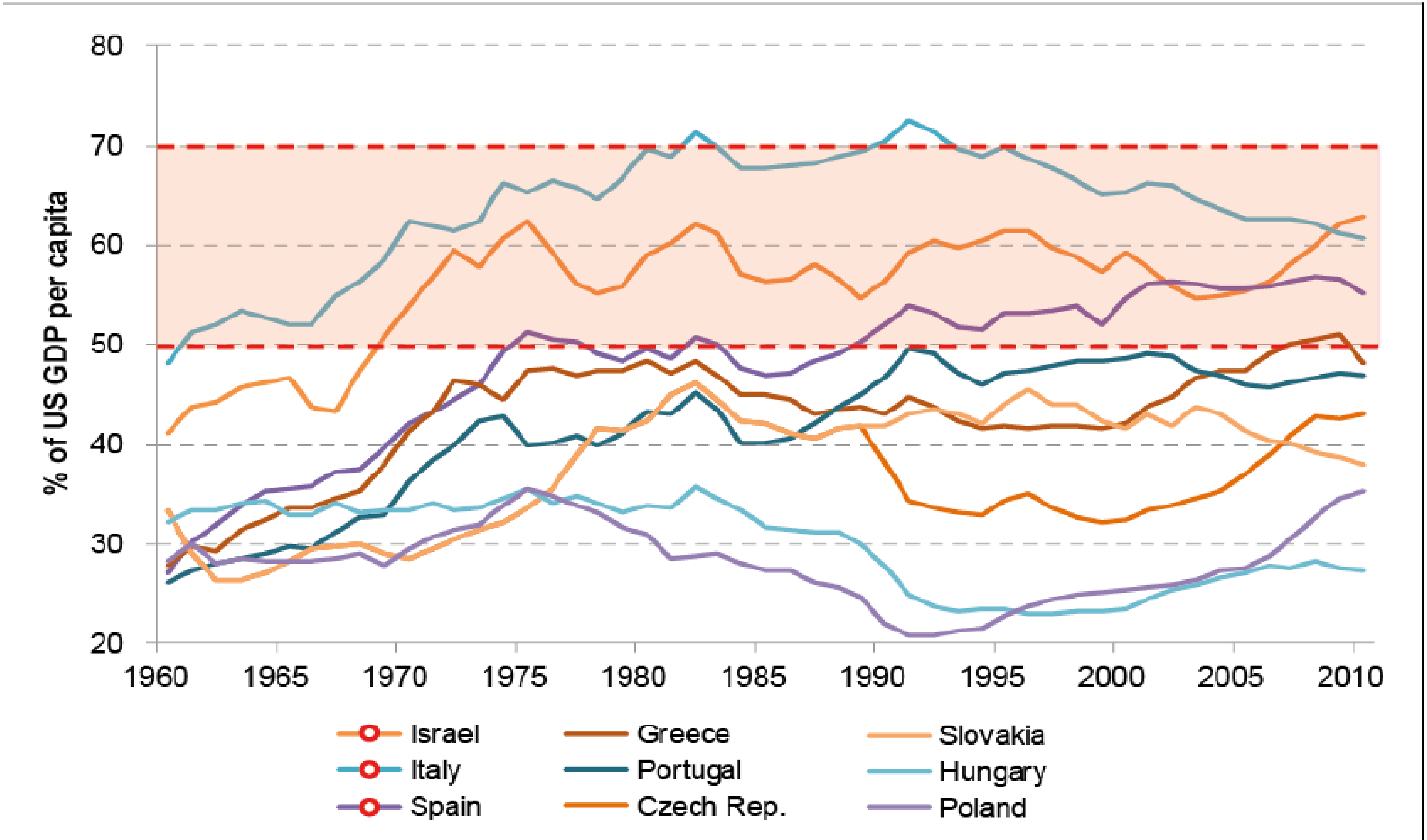
Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014).

Figure 5: An Illustration of the MIT based on the Definition of Agenor and Canuto (2012)



Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014), Penn World Table (2015). This is an updated version of a figure that appeared in Pruchnik and Toborowicz (2014) and Gill and Kharas (2015).

Figure 6: An Illustration of the MIT based on the Definition of Bukowski, Halesiak and Petru (2013)
(%)



Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014). This is an updated version of a figure that appeared in Pruchnik and Toborowicz (2014).

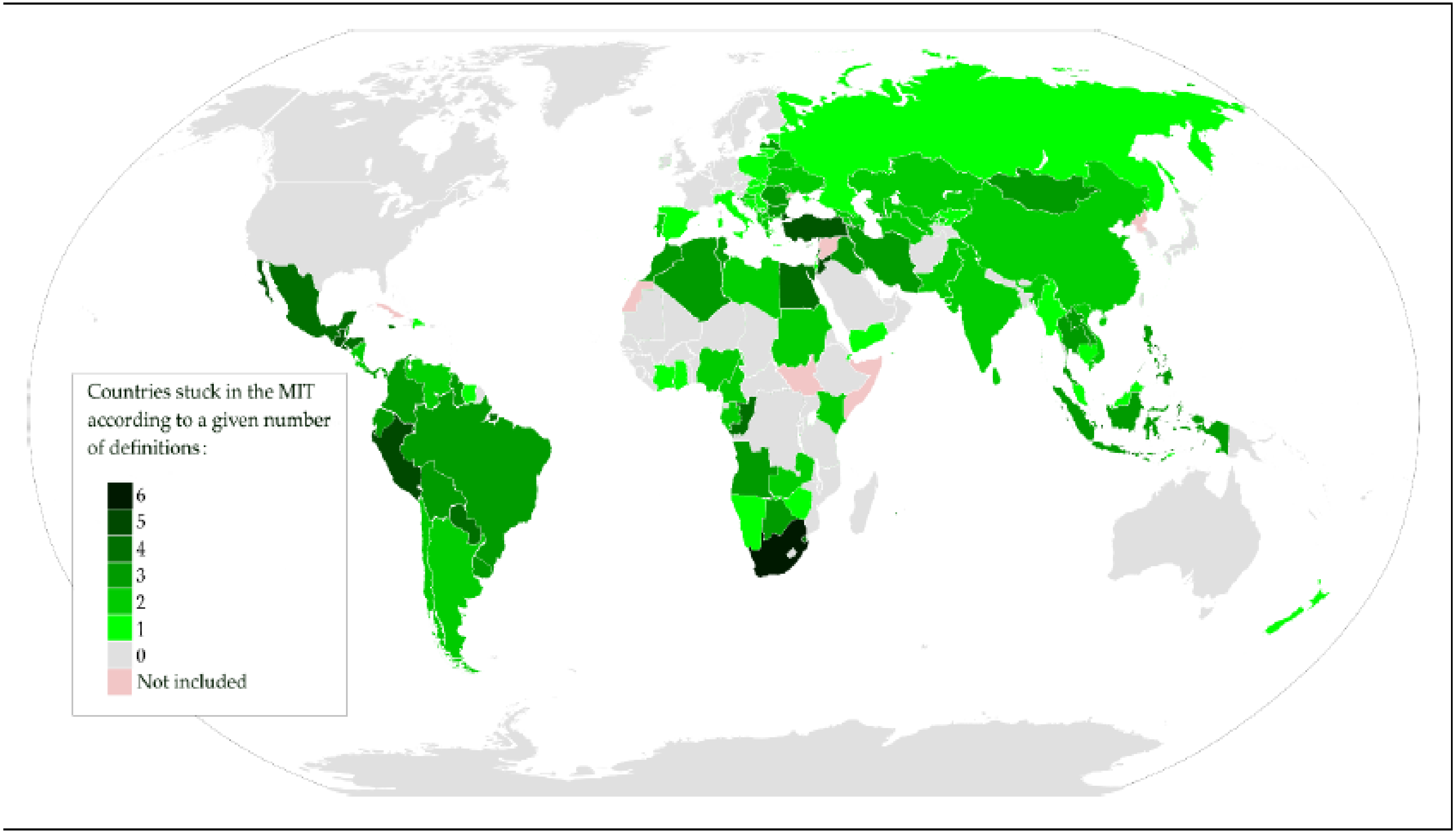
Comparative Study of MIT Definitions

Table 2: Regional Analysis of the MIT

Region	Countries 'Trapped' According to at least One Definition (%)	Average Number of Definitions by which Countries are 'Trapped'	Median Number of Definitions by which Countries are 'Trapped'
Latin America and Caribbean	90.6	2.4	3.0
South Asia	62.5	1.1	2.0
East Asia and the Pacific	53.3	1.0	1.0
Europe and Central Asia	61.2	1.1	1.0
Middle East and North Africa	63.2	1.8	1.0
Sub-Saharan Africa	43.5	1.0	0.0
North America	0.0	0.0	0.0

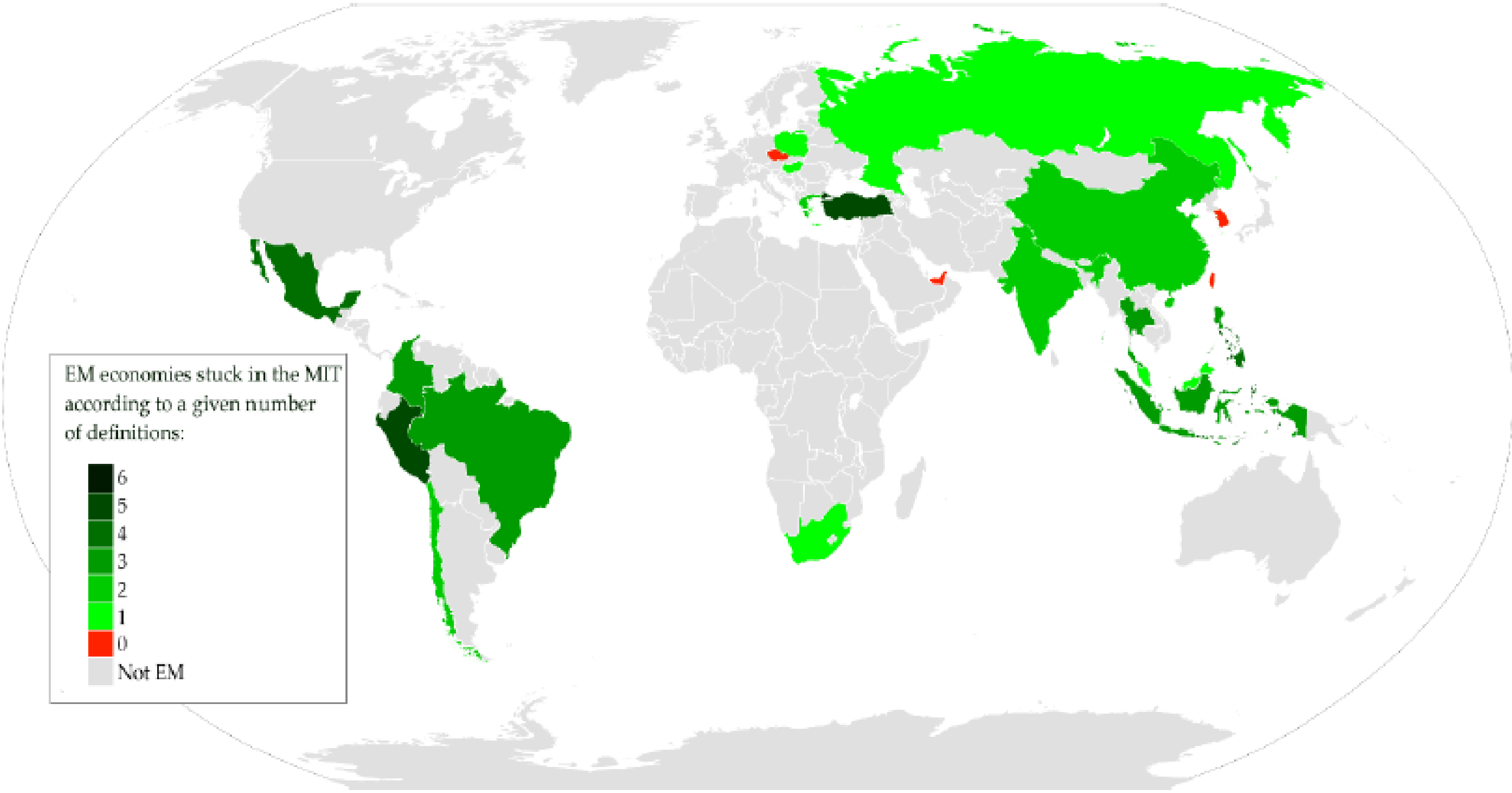
Source: Own elaboration, World Bank (2015).

Figure 7: Countries Classified as 'Stuck' in the MIT by a Given Number of Definitions



Source: Own elaboration.

Figure 8: Emerging Market Economies Classified as Stuck in the MIT by a Given Number of Definitions



Source: Own elaboration, Russell Investments (2015).

Factors Contributing to MIT

- Unfavorable demographics
- Low level of economic diversifications
- Inefficient financial market
- Insufficient advanced infrastructure
- Low level of innovation
- Weak institutions
- Inefficient labor market