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Argentina: PPP, Infrastructure and Growth

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Council of the Americas

New York, May 1st 2018

PPP, infrastructure and growth

Argentina´s problem

- Low productivity and capital stock performance
- Low infrastructure investment effort
- Tight fiscal space, need to rebalance

PPP as (one) part of an infrastructure-growth strategy

- Raise investment in infrastructure
  - Which infrastructure/projects? Impacts on which sectors?
- With impact on productivity & growth performance
  - What channels/likely magnitude?

Argentina: Labour Productivity & Capital Stock per Worker

1960-2013 (millions of PPP 2005 constant dollars per thousand workers)

sources: GGDC, IMF, INDEC

Only 3 reasonable episodes

Argentina: Annual Labor Productivity Growth Rates (%)

		Sectoral		
	Economywide	*Utilities*	*Construction*	*Transport, Storage & Communication*
1960-2013	**0.97%**	**2.56%**	**0.95%**	**2.95%**
1964-1972	**3.64%**	9.59%	1.75%	4.30%
1990-1998	**4.15%**	4.35%	10.75%	3.44%
2003-2010	**3.22%**	**0.97%**	4.08%	7.29%

Sources: GGDC, IMF and INDEC

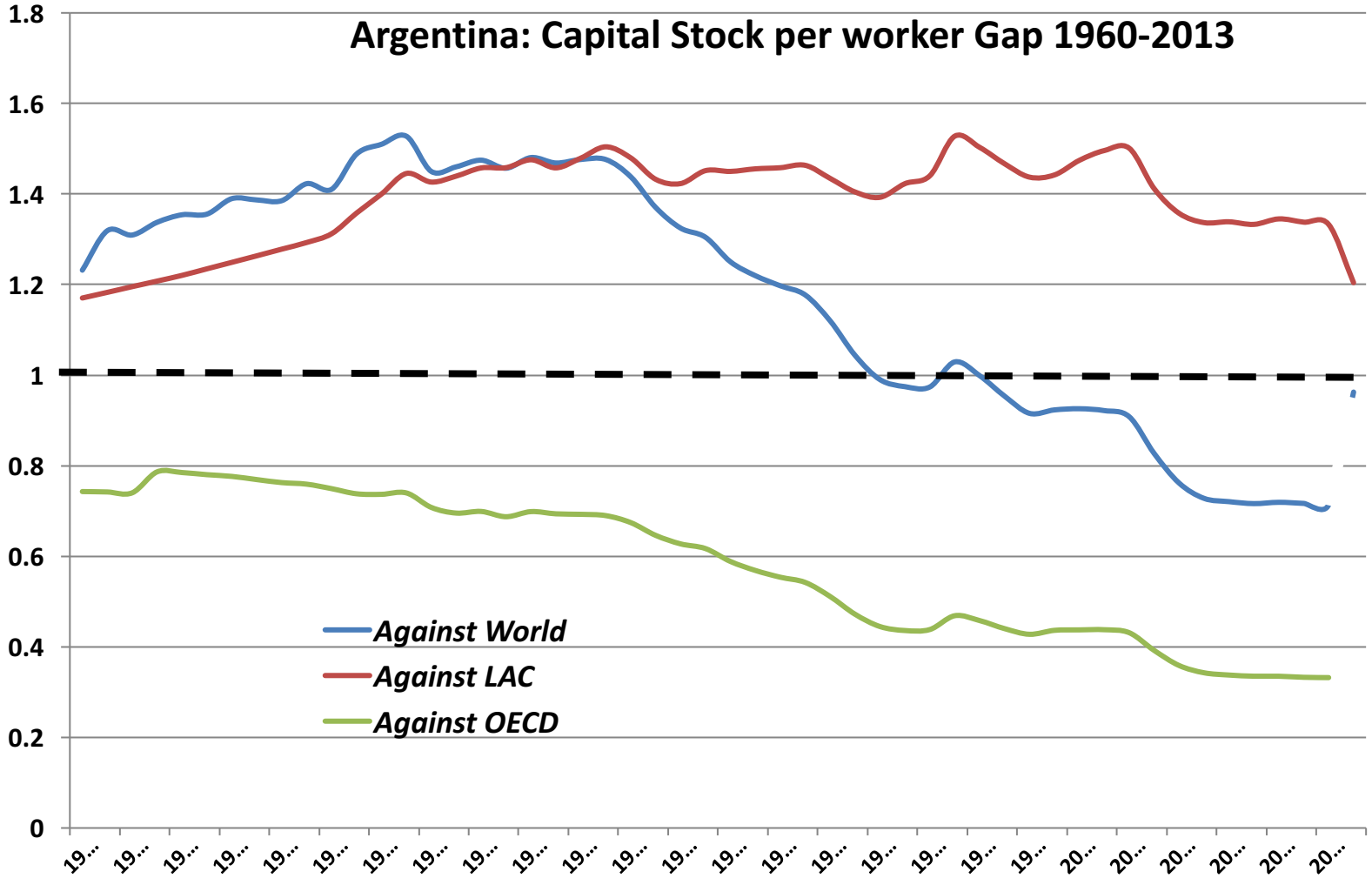
…But with different K/L performance

Argentina: Annual Capital Stock per worker Growth Rates (%)

		Capital Stock per Worker		
	Economywide Labor Productivity	**Total**	*Public*	*Private*
1960-2013	**0.97%**	**0.53%**	***1.38%***	***0.35%***
1964-1972	**3.64%**	2.59%	*2.77%*	*2.56%*
1990-1998	**4.15%**	**-0.35%**	*0.26%*	***-0.46%***
2003-2010	**3.22%**	**-0.91%**	*1.32%*	***-1.41%***

Sources: GGDC, IMF and INDEC

Argentina: anemic on capital



PPPs as a Vehicle to Boost Infrastructure Investment

- Infrastructure+growth depends on cost-effectiveness and high productivity of infrastructure capital services

- PPPs can achieve both if well designed:
  - They improve Willingness-to-Pay for services
  - They reduce costs of services through efficient investment, operation and maintenance

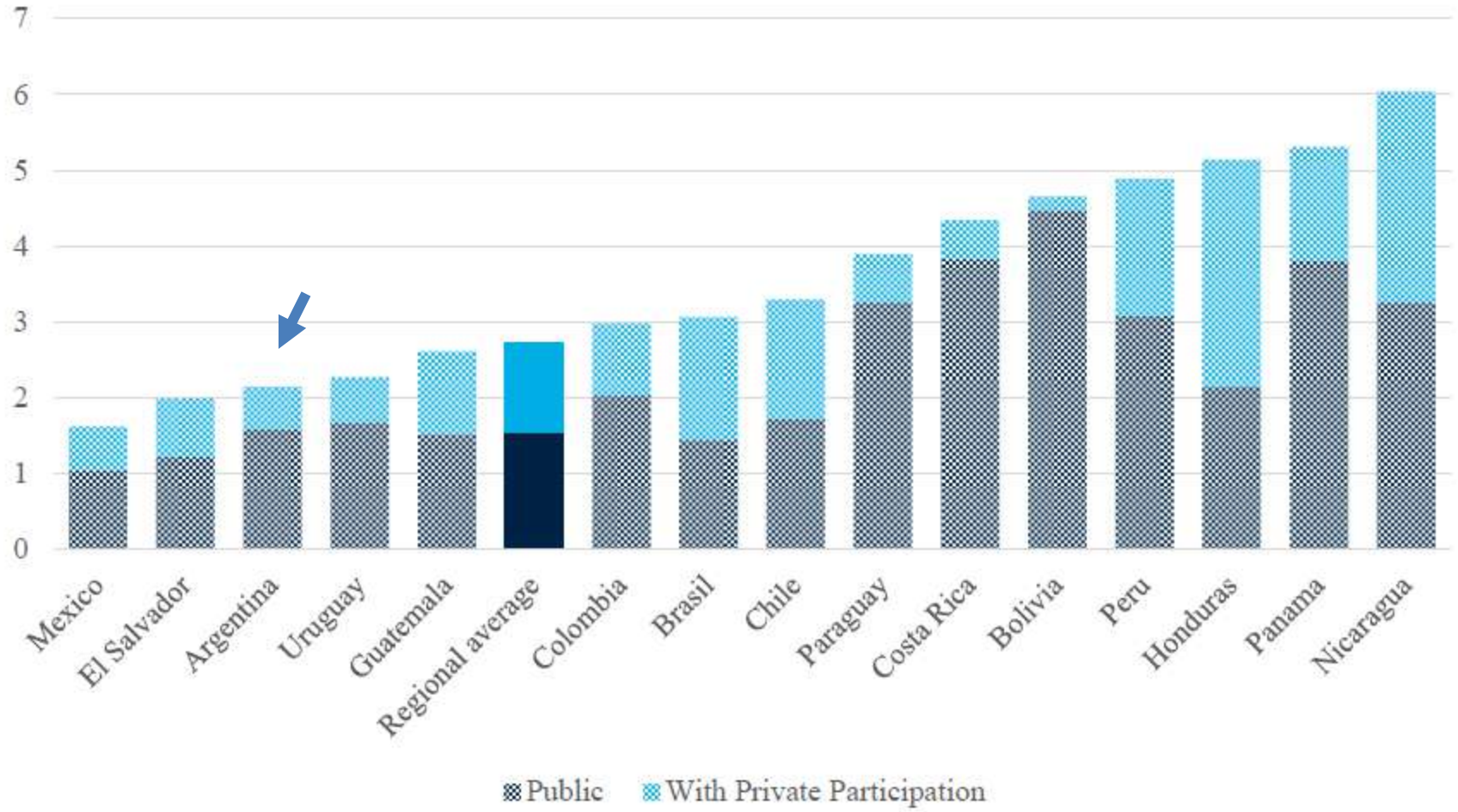
PPPs as a Vehicle to Boost Infrastructure Investment

- Good design involves:
  - Good project selection
  - Sound fiscal management
  - Systemic view of value-chain constraints
  - Financial/contractual (risk allocation; renegotiation) design plus governance.
  - Trouble-shooting check-list required

- MDB support, an enabling environment to:
  - Attract private investment
  - Provide assistance and technical expertise in project preparation
  - Contribute in closing financing gaps.

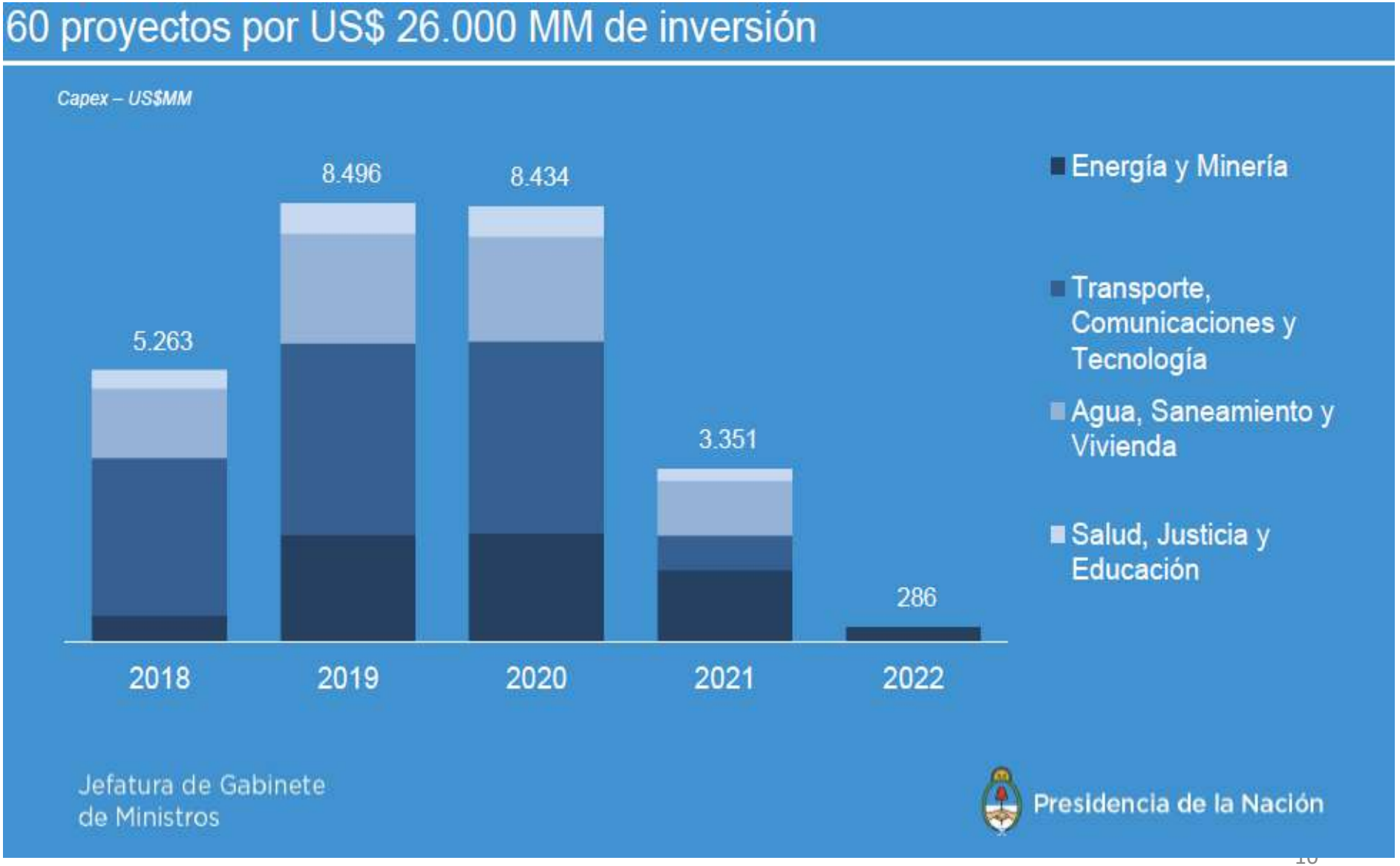
A 1% gap in PPP

Figure 2: Infrastructure investment levels varied enormously across countries in 2008-13
(percentage of GDP)



Source: www.infralatam.info, downloaded on May 2, 2016.

PPP pipeline

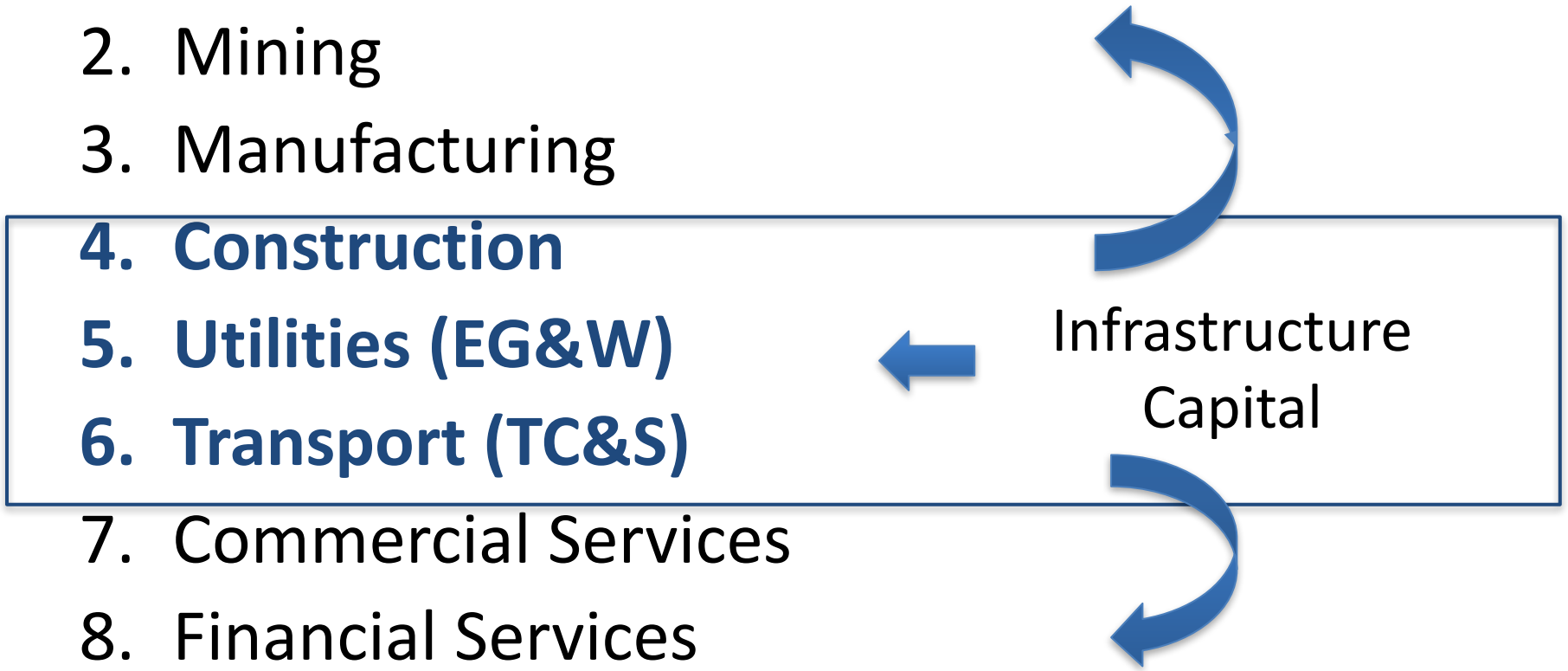


Infrastructure for Growth: New Methodology's questions

- Impacts of infrastructure on growth are multidimensional: they depend on the sector, country, stage of development, etc.
- Some methodologies address "which infrastructure?" at an aggregate level. Yet no results are available on the "on which sectors?" question
- Data constraints hinder growth accounting by sector, disaggregating capital infrastructure.
- Data on sectorial labor productivity (not TFP) since 1950 is available (eg. Groningen group) and allows for an analysis of impacts of infrastructure sectors on other sectors.
- Capital stock is available from IMF dataset

Labor Productivity in 10 Sectors

1. Agriculture
2. Mining
3. Manufacturing
4. **Construction**
5. **Utilities (EG&W)**
6. **Transport (TC&S)**
7. Commercial Services
8. Financial Services
9. Government Services
10. Social Services



Which Sectors?

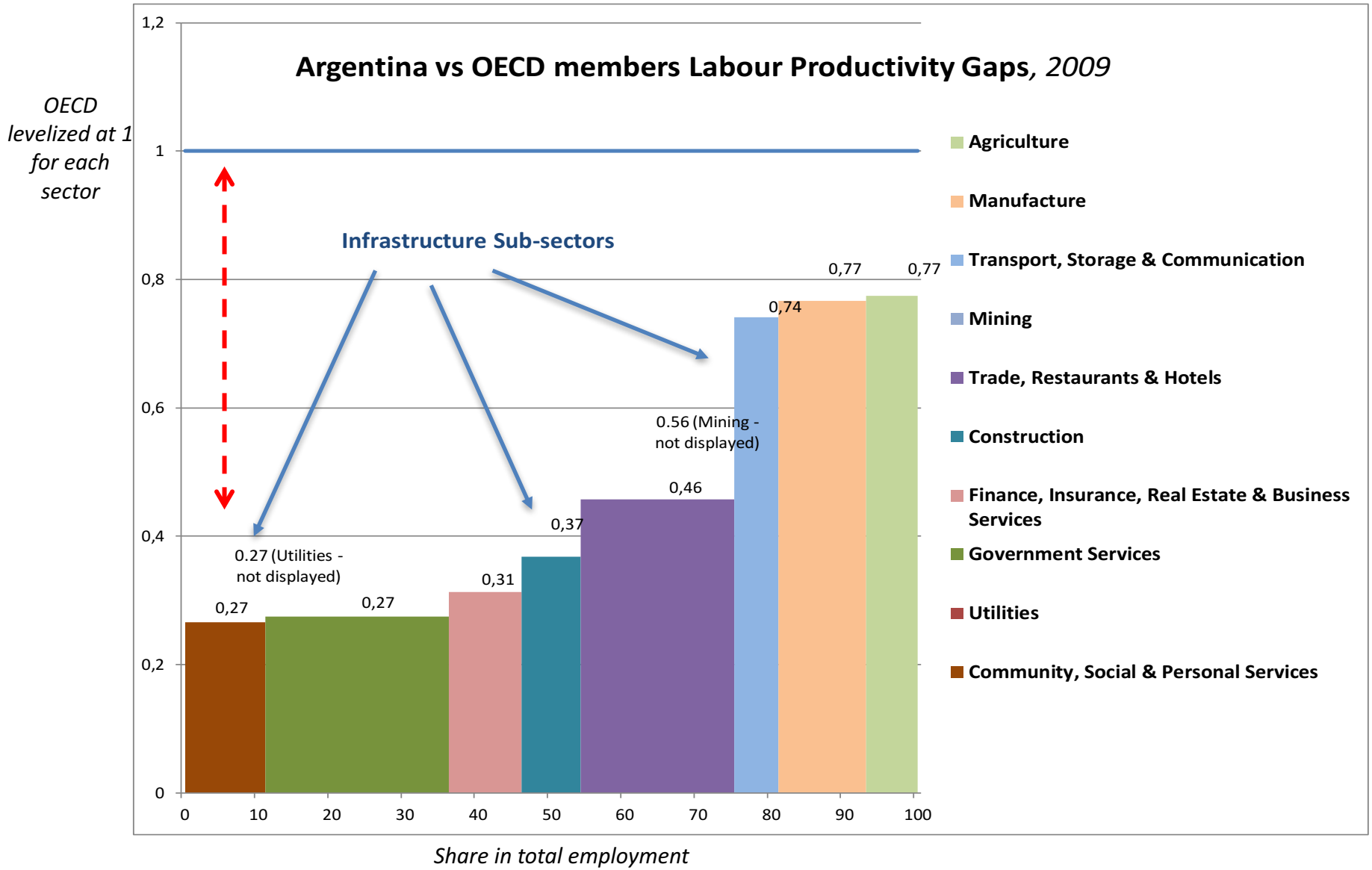
- Countries in the region have different productivity gaps across sectors
  - *What do they look like?*
  - *Examples of different positions*: Argentina

- Key sectors are those with large potential productivity gaps or those with strong growth prospects where infrastructure investment will ignite growth:

  - *Low productivity example*:
    - Utilities

  - *Dynamic productivity example*: Energy in Argentina
    - Transmission infrastructure for electricity and gas

Argentina's Labor Productivity Sectoral Gaps vs OECD



Effect of infrastructure on growth

- Productivity per worker depends on capital per worker and TFP.
- Estimating the impact of a 1% of GDP permanent investment shock on infrastructure.
- Direct effect through K/L
- Indirect effect through productivity shocks in infrastructure services

Growth impact estimates

Growth effect on Economywide Labour Productivity of an annual 1% (of GDP) investment in infrastructure

		Indirect Effect: Shock on sectoral productivity		**Total Impact**
	Direct Effect through Capital Stock	Construction	Transport, Storage & Communication	
	0.18%	0.07%	0.33%	**0.58%**
As % of Total Impact	*31%*	*12%*	*57%*	*100%*

Source: Own estimates based on GGDC, IMF and INDEC data

Complementary Policies

- Several barriers/distortions need to be removed to make the impact of infrastructure on growth most effective
  - "Software" versus "Hardware" of infrastructure services
- Various dimensions
  - Balance Sheet, Saving-Investment Planning
  - Governance/Regulation
  - Competition Policy on infrastructure services
- Examples in Argentina
  - Competition in transport services
  - Development of wholesale gas and electricity markets in Argentina