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**Local Content Requirements: Report  
on a Global Problem**

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# **Local Content Requirements: Report on a Global Problem**

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# Report outline

## Motivation

- In the wake of the Great Recession, more than 100 new Local Content Requirements (LCRs) have been considered or implemented.
- Several depart from the classic format of mandated purchases from domestic suppliers and mix price and quantity signals to influence market outcomes.

## Three part study

1. Documents the rise of “new LCRs” and outlines six policy alternatives.
2. Comprehensive databank of LCRs since 2008 with estimate of their impact on global trade.
3. Six cases studies highlight the costs of LCR measures and their impact on domestic and international markets.

# The incidence of “new LCRs”

## Comparative statistics for countries with LCRs from 2008 to present

Country	Number of LCR cases	2010 GDP (US\$ billions)	Two-way trade (% of GDP)	Inward FDI stock (% of GDP)
<b>Advanced economies</b>				
Australia	7	1,132	45	45
Canada	5	1,577	60	36
United States	14	14,587	28	24
<b>Average: advanced economies with LCRs</b>	9	5,765	45	35
<b>Average: all other advanced economies</b>	0	905	72	84
<b>Developing economies</b>				
Argentina	8	369	41	24
Brazil	15	2,088	23	23
China	10	5,927	56	10
India	9	1,727	47	11
Indonesia	12	707	47	17
South Africa	3	364	57	36
<b>Average: developing economies with LCRs</b>	10	1,863	45	20
<b>Average: all other developing economies</b>	0	44	105	40

Sources: Number of LCR measures drawn from Appendix A, LCR measures spreadsheet; GDP and trade data from WTO, WDI database and WTO statistics database; FDI data from UNCTADStat.

# The impact of “new LCRs”

## Estimated goods and services trade impacted by LCR measures since 2008

LCR measures	Estimated affected goods and services trade (billions)	Speculated estimate of trade reduced (billions) <sup>1</sup>
50 quantifiable measures	616	62
67 non-quantifiable measures <sup>2</sup>	825	83
<b>Total for 117 LCR measures</b>	<b>1,441</b>	<b>144</b>

<sup>1</sup> Estimated tariff-equivalent of 10 percent ad valorem and assuming the elasticity of import demand for foreign goods as approximately -1.0.

<sup>2</sup> Estimated affected trade was calculated by multiplying the 67 measures by the average of \$12.3 billion affected trade per "quantifiable" LCR measure.

Source: Authors' calculations, Appendix A

# Six case studies

- The Healthcare Sector in Brazil
- Wind Turbines in Canada
- The Automobile Industry in China
- Solar Cells and Modules in India
- Oil and Gas in Nigeria
- Buy America in the United States

# Case Study: Wind turbines in Canada

- By mandating LCRs, Ontario and Quebec aim to increase both investment and manufacture of renewable energy products. LCRs almost certainly increase the cost of installed capacity and, as a result, limit expansion of renewable energy capabilities.
- Since 2009, Ontario installed about 800,000 kW of wind power, while Quebec installed 500,000 kW. Based on the “overnight cost” of onshore wind plants, we estimate that Canadian wind turbines cost about \$386 more to install, per kW of electric capacity, than US wind turbines.
- Rough but conservative estimates suggest Ontario paid an extra \$300 million in capital costs, and Quebec paid an extra \$200 million, owing to LCRs.

# Case Study: Solar cells & modules in India

- The Jawaharlal Nehru National Solar Mission (JNNSM) auctions power purchase agreements to solar developers at a premium; developers must use cells and modules manufactured in India.
- We estimate that lower efficiency of thin film imposes a “balance of system” penalty on developers up to 8 cents per watt compared to CSi. Developers effectively pay up to 12% more for solar modules and up to 3% more for entire solar systems than they would without the LCR.
- LCRs distorted the Indian module market shifting market share toward thin film and increasing cost of PV systems without spurring domestic manufacturing.

# Case Study: Buy America in the US

- In 2009, the American Recovery and Reinvestment Act (ARRA), included a \$787 billion mix of tax cuts and expenditures and \$67 billion for infrastructure. Requires all steel and iron procured via these funds be American-made.
- We consider the impact on project costs via higher steel costs of US steel versus imported steel. Total cost of the Buy America provision might have cost the public around \$5.7 billion over three years.
- Probably the greatest damage from Buy America was not higher project costs or delays, but the green light it gave to other countries to emulate the US with their own LCRs.

# So are LCRs bad policy?

- Extent of assistance to local activity is highly variable.
- Often government officials have little knowledge as to the effectiveness of LCR measures.
- LCRs should enable domestic producers to capture economies of scale and penetrate global markets, but often insulate firms from competition and generate lags in new technology.
- LCRs are nontransparent and the price impact on downstream producers difficult to calculate.
- LCRs can create unnecessary delays and raise costs.
- LCRs seldom contain “sunset” provisions and hence market distortions may last for a very long time.

# Proposed LCR alternatives

- 1. Promote a business-friendly environment.** A proven way to create jobs and stimulate investment. Low corporate tax rates and honest officials are key ingredients.
- 2. Encourage corporate social responsibility (CSR).** Governments can encourage multinational corporations (MNCs) to search out local firms for their supply base, without crossing the line into “forced localization”.
- 3. Training.** For every one percent increase of workers participating in training for, the employment rate and labor force participation rate in OECD countries rose by more than one percent.

# Proposed LCR alternatives

4. **Improve logistics.** World trade characterized by global value chains, and trade transaction costs (TTC). Every country has the ability to reduce its own TTC burden.
5. **Invest in infrastructure.** US infrastructure projects create 18,000 jobs for every \$1 billion in new outlays; and in the “average” developing country 70,000 jobs per \$1 billion.
6. **Use tariffs or subsidies.** If a government has a political choice between a new LCR and a higher tariff or subsidy, the latter is the less bad economic choice.