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# The Caribbean Conundrum of Small Scale: *Economic Development with Limited Supplies*

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*Augusto de la Torre and Daniel Lederman, with Justin Thomas*

Sir Arthur Lewis Memorial Lecture

St. Kitts and Nevis  
November 4, 2015

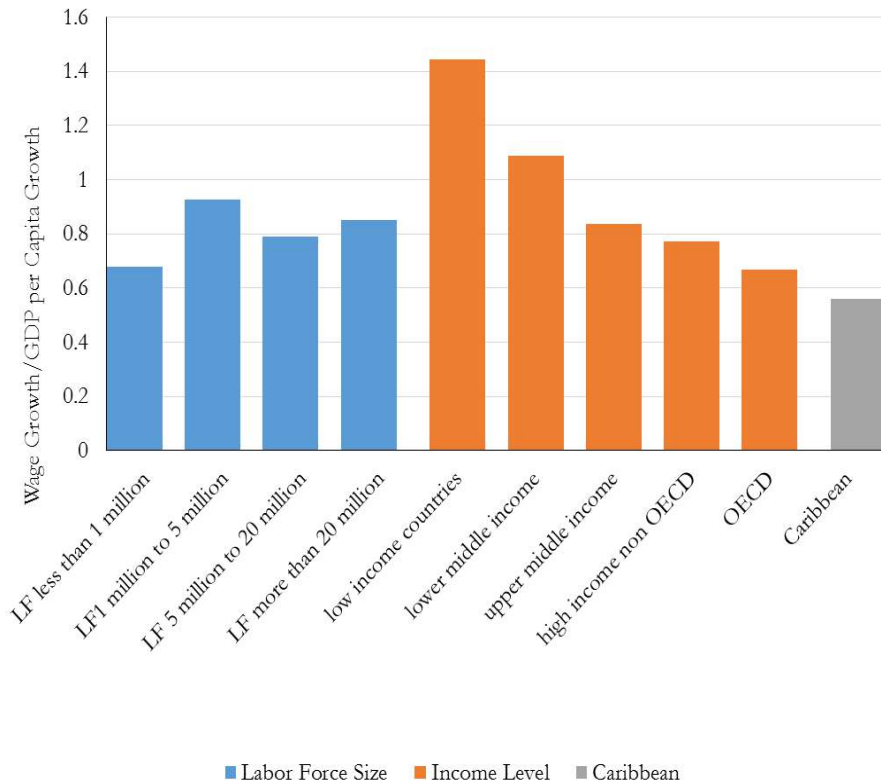
# The legacy of Sir Arthur Lewis

## 1979 Nobel Price in Economics

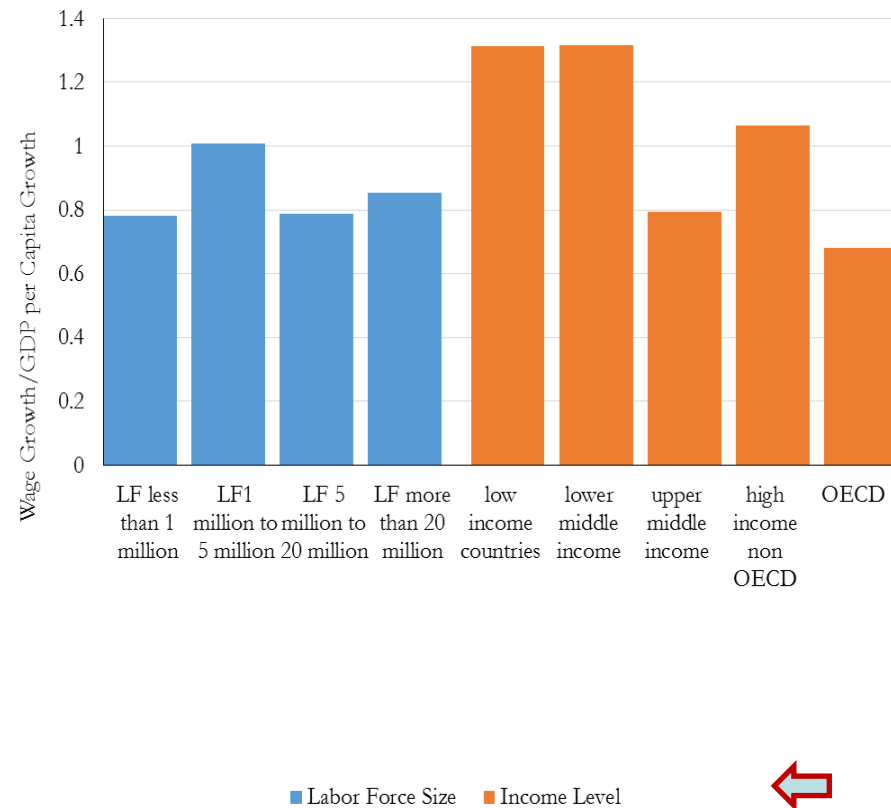
- Major work: “Economic Development with Unlimited Supplies of Labour,” *The Manchester School* **22**, 1954
- Major contribution: dual sector model of development
  - What differentiates developed and developing countries is the presence in the latter of virtually unlimited labor supply
  - “Capitalist sector” uses unlimited labor from “non-capitalist sector”
  - Growth at unchanged wages allows high profits that are reinvested, propelling capital accumulation-based economic development
- However, this influential model
  - Is not consistent with the observed evolution of wages →
  - *Does not explicitly account for the impact of small economic size, where local labor and land are in limited supply*

# Wages and GDP growth

**Ratio of wage growth to GDP per capita growth  
(2001-2011)**

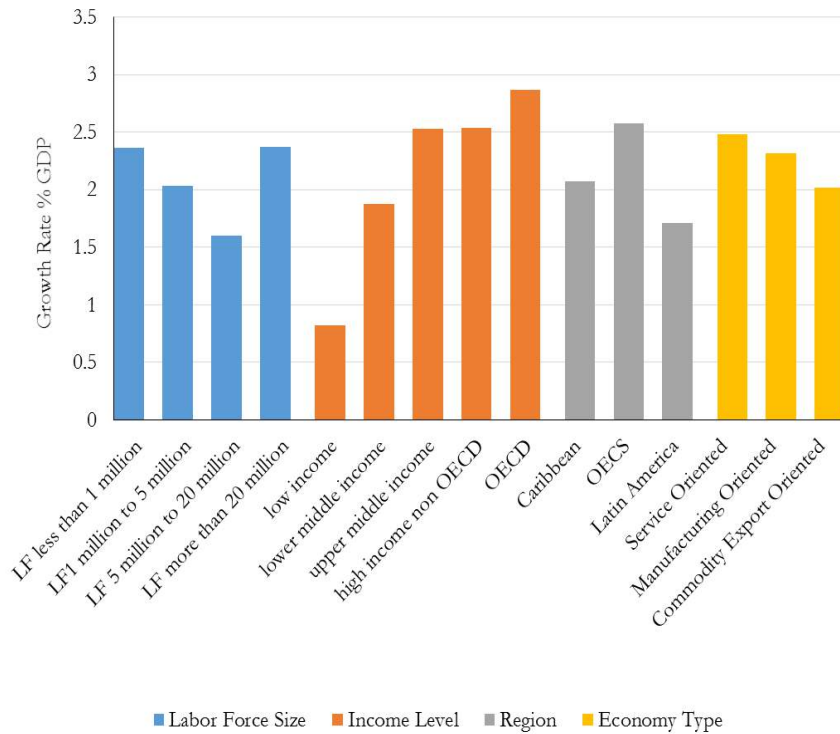


**Ratio of wage growth to GDP per capita growth  
(1996-2011)**

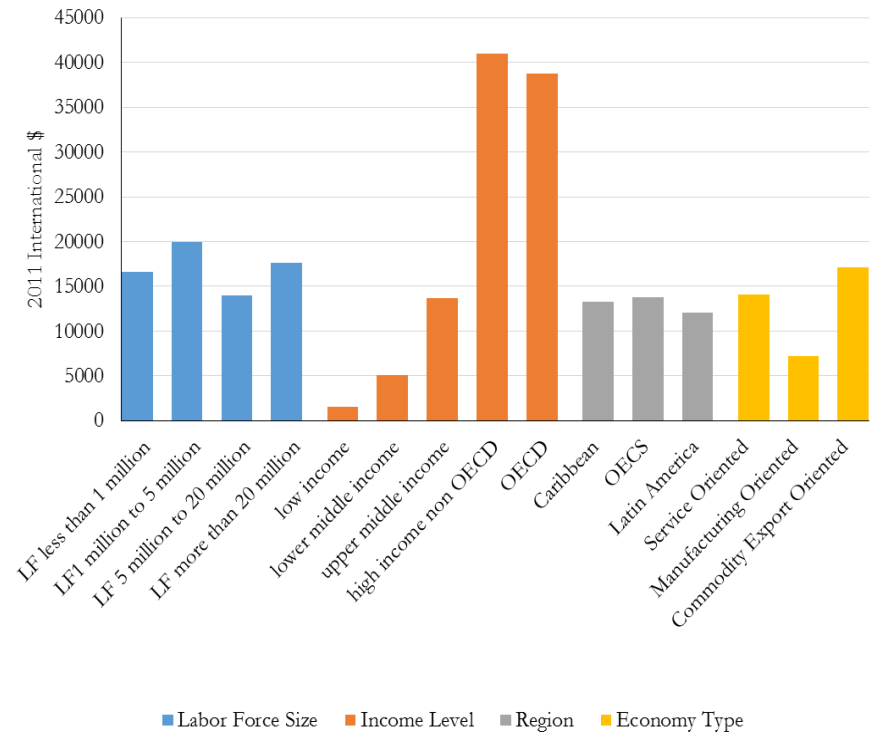


# Size matters but does not need to condemn a country

**Long Run GDP Growth Rate**  
(Per annum, 1970-2013)



**GDP Per Capita PPP in 2013**



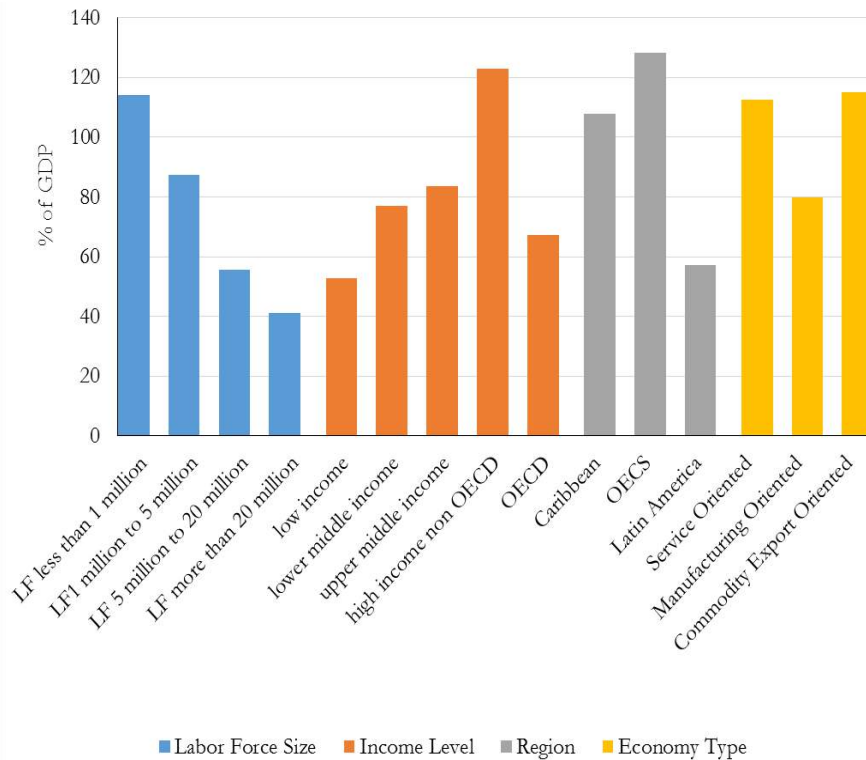
# Economic development in small economies

- Characteristics
  - Openness
  - Specialization
  - Diseconomies of scale
- Challenges
  - External volatility
  - Low saving rates and fiscal vulnerabilities
  - Lack of backward linkages in FDI
- Solutions
  - Cost and risk pooling
  - Fiscal rules and self insurance
  - Tax code reforms

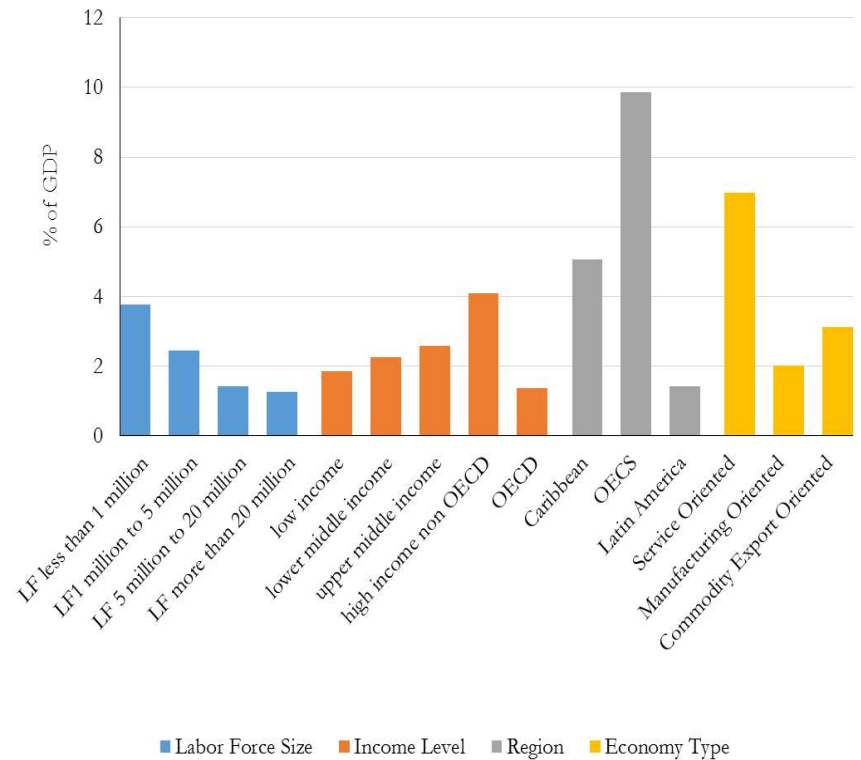
# *Characteristics*

# Small size is associated with greater openness

**Trade/GDP Ratio**  
(1970-2013)

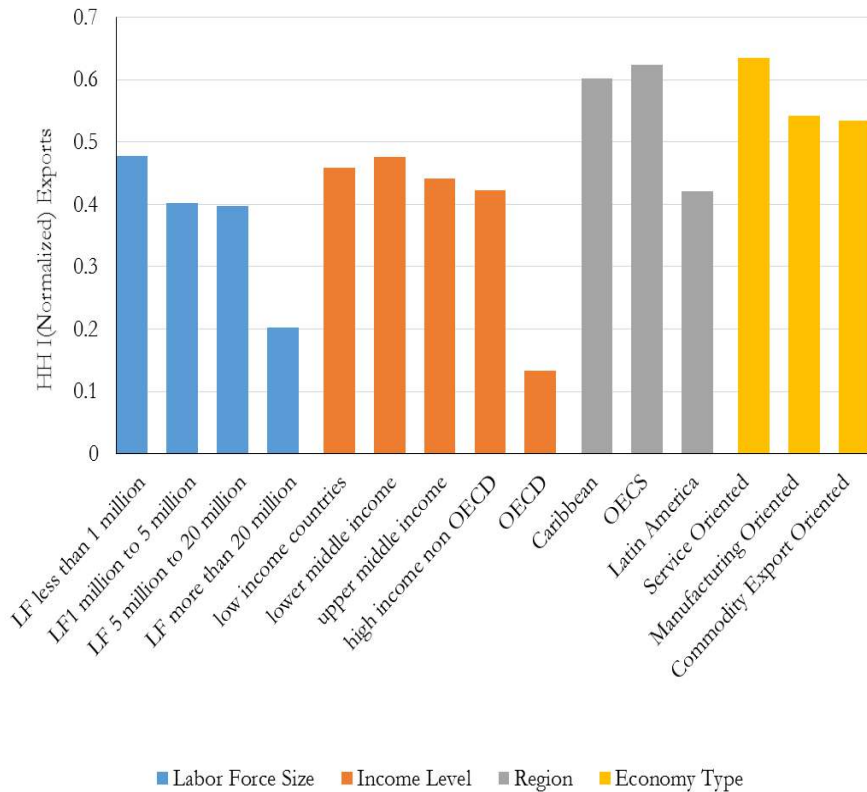


**Gross FDI/GDP Ratio**  
(1970-2013)

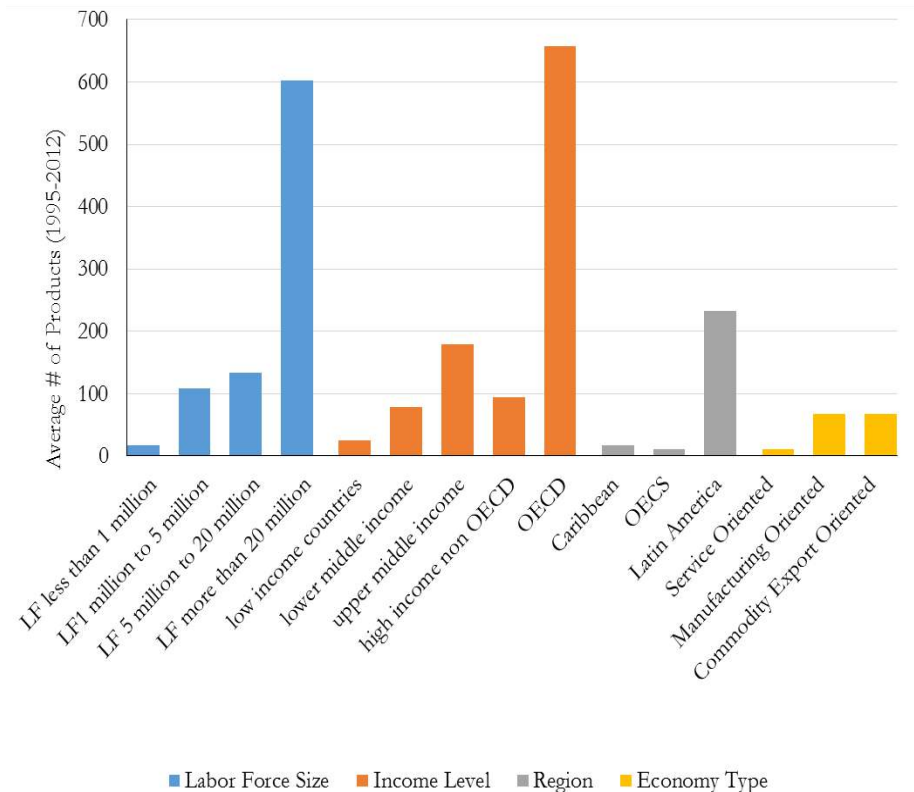


# Small size seems linked to export concentration...

**Herfindalh Export Index**  
(1995-2012)



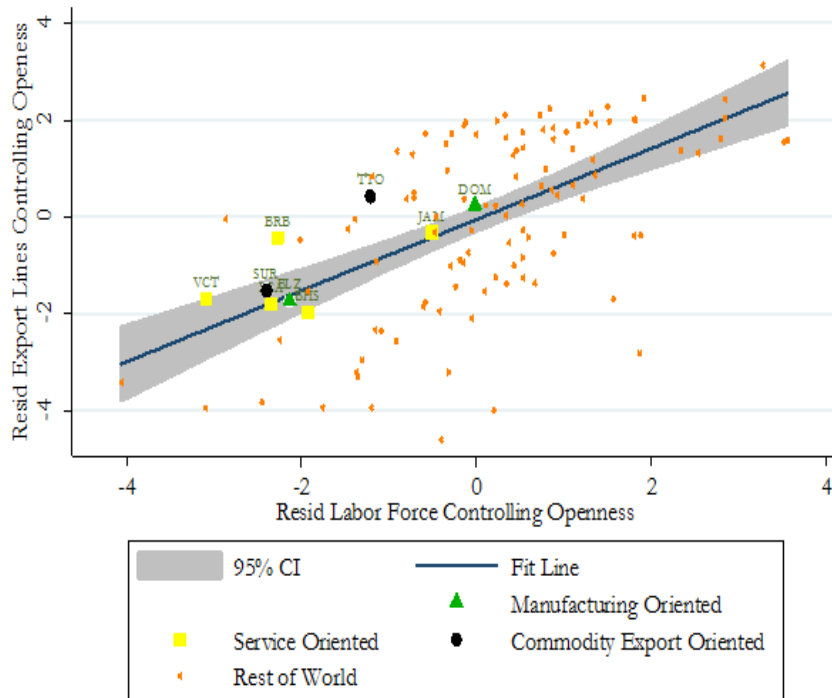
**Average Number of Export Lines**  
(1995-2012)



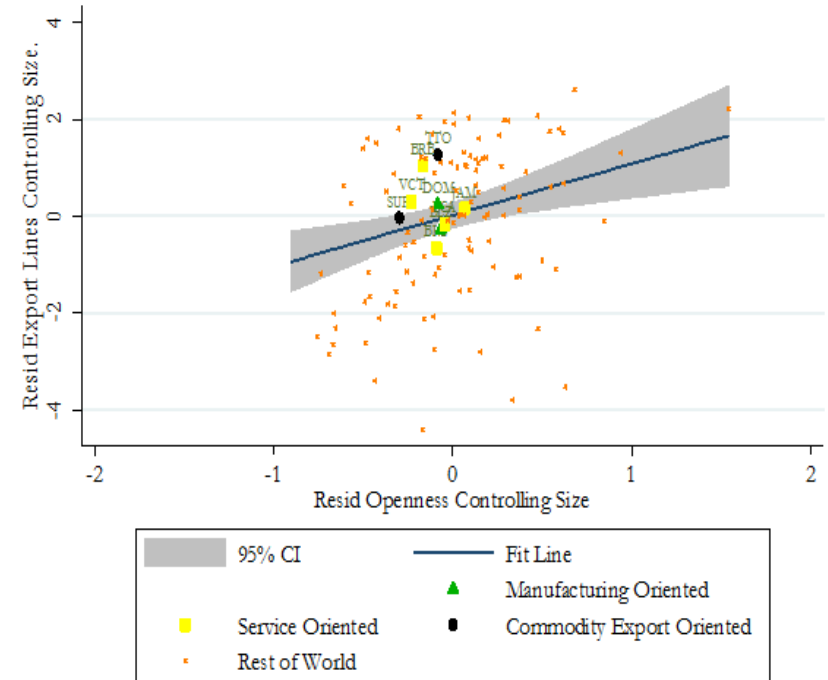


# ... but is specialization a result of size or openness?

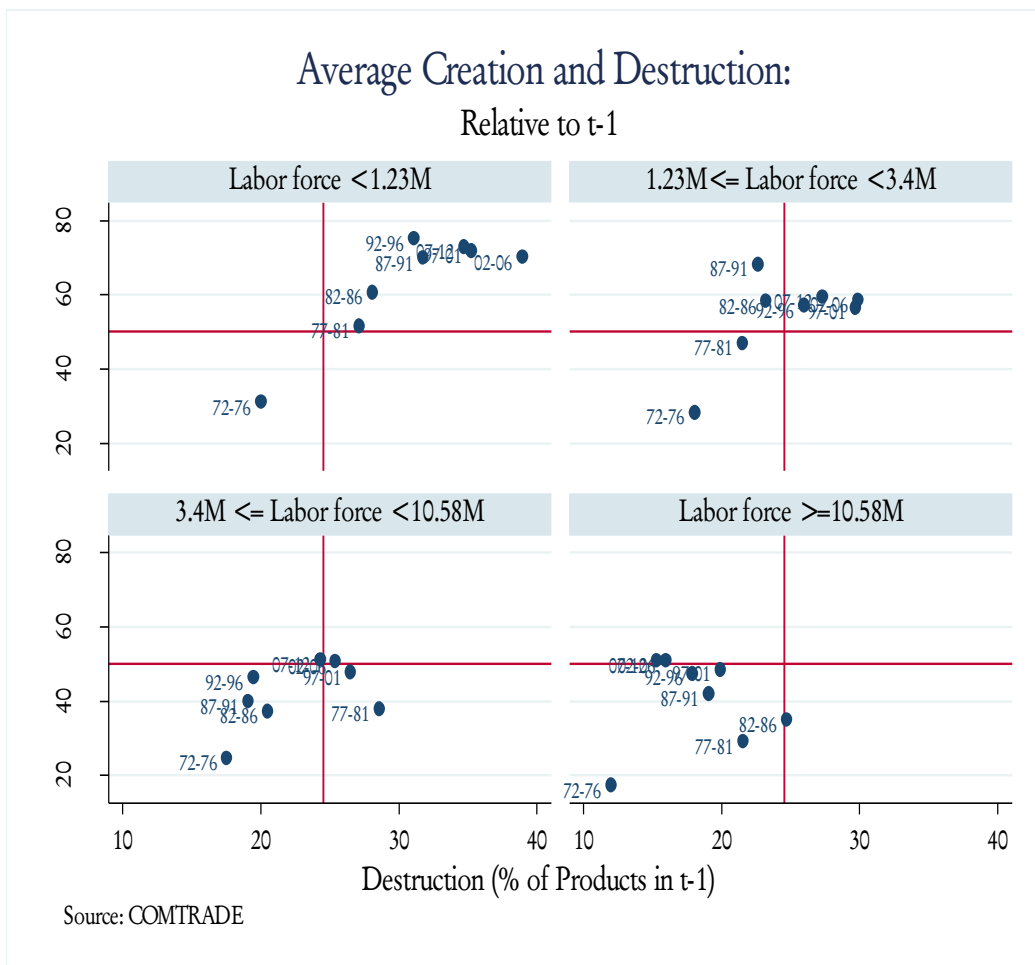
**Partial Correlation Between  
Size and Average Number of Export Lines**



**Partial Correlation Between  
Openness and Average Number of Export Lines**



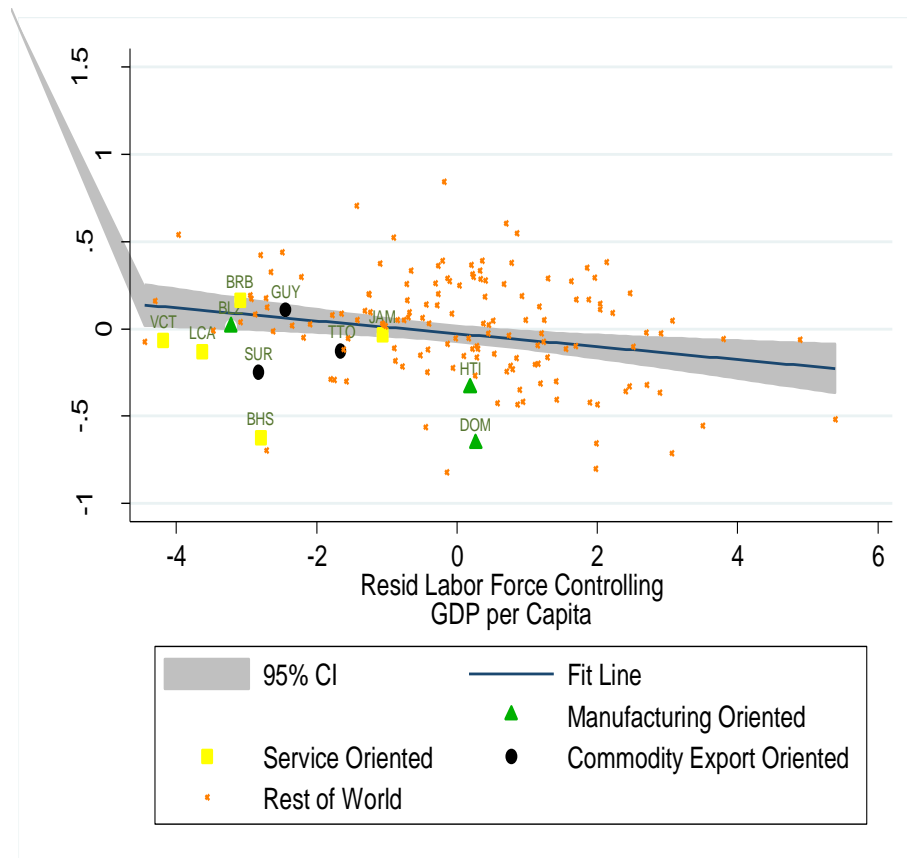
# Smaller economies display latent specialization – nimbleness over time



- Traditional measures of diversification don't take into account the potential of dynamic diversification over time
- Countries retain knowledge and infrastructure from products exported in previous years giving them flexibility to jump into new products later on
- A potentially significant way for small economies with limited resources to diversify

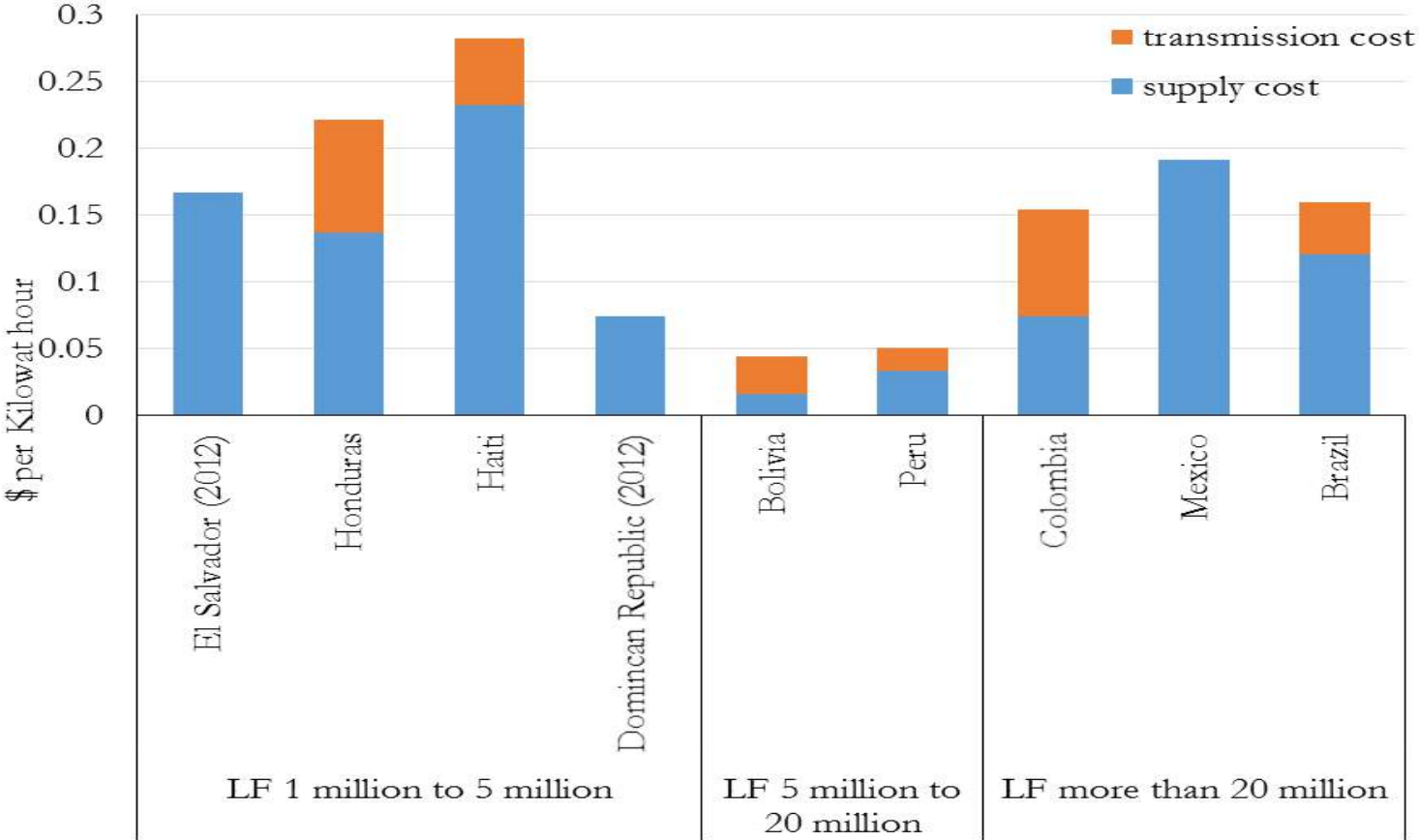
# Diseconomies of scale: government and public goods

## Partial Correlation Between Size and Government Spending/GDP



- Smaller countries have higher G/Y (Wacziarg and Alesina, 1998)
  - Inability to amortize fixed costs over large economic and population base
- Lack of economies of scale in providing public goods (Favaro 2008)
- In addition, Caribbean governments exhibit poor revenue generation

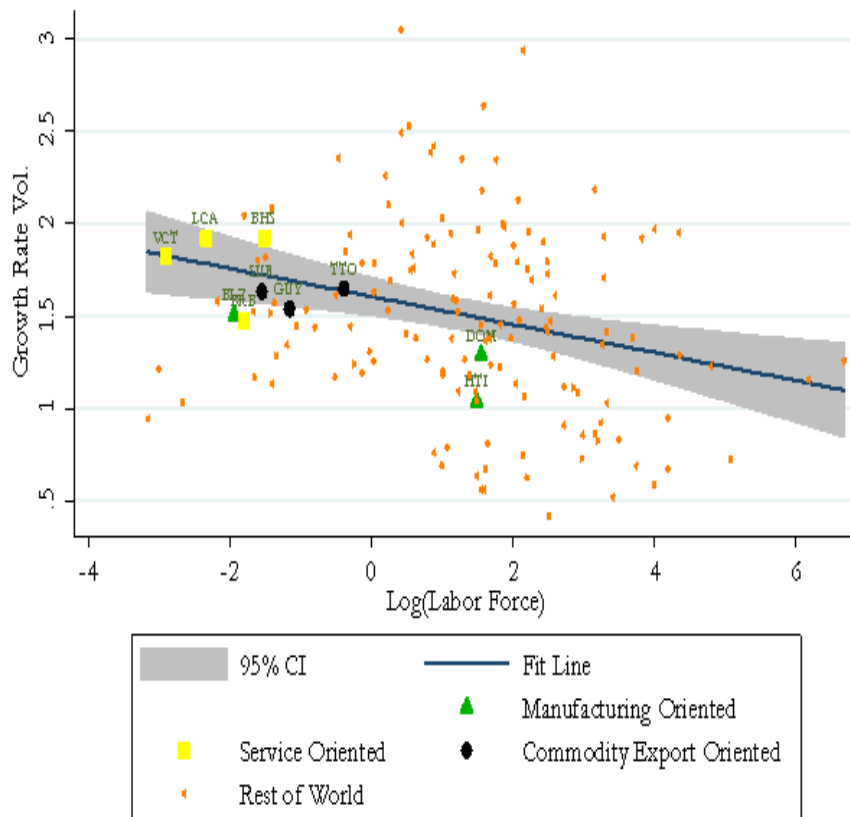
# Diseconomies of scale: electricity costs



# *Challenges*

# Smallness associated with higher growth volatility

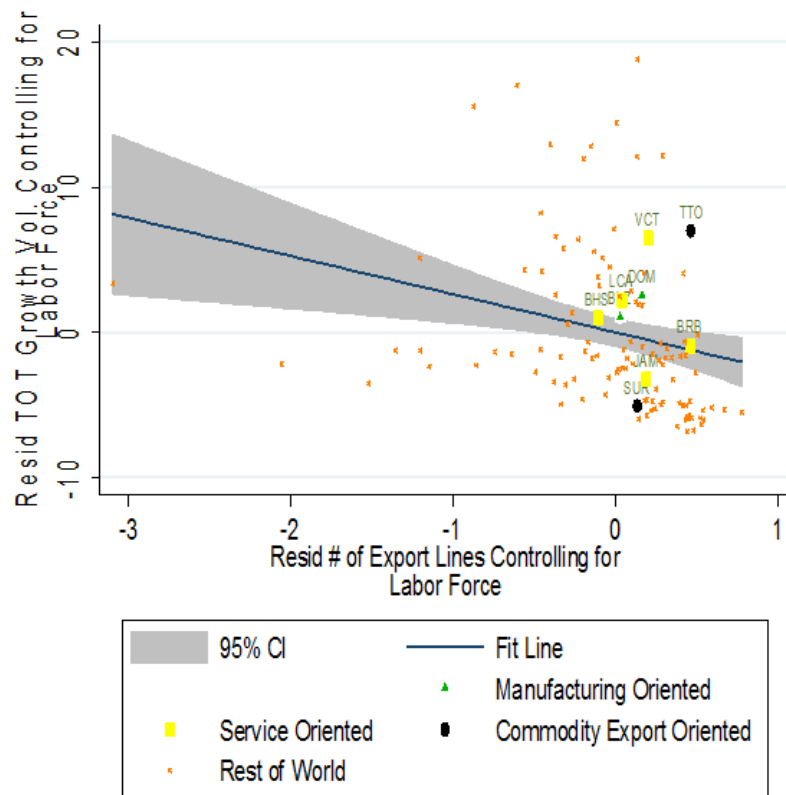
## Correlation Between Size and GDP Growth Volatility



- Smaller countries have more volatile GDP growth.....
- ...but not necessarily caused by size per se
  - Terms of trade volatility
  - Export concentration
  - Natural disasters
- Higher growth volatility linked to lower long-term growth (Ramey & Ramey, 1995)

# Terms of trade shocks: the downside of concentration

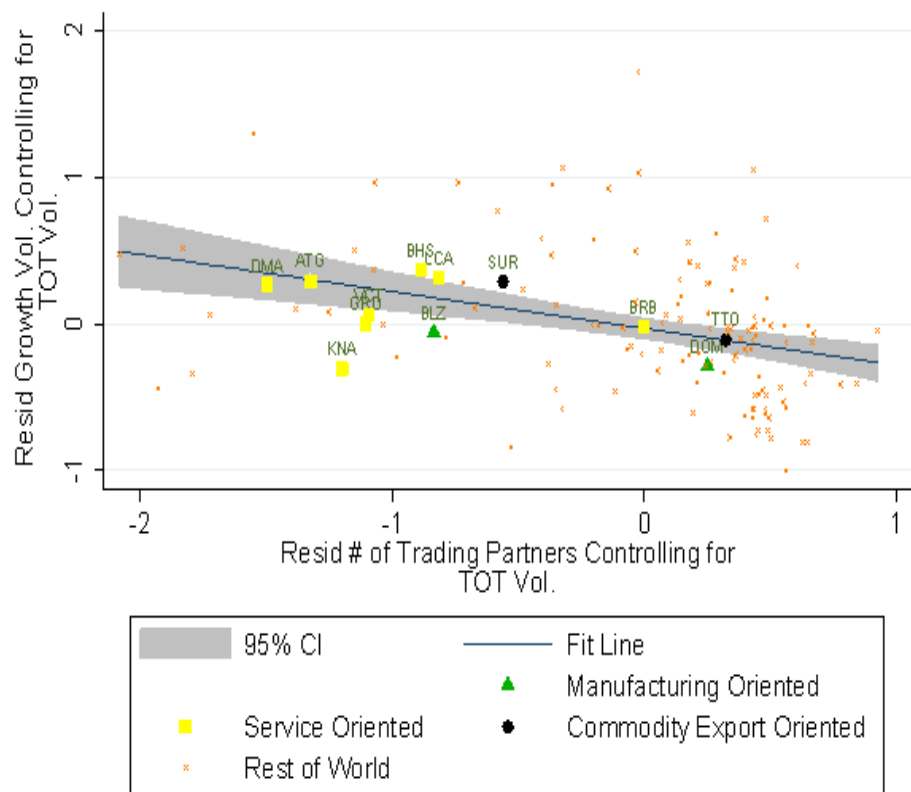
## Partial Correlation Between Average Number of Export Lines and ToT Volatility



- Terms of trade volatility is linked to economic specialization (Lederman and Maloney, 2012)
- Terms of trade volatility linked to higher growth volatility (Jansen 2004, Bacchetta et al. 2007)
- Given specialization, terms of trade volatility has greater effects on more open countries

# Smallness and specialization in (few) trading partners

## Partial Correlation Between Average Number of Trading Partners and Growth Volatility



- Negative relationship between size and number of trading partners
- Negative relation between number of trading partners and GDP volatility
  - Also holds when controlling for TOT volatility, GDP per capita, size, number of export lines, and openness
- Shocks from one partner are not diversified away with non-correlated shocks from other partners
- Impact on GDP may be amplified by openness



# Natural disasters: small size => high value at risk

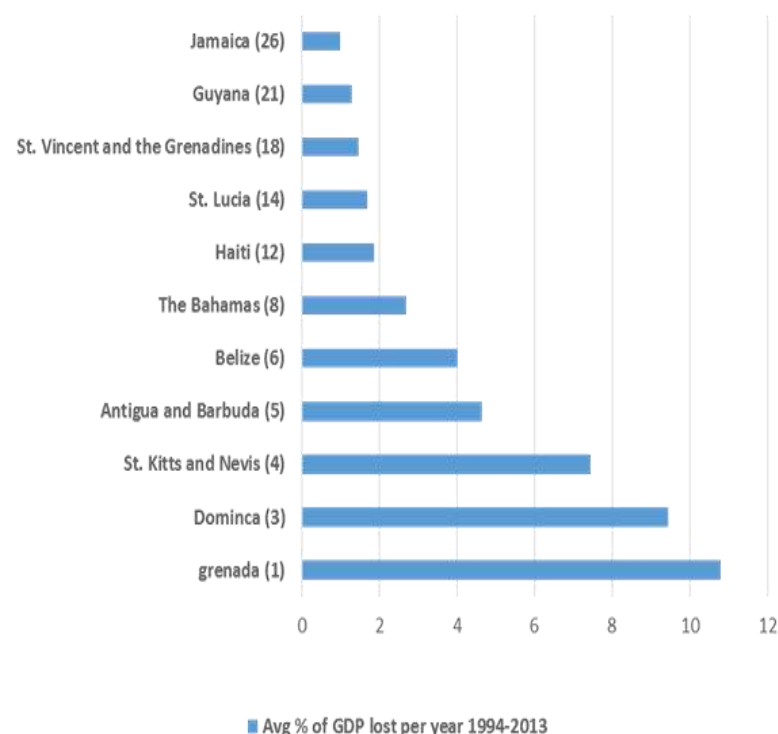
## Disaster Incidence: 1970-2004

	All Recorded Disasters				
	Number of events	Number of events divided by land area		Number of events divided by population	
		Index	Rank	Index	Rank
All countries	7,116	100	75	100	75
Advanced economies	1,572	18	74	35	96
<b>Caribbean</b>	<b>190</b>	<b>587</b>	<b>23</b>	<b>378</b>	<b>22</b>
Eastern Caribbean					
Currency Union	48	1,173	5	747	5
Other Caribbean	142	196	35	133	34

Sources: EM-DAT Emergency Disasters Data Base (EM-DAT) (CRED, 2004) for natural disasters; World Bank, World Development Indicators database for land area; IMF, World Economic Outlook database for population.

Notes: The sample contains 148 countries after omitting countries without at least one natural disaster associated with a cost estimate and/or missing information on GDP (24 advanced economies, 15 Caribbean countries, and 109 other developing countries). Simple unweighted averages are used for country groupings. Rankings are in descending order, with "1" indicating the most exposed to natural disaster.

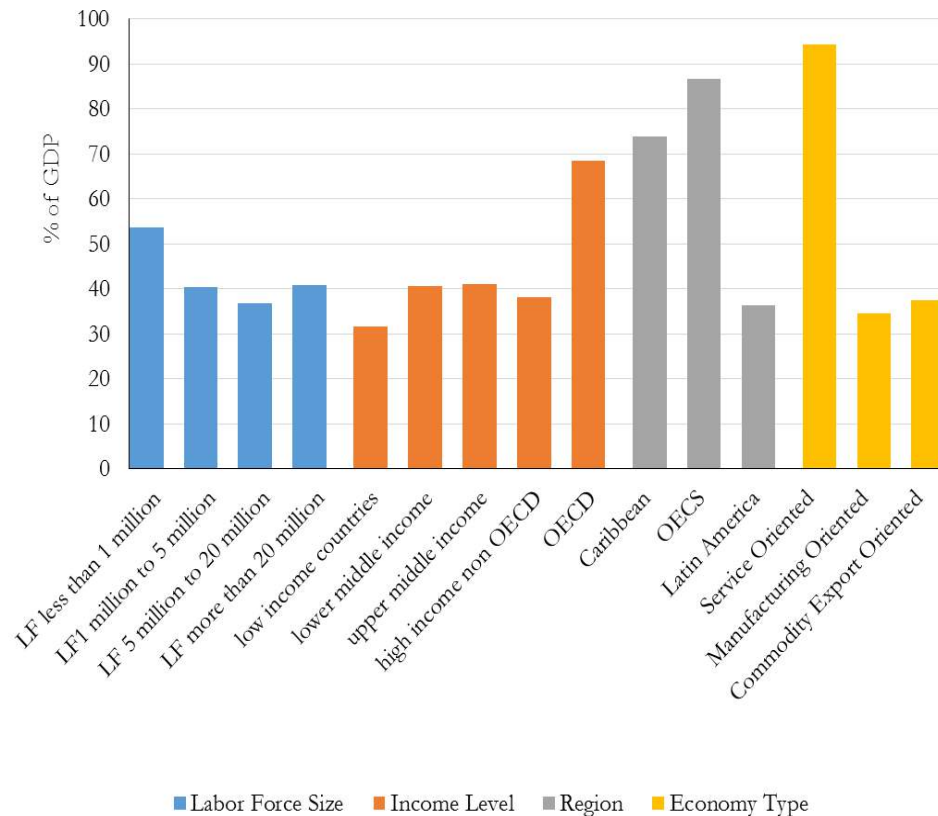
## Losses from Disasters as % GDP (1994-2013)



**11 of top 26 losers worldwide are in Caribbean**

# High public debt – is it a consequence of small size?

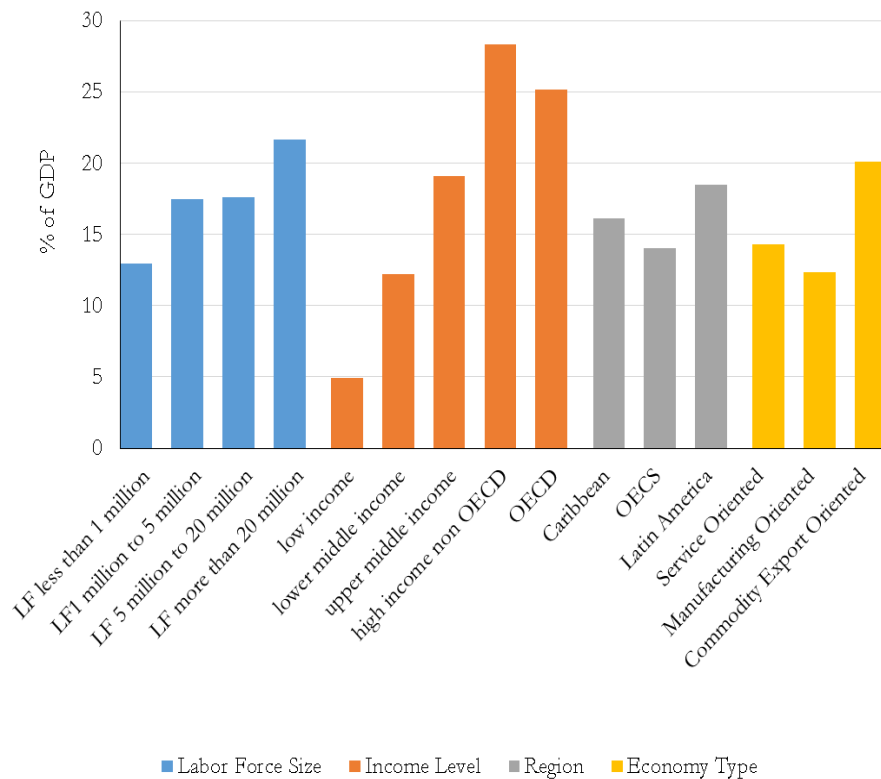
## Gross Public Debt/GDP in 2013



- The Caribbean as a region struggles with high debt...
- ...which is not related to size per se
- Possible contributors
  - High cost of government per capita
  - Low government revenue collection
  - Natural disaster-related expenses
  - Bailouts and other unplanned liabilities
  - Negative debt dynamics

# Why to smaller countries tend to save less?

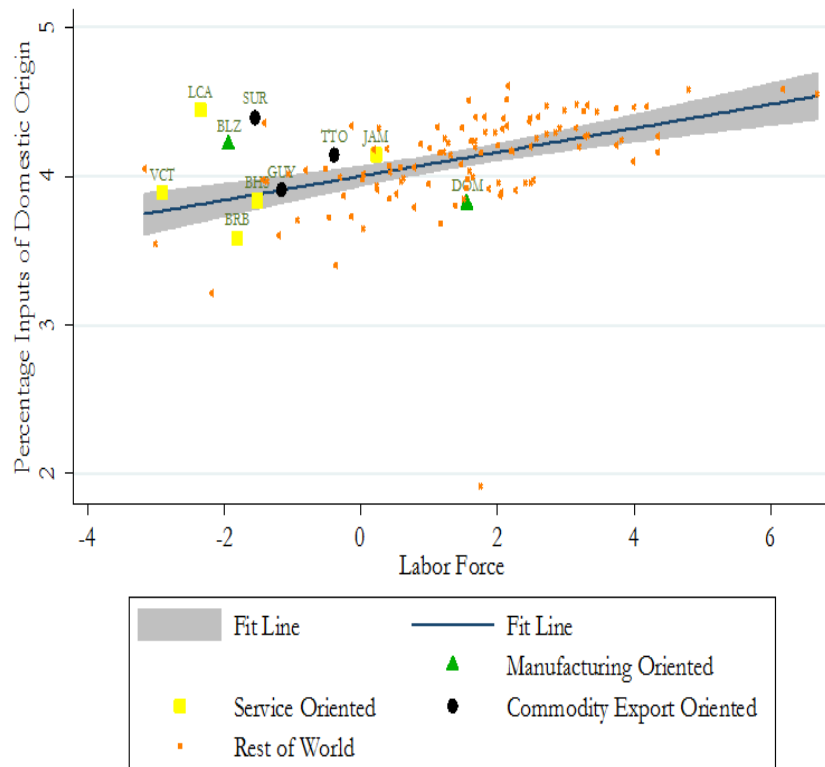
**Gross Domestic Saving/ GDP**  
(1970-2013)



- Possible channels in the Caribbean:
  - High public debt => low public savings
  - High remittances-induced consumption
- Lower savings is related to higher macro vulnerability, less competitive real exchange rates, lower investment, and lower growth

# FDI: lack of growth generating spillovers in the Caribbean

## Correlation Between Country Size and Backward Linkages of Foreign Firms



- Caribbean countries receive higher than average FDI inflows relative to their economic size...
- ...but that has not resulted in higher than average growth rates
- One possible reason: few and weak backward linkages...
- ...which are key to generating positive growth spillovers (Janovick 2004, Blalock and Gertler 2008)...
- ...but are not independent of scale

## Despite smallness, the Caribbean has not historically been more prone to financial crises than the rest of LAC

	# of crises	# of debt crises	# of bank crises	# of currency crises
Caribbean	15	8	2	7
Central America	18	10	6	8
Mexico	5	1	2	3
South America	68	32	19	30

	# of crises/year	# of debt crises/year	# of bank crises/year	# of currency crises/year
Caribbean	.095	.070	.013	.044
Central America	.075	.042	.025	.033
Mexico	.125	.025	.050	.075
South America	.170	.080	.048	.075

# *Solutions*

# In search of scale effects

- The big ticket item: cost and risk pooling
  - Requires greater and deeper integration, regionally and globally
  - A good example: the Caribbean Catastrophe Risk Insurance Facility, but it would benefit from broader participation from outside the region
- Diversification in trade over time – nimbleness
- Fiscal rules, precautionary savings, infrastructure
  - Structural budget targets => public sector saving as a form of self insurance
  - Building codes and climate-resilient infrastructure
  - Tight control over contingent liabilities
- Tax revenues: global best practices may not be best for the Caribbean
  - Focus on indirect taxes to decrease collection costs and increase compliance
    - Import taxes function as sales taxes
  - Revisit tax incentives for FDI and taxes on non-productive uses of (highly scarce) land

Thank you