

The Development Trinity: How Regional Integration Impacts Growth, Inequality and Poverty

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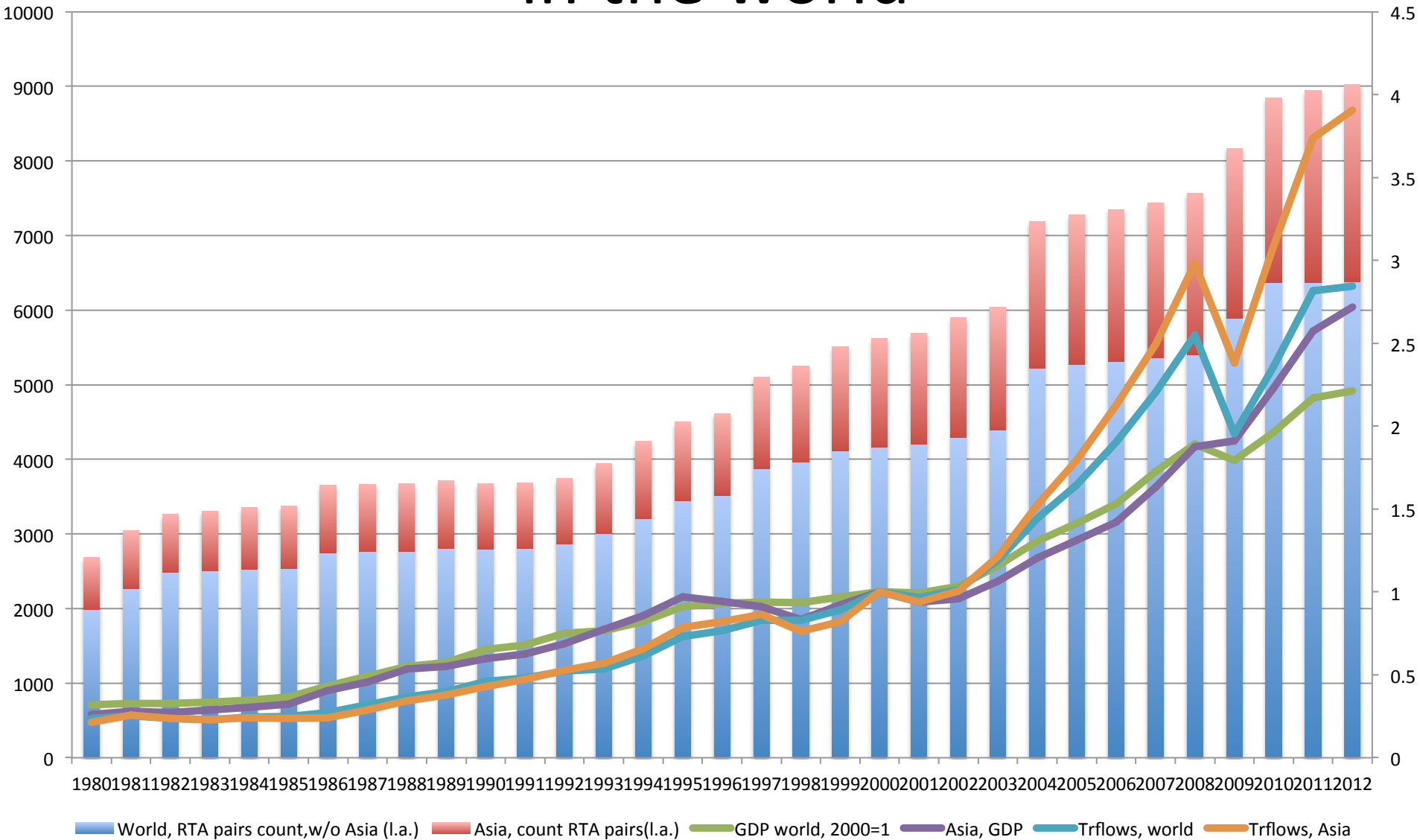
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Rome, Italy

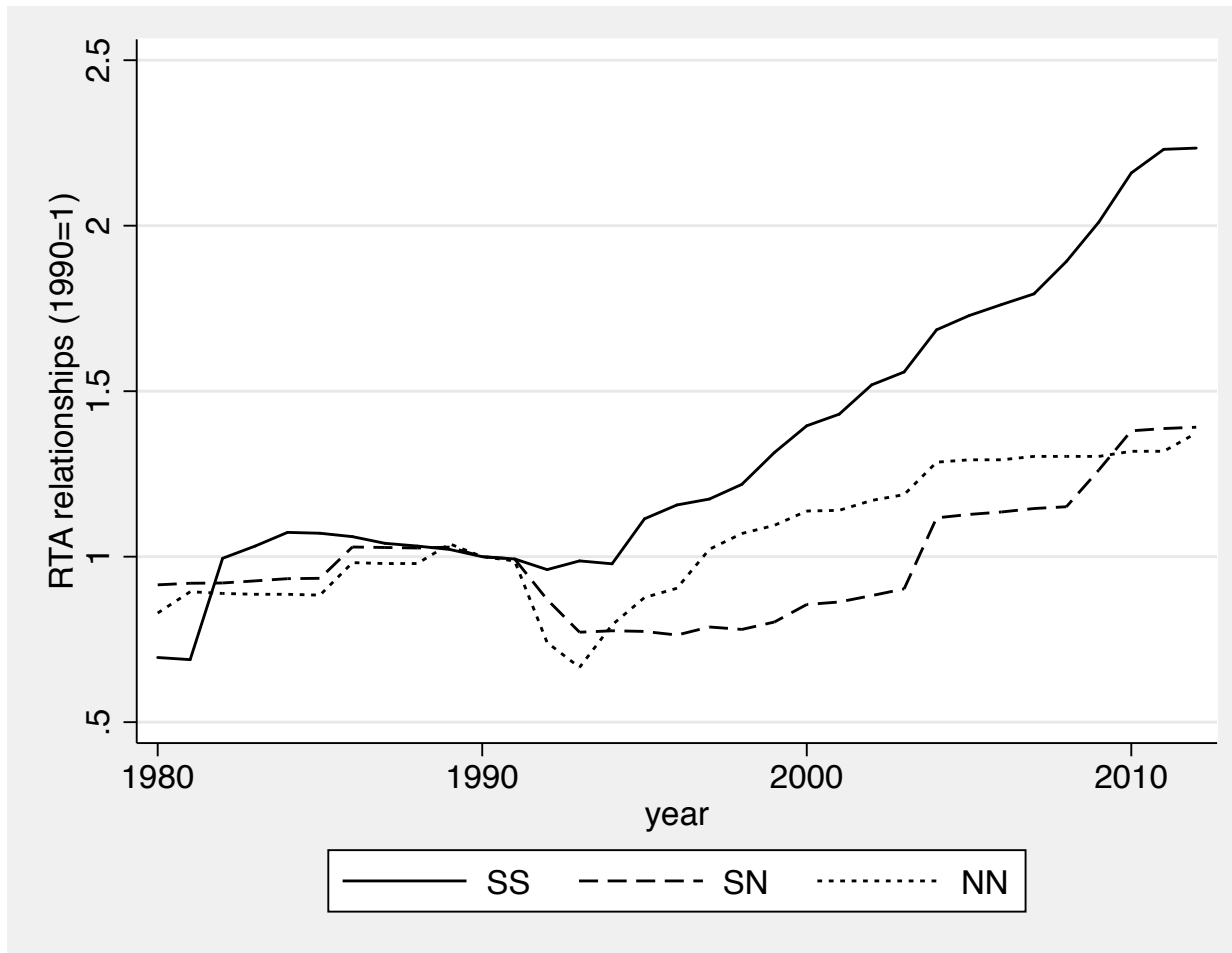
Motivation

- In the world of multilateral trade liberalisation, regional trade integration is taking over
 - Every WTO member is a partner of at least 1 regional trade agreement (RTA)
 - Is regionalisation undermining or improving the development?
- Do countries reap the benefits in the same way?

Development of regional relationships in the world



South-South, South-North



Literature review (1/2)

- RTAs are no longer about trade
 - Viner (1950) trade liberalisation;
 - TTIP/TPP/ASEAN/USA-Can-Mex, etc include a menu from ecommerce, women empowerment, data protection, human rights, sustainability considerations (latest is Rodrik 2018 that claims that trade creation and diversion is not sufficient effect of RTAs)
- Welfare impacts of RTAs are ambiguous
 - Even trade-induced (Baier & Bergstrand, 2007, 2017; Dai et al., 2014)
 - Trade and price indexes (Winters and Chang, 2002), economic growth (Hur and Park, 2012) is believed to be overall a positive relationship
 - Welfare gains of integration depend on input (Arokolakis, Costinot and Rodriguez-Clare, 2013)

Literature review (2/2)

- EU introduced sustainability considerations (SIA) into RTA negotiations
- Inequality within countries is rising at the same time as trade (e.g. Goldberg and Pavcnik, 2007)
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- Trade can increase absolute poverty (e.g. Chang et al., 2009) or decrease it (Borraz and Ferrés, 2012)
- Etc, etc, etc...

RTAs heterogeneity

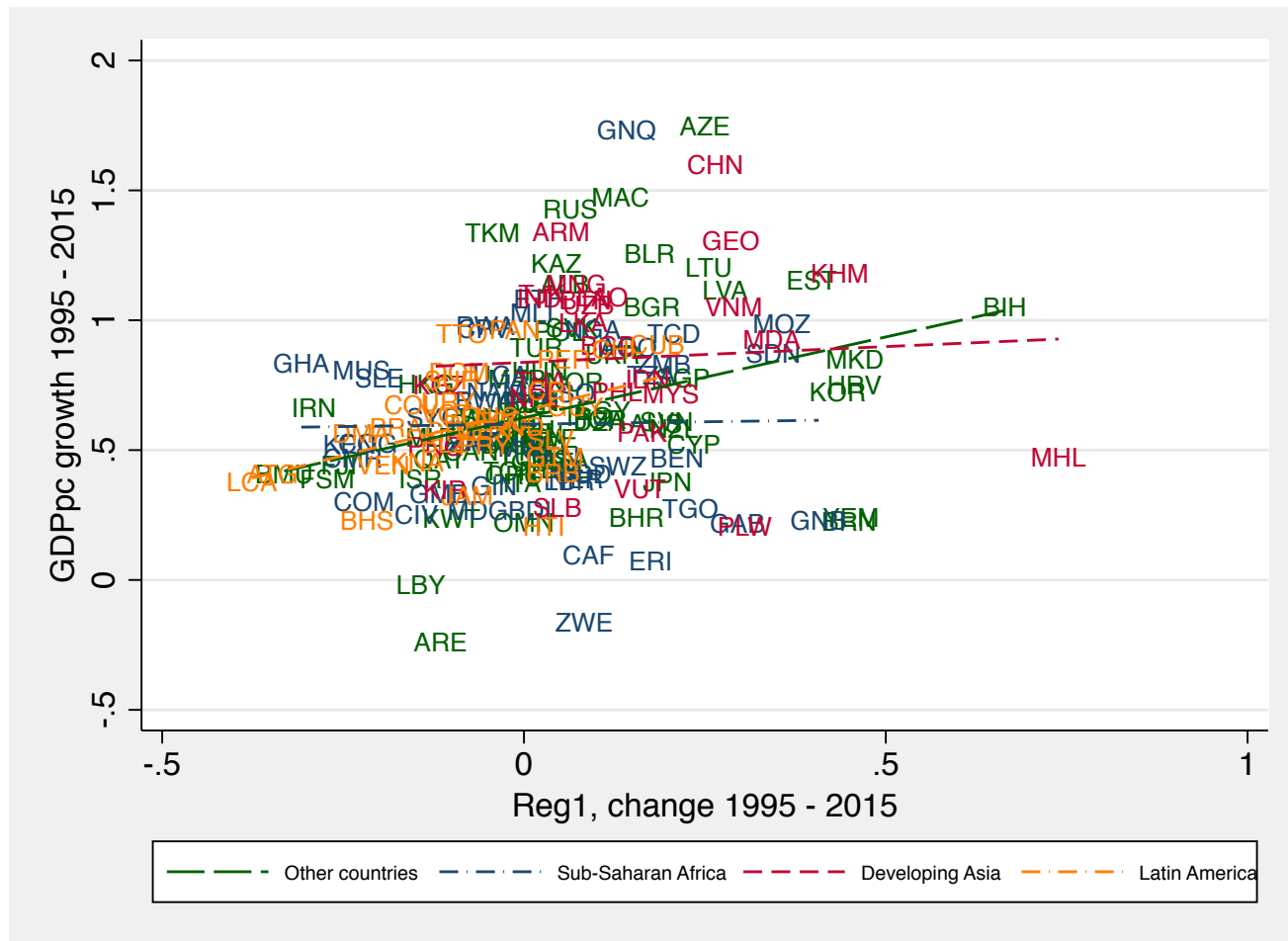
	Type of Agreement	Definition
NA	No Agreement	No preferential trade agreement
NR_PTA	Non Reciprocal Preferential Trade Agreement	Preferential terms and customs concessions given by developed nations to developing countries
PTA	Preferential Trade Agreement	Preferential terms to members vs. non-members
FTA	Free Trade Agreement	Trade barriers eliminated (or substantially so) among members; treat non-members differently
CU	Customs Union	Same as FTA; but treat non-members the same
CM	Common Market	Same as CU; but also includes free movement of labor/capital
EUN	Economic Union	Same as CM, but also monetary and Fiscal Policy coordination; further harmonization of taxes/regulation/monetary systems

Internal Regionalisation

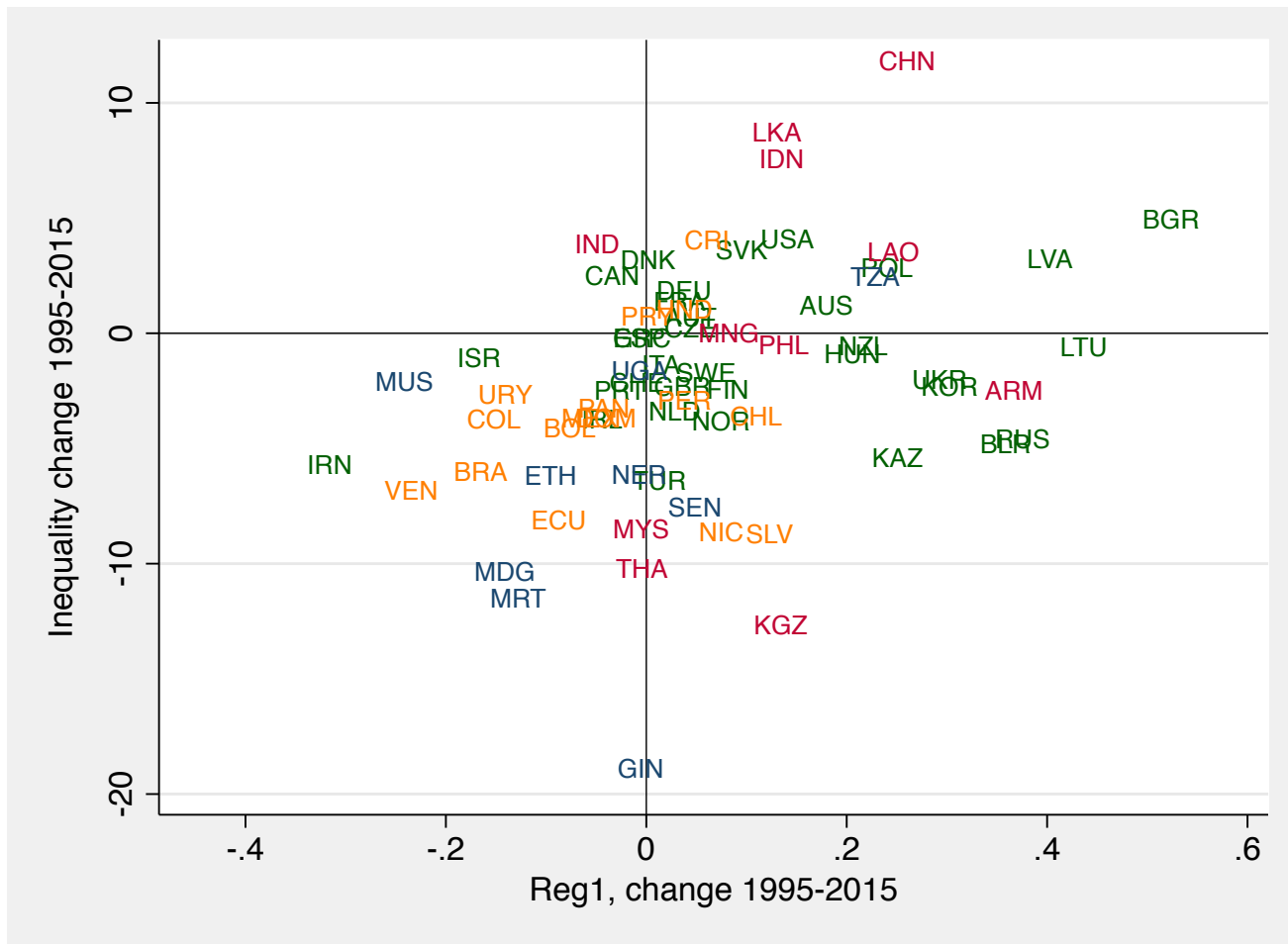
$$Reg1_i = \frac{\sum_J trade_{ij} * D(1|RTA_{ij}=1)}{\sum_J trade_{ij}}$$

- A share of regional trade in overall trade
- Reflects sovereign country's participation in RTAs

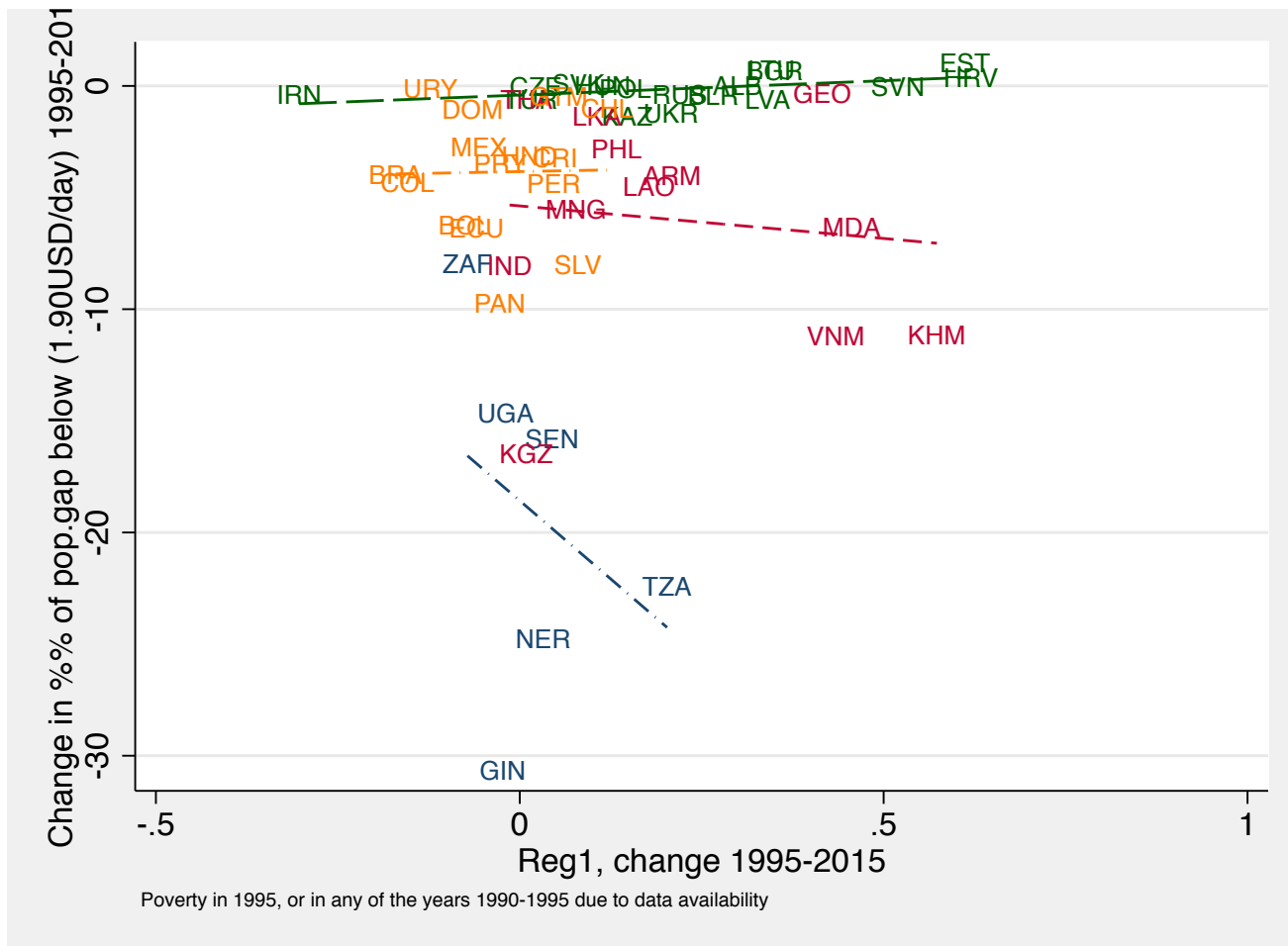
Internal Regionalization and Growth



Internal regionalization and inequality



Internal regionalization and poverty

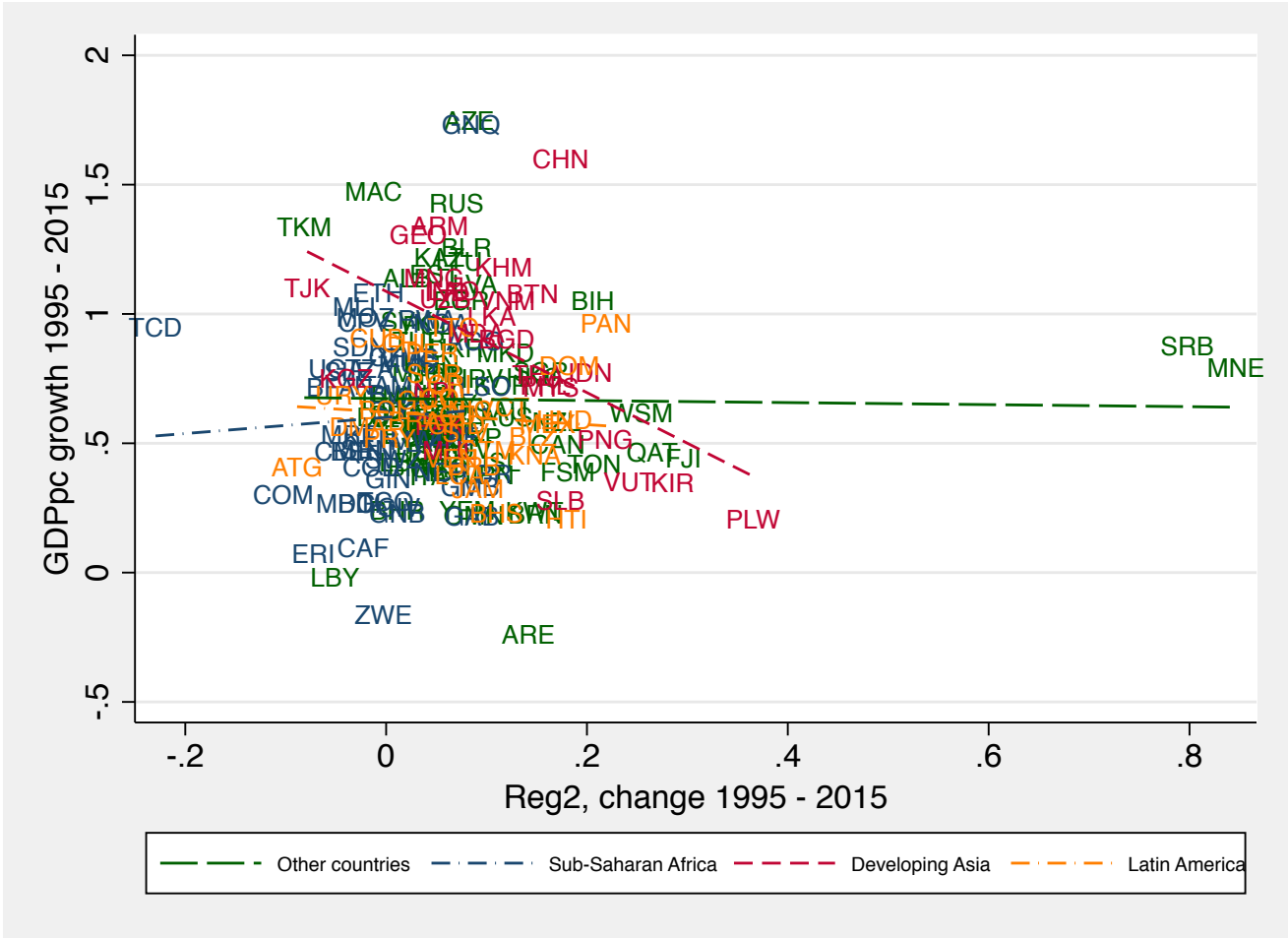


External Regionalisation

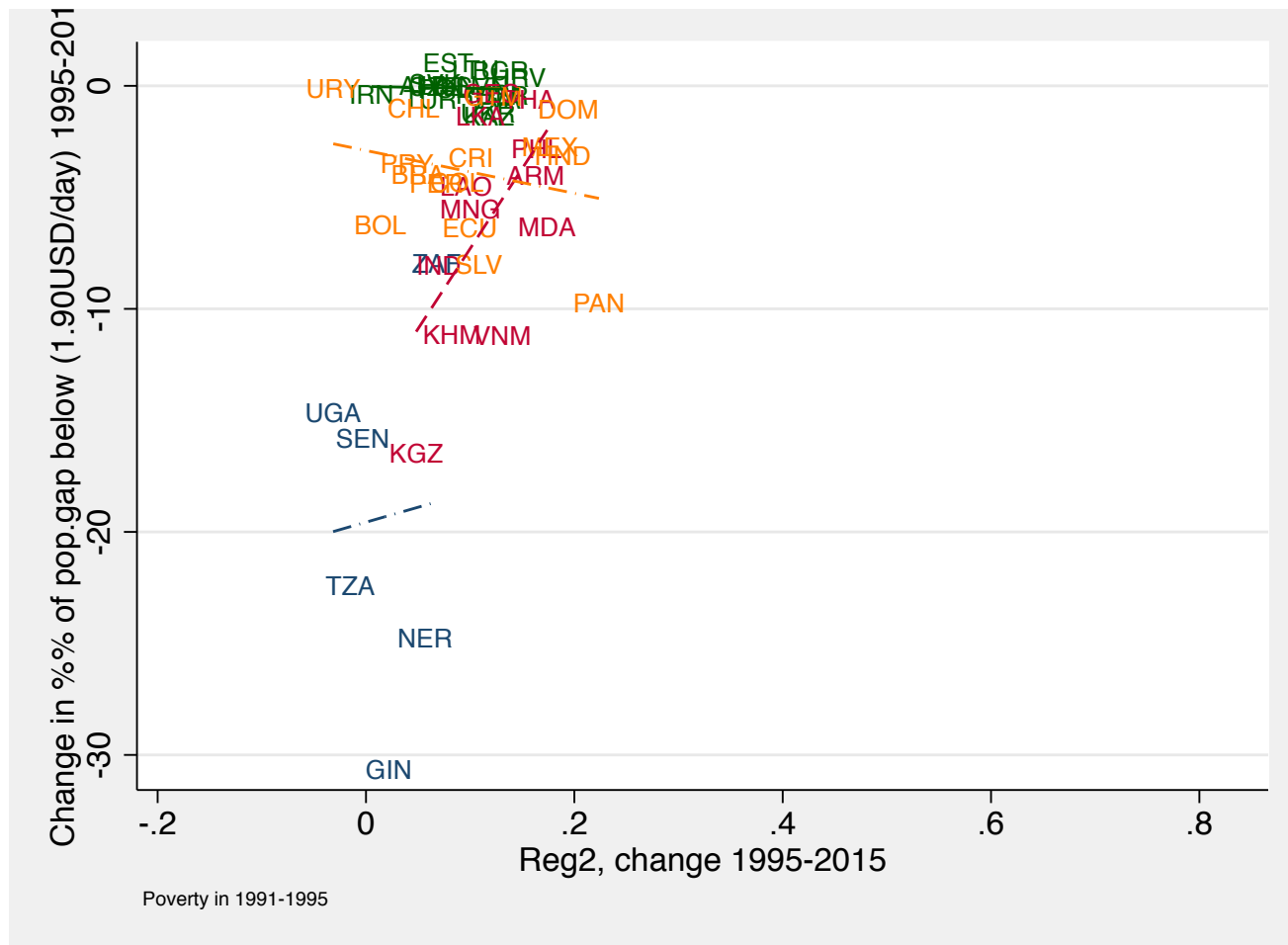
$$Reg2_i = \sum_J \left(\frac{trade_{ij}}{\sum_J trade_{ij}} * Reg1_{j,-i} \right)$$

- “Noodles” and “spaghetti” of RTAs exist
- A country is exposed to regionalization policy of its trading partners
- Even if you are not “implementing” the decision, you are affected

External regionalisation and Growth



External regionalisation and poverty



Empirical strategy (1 of 3)

$$\begin{aligned} \text{GrowthGDPpc}_{it} = & \beta_0 + \beta_1 \text{Reg1}_{it} + \beta_2 \text{AreaDummy} \times \text{Reg1}_{it} + \beta_3 \ln(\text{gdppc}_{it-1}) + \\ & + \beta_4 \ln(\text{Educ}_{it}) + \beta_5 \ln(\text{lagInequality}_{it}) + \beta_6 \ln \text{Invest}_{it} + \beta_7 \ln(\text{GovExp}_{it}) + \beta_8 \ln(\text{M2}_{it}) + \\ & + \text{FE}_i + \text{FE}_t + \varepsilon_{it} \end{aligned}$$

- Use dummies for exploring non-linear effect of regionalisation
- Groups:
 - LDCs
 - Development clusters (Latin America and Caribbean, Sub-Saharan Africa, developing Asia)
 - Income groups (Low Income Countries, Lower Middle Income)
- OLS/GMM on 5-year averages
- Data 1990-2015, covering all countries

Internal regionalization and growth

Variables	Dependent variable: Growth in gross domestic product per capita							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	OLS	GMM	OLS	GMM	OLS	GMM
Reg1	0.32*** (0.12)	0.40*** (0.11)	0.42*** (0.13)	0.80*** (0.20)	0.30** (0.13)	0.41*** (0.11)	0.29** (0.12)	0.61*** (0.19)
LDC×Reg1			-0.14 (0.20)	-0.52** (0.27)				
DevAs×Reg1					0.44* (0.15)	-0.30* (0.15)		
LA×Reg1					0.04 (0.36)	-0.67*** (0.20)		
SSA×Reg1					-0.10 (0.19)	-0.65*** (0.22)		
dLIC×Reg1							-0.00 (0.21)	-0.99* (0.56)
dLMIC×Reg1							0.37* (0.19)	-0.41 (0.27)
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	871	871	402	402	402	402	402	402
R-squared	0.05	0.72	0.69		0.72		0.73	
Hansen test				0.14		0.27		0.23
Number of countries	185	129	129	129	129	101	129	101

Overall results

	10 per cent increase in the	
	Reg1	Reg2
Developing Asia		
Economic Growth	+ 4.9 %	+ 5.5 %
Inequality	- 3.0 %	- 0.04 %
Poverty	- 2.22 %	- 6.2 %
Latin America and Caribbean		
Economic Growth	+ 0.02 %	+ 1.3 %
Inequality	<u>insignif.</u>	+ 5.6 %
Poverty	- 4.89 %	<u>insignif.</u>
Sub-Saharan Africa		
Economic Growth	+ 0.04 %	- 0.6 %
Inequality	<u>insignif.</u>	+ 5.6 %
Poverty	+ 2.28 %	<u>insignif.</u>
Low Income Countries		
Economic Growth	- 2.4 %	+ 1.03 %
Inequality	<u>insignif.</u>	- 12.1 %
Poverty	<u>insignif.</u>	<u>insignif.</u>
Low Middle Income Countries		
Economic Growth	<u>insignif.</u>	<u>insignif.</u>
Inequality	- 3.1 %	- 0.05 %
Poverty	- 3.65 %	<u>insignif.</u>

The benefits of regional integration are uneven and non-linear, e.g.:

- Developing Asia is gaining the most
- Latin America benefits most from internal regionalisation
- Gains for Sub-Saharan Africa are dubious
- Result is sourced from Low Middle Income Countries

Results

- Regional integration matters as
 - Decision of a sovereign country (Reg1)
 - As exposure through trading partners (Reg2)
- Regional integration (through RTAs) can improve the development path of a country
- The effect is non-linear, it depends on specific design in the geographic area

Takeaway

- Multilateral trade rules exist, and they are not enough for development
- Regionalisation can improve the development results of trade liberalisation
- But it has to be “well suited” for certain contexts

Thank you!

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