

# Innovation, Access, and TRIPS: What Have We Learned?

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# Why TRIPS?

- ▶ Why is IP part of trade agreements?
  - ▶ Protectionism and industrial policy
  - ▶ Non-tariff barriers to trade
  - ▶ Free-riding
- ▶ Long history
  - ▶ Paris Convention
  - ▶ Berne Convention
  - ▶ Patent Cooperation Treaty
- ▶ TRIPS arguably provided more "bite" due to WTO dispute resolution procedures

## Why not TRIPS?

- ▶ Unequal benefits
  - ▶ Innovative capacity higher in developed countries
- ▶ Unequal costs
  - ▶ Less time for developing countries to "catch-up" by copying, relative to US in late 1800s, e.g.
- ▶ Innovation vs. access balance

## Did TRIPS increase innovation?

- ▶ Hard to demonstrate empirically
  - ▶ Most measures of innovation use patent data, and patent counts increase mechanically with more countries granting patents
  - ▶ Many innovation markets are global -> hard to isolate changes linked to policies
  - ▶ Unclear counterfactual: would poor countries grow faster without IP?

## Did TRIPS increase innovation?

- ▶ Case study: pharmaceuticals
  - ▶ Alternative measures of innovation available
  - ▶ Patents introduced in different countries in different years -> quasi-natural experiment
  - ▶ Diseases that are primarily in poorer countries are less likely to attract investment; patent protection does not appear to change this
  - ▶ But global diseases do see an increase linked to patents

## Did TRIPS increase access?

- ▶ Somewhat easier for empirical work because of trade data
  - ▶ If imports of good increase, particularly from countries that export innovative products, access is probably greater
  - ▶ Many other papers document the benefits of greater trade: learning, efficiency gains from increased competition, etc.

## Did TRIPS increase access?

### Post-TRIPS Estimated Effect on Trade of High-IP Sectors, 1993-2016

High-IP Sector	Imports from World			Imports from High-Income Innovative Countries
	All Countries	DC	DC	DC-Low (Lower-middle/Low)
High-IP	0.130*	0.191**	0.340*	0.415*
Biopharma	0.628**	0.645*	0.971**	1.420**
Medical Devices	0.286**	0.331**	0.604*	0.791*
Chemicals	0.174**	0.245**	0.370**	0.421**
ICT	0.233**	0.333**	0.482**	0.565*

Notes:  $Y = \ln(\text{country-year real dollar value of trade in sectors})$ .  
 The table reports the difference in the estimated coefficients of High-IP Sector\*Post-TRIPS vs. Control\*Post-TRIPS on  $Y$ .

## Did TRIPS increase access?

- ▶ Case study: pharmaceuticals
  - ▶ Lanjouw et al. (2016): drugs are more likely to be launched in countries with patent protection
  - ▶ Duggan et al. (2016): prices of patented drugs in India did not increase following TRIPS
  - ▶ Kyle and Qian (2018): more launch, no increase in price, higher quantities for patented drugs in developing countries



## Limitations of TRIPS studies

- ▶ *Value* of trade increased, but is this really increased access?
  - ▶ Patents -> higher prices, lower quantities?
  - ▶ Do imports displace domestic production?
- ▶ Other constraints on pharmaceutical pricing
  - ▶ Compulsory licensing
  - ▶ Price controls
  - ▶ Greater tolerance of differential pricing across countries?
- ▶ More work needed:
  - ▶ Research exception?
  - ▶ Enforcement?
  - ▶ Non-patent forms of IP?