# Cartels, Antitrust Enforcement, and Industry Performance: Evidence from Mexico

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IFC Conference on Competition and Productivity January 24, 2023 Evidence of rising markups and concentration (DeLoecker & Eeckhout 2018; Ganapati 2021)

Consensus on need for vigorous antitrust enforcement (Khan, 2017; Shapiro, 2018; Wu, 2018; Berry, Gaynor & Scott Morton, 2019; Marinescu & Posner, 2019; Rose, 2019; Salop, 2021)

But evidence comes only from case studies, mostly in rich countries

## This paper

Estimate causal effects on industry performance of many sanctions against illegal monopolistic practices by the Federal Competition Commission of Mexico

- **1** Measure outcomes in economic census (sales, wages, profit margin, productivity)
- Ø Mexico discloses relevant markets of "closed cases"
  - ► Alternative counterfactual to address selection bias in US evidence
  - ▶ Test for "false negatives" alleged by Khan (2017) and Salop (2017)
- Inform debate: Do we change law, judicial presumptions, or just hire more investigators?

Mexico illustrates what antitrust can achieve in a relatively short period

Mexico has strong laws but only recently establishes enforcement agency:

- U.S. Federal Trade Commission founded in 1914
- European Commissioner for Competition designated in 1958
- Mexico's Federal Competition Commission established in 1993

Commission part of a modernization effort led by President Carlos Salinas de Gortari

- Participation in GATT, WTO, and NAFTA targeted competition in tradables
- Commission takes enforcement of Article 28 away from the Presidency, following OECD

OECD (2020): Mexico's competition regime is "equipped with strong powers, solid institutions and enforcement tools" and is ranked highly by the World Economic Forum

About 40% of economic activities in Mexico have been investigated for alleged illegal monopolistic practices



#### Case 1: Sales increase after sanction of real estate brokers' cartel





# Case 2: Sales decrease after decision not to sanction exclusive dealing



### Antitrust and Sales

(1)	(2)	(3)	(4)	(5)
sales	sales	sales	sales	sales
0.038***	0.034***	0.032**	0.058***	0.046***
(0.004)	(0.005)	(0.013)	(0.018)	(0.009)
-0.025***	-0.037***	-0.058***	-0.071***	0.032***
(0.002)	(0.003)	(0.009)	(0.011)	(0.005)
			0.00625	
90	90	90	90	134
FE	FE	FE	RE	FE
SDID	DID	SC	SDID	FD
	(1) sales 0.038*** (0.004) -0.025*** (0.002) 90 FE SDID	(1) (2)   sales sales   0.038*** 0.034***   (0.004) (0.005)   -0.025*** -0.037***   (0.002) (0.003)   90 90   FE FE   SDID DID	(1) (2) (3)   sales sales sales   0.038*** 0.034*** 0.032**   (0.004) (0.005) (0.013)   -0.025*** -0.037*** -0.058***   (0.002) (0.003) (0.009)   90 90 90   FE FE FE   SDID DID SC	(1) (2) (3) (4)   sales sales sales sales   0.038*** 0.034*** 0.032** 0.058***   (0.004) (0.005) (0.013) (0.018)   -0.025*** -0.037*** -0.058*** -0.071***   (0.002) (0.003) (0.009) (0.011)   0.00625 90 90 90   FE FE FE RE   SDID DID SC SDID

### Antitrust and Workers

	(1)	(2)	(3)	(4)	(5)
Change in (the log of the)	wage rate	wage rate	wage rate	wage rate	wage rate
Financial sanction $(=1)$	0.013***	0.035***	0.025***	0.028***	0.017***
	(0.001)	(0.003)	(0.004)	(0.008)	(0.005)
Constant	-0.009***	-0.021***	-0.006*	-0.014***	0.042***
	(0.001)	(0.002)	(0.003)	(0.005)	(0.003)
$\gamma^2$	, , , , , , , , , , , , , , , , , , ,	, , ,	, , , , , , , , , , , , , , , , , , ,	0.000721	, , , , , , , , , , , , , , , , , , ,
Observations	90	90	90	90	134
Meta analysis framework	FE	FE	FE	RE	FE
Outcome change estimator	SDID	DID	SC	SDID	FD

# Antitrust and Operating Profit Margin

	(1)	(2)	(3)	(4)	(5)
Change in (the percentage point)	operating	operating	operating	operating	operating
	profit	profit	profit	profit	profit
	margin	margin	margin	margin	margin
Financial sanction $(=1)$	-0.539	-3.749***	-5.069***	-0.677	-0.030
	(0.628)	(0.652)	(0.531)	(2.028)	(0.618)
Constant	1.604***	8.127***	1.700***	1.630	1.429***
	(0.333)	(0.394)	(0.326)	(1.313)	(0.474)
$\gamma^2$				56.16	
Number of cases	90	90	90	90	134
Meta analysis framework	FE	FE	FE	RE	FE
Outcome change estimator	SDID	DID	SC	SDID	FD

Claim: Suppose the Commission uses judicial discretion

- Only sanction those that "can afford it"
- Estimated effect is not causal

Solution: Mexican law varies judicial discretion

#### Mexico is "post Chicago"

"Chicago" school argues against rule making, for litigation of every case (Bork 1966; Lancieri, Posner, and Zingales 2022)

Mexico is "post-Chicago," as some conduct punishable w/out market power or consumer harm

- Absolute monopolistic practices are per se illegal
  - No judicial discretion, agent sanctioned if conduct occurred
  - E.g., price fixing (real estate brokers)
- Relative monopolistic practices are subject to the rule of reason
  - Firm has chance to argue conduct improves welfare and should be permitted
  - E.g., exclusive dealing (wedding supplies)

#### Absolute vs. relative monopolistic practices

	(1)	(2)	(3)
Change in	the log	the log	operating
	of	of the	profit
	sales	wage bill	margin
Absolute monopolistic practices $ imes$ sanction(=1)	0.86	0.73	-0.57
	(0.53)	(0.50)	(4.60)
Financial sanction $(=1)$	0.42	0.57	-0.17
	(0.38)	(0.36)	(3.13)
Absolute monopolistic practices $(=1)$	-0.63*	-0.80**	-0.31
	(0.33)	(0.32)	(3.16)
Constant	-0.77***	-0.55***	1.72
	(0.18)	(0.18)	(1.52)
	. ,		
Observations	90	90	90
Meta analysis framework	RE	RE	RE
Outcome change estimator	SDID	SDID	SDID
Effect of financial sanction in absolute case	1.28***	1.31***	-0.74
	(0.37)	(0.35)	(3.37)

#### Cartels vs. vertical restraint

Positive effects concentrated in cases where Commissioners have no discretion

• Sanctions occur only based on strength of evidence investigation found

Sales and wages fall and profit margins rise by more in closed absolute cases

- Stakes appear higher in absolute cases
- Suggests investigative focus on cartels, other absolute cases is right

Contrast with Khan (2017) who proposes rules in cases of relative monopolistic practice

• Caveat: US debate about big tech, here we are studying commerce and manufacturing

# Antitrust, Concentration, and Informality

	(1)	(2)	(3)	(4)	(5)	(6)
Change in	The log of	Herfindahl-	C4: Sales share	C1: Sales share	Legal informal	Social security
	the number of	Hirschman	of four	of largest	share of	share of
	firms	Index	largest firms	firm	employment	wage bill
Financial sanction $(=1)$	0.06	2.53	-0.12	0.82	-2.40**	1.07
	(0.13)	(3.16)	(3.35)	(3.36)	(1.04)	(0.91)
Constant	-0.14*	-5.11**	-0.04	-1.54	1.45**	-1.50***
	(0.08)	(1.99)	(2.21)	(2.09)	(0.64)	(0.55)
Observations	90	90	90	90	90	90
Meta analysis framework	RE	RE	RE	RE	RE	RE
Outcome change estimator	SDID	SDID	SDID	SDID	SDID	SDID

## Antitrust and Productivity

	(1)	(2)	(3)	(4)	(5)	(6)
Change in	market share	unweighted	correlation of	variance of	$\sigma = 3$	$\sigma = 5$
	weighted average	average	market share and			
	$\ln(TFPR_{jk})$	$ln(TFPR_{jk})$	$\ln(TFPR_{jk})$	$\ln(TFPR_{jk})$	$ln(TFPQ_j)$	$ln(TFPQ_j)$
Financial sanction $(=1)$	0.009*	0.011*	-0.013	0.034	0.076***	0.108*
	(0.005)	(0.006)	(0.056)	(0.115)	(0.030)	(0.061)
Constant	0.000	-0.002	0.133***	0.187***	-0.052***	-0.040
	(0.003)	(0.004)	(0.036)	(0.072)	(0.019)	(0.038)
Number of cases	90	90	90	90	90	90
Meta analysis framework	RE	RE	RE	RE	RE	RE
Outcome change estimator	SDID	SDID	SDID	SDID	SDID	SDID

A rough estimate of the contribution of antitrust to growth:

- Commission investigates 1.6 percent of output per year
- About 40 percent of investigations end in sanction
- Contribution of the Commission to steady state per capita GDP growth is  $0.016 \times 0.4 \times 0.009 = 0.0000576$ , which divided by 0.01, the long run average GDP per capita growth rate, is about 0.576 percent.

#### Conclusions

- **()** Antitrust sanctions benefit consumers and workers, reduce profits
- ② Investigative resources are being deployed towards suspicious markets
- More resources for COFECE could accelerate economic growth in Mexico