

Diffusion and Adaptation of Competition Policy in Asia

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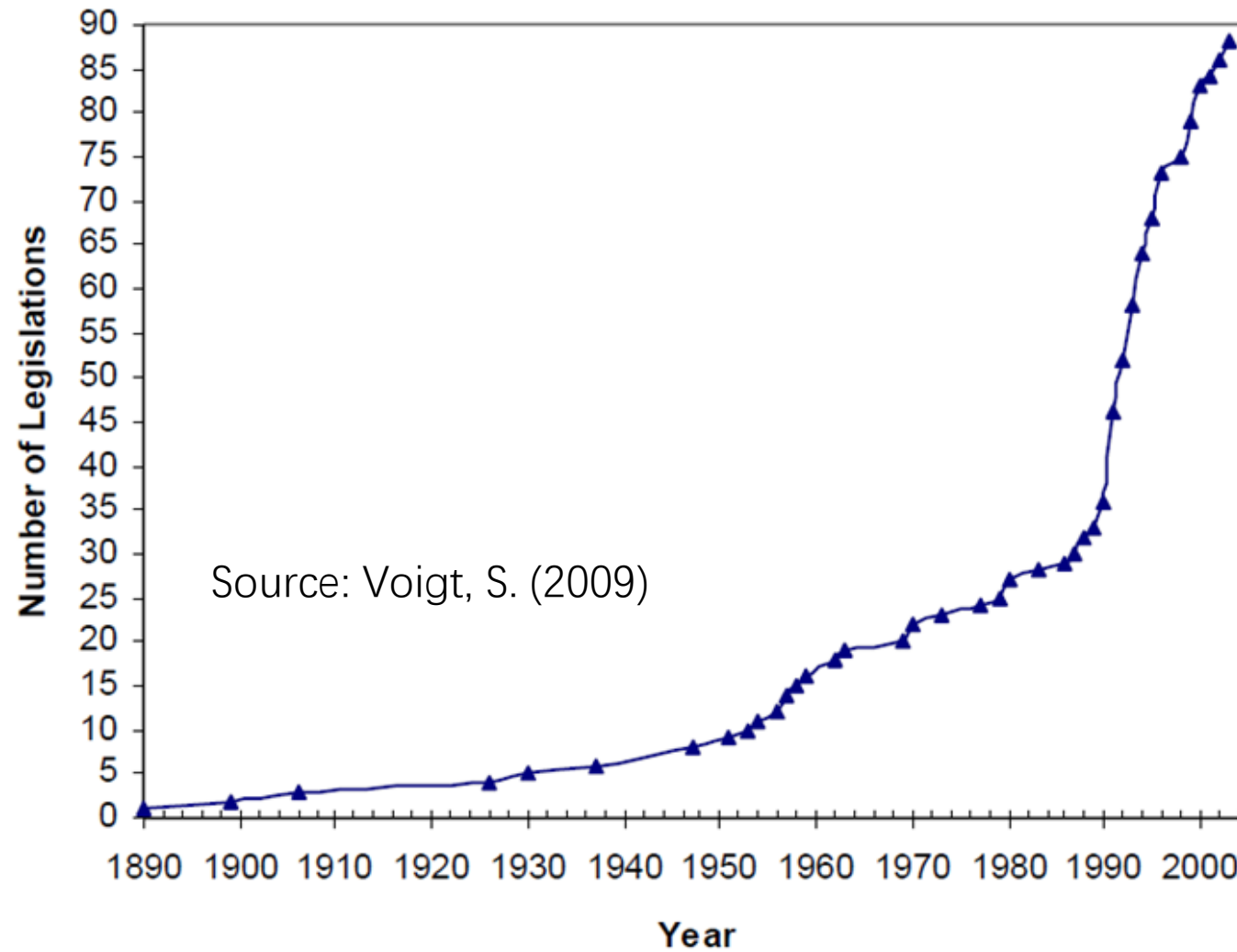
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Outline

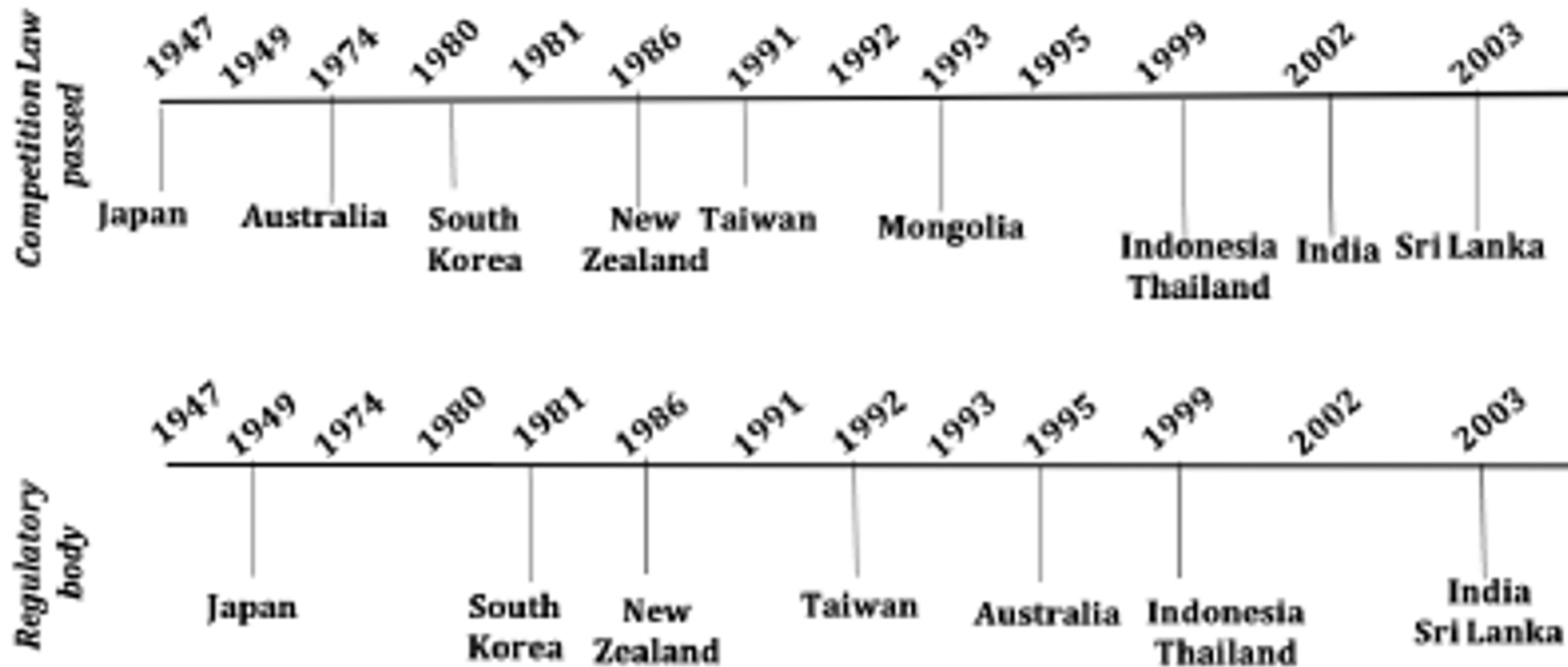
- **Proliferation of competition law jurisdictions** accelerated in the 1990s especially in the Global South
- Simplistic views
 1. Acceleration is consistent with **diffusion of innovation models** (e.g., Rogers 2003).
 2. It is simply because of the increase in **market-oriented economies**
- This paper explores additional reason(s)
 - by reviewing the **history of proliferation in Asia**
 - by using **cross-country panel regression**

Introduction

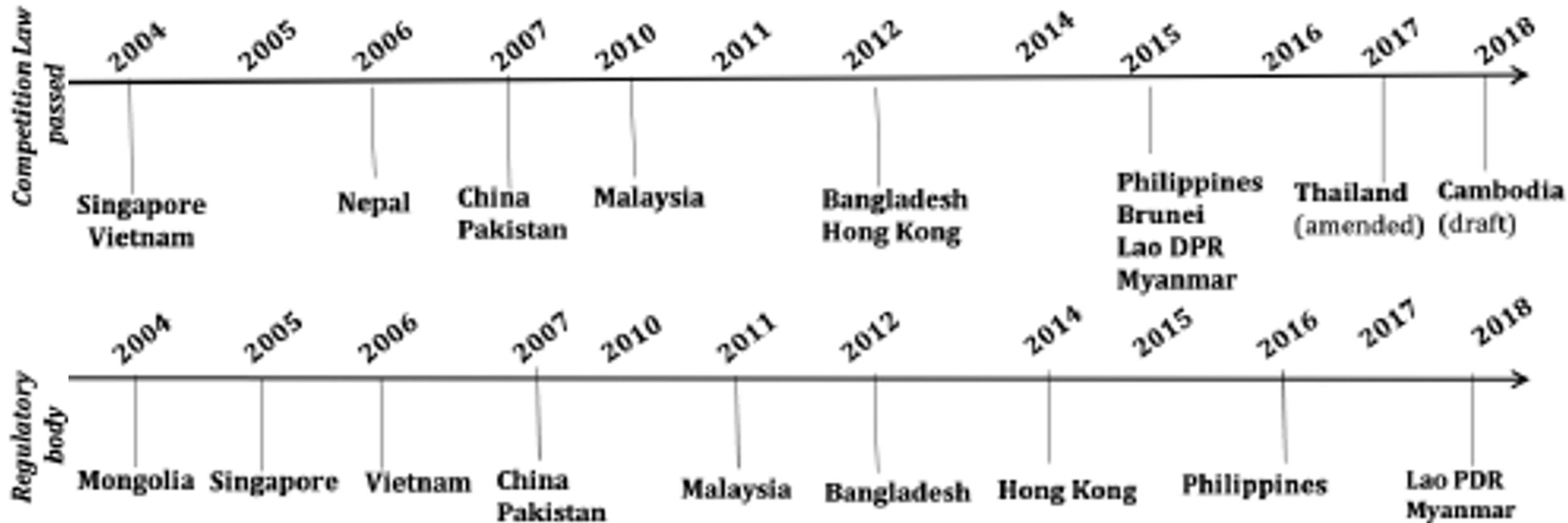
Competition Legislation



In Asia & Pacific 1947-2003 (source: Ravago et al 2021)



In Asia & Pacific 2004-2018 (source: Ravago et al 2021)



Historical Background

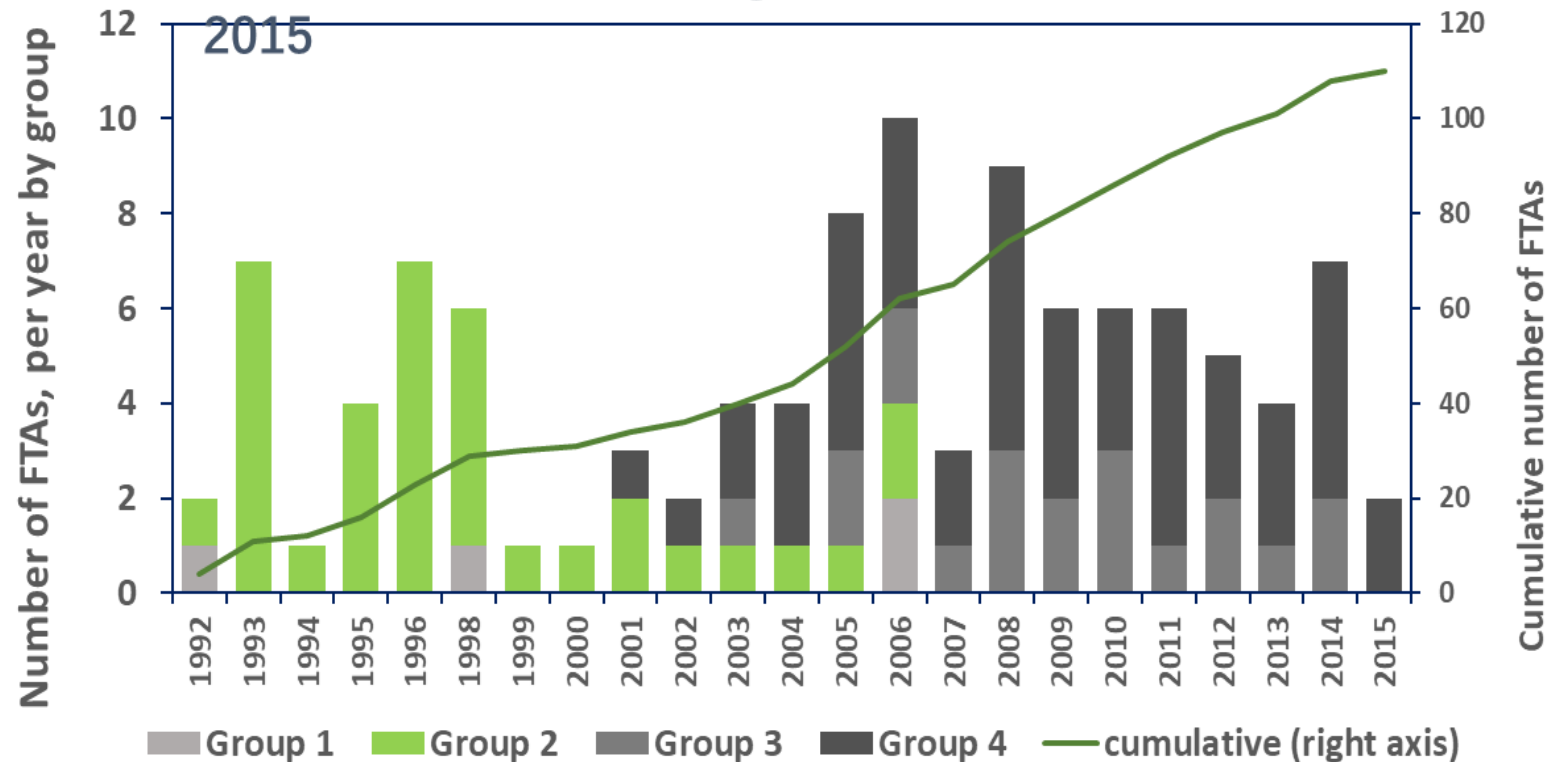
- The history of competition law in Asia began with Japan's enactment of the Antimonopoly Act in 1947 (when Japan underwent the process of economic democratization under the US occupation).
 - Japan was the third country, only to Canada and the US, to have comprehensive competition law that includes regulation on cartels, mergers, and unilateral conduct.
- The first wave: Development of market economies; and the influence of the US (Ravago et al., 2021).
- The second wave: Increased globalization

Concurrently, trade regime changed and FTAs and EPAs proliferated

- Commencement of **WTO** in January 1995.
- Many Asian countries joined WTO immediately
 - Japan, India, Hong Kong, Indonesia, Bangladesh, Brunei, Singapore, Malaysia, Pakistan, Thailand, Philippines, and Korea,
- **PRC, Taiwan, Vietnam, and Cambodia** joined later.
- Trade agreements often include competition chapters.
- This table illustrates the extent of the proliferation of trade agreements between Japan and other countries with such chapters.

Deepening of Trade Arrangements and Competition Policies

Content of Free Trade Agreements in Asia, 1992–



Group 1 = Free Trade Agreements (FTAs) that only have border policies.

Group 2 = FTAs with less than five border policies and less than five behind-the-border policies.

Group 3 = FTAs with five or more border policies and less than five behind-the-border policies.

Group 4 = FTAs with five or more border policies and five or more behind-the-border policies.

“Competition Chapters” in Trade Agreements

- Trade agreements often include **competition chapters**.
- The extent of the proliferation of such agreements **between Japan and other countries**

Singed	Country
2002.1	Singapore
2004.9	Mexico
2005.12	Malaysia
2006.9	Philippine
2007.3	Chile
2007.4	Thailand
2007.8	Indonesia
2008.4	ASEAN
2008.12	Vietnam

signed	Country/ies
2009.2	Switzerland
2011.2	India
2011.5	Peru
2014.7	Australia
2015.2	Mongolia
2016.2	TPP11
2018.3	
2020.11	RCEP

Why “Competition Chapters”?

- [Richard Baldwinモデル \(木村, 2018\)](#)

図1 距離の克服とアンバンドリング



Why “Competition Chapters”?

- Helped by the development of information and communication technology, center of gravity in int’l trade shifted toward **offshore production and global value chains**
- Richard Baldwin calls “**Second Unbundling**” or “Globalization’s Second Acceleration”
- **Global buyers** do not like cartels or mergers among their suppliers in developing countries
- In Asia, especially ASEAN, **regional trade** was and is of paramount importance. The development of **regional supply chains** also required stable, **sound competition among suppliers and among buyers.**

Hypothesis I: Promotion of 2nd unbundling needed competition policy

- Under this hypothesis, it is predicted that **developed countries would be happy to help developing countries adopt** competition policies and establish competition agencies.
- Indeed, there have been many **technical assistance** programs

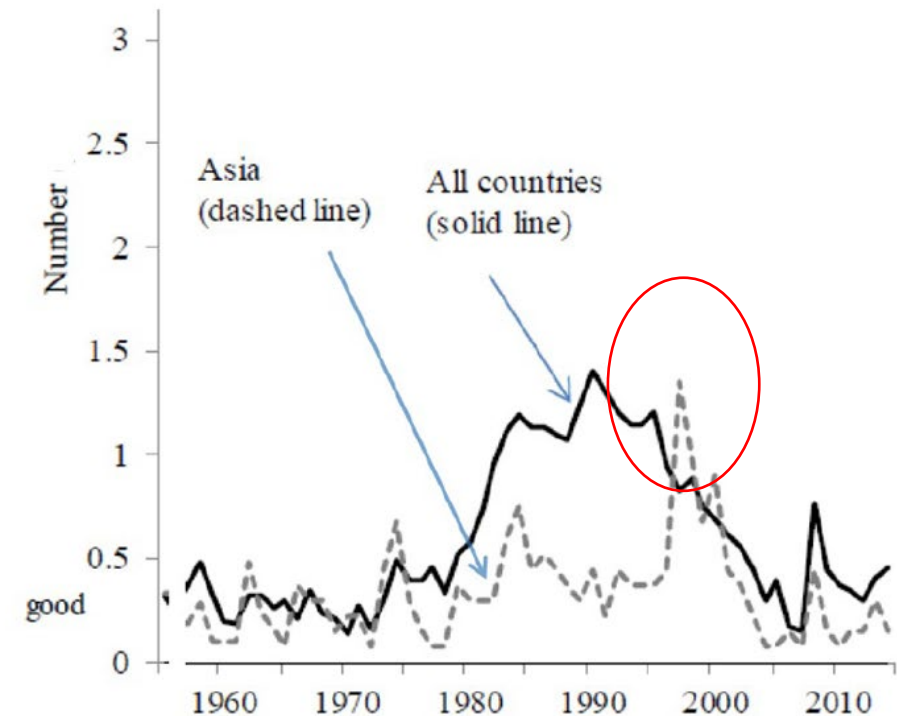
Inter-agency cooperation including technical assistance provisions concluded by JFTC

Country	Agency	Sign
Philippines	Department of Justice	2013
Viet Nam	Competition Authority	2013
Brazil	Administrative Council for Economic Defense	2014
Mongolia	Authority for fair Competition and Consumer Protection	2017
Singapore	Competition Commission o	2017
China	State Administration of Market Regulation	2019
India	Competition Commission	2021

The Asian Financial Crisis (AFC), 1997-98

- In **1997 and 98**, the Financial Crisis hit Asian economies.
- In response, tried to stabilize their economies using varying approaches.
- Indonesia, Korea, and Thailand opted for **IMF programs** supported by bilateral and multilateral partners including ADB
- Under the IMF program, Indonesia and Thailand were required to undertake **economic reforms which resulted in the introduction of competition laws** in 1999.

Figure 4 Frequency of Economic Crises in Asia and the World



Source) Carmen Reinhart and Vincent R. Reinhart (2015). "Financial Crises, Development, and Growth: A Long-term Perspective." *World Bank Economic Review* 29 (1), 1-24.

Hypothesis: Post-financial crisis policy reforms require competition laws and policies.

- Under this hypothesis, it is predicted that a financial crisis can induce **the crisis-hit country to adopt competition law** as part of post-crisis, market-oriented economic reform
- Indeed, under the **IMF program, Indonesia and Thailand** were required to undertake economic reforms which resulted in the introduction of competition laws in 1999.
- Under pressure from **IMF, Korea** amended the **Monopoly Regulations and Fair Trade Act (MRFTA)** in 1998 and 99 to set robust competition environment (Jung and Chang, 2006).

Evolution of Competition Agencies in Asia

- The AFC precipitated a series of comprehensive reforms within the region
 - Characterized by the adoption and adaptation of competition policies
- Major international fora emerged: OECD (Annual Global Forum on Competition), ICN, UNCTAD (Expert Meeting on Competition Policy), AEGC, CPL, AANZFTA, EATOP initiated by JFTC, etc.
- Recently, cooperation between competition agencies promoted: JFTC (Table 2), ACAP, etc.

Table 2: Inter-Agency Cooperation Memorandums/Arrangements including Technical Assistance Provisions Concluded by JFTC

Country / Region	Counterpart Agency	Signature Date
Philippines	Department of Justice of the Republic of the Philippines	2013.8
Viet Nam	Competition Authority of the Socialist Republic of Vietnam	2013.8
Brazil	Administrative Council for Economic Defense (CADE)	2014.4
Republic of Korea	Korea Fair Trade Commission	2014.7
Australia	Australian Competition and Consumer Commission	2015.4
Kenya	Competition Authority of Kenya	2016.6
Mongolia	Authority for Fair Competition and Consumer Protection	2017.3
Canada	Competition Bureau	2017.5
Singapore	Competition Commission of Singapore	2017.6
China	State Administration of Market Regulation	2019.6
India	Competition Commission of India	2021.8

Source: JFTC Website.

Testable hypotheses

#1: Cross-border diffusion of competition policies

- “WTO accession” (preparation) facilitated the adaptation of competition policies
- “Economic crisis” facilitated the adoption of competition policies

#2: Market development and the adoption of competition policies

- e.g., industrialization, expansion of cross-border economic activities, and digitalization
- “Per capita GDP growth” facilitated the adoption of competition policies

#3: Governance as a necessary condition

- “Governance index” and the adoption of competition policies

#4: Adoption vs. Adaptation

- Enactment of law vs. budget; enforcement and effectiveness

Framework

(1) Determinants of competition policies

$$D_{it} = Z_{it}\beta + u_{it}$$

- **D:**
 - Law, agency, and policy in place dummy
 - Ability/enforcement indicators (dawn raids, # of studies, # of cartel decisions, leniency applications, # settlements, # abuse of dominance decisions, # merger decisions, % of remedy decisions, fines, etc)

(2) The impact of competition policies on competition, technological progress, and welfare

$$Y_{it} = \alpha D_{it} + X_{it}\gamma + \varepsilon_{it}$$

- Cross-country panel data, TWFE
- Estimate (1) and (2) individually
- IV estimation with (1) and (2)
- Include lag and lead variables for the main control variables

• Z and X:

- Governance, The quality of institutions, Indicators of political institutions
- External policy and trade arrangements (WTO, FTA, APEC)
- Development level (per capita GDP); industry structure (Share of GDP/labor in each sector)
- Economic crisis
- FDI (Specifically M&A);
- GVC (Within industry trade, trade complexity index)
- R&D, Patent; Digitalization (internet users, digital expenses)
- Legal origin
- ODA (Technical aid including legal support)
- Cross-border diffusion of competition policies
- Inequality measures (Top income share, fraction of the middle class hh, poverty index)

• Y:

- Markups
- R & D, Technological progress; GDP growth
- Inequality measures (Top income share, fraction of the middle class hh, poverty index)
- The degree of institutional enforcement (GCI)

Data

- **“Law_{it}”**: 1[a competition law is in place]
- **“Fine_{it}”**: 1[the competition law provides for fines violating the law]
 - **Comparative Competition Law (CCL; 1850-2010)**
 - Ravago et al. (2021): 1947-2018 for Asia
 - Data from each country
- **“Budget_t”**: **budget size of FTC** collected by **our own survey**
- Other implementation and enforcement:
 - **WEF’s GCI (2007-2017)**
 - OECD PMR (1998, 2003, 2008, 2013, 2018)
 - BTI data (2006-2020)
 - Budget allocation data from each country
- **“WTO_{it}”**: 1[GATT/WTO member]
 - **GATT/WTO database**
- **Governance**
 - **WGI (1996-2020)**
- **Country characteristics**
 - **PTW (1950-2019)**
- **“CRISIS”** Global Crises Data (Reinhart & Rogoff)

Result I: Adoption

- **The effect of joining GATT/WTO** on the adoption of competition policies:

$$D_{it} = Z_{it}\beta + u_{it}$$

- **Economic development and structural transformation to service sector is closely related to adoption.**
- Economic crisis seems to induce adoption
- Good governance may delay adoption

Table 3. Effect of Participation in GATT/WTO on Competition Policy

VARIABLES	(1) Law	(2) Law	(3) Law	(4) Law	(5) Law	(6) Law	(7) Fine	(8) Fine	(9) Fine	(10) Fine	(11) Fine	(12) Fine
WTO_{it+1}	0.0375** (0.0181)	0.0292 (0.0184)	0.0327* (0.0183)	0.00933 (0.0195)	0.00913 (0.0194)	0.00957 (0.0194)	0.0285 (0.0192)	0.0287 (0.0187)	0.0303 (0.0187)	0.0222 (0.0194)	0.0214 (0.0193)	0.0218 (0.0193)
WTO_{it+2}	0.0970*** (0.0208)	0.0649*** (0.0201)	0.0599*** (0.0195)	0.000215 (0.0190)	0.00142 (0.0189)	0.00248 (0.0189)	0.0336** (0.0157)	0.0307* (0.0157)	0.0244 (0.0153)	0.00817 (0.0158)	0.00962 (0.0157)	0.00900 (0.0157)
WTO_{it+3}	0.103*** (0.0327)	0.121*** (0.0291)	0.0831*** (0.0293)	0.104*** (0.0306)	0.106*** (0.0297)	0.103*** (0.0297)	0.146*** (0.0323)	0.135*** (0.0302)	0.103*** (0.0297)	0.0670** (0.0316)	0.0734** (0.0310)	0.0699** (0.0308)
WTO_{it}	0.0250* (0.0133)	0.0244* (0.0133)	0.0289** (0.0127)	0.0172 (0.0143)	0.0179 (0.0143)	0.0181 (0.0144)	0.0122 (0.0137)	0.0117 (0.0137)	0.0153 (0.0136)	0.00296 (0.0151)	0.00414 (0.0151)	0.00370 (0.0154)
WTO_{it-1}	0.00551 (0.00818)	0.00394 (0.00808)	0.000252 (0.00838)	-0.00368 (0.00888)	-0.00320 (0.00886)	-0.00349 (0.00894)	0.0164 (0.0107)	0.0148 (0.0107)	0.0105 (0.0111)	0.00520 (0.0112)	0.00584 (0.0112)	0.00503 (0.0113)
WTO_{it-2}	0.0247*** (0.00918)	0.0182** (0.00923)	0.0165* (0.00893)	-0.00399 (0.00898)	-0.00317 (0.00894)	-0.00227 (0.00903)	0.0220** (0.00875)	0.0173* (0.00892)	0.0164* (0.00867)	-0.00231 (0.00868)	-0.00136 (0.00869)	-6.74e-05 (0.00865)
WTO_{it-3}	0.123*** (0.0217)	0.0753*** (0.0222)	0.0742*** (0.0210)	-0.0394* (0.0214)	-0.0382* (0.0213)	-0.0378* (0.0214)	0.113*** (0.0239)	0.0795*** (0.0247)	0.0781*** (0.0240)	-0.00448 (0.0239)	-0.00498 (0.0239)	-0.00303 (0.0242)
Population		0.00140*** (0.000327)	0.00124*** (0.000272)		0.000601*** (0.000189)	0.000608*** (0.000193)		0.00135*** (0.000386)	0.00121*** (0.000331)		0.000694*** (0.000241)	0.000711*** (0.000237)
Services GDP share (%)?			0.00378** (0.00167)			-0.00201 (0.00158)		0.00315** (0.00151)				-0.000549 (0.00153)
Industrial GDP share			-1.60e-05 (0.00172)			-0.00134 (0.00168)			-0.000817 (0.00143)			-0.00248* (0.00148)
Per capita GDP		0.00775*** (0.00188)			0.000620 (0.00142)			0.00662*** (0.00207)			0.00189 (0.00121)	
Constant	0.167*** (0.0386)	0.0839 (0.0566)	0.0729 (0.0530)	-0.201*** (0.0335)	-0.200*** (0.0395)	-0.214*** (0.0432)	0.152*** (0.0371)	0.0959* (0.0549)	0.0901* (0.0512)	-0.191*** (0.0333)	-0.185*** (0.0375)	-0.204*** (0.0424)
Country FE	NO	NO	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES
Year FE	NO	NO	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES
No of Countries	189	189	189	189	189	189	189	189	189	189	189	189
Observations	9,604	9,604	9,604	9,604	9,604	9,604	8,750	8,750	8,750	8,750	8,750	8,750
Number of id_countrycode	189	189	189	189	189	189	189	189	189	189	189	189

Note) Country-level cluster robust standard errors are shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1, We also included the following variables: dummy variable for missing population variable; dummy variable for missing services GDP share, and dummy variable for missing industrial GDP share.

Result I: Adoption

- **The effect of joining GATT/WTO** on the adoption of competition policies:

$$D_{it} = Z_{it}\beta + u_{it}$$

- **Economic development and structural transformation to service sector** is closely related to adoption.
- **Economic crisis** seems to induce adoption
- **Good governance** may delay adoption

Table 4. Encompassing Regression of Competition Law

VARIABLES	(1) Law	(2) Law	(3) Law	(4) Law	(5) Law	(6) Law
CRISIS_{it+1}	-0.00227 (0.00659)	-0.00285 (0.00625)	-0.00399 (0.00632)	-0.000298 (0.00647)	-0.000911 (0.00646)	-0.000281 (0.00652)
CRISIS_{it+2}	0.00217 (0.00843)	0.000154 (0.00810)	-0.00247 (0.00813)	-0.00373 (0.00789)	-0.00399 (0.00781)	-0.00375 (0.00792)
CRISIS_{it+3}	-0.0214 (0.0154)	-0.0217 (0.0150)	-0.0234 (0.0147)	-0.00940 (0.0141)	-0.0105 (0.0141)	-0.0100 (0.0140)
CRISIS_{it}	0.0185*** (0.00660)	0.0154** (0.00630)	0.0123** (0.00615)	0.00362 (0.00599)	0.00275 (0.00594)	0.00279 (0.00596)
CRISIS_{it-1}	0.00284 (0.00862)	0.00193 (0.00820)	0.000309 (0.00824)	-0.00331 (0.00718)	-0.00465 (0.00716)	-0.00434 (0.00714)
CRISIS_{it-2}	0.0217** (0.00885)	0.0187** (0.00866)	0.0162* (0.00857)	0.00616 (0.00847)	0.00514 (0.00835)	0.00546 (0.00836)
CRISIS_{it-3}	0.0286** (0.0139)	0.0270* (0.0139)	0.0243* (0.0139)	0.0110 (0.0140)	0.00961 (0.0140)	0.00965 (0.0140)
WGI_{it+1}	0.00659 (0.00981)	-0.00339 (0.00984)	-0.00178 (0.00985)	-0.0160* (0.00912)	-0.0181* (0.00928)	-0.0154* (0.00933)
WGI_{it+2}	-0.00195 (0.0167)	-0.0158 (0.0166)	-0.00970 (0.0166)	-0.00679 (0.0165)	-0.0135 (0.0159)	-0.00660 (0.0159)
WGI_{it+3}	-0.00741 (0.0158)	-0.0134 (0.0153)	-0.0118 (0.0157)	0.0120 (0.0160)	0.00622 (0.0154)	0.0114 (0.0155)
WGI_{it}	0.0274 (0.0219)	0.0225 (0.0185)	0.0203 (0.0188)	0.0179** (0.00896)	0.0162* (0.00905)	0.0175* (0.00921)
WGI_{it-1}	0.00592 (0.00758)	0.00229 (0.00764)	0.00356 (0.00748)	0.00715 (0.00797)	0.00513 (0.00809)	0.00696 (0.00800)
WGI_{it-2}	-0.0325** (0.0134)	-0.0416*** (0.0137)	-0.0278** (0.0134)	-0.0395*** (0.0125)	-0.0419*** (0.0127)	-0.0379*** (0.0124)
WGI_{it-3}	-0.0353*** (0.0129)	-0.0423*** (0.0131)	-0.0285** (0.0128)	-0.0375*** (0.0118)	-0.0392*** (0.0119)	-0.0359*** (0.0116)

Result II: Adaptation

- **The effect of different elements** on the adaptation of competition policies captured by **FTC budget size**:

$$D_{it} = Z_{it}\beta + u_{it}$$

- **Economic crisis and good governance seem to induce adaptation**

Appendix. Effect on Budget Size of Competition Agencies

VARIABLES	(1) Budget Size	(2) Budget Size	(3) Budget Size	(4) Budget Size	(5) Budget Size	(6) Budget Size
WTO_{it+1}	-0.537 (3.016)	-0.514 (3.015)	-0.542 (3.097)	-0.191 (2.908)	-0.168 (2.890)	-0.232 (2.890)
WTO_{it+2}	0.705 (2.490)	0.890 (2.493)	0.844 (2.558)	-0.0122 (2.417)	0.385 (2.406)	0.432 (2.407)
WTO_{it+3}	0.185 (1.098)	0.119 (1.098)	0.237 (1.130)	0.485 (1.089)	0.189 (1.095)	0.185 (1.095)
WTO_{it}	0.131 (3.025)	0.0737 (3.023)	0.192 (3.106)	-0.195 (2.918)	-0.309 (2.901)	-0.310 (2.902)
WTO_{it-1}	-0.752 (3.042)	-0.787 (3.040)	-0.629 (3.127)	-0.626 (2.931)	-0.606 (2.912)	-0.532 (2.917)
WTO_{it-2}	0.635 (3.043)	0.629 (3.040)	0.504 (3.126)	1.267 (2.934)	1.213 (2.915)	1.115 (2.918)
WTO_{it-3}	-0.378 (2.479)	-0.497 (2.479)	0.154 (2.584)	-1.671 (2.401)	-1.641 (2.394)	-1.072 (2.432)
CRISIS_{it+1}	0.0835 (0.332)	0.110 (0.332)	0.0999 (0.342)	0.200 (0.379)	0.234 (0.378)	0.222 (0.379)
CRISIS_{it+2}	-0.0799 (0.355)	-0.0931 (0.355)	-0.0728 (0.365)	-0.0979 (0.399)	-0.135 (0.397)	-0.148 (0.399)
CRISIS_{it+3}	-0.0656 (0.347)	-0.137 (0.356)	-0.0635 (0.358)	-0.195 (0.402)	-0.258 (0.400)	-0.235 (0.402)
CRISIS_{it}	0.0331 (0.309)	0.0154 (0.310)	0.0638 (0.319)	0.299 (0.354)	0.284 (0.353)	0.314 (0.353)
CRISIS_{it-1}	-0.368 (0.306)	-0.382 (0.307)	-0.340 (0.319)	-0.369 (0.355)	-0.396 (0.354)	-0.397 (0.353)
CRISIS_{it-2}	-0.426 (0.318)	-0.413 (0.318)	-0.440 (0.328)	-0.701* (0.364)	-0.719** (0.363)	-0.702* (0.362)
CRISIS_{it-3}	0.616** (0.312)	0.668** (0.314)	0.630* (0.322)	0.906** (0.360)	1.033*** (0.362)	1.052*** (0.362)
WGI_{it+1}	4.353 (2.674)	4.487* (2.673)	4.367 (2.746)	5.555** (2.592)	5.611** (2.576)	5.501** (2.576)

Result III: Adaptation evaluated from enforcement (X) and effectiveness (Y)

- Can competition policy enforcement (X) achieve effective (fair) competition (Y)?
- Market competition data (2009-2014) from Global Competitiveness Report 2017-2018“ of WEF.
 - ✓ **Enforcement** of anti-monopoly policy variable:
 - ✓ "In your country, how effective are anti-monopoly policies at ensuring fair competition?" (1=not effective at all; 7=extremely effectively)
 - ✓ **Effectiveness** captured by “local competition” composite index of two variables:
 - ✓ (1) **Intensity**: "In your country, how intense is competition on the local markets?", 1= not intense at all; 7= extremely intense
 - ✓ (2) **Extent of market dominance**: "In your country, how do you characterize corporate activity?, 1= dominated by a few business groups; 7= spread among many firms

Result III: Adaptation evaluated from enforcement (X) and effectiveness (Y)

Effectiveness of Competition Policy and Market Competition



Remarks

- The increase in the adoption of competition policy was inextricably linked with the growing globalization as well as post-crisis policy reforms
- Economic development (and structural change) was also one of the key drivers
- The post-crisis reform and governance level matters for the adoption and adaptation
- Adaptation is part of policy reform and enforcement of competition policy can achieve effective (fair) competition