



Designing Competition Policy for Economic Development in Asia and the Pacific

Edited by Arsenio Balisacan, Yesim Elhan-Kayalar, Majah-Leah Ravago,
James Roumasset, Yasuyuki Sawada, and Tetsushi Sonobe

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Abbreviations

ABIF	ASEAN Banking Integration Framework
AI	artificial intelligence
APEC	Asia-Pacific Economic Cooperation
ARTA	Anti-Red Tape Authority
ASEAN	Association of Southeast Asian Nations
BG	business group
BTI	Bertelsmann Stiftung's Transformation Index
CADPI	Central Azucarera Don Pedro, Inc.
CBBG	control-based business group
CBDC	central bank digital currencies
CF	contract farming
CNE	cross-side network effect
COVID-19	novel coronavirus disease
CPI	Competition Policy Index
DLT	distributed ledger technology
EAP	East Asia Pacific
EPA	economic partnership agreement
EU	European Union
EV	equivalent variation
FDI	foreign direct investment
FIES	Family Income and Expenditure Survey
FTA	free trade agreement
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GMV	gross merchandise value
GVC	global value chain
ICN	International Competition Network
ICT	information and communication technology
IMF	International Monetary Fund
IoT	Internet of Things
ISP	internet service provider
JFTC	Japan Fair Trade Commission
KFTC	Korea Fair Trade Commission
NCP	National Competition Policy
NEDA	National Economic and Development Authority
OECD	Organisation for Economic Co-operation and Development
P2P	peer-to-peer

PCA	Principal Component Analysis
PCA	Philippine Competition Act
PCC	Philippine Competition Commission
PCO	partial collusive oligopolistic
PDP	Philippine Development Plan
PIC	public interest consideration
PLDT	Philippine Long Distance Telephone Company
PMFC	Platform-Most-Favored-Customer
PMR	Product Market Regulation
PPC	price parity clause
PPP	purchasing power parity
PPP	public-private partnership
PRC	People's Republic of China
QAB	Qualified ASEAN Bank
RHI	Roxas Holdings, Inc.
RIA	Regulatory Impact Assessment
SAR	South Asia Region
SLC	significantly lessen competition
SNE	same-side network effect
SOE	state-owned enterprise
TCC	Trade Competition Commission
TPP	Trans-Pacific Partnership
UNCTAD	United Nations Conference on Trade and Development
UPP	upward price pressure
URC	Universal Robina Corporation
US	United States
UTP	unfair trading practice
WELCOM	Welfare and Competition
WGI	Worldwide Governance Indicators
WGTCP	Working Group on the Interaction between Trade and Competition Policy
WTO	World Trade Organization

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To everyone who has contributed to this endeavor, your collective efforts have culminated in a publication that we believe will make a meaningful impact on the discourse surrounding competition policy in Asia and the Pacific. Thank you!

The content or opinions expressed in this volume are those of the chapter authors alone. They do not reflect the views of the above nor the views of our respective institutions.

The Editors

Manila, Tokyo, Hawaii
September 2024

Endorsements

This book is a major intellectual breakthrough. It offers a reasoned meditation on how competition law and policy could be made more relevant for developing economies in Asia and the Pacific. The starting point of its analysis is that competition cannot be an end in itself but must contribute to the economic development of developing economies. This means not only that legal transplants from developed economies may not be sufficient or relevant but also that for Asian economies, which each have different economic conditions and legal systems, one size may not fit all. The value of this book is that its conclusions are based on a very thorough comparative analysis of the structure, conduct and performance of the competition law regimes and policies of a large number of economies. Building on this analytical framework, the authors also discuss some of the most pressing social and economic issues currently facing the competition community, such as the necessity to modernize agricultural and food supply chains and to adapt competition policy to the rise of the digital sector, whether in the provision of financial services or in e-commerce. This book is a must-read for anyone interested in competition and development.

Frédéric Jenny

Chairman, Competition Committee

Organisation for Economic Co-operation and Development

The integration of the digital economy, alongside the pursuit of carbon net zero and evolving economic security dynamics, is fundamentally altering competition policy within the vital Asian economic landscape. This book presents a persuasive argument for the creation of a harmonized competition policy framework that acknowledges the unique characteristics of each Asian [economy], making this book an indispensable resource for shaping the region's economic development trajectory.

Hiroshi Ohashi

Vice President and Professor of Economics

The University of Tokyo

Foreword

Market rules or structures that provide an unfair advantage to certain businesses can often lead to limited consumer choices, reduced quality of products and services, and higher prices. Competition policy strives to ensure healthy competition within the marketplace to maximize economic efficiency and benefit society as a whole by fostering innovation, productivity increases, investment, and growth.

Designing Competition Policy for Economic Development in Asia and the Pacific, a collaborative effort between the Asian Development Bank and the Asian Development Bank Institute, explores the ways in which competition policy contributes to sustainable economic growth and development in Asia by studying the design and implementation of various domestic competition policies across the region. This volume is the product of a journey that began in Manila in 2018 when the Philippine Competition Commission brought together government officials, private sector representatives, and members of civil society to discuss whether and how competition policy can raise productivity growth and contribute to structural reform. To answer these questions, it was necessary to first define competition policy in theory and in practice; understand its links to the political economy; and assess how it impacts the performance of developing economies, which often otherwise suffer from anti-competitive market practices. Emerging challenges to competition policy, such as the increased economic role of digital platforms and e-commerce, also demanded attention.

Assessing the impacts of existing competition policies in different Asian economies is necessary to improve their design and effectiveness. It is also critical that competition policies be part of a larger competition strategy that includes the economy's industrial and trade policies. This book synthesizes discussions and research centered around identifying the most effective competition policies through which Asian economies can boost productivity and support economic development. These discussions were informed by an awareness that effective economic incentives are at the core of any successful competition policy.

The findings included in this book reveal that the influence of developed economies often weighs heavily on the formulation of competition policies in developing Asian economies, including on the structure and role of competition authorities. It is not uncommon for competition law and the associated regulatory procedures to closely resemble those found in the European Union and the United States.

Evidence from some economies included in this study suggests that their competition policies do not adequately account for domestic political and economic environments, while also giving insufficient attention to key issues facing developing economies, such as ensuring growth, poverty reduction, and employment generation. As this book concludes, competition policy should always be tailored to local circumstances and be aligned with industrial and trade policies in pursuit of enhanced efficiency and competitiveness.

Designing Competition Policy for Economic Development in Asia and the Pacific is intended to reach a wide audience, ranging from policymakers and regulatory authorities to business leaders and academics. Lessons learned from the experiences of Asian economies can offer policy guidance in the reform of competition policy to best support domestic economic development. However, the recommendations included in this volume are meant to serve as a starting point by providing general practical guidelines. In many cases, designing appropriate, specific policies in real-world situations will require deeper assessment.

This book aims to stimulate collaborative dialogue, particularly among industry representatives, competition authorities, and policymakers, that will contribute to the implementation and refinement of some of the policy proposals recommended by the book's authors. As trusted development partners, the Asian Development Bank and the Asian Development Bank Institute can leverage their convening power to facilitate informed, solution-focused consultations among key stakeholders to enhance mutual understanding of the many facets of competition policy and support pathways to solutions that effectively balance business priorities, development outcomes, and user rights.

I extend my appreciation to all of the policy makers, industry representatives, and researchers who have generously contributed to this volume. This book will be useful in designing and implementing effective competition policies for online and physical marketplaces and for further strengthening the contributions of competition policies to economic development in Asia and the Pacific.



Albert Park

Chief Economist and Director General
Economic Research and Development Impact Department
Asian Development Bank

Preface

This volume, *Designing Competition Policy for Economic Development in Asia and the Pacific*, evolved from the vibrant discussions at the 2018 Manila Forum on Competition in Developing Countries organized by the Philippine Competition Commission. Inspired by the imperative to address the unique challenges faced by economies in the region, the conceptualization of this book project took root in 2018, fostering a collaborative effort to delve into the intricate intersection of competition policy and economic development.

Acknowledging the significance of fostering inclusive and competitive market environments in the Asian context, the Asian Development Bank (ADB) played a pivotal role by extending its support to the advancement of the competition–development nexus in the Association of Southeast Asian Nations. Subsequently, a robust research partnership was formed among the Philippine Competition Commission, ADB, and the Asian Development Bank Institute (ADBI) for this book project.

The journey commenced with an inception workshop on 11 March 2022, where chapter contributors converged to outline the objectives of our collective endeavor. At the forefront of our exploration was the pivotal question of understanding the extent to which competition policy contributes to sustained economic growth and development. The inception workshop was followed by workshops at ADBI in Tokyo on 17–18 November 2022 and at ADB in Manila on 23–24 March 2023 to align the chapters with the broader questions deliberated by competition authorities, development practitioners, and researchers in Asia and the Pacific.

Our aim is to document the structure, conduct, and performance of competition policy across Asian economies, unraveling insights that can inform the improvement of competition policy design and administration. With a principal focus on the laws and practices constituting competition policy in Asia, our goal is to harmonize these policies with industrial strategies, fostering a holistic and forward-looking approach to economic development.

This book is also a practical resource intended for a diverse readership. It is tailored for competition authorities, policymakers, development practitioners, and students of economics and law. Each chapter encapsulates recommendations that transcend theoretical discourse, offering practical proposals to empower competition

authorities and policymakers in reorienting competition policies and laws toward development. These recommendations are underscored by the need for ongoing research and collaborative efforts to shape a competitive landscape that aligns with the evolving economic realities of the Asia and Pacific region.

We hope that these studies serve as a catalyst for informed dialogue, evidence-based policy formulation, and a shared commitment to fostering sustainable economic growth in the dynamic and diverse tapestry of Asian economies.

The Editors

Manila, Tokyo, Hawaii

September 2024

PART I

Introduction and Synthesis

1

Designing Competition Policy for Economic Development in Asia and the Pacific: Overview and Policy Directions*

*Majah-Leah Ravago, James Roumasset, Arsenio Balisacan,
Yasuyuki Sawada, Tetsushi Sonobe, and Yesim Elhan-Kayalar*

1.1 Introduction

External pressures to formulate competition laws and create competition authorities may have driven some Asian developing countries to appropriate the laws and procedures of European countries and the United States (US). This leads to the possibility that competition laws in emerging Asian economies are not ideally suited to facilitating productivity growth and economic development in those countries.

Does competition policy complement development policies for promoting productivity growth and structural change? To address this critical question, a comprehensive understanding of the nature of competition policy, i.e., its structure and conduct, its political economy causes, and its consequences for the degree of competition and the

* Section 1.4 of this chapter is in part informed by the panel discussion on “Competition Policy: Perspectives from Policymakers and Regulators” with panelists including PCC Chair Michael Aguinaldo, Philippine Senator Sherwin Gatchalian, Marikina 2nd District Representative and former PCC Commissioner Stella Luz Quimbo, and co-authors National Economic and Development Authority Secretary and founding PCC Chair Arsenio Balisacan, ADBI Dean and CEO Tetsushi Sonobe, and moderated by former ADB Chief Economist and University of Tokyo Professor Yasuyuki Sawada at the book workshop held at ADB on 23–24 March 2023.

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economy's performance is essential. From a development economics perspective, competition and other policies are needed for markets to achieve their welfare-improving potential.

In order to inform the normative motivation of adapting competition to the requirements of economic development, this volume explores the practice of competition policy in the context of economic development and growth and its potential contribution to sustained economic growth and development. By documenting the structure, conduct, and performance of competition policy in Asian developing economies, we seek implications for competition policy design and administration, including harmonizing competition policy with industrial policy. The chapters cover the causes and consequences of competition policy in Asia, including significant ideas and paradigms as well as economic and policy environments that have influenced the adoption and adaptation of competition policy in Asia and how competition policy contributes to the development agenda. Whereas competition law in the US and European countries has existed since the early 1900s, many Asian economies only adopted a comprehensive competition law in the 1990s. Beyond appropriating the laws from the US and European countries, competition policy must be adapted to an economy's individual priorities, governance levels, economies, and institutions.

Characterizing the nature of competition policy involves elucidation of its structure and conduct. "Structure" includes the laws enabling and governing the competition authority and its organization. "Conduct" deals with the execution of the authority's responsibilities and powers. Both structure and conduct contribute to the quality, intensity, and effectiveness of competition policy, as summarized, for example, in various competition policy indexes. The consequences of competition policy can be assessed by relating these metrics of competition-policy quality and intensity to the degree of competition in domestic markets and to performance metrics of the overall economy, such as innovation, structural change, total factor productivity growth, poverty alleviation, and international competitiveness.

As it was in the beginning (with Adam Smith's *Inquiry into the Nature and Causes of the Wealth of Nations*), positive (i.e. descriptive and explanatory) analysis provides insights into normative issues of policy. More specifically, understanding the nature, causes, and consequences of competition policy serves as an effective economic method to capture to what extent competition policies in the emerging economies of Asia are appropriate for the needs of economic development.

This volume is structured into three parts. Part I, which comprises the current chapter, introduces the volume and summarizes the findings in subsequent chapters. It also provides policy directions and actionable

reforms to reorient competition policy for economic development. In Part II, the six chapters focus principally on the theory and practices constituting competition policy in Asian economies. Lessons drawn from these chapters demonstrate the need to reorient competition policies, especially in addressing the emerging issues in the region. Part III, consisting of six chapters, examines some of these critical emerging issues and challenges of competition policy in Asia. The proliferation of digital technologies and the rise of e-commerce have transformed traditional market structures, presenting opportunities and challenges for businesses, consumers, and policymakers. Simultaneously, the intricacies of ensuring fair competition within complex food supply chains and the growing influence of digital platforms have added complexity to enforcing competition policies. As we navigate through this intricate terrain, understanding and addressing these issues are crucial for sustained economic growth and development and for promoting equitable market practices that benefit businesses and consumers alike.

1.2 Competition Policy in Asia: Theory and Practice

Part II of this volume tackles the theory of competition policy in Asian economies. Previous comparative studies of competition policy have focused on developed economies (e.g., Buccirossi et al. 2011, 2013) or have limited attention to the intensity of competition policies (e.g., Bradford et al. 2019). We shift the attention to Asian economies, where many have adopted modern competition law since the late 1990s.

Chapter 2 by Roumasset, Ravago, and Balisacan discusses the theoretical foundations of competition policy. Do economies in different economic environments and at various stages of development warrant different competition policies? Rather than focusing on competition as a goal, competition policy should be designed to enhance economic development by promoting competition that curbs rent-seeking and increases productivity. Focusing on the dynamics of economic welfare suggests coordinating with trade, industrial, and infrastructure policies and recognizing the extra-market governance mechanisms that support specialization, innovation, and investment coordination. Chapter 2 further examines the impact of the adoption of competition law on long-term economic growth. Economies may choose whether or not to adopt competition law depending on their circumstances, including the level of economic development, institutions, and geography. Adoption is found to have increased the growth rates in adopting economies but, on

average, would have decreased growth in non-adopting economies. This finding suggests that economies should not be pressured to prematurely adopt competition law unless it is tailored to the relevant institutions, capabilities, and priorities.

Chapter 3 by Aoki et al. focuses on the diffusion and adaptation of competition policy in Asia. Competition law jurisdictions have proliferated in the last 4 decades. Asian adopters became champions of high economic growth by actively participating in global value chains and receiving increased foreign direct investment. This chapter puts forward two hypotheses. First, the increase in competition policy adoption was inextricably linked with the growing globalization during the period. Second, competition policy played a role in financial crises and subsequent market-oriented reforms. The empirical results show that market-oriented reforms and governance levels matter in the adoption of competition laws and policies. The results have implications for other developing economies that are contemplating adoption of competition law.

Economies in Asia base their competition laws on developed countries (initially the US, but now mainly Europe). Given this, Chapter 4 by McEwin asks whether competition laws in Asia should be redesigned to improve economic outcomes. This chapter rests on the premise that little account is taken in the design of competition laws for Asian economies of the differences in economic conditions and policies between economies. Business practices and the extent to which local legal systems incorporate economic thinking and evidence differ between developing countries in Asia and developed countries. This chapter argues that economic conditions and institutional differences matter in designing competition laws and that special account should be taken of Asian business forms and practices, including family conglomerates.

Chapter 5 by Ravago et al. assesses the structure, conduct, and performance of competition agencies in Asia. This chapter documents and explains the stylized facts of competition policy and provides a comparative assessment of competition agencies in Asia and the Pacific economies. The chapter reports on the structure, conduct, and performance of competition policy in selected Asian economies. Using a Principal Component Analysis, the authors create a Competition Policy Index of Resources, Enforcement Intensity, and Quality of Competition Regimes. Competition agencies were ranked according to these indexes. Their findings suggest that to improve effectiveness; young agencies should focus on easier cases to prosecute, such as cartel cases, wherein tangible evidence of agreements is easier to produce. As an agency matures and becomes more effective, it can shift its focus to more complex cases and consumer advocacy. (See also McEwin's discussion

of case selection in Chapter 4.) Since competition is complementary to other aspects of development policy, competition policy should be closely coordinated with industrial, trade, and other economic policies.

Continuing the comparative assessment, Chapter 6 by Papa, Atanacio, and Balisacan examines the *pillars* of competition policy, using the Philippines as a case study. The chapter reviews the conceptual underpinnings of and divergent experiences in the three operational pillars of competition policy in developed and developing countries (cartel prohibition, regulation of mergers and acquisitions, and the control of abuses of dominance). It explores the challenges in transplanting and enforcing competition policy formulation from developed to developing countries. The chapter further identifies the general trends and patterns in the implementation of competition policy and evaluates how they relate to the nuances of the Philippine experience. Competition policy in a developing country is part and parcel of the economic development agenda, and the “best practices” for competition regimes in developing jurisdictions are not a one-size-fits-all solution. Instead, they must be critically evaluated in light of a country’s level of economic development, political economy and institutional arrangements, history, and culture.

Chapter 7, by Jandoc, Ducanes, and Azardon, examines the relationship between competition, poverty, and inequality, also using the Philippines as a case study. Concentrated markets may impact poor people disproportionately and lead to increased inequality due to price increases in the context of limited product substitution and restricted access to alternative markets. The authors employ a simulation approach using a welfare and competition tool to examine how changes in market concentration affect distribution, focusing on rice and telecommunications to exemplify products whose expenditure patterns differ for poor people versus rich people. This chapter finds that improving the competition environment for the rice sector leads to a drop in poverty headcount and the Gini index. In contrast, lessening market concentration in the telecommunications sector, whose services are mainly consumed by the rich, is found to have a more modest distributional impact. This finding may be useful in the design of agency priorities.

1.3 Emerging Issues and Challenges of Competition Policy in Asia

In recent years, the dynamic landscape of Asia has witnessed remarkable economic growth and globalization, bringing to the forefront a host of emerging issues and implementation challenges in the realm of competition policy. Part III sheds light on the

multifaceted nature of some of these emerging issues, encompassing technological advancements, cross-border transactions, and evolving market structures. Notably, the advent of digital markets, the intricacies of food supply chains, and the pervasive influence of digital platforms have emerged as critical focal points demanding a nuanced understanding and responsive regulatory approach. Simultaneously, it recognizes the complex web of challenges faced in implementing effective competition policies across diverse economies with varying regulatory frameworks. This underscores the imperative for Asian countries to grapple with the associated implementation challenges and to foster a competitive landscape that aligns with the evolving realities of the 21st-century economy. A key lesson from Part II is that merely adopting responses of developed countries may not work for individual economies in Asia.

In Chapter 8, Galang and Murciego consider designing an effective regulatory environment to foster domestic competition. Enhancing competition in Asia, in both domestic and regional markets, is critical to increasing productivity, fostering economic growth, and promoting consumer welfare. Effective competition policy requires a combination of pro-competition regulation, measures to foster competitive neutrality, especially between public and private operators, and robust regulatory and institutional competition frameworks. This chapter develops these elements, building on examples from the region, especially the Philippines.

Recent competition law adoption in Asian economies has compelled business operations in various sectors to make substantial adjustments. One example regards food supply chains, the focus of Chapter 9 by Kai and Sonobe. The modernization of agricultural and food supply chains in developing economies began belatedly in the early 1990s. Its icon is the diffusion of supermarkets that brought consumers the convenience of one-stop shopping, a greater variety of food and groceries, lower prices, and better quality. Food manufacturers went through modernization as well. Both supermarkets and modernized manufacturers began coordinating with farm production using contract farming, which has made farmers better off in rural areas worldwide. There is evidence that these welfare gains have been associated with the rapid growth of the agri-food supply chains. Nonetheless, this industry's market concentration is a topic of considerable discussion in Europe and the US. How serious is the risk of the abuse of market power in this industry? This chapter reviews the results of recent studies to answer this question from the Asian perspective.

Chapter 10 by Morgan examines competition issues related to the financial sector in Asia, primarily focusing on the banking sector

in the Association of Southeast Asian Nations (ASEAN) countries. This subject's import derives from the strategic role of the financial sector in providing funds to the rest for investment and growth. At the same time, it is subject to booms, busts, and financial crises. This chapter focuses on three issues: the locus of competition policy within the overall regulatory framework, the implications of the rapid development of financial technology for competition in the financial sector, and the role of foreign entry in promoting competition and other regulatory objectives.

Continuing the discussion of financial technology, Chapter 11 by Izumi et al. focuses on digital platforms and their implications for competition policy and micro, small, and medium-sized enterprises (MSMEs). This chapter reviews the overall MSME landscape in Asia, including enterprise challenges and constraints in offline and online markets. It examines platform characteristics, externalities triggered by these characteristics, and how they impact merchants and other platform users. The use of digital platforms as intermediaries where many sellers and buyers interact to exchange products and services gives rise to two-sided markets. The unique features of platforms and the two-sided market structure they foster require an idiosyncratic policy approach from competition authorities and policymakers.

The novel coronavirus disease (COVID-19) pandemic has accelerated e-commerce. Chapter 12 by Zhou et al. focuses on e-commerce, the COVID-19 pandemic, and industry dynamics in a two-sided market, examining the case of a digital food delivery platform in the People's Republic of China (PRC). The pandemic provides a serendipitous opportunity to examine the overall impact of entry and other competition policies on the performance of merchants via digital platforms. Using merchant-week level data for 3 years from early 2019 to 2021 from Alibaba Group's Ele.me app, a digital food delivery platform in seven cities in the PRC, this chapter documents three types of results. The first regards the heterogeneous effects of digitalization depending on timing. The second concerns the positive cross-network effects (CNEs) and substantial benefits of digitalization conditional on merchants' ability to adapt their businesses to platform possibilities: Data support the existence of CNEs among merchants, delivery riders, and active users in the two-sided digital market. On the other hand, there could be a lack of direct network effects (DNEs) arising from negative cannibalization effects due to fierce competition among merchants. Finally, these patterns of entry and recovery, as well as the CNEs and DNEs are likely to be salient among chain stores, stores with multi-app exposure, and shops offering non-food groceries or uncooked food.

The last chapter, Chapter 13 by Sawada et al., continues the discussion, focusing on e-commerce dynamics and its role during the COVID-19 pandemic. This chapter analyzes the dynamics of e-commerce and how they unfolded during the COVID-19 pandemic, using a unique, composite dataset focusing on GoFood merchants in Indonesia. This chapter makes a notable contribution by expanding platform-efficiency analysis to static and dynamic efficiency perspectives. The analysis reveals three key findings. First, online platforms like GoJek in Indonesia offered a novel form of social safety nets for MSMEs. Second, market congestion externalities and cannibalization tendencies have been observed as the pandemic intensified. Third, the pandemic disproportionately affected vulnerable microenterprises, often owned by women merchants with limited support networks and business assets. Overall, this chapter demonstrates that the rapid acceleration of digital transformation during the COVID-19 pandemic presents unique research opportunities regarding distributive justice, external effects, scale economies, and related competition policies.

1.4 Priorities for Redesigning Competition Policy for Economic Development in Asia and the Pacific

The next step is determining priorities for redesigning competition policy and its administration, including harmonizing competition policy with industrial policy for economic development. As emerging and developing economies in Asia and the Pacific aim to become middle-income countries, adopting a competition policy is crucial in deepening reforms to realize this aspiration. However, as the analysis under Part II of this volume shows, merely appropriating the long-established competition policies in developed countries such as the US and European countries may not work.

Institutions, income levels, structures, and preferences significantly differ between developed and developing countries. Missing markets, information asymmetries, and high unit transaction-costs proliferate in developing economies. Internet access by rural farmers, for example, may be limited.

Competition policy in developing economies should be oriented to two major goals. One is facilitating development through better resource allocation. Second, is achieving equity and fair competition. Competition policy can be a win-win instrument, driving efficiency and economic growth. At the same time, since competition policy reduces excess burden (economic waste), it gets the economy closer to

its potential and relieves victims of anticompetitive practices, thereby improving both efficiency and growth.

As emerging and developing economies in Asia adopt and introduce competition laws and policies into the economic landscape, the challenge is developing and preserving the culture of competition initiated by the law. In some instances, competition agencies are thought to regulate contests, such as sports events and beauty pageants. Even those in the business community may know little about competition policy. Decades of anticompetitive practices may have been thought to be the norm. Confusion arises when these suddenly become illegal. Thus, advocacy is a crucial part of competition policy and is more challenging to young competition agencies in developing countries. When the Philippines introduced competition law in 2015, the approach to establishing a culture of competition started with the government, the academe, and then businesses. Within the government, it is vital to include players in the core competition landscape, the executive branch, the judiciary, and the legislative branch. Educating the media about competition policy and competition issues is also crucial to the competition advocacy of young agencies because they can amplify the voice of competition agencies.

Enforcement of competition and competition advocacy benefits from concerted and coordinated efforts among various government agencies. The Philippines' National Development Plan has dedicated a chapter to competition policy, signaling a whole of government approach to enforcing the law. In Fiji a broad mandate and lobbying of government agencies has helped to promote a culture of competition. Depending on how the competition law is written, there will always be a challenge of turf issues between and among government regulators. While competition law may give primary and exclusive mandates to competition agencies, sectoral regulatory agencies may include competition mandates in their charters. Sectoral regulators may have purview concerning pricing and other behaviors possibly creating confusion in the regulatory process and uncertainty for businesses.

Effective enforcement can also be used as a form of advocacy. Depending on how the competition law is written, a young competition agency often focuses on merger review, especially when this is compulsory. This can be supplemented by cartel cases that are relatively easy to prove. Advocacy can then focus on successfully prosecuting these low-hanging fruit. This in turn builds a culture of competition and helps build the expertise and resources of the young competition agency, allowing the agency to broaden its focus to include anticompetitive agreements, more difficult cartel enforcement, and abuse of dominance. Moreover, developing early on a competition

agency's capacity to deal with mergers and easy cartel cases, followed by the development of expertise on more complicated cases are mutually reinforcing.

Special interests with disproportional political power represent another challenge to competition agencies. When competition law was passed in the Philippines, vested interests attempted to dilute the law by raising the thresholds for review. Such political pressures strengthen the case for both agency vigilance and advocacy to build political support for pursuing the original objectives of competition law.

At times, government policy may itself be the source of anticompetitive practices. For example, the Bureau of Plant Industry in the Philippines issues import permits for onions to a few large importers (Panti 2023). This gives market power to the importers who may either own wholesale and retail outlets or form alliances with them. This allows traders to import at harvest time thereby using their monopsony power to depress farm gate prices. This situation can be avoided by replacing government control of imports with trade liberalization and tariffication. Nonetheless, trade liberalization leaves sanitary and phytosanitary regulations as potential instruments of protection. Accordingly, liberalization needs to be harmonized with a liberal and transparent process of food safety regulations.

Relatedly, implementing competitive neutrality is important. A level playing field should be afforded to private businesses and government-owned corporations. Divesting all commercial operations of the government should be assessed. It can be more efficient to leave importing and other operations with the private sector. They create more value, and they pay taxes. The business of the government is governance and regulation. Having a dual role of governance and commerce may serve special interests that can be detrimental to consumers.

Given the relatively recent adoption of competition law in many developing economies in Asia, several emerging issues and challenges lie ahead. One challenge regards the coordination of laws and policies. Even within ASEAN, countries are at different development levels; thus, state laws and policies may differ fundamentally. However, multinational corporations operate across borders. As such, merger cases and anticompetitive conduct involving multinational corporations require coordination among competition agencies. The case of Grab acquiring Uber went beyond the Philippines and extended to other Southeast Asian countries (ASEAN 2018; CCCS 2018; Ravago, Roumasset, and Balisacan 2022b). This prompted the Philippine Competition Commission (PCC) and the Competition and Consumer Commission of Singapore to sign a memorandum of understanding for cross-border cooperation (PCC

2021, CCCS 2021). While formal agreement among countries in Asia may take time, the need for information sharing reinforces the role that multilateral agencies like the Asian Development Bank (ADB) and the Asian Development Bank Institute (ADBI) can play in helping countries in Asia to improve and reorient competition policies for economic development.

Another challenge regards emerging technologies such as artificial intelligence (AI), including digital and cyber business models that go beyond borders. The technologies develop so rapidly that the rules, tools, and instruments available to competition agencies may need frequent updating.

The independence of a competition authority and its members is critical. An important lesson can be learned from the case of Thailand. The old Trade Competition Commission was a subsidiary division within the Ministry of Commerce, which made competition policy subservient to the objectives of industrial policy and vulnerable to rent-seeking (Thanitcul 2020; Nikomborirak 2005 and 2006; Ravago, Roumasset, and Balisacan 2022b). Thus, while competition policies need to be tailored to individual country characteristics and priorities, some general lessons can still be drawn from and about developing countries.

Competition agencies' engagement and partnership with the academe is essential. The academe has a role in reorienting competition policy and making it work for development. The disciplined exercise of evidence and reason is needed to help competition agencies understand complicated issues. For example, digital platforms assisted by AI present an upcoming challenge for developing countries. On the one hand, AI tools have the potential to serve as mechanisms for enhancing the ability of special interests to gain market power. But AI also has the potential to make large contributions to productivity growth. Developing countries, especially the small ones, face limitations in understanding and managing these issues, including regulatory reform. The discussion in Part III shows that new innovations will require new regulatory mechanisms. Competition authorities may be best positioned to fill this role.

Multilateral and development agencies like ADB and ADBI have roles to play in reorienting competition policy. Forums for sharing knowledge, experiences, and information that recognize the context, initial conditions, and realities in a developing economy are crucial to making competition work for economic development. While there are many competition policy forums, they are organized and hosted by big law firms and multinational businesses whose objectives may differ from the pursuit of the general welfare. While participating in these forums is also essential for the capacity building of young competition agencies

in a developing country, it may not be congruent with the priorities of developing economies. Multilateral and development agencies can play an active role in providing a venue for conversation and exchanging ideas for developing economies to have a deeper understanding of the role of competition policy in economic development. This was the motivation behind the Manila Forum on Competition in Developing Countries organized by the Philippine Competition Commission, which aims to introduce a fresh perspective on competition policy grounded on the experiences of and realities in developing countries (PCC n.d.). Such forums can serve as venues for sharing knowledge, information, and new research that advances understanding of complicated issues in the context of developing countries.

Another role for development and multilateral agencies is engaging with partner agencies regarding the anticompetitive effect of regulatory interventions. Investments by multilateral agencies in policy in competition policy, such as supporting forums for developing countries' capacity building, can be subjected to standard benefit-cost analysis. For example, ADB provided the Philippines with a loan of \$23.3 million to expand the PCC's capacity to promote greater competition. The loan is a first of its kind, demonstrating how lending by donor agencies can be used for capacity building for competition authorities (Valdez 2019).

1.5 Concluding Remarks

While the adoption of competition law has been associated with per capita income, globalization, market-oriented reforms, and governance levels, it has also been shaped by international pressure. Such laws were patterned mainly after those in the US and the European countries and inadequately tailored to individual country institutions, cultures, business practices, political economy, and development priorities. The remaining challenge in Asia is to adapt competition policy to country priorities, especially regarding productivity growth.

Competition policy in developing Asian economies can be made complementary to industrial policy by aligning it with the goals of innovation and productivity growth as opposed to competition for its own sake. In some cases complementarity is best exercised by allowing competition to decrease, e.g., when ruling on merger cases in markets with many small firms.

Competition policy is more effective where infrastructure and institutions help make economic agents more responsive to changes in economic incentives. How legal systems process information also differs according to levels of development and motivates different approaches to competition policy. While the focus in developed countries may

be turning toward distribution, priorities in developing economies place greater weight on growth, poverty reduction, and employment generation. Thus, competition policy must be tailored to a country's development agenda to deepen reforms for economic development. Crafting the ingredients of competition policy and its enforcement should not be taken in isolation but as part of the country's development agenda. For competition policy to succeed, it should be complementary with trade, industrial, and other economic policies.

Sectoral priorities also play a role inasmuch as departures from competition have disparate effects on poverty and are more egregious in some sectors than others. Indeed, counterfactual analysis shows that while adoption accelerated growth, non-adopting economies would have been worse off had they adopted competition policy (Ravago, Roumasset, and Balisacan 2022a). This augments the case for tailoring competition policy reform to individual needs.

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PART II

Competition Policy in Asia: Theory and Practice

2

Competition Policy in Theory and Practice^{*}

James Roumasset, Majah-Leah Ravago, and Arsenio Balisacan

2.1 Introduction

The purpose of competition policy is not merely to promote competition. If it were, government agencies would be forever at odds, pursuing different objectives. This may seem the natural order of things in the modern world of proliferating objectives, goals, targets, and milestones. Yet, there is only one overarching role of government. As enshrined, for example, in the Philippine and United States (US) constitutions, government exists to promote the common-good/general-welfare.

The potential benefits of competition are well known. Competition subjugates other objectives to the pursuit of profits, thereby “[allocating] productive resources to their most valued uses” (Smith 1776). Competition can also stimulate innovations in product quality, costs, and variety, further enhancing consumer welfare. However, these benefits are not guaranteed by an economy with many firms with small market shares. Inappropriate government policies and firm conduct can impair competition and hinder its role in economic development. Weak institutions and rent seeking by special interests may inhibit competition-enhancing reforms, restrict opportunities for innovation,

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and diminish consumer welfare. Accordingly, the purpose of competition policy is not to enhance competition *per se* but to promote welfare-enhancing competition. That is, competition is an instrument, not the ultimate goal.

Competition policy should be pursued in concert with agricultural, industrial, and trade policies to promote productivity growth. Rather than pursuing different goals and coordinating *ex post* to avoid conflict with one another, competition policy should be part of an overall economic strategy or plan wherein different agencies are doing their part along with other team members. We review these arguments, focusing on Asian economies. While the design and organization of competition authorities in Asia vary according to each country's historical and economic situation, we focus on the Republic of Korea, Thailand, and the Philippines to capture the characteristics of the competition law and authorities at various stages of maturity.

The next section outlines the role of competition in economic development and explains the need for competition policies to play a complementary role to other policy instruments. Section 2.3 describes the nature and causes of competition policy adoption and the need to tailor competition policy to an economy's level of development and other idiosyncratic characteristics. Section 2.4 describes a research agenda for learning about policy design from an explanation of patterns relating differences in competition policy to country characteristics.

2.2 Theory of Competition and Development

2.2.1 Competition Policy and the Promotion of Welfare

Two contrasting approaches to competition policy and regulatory policy generally are often characterized. The public interest perspective views regulation primarily as a mechanism for correcting monopolies and other market failures. It also admits other objectives, such as safety standards and fair treatment of small and medium-sized enterprises. The private-ordering view focuses exclusively on promoting general welfare through efficiency improvements. This is known as the consumer welfare standard as coined by Judge Robert Bork (1978), meaning aggregate consumer welfare. The private-ordering view largely follows the rational-actor paradigm in explaining market structure and conduct as well as the behavior of government regulators. Since market structure is endogenous, it does not necessarily have implications for firm conduct and market performance. Rather the causes of market structure and conduct need to be analyzed before drawing conclusions about market performance.

Broadly construed, regulatory policy promotes the general welfare by constructing an infrastructure of cooperation. This includes rules and standards of property and contracting, including competition policy, such that bilateral exchange leads to competitive markets. The fundamental theorem of welfare economics, a formalization of Adam Smith's *invisible-hand* proposition, states that, under ideal circumstances, competitive markets can eliminate waste and achieve economic efficiency. Ensuring freedom of entry and other preconditions for competition is thus an integral part of the infrastructure of cooperation.

Competition policy can potentially promote the general welfare through both behavioral and organizational means. Competition renders abusive behaviors (e.g., price-fixing) unprofitable. It also selects (through entry and exit) firms that reduce costs and improve product quality and variety. The infrastructure of economic cooperation also includes complementary functions where bilateral exchange is insufficient for efficiency. Thus, in the case of natural monopolies, public goods, and incomplete markets, the role of government extends to facilitating multi-agent cooperation, including market regulation and provision of public goods.

A primary means by which competition policy promotes welfare is by providing a countervailing force on behalf of consumers to combat the unequal power of producers.

In one of his most famous passages, Adam Smith (1776) notes: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices." Arrow (1969) alludes to a formalization of Smith's conspiracy theory when he states: "It is not the size of transaction costs but their bias that is important." That is, while people of the same trade can easily collude, it is much more difficult for consumers to form a coalition to block those efforts, such as by temporary boycotts. Indeed, regulation of potentially anticompetitive agreements, organizations, and behaviors can be viewed as an *administered contract* (Goldberg 1976) by the government on behalf of consumers to confer *countervailing power* (Galbraith 1952) on consumers. Specifically, the ideal regulator offsets the bias in bargaining power that threatens the ability of markets to deliver the promise of promoting public welfare (Balisacan 2019).

We regard the purpose of competition policy as *making markets work for economic development*. By combating collusion and rent seeking, competition policy facilitates the ability of bilateral exchange to efficiently promote the general welfare. By blocking anticompetitive agreements and behaviors among elite producers and providing an equal playing field for small and medium-sized enterprises, it promotes

vertical equity as well as efficiency. Competition policy also promotes horizontal equity since equality under the law includes freedom from price and other forms of commercial discrimination and equal opportunity to engage in economic exchange.

2.2.2 Competition and Economic Development

To the extent that Asian countries have borrowed competition policies from developed economies such as the US and those in Europe (Ravago, Roumasset, and Balisacan 2022a; McEwin and Chokesuwananaskul 2022), where static considerations have dominated discussions, Asian competition policy can benefit from understanding the role of government in the dynamics of growth and development, especially regarding specialization, innovation, and investment coordination. What does development economics tell us about said dynamics?

Economic development is economic growth modified by structural change. In particular, structural transformation is characterized by the decline of the share of agriculture in the economy, the growth and subsequent decline of the share of industry, and the growth of the services sector. On an efficient development path, productivity growth in agriculture stimulates industrialization via supply and demand linkages. Further productivity growth in agriculture combined with even faster growth in industry raises real wages and per capital incomes. Structural transformation is thus a symptom of growth and development. Productivity growth is its cause. Policies that stifle productivity growth may lead to the decline of industry at a relatively low share of the economy and stimulate premature growth in services. This kind of structural transformation, known as *development progeria*, may stifle growth instead of promoting it (Daway and Fabella 2015).

At the early stages of development, capital accumulation and innovation in agriculture barely surpass diminishing labor productivity from population pressure (Boserup 1965; 1981; Lucas 1993; Roumasset 2008). Even with modest growth of productivity relative to population, the relatively low-income elasticity of demand for food and the supply-side linkages of savings and low-cost labor eventually lead to the emergence of industrialization and to increasing shares of output and employment contributed by manufacturing (Jorgenson 1961).

Greater rates of specialization and capital formation, especially in manufacturing, spur faster productivity growth in the economy and provide a further impetus to wage growth. This process also increases the returns to human capital formation, lowering fertility and further contributing to the virtuous circle of rising productivity (Lucas 1993, 2001). Along with this transformation, manufactured products increase

as a proportion of exports, and both exports and imports grow relative to total production.

The fact that average productivity tends to be higher in industry than in agriculture does not imply that government policy should artificially promote the transition, such as by taxing agriculture and subsidizing import-substituting manufacturing through tariff protection (Bautista, Power, and Associates 1979). Productivity growth leads to structural transformation, not the other way around (Jorgenson 1961; Felipe and Estrada 2018).

In the final stage of structural transformation, the services sector modernizes and grows relative to industry. It is sometimes seen as an increasingly important source of growth and poverty alleviation “due to its complementarity with manufacturing, criticality in the global value chain, and rising tradability” (World Bank 2016). As Wallis and North (1986) have detailed, the modern services sector is largely composed of the transaction sector (especially transportation, communication, finance, and the digital economy). This facilitates specialization and the continued escalation of productivity. The size of the transaction sector grows even as unit transaction costs (e.g., transport cost per ton-kilometer) fall.

2.2.3 Specialization

Specialization is a key engine of growth. The falling costs of communication and transportation facilitate more and more transactions, more complex economic organization, and further specialization in the virtuous circle that grows the transactions sector (modern services). Horizontal and vertical specialization promote innovation and learning. To illustrate, think of the first rifle that was ever made. It would have been made by a blacksmith who created all the parts—lock, stock, and barrel. But as demand grew, artisans began horizontally specializing in different rifles, vertically specializing in parts, and later horizontally specializing in different parts. At first, the components had to be standardized. Specialization in intermediate goods (lock, stock and barrel) was limited by the size of the market (Stigler 1951). As demand grew further, specialized producers emerged for the differentiated components for Remington, Winchester, Colt, Smith-Wesson, and other brands.

For specialization to be only limited by the size of the market, vertical coordination (and its concomitant governance costs) must be increased, facilitated by ever-falling unit transaction costs. The increased total transaction costs are warranted by the greater value added from the external and internal economies and the improved fit of production with diverse preferences.

The problem for the economics of competition policy is that we lack a well-developed and operational paradigm to understand the effects of policy reforms on specialization, inasmuch as the required model would allow for the coevolution of markets and nonmarket governance institutions. The public-interest (i.e., market-failure) paradigm rests on static foundations without transaction costs. The private-ordering paradigm, on the other hand, allows for transaction costs but lacks the formalization that would make it operational. In the meantime, some flexibility in competition policy is needed, lest regulation restricts the evolution of efficient organizational forms.

Another example of the coexistence of markets and relationships is provided by the institution of parallel sourcing. Toyota is reported to have used only one supplier of each component for each of its models (i.e., one supplier of steering wheels for Corolla, another for Celica, and so on). Each is a monopolistic supplier to a particular model, but there is competition across models, so Toyota gets the best of both worlds. The use of one supplier improves the interfirm relationship, making it conducive to product quality, while competition motivates suppliers to specialize and innovate at reasonable costs (Richardson and Roumasset 1995). This case illustrates that competition need not displace intra- and interfirm relationships. Rather competition and firm relationships can be complementary.

While specialization is limited by transaction costs at any point in time, it can be increased by lowering unit transaction costs. Instead of total transaction costs falling as unit transaction costs fall, however, the opposite happens. As just discussed, the transactions sector grows with economic development due to the increasing complexity of economic organization. Competition policy for economic development, therefore, needs to facilitate competition without impairing the extra-market coordination needed for increased specialization. For example, the need for vertical coordination as specialization proceeds means that such benefits should be considered in vertical merger cases and vertical agreements.

2.2.4 Trade, Competition, and Industrial Policy

In the late 1980s and early 1990s, the predominant view of economic development policy, labeled the Washington Consensus (Williamson 1990), focused largely on static efficiency losses (e.g., Krueger, Schiff, and Valdez 1988, 1991–92). The philosophy was to reduce market distortions associated with taxes, subsidies, and barriers to domestic and international trade competition. In this view, economic regulation and other market interventions are only needed to correct externalities and guard against anticompetitive forces. This view subsequently lost

favor due to the mixed success of static-focused policy reforms and because incentives for enhancing investment and productivity were given short shrift (Rodrik 2006).

A more comprehensive view was provided by discussions of the *East Asian Miracle* (Roumasset 1992; World Bank 1993), in which investment coordination and productivity growth were key. The “miracle” countries succeeded by dramatically growing manufactured exports. Manufacturing provides almost limitless opportunities for both horizontal and vertical specialization, and specialization appropriates external economies from knowledge, learning and networks (Yang 2003). While industrialization has peaked in many developing economies, this was partially due to policy mistakes such that opportunities still remain (Daway and Fabella 2015).

One key to export promotion is lower tariff and non-tariff barriers to imports. These promote economic development via multiple channels, all involving increased competition and engagement with international markets. First, the gains from trade provide an immediate boost to levels of living. Second, removing import protection spurs industrial development, especially via manufactured exports, inasmuch as tariff protection discriminates against exports via an appreciated exchange rate (Power 1972). The concomitant specialization leads to further growth through learning-by-doing, network externalities, and outward-oriented innovation (Lucas 1993). A third mechanism lies in the ability of international competition to retard domestic rent-seeking (Oman 1996).

Another key to export promotion in the “miracle” countries was the selective assistance for domestically successful firms to transition to the export market, through such tools as subsidized credit, government certification of product quality and investment coordination. Competition and cooperation were intertwined in this channel. First, domestic competition provided a mechanism to select the most successful firms. Many of these successful firms then formed conglomerates, such as the *keiretsu* (interconnected groups of companies with strong business ties) in Japan and the *chaebol* (large family-owned conglomerates) in the Republic of Korea. These institutions facilitated cooperation between firms, banks, and governments in coordinating investments. This enabled firms to initially succeed in international competition and to sustain their success through innovation in product quality and production methods (Halberstam 1986; Roumasset 1992).

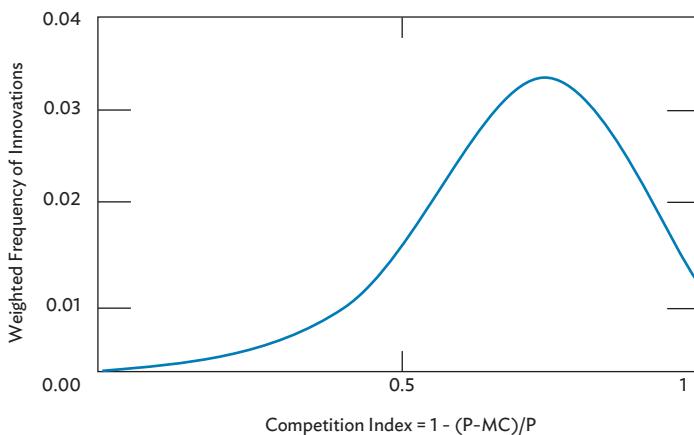
2.2.5 Innovation

Productivity growth is central to economic development, and innovation is a key factor in increasing productivity. How should competition policy be adapted to promote innovation? Schumpeter (1942) famously

proposed that too much price-lowering competition can destroy the competition that really matters—competition to develop new technologies, products, and organizational forms, and new sources of supply. This inverse relationship between innovation and competition was formally derived by Romer (1990), Grossman and Helpman (1991) and Aghion and Howitt (1992), but empirically rejected by Nickell (1996) and Blundell, Griffith, and van Reenen (1999), who found a positive relationship instead. This led Aghion et al. (2005) to synthesize the theory of an inverted U-shaped relationship between innovation and competition, which they confirmed using a panel of firms listed on the London Stock Exchange. The results are shown in Figure 2.1, wherein the maximum effect of competition, given by one minus the Lerner index, occurs at a price-cost margin of around 20%. The humped-shaped relationship between the research and development effort and competition is thought to be the result of opposing forces. On the one hand, firms have positively sloped reaction functions to the innovative efforts of competitors. On the other hand, at high levels of competition, this is overcome by falling individual returns to innovation (Acemoglu 2009).

Inasmuch as the Lerner index is typically greater than 0.2 in developing countries (e.g., World Bank 2018), more competition is likely to promote greater investment up to a point.

Figure 2.1: Competition Promotes Innovation up to a Point



Source: Adapted from Aghion et al. (2005).

Patent law may be seen as a device to incentivize innovation without conferring a surfeit of excess profits to producers. In effect, the innovator becomes a temporary monopolist over the innovation. The patent system has some disadvantages, however, notably restricting use of what is essentially a public good, imposing a rather arbitrary patent duration, and requiring disclosure of technical information that may have been costly for a firm to acquire (Konan et al. 1995).

Again we see that, while competition policy is a useful tool for promoting innovation, too much of a good thing can be counterproductive.

2.2.6 Investment Coordination

The most prominent growth externality involves interdependent investments (Stiglitz 1996). Suppose that a manufacturer and its supplier are considering an expansion such that a win-win outcome is realized if both parties invest. There is an *assurance problem* in that both players stand to lose if they invest but their counterpart does not. Inasmuch as static spot markets are not well suited to the dynamic coordination of investments, competition that disrupts efficient mechanisms of coordination may be welfare reducing. Relatedly, competition that undermines internal governance structures that facilitate coordination in the value chain may also be harmful. As a result, competition, in the absence of forward markets, needs to be supplemented by extra-market mechanisms.

One approach to the coordination of investments is to correct market signals by Pigouvian price adjustments, typically through tax incentives. This approach invites rent-seeking however, inasmuch as those special interests with the best lobbying efforts will tend to get the greatest tax breaks. The approach can also promote *Band-Aid economics*, the tendency to endlessly patch on and patch up new rounds of mandates, subsidies, and taxes.

The most promising approach to coordinating investments may be through economic cooperation. In the *keiretsu* and *chaebol* models followed by Japan and the Republic of Korea, for example, cooperative investment has been encouraged by means of conglomerates and deliberation councils (Lee and Naya 1988). While direct coordination through conglomerates and deliberation councils can internalize coordination externalities, they also risk encouraging rent-seeking. Competition policy can potentially curb these excesses without undermining the warranted coordination (Shin 2018). While there remains a risk that the competition authority can be captured by the very industries it is meant to regulate (Stigler 1971), this risk is mitigated by

the quasi-judicial nature of competition agencies and by the orientation of these authorities to general welfare instead of a particular industry.

By unequivocally banning conglomerates as being cartels, competition policy could potentially stifle investment coordination. How to balance the need to promote investment coordination with regulation is well illustrated by Kim Sang-jo when he was chairperson of the Republic of Korea's Fair Trade Commission. On the one hand, he was famously known as the *Chaebol Sniper* for his tough treatment. On the other hand, he declared that he “loves *chaebols*,” thereby illustrating his appreciation of their important economic function. The Republic of Korea case nicely illustrates the need for competition policy to curb the potential abuses of extra-market institutions but not going so far as to destroy their ability to promote welfare.

As anticipated by Adam Smith, the role of the state also includes the facilitation of public works, now known as *public goods*, such as transportation infrastructure and education. Public goods are non-rival in consumption, thereby conferring positive consumption externalities on non-providers. State facilitation of public goods also takes a variety of forms, including provision, procurement, and incentives (e.g., through vouchers or public-private partnerships). Since “government failure may be as important as market failure” (Besley and Ghatak 2006), competition policy also embodies regulation of the public sector, be it a public utility, a public procurement process, or a public agency providing private goods such as a grain-marketing parastatal.

In summary, focusing competition policy on economic development calls for greater orientation to the dynamics of investment, innovation, specialization and coordination. In addition to the need for the rule of law, especially market-friendly institutions for contracting, there must be balance between the coordination of interdependent investments and anticompetitive regulations that limit the scope for rent-seeking. A dynamic perspective puts more weight on productivity-enhancing innovations than squeezing out the last drop of excess profits. This will be enhanced by policies that improve free entry and by avoiding unnecessary protectionist efforts to keep existing businesses afloat.

We are left with a dilemma. On the one hand, the public interest (market failure) perspective is founded on a static equilibrium notion where there are no transaction costs and market structure is exogenous. On the other hand, while the private-ordering approach includes transaction costs, recognizes endogenous market structure, and is suitable for understanding sources of productivity growth with extra-market institutions, it has not been formally developed and is therefore not fully operational.

2.2.7 Pitfalls: Views from Public Choice and Transaction Cost Economics

The public choice school of economics seeks to *explain*, rather than *prescribe*, economic policy. In particular, the third-best level of analysis explains public policy as the noncooperative outcome of competition between opposing interest groups (Becker 1983; Balisacan and Roumasset 1987; Dixit 1999). From this perspective, economic regulation may lower public welfare via regulatory capture (Stigler 1971), according to which regulated industries tend to divert the actions of regulatory authority from their mission of consumer protection. In this view, a regulatory authority becomes a vehicle for producer collusion. Some authors contend that anticompetitive forces even shaped the original antitrust legislation in the United States (e.g., Boudreaux, DiLorenzo, and Parker 1995; Ekelund, McDonald, and Tollison 1995), i.e. that special interests influenced the legislation itself, as well as its implementation.

Politically motivated case selection can actually lower competition and welfare. Long, Schramm, and Tollison (1995) present evidence that preventing consumer welfare losses had little to do with the antitrust case selection in the United States. Nor does the advent of antitrust law necessarily decrease the number of mergers. Bittingmayer (1995) shows that the Sherman Act caused the Great Merger Wave in the United States, as firms substituted mergers for cartels, which, in turn, led to the Clayton Act. Moving to macroeconomic effects, Shughart and Tollison (1995) contend that antitrust enforcement harmed employment in the United States by actually raising prices and lowering output.

Before the heyday of transaction cost economics, it was widely presumed that the purpose of vertical mergers was to restrain trade. As Coase argues in his 1937 *Nature of the Firm*, however, firms will tend to acquire a supplier when what are now called the “agency costs” of internal governance are less than the contracting costs of dealing with the external firm. This efficiency rationale for vertical mergers became widely appreciated due to the *new institutional economics* (e.g., Williamson 1975, 1985, 2000), which clarified that contracting costs include the governance costs and residual losses associated with opportunistic behavior such as the “hold-up” problem. The efficiency rationale for vertical mergers is now widely recognized in the practice of competition policy.

These examples show that the single-minded pursuit of competition instead of consumer welfare can be counterproductive. Accordingly, modern competition policy seeks to understand the causes of mergers and other practices instead of assuming that all apparent deviations from competition are conspiracies against the public. Rather than basing

merger cases on market share, for example, econometric studies are sometimes done to determine whether market power will unacceptably raise prices.

The pursuit of competition where it is easiest to promote may also lead to welfare losses, in particular if the resulting competition draws resources away from a sector that is even less competitive, thereby increasing excess burden in that sector. To the extent that a competition authority passively responds to complaints and requests for approval, piecemeal reforms can easily miss the larger picture. This implies the need to actively review markets and find out where the distortions are greatest, including sectors with major state-owned enterprises.

Focusing on economic efficiency and sectoral priorities does not imply that all other functions of competition policy be ignored, however. In cases where there has been a clear violation of law, e.g., in cases of price fixing, bid rigging, and market sharing, the competition agency is obliged to provide complainants with justice under the law. Similarly, the agency is obligated to provide some level of review regarding merger cases.

Competition policy is best seen as an instrument for promoting economic welfare and development, not promoting competition as an end in itself. Given the complex nature of economic development and the transactions-sector growth needed to facilitate it, competition policy needs to be seen as one part of pro-market interventionism, whereby markets are both facilitated and complemented by extra-market institutions. The competition authority should play an active role beyond responding to complaints and requests for approval, particularly by conducting market and economy-wide reviews, including reviews that prioritize sectors needing reform and government monopolies. Competition policy should be complementary to other development and trade policies, providing an integrated reform package. In general, public policies should respect the Hippocratic maxim: first do no harm.

2.3 Competition Policy in Practice

The design of competition policy can also be informed by how it has worked in practice. A suitable paradigm pursues the nature, causes, and consequences of policy. Nature includes competition law, agency organization, procedures (e.g., priorities and case selection), and enforcement intensity. Causes includes an economy's legal traditions (e.g., civil or common law), international standards, and the influence of special interests. Measures of consequences could include indicators of competition and market power as well as the role of said indicators on measures of economic performance.

Adoption of competition policy has been found to be positively related to the level of economic development, the international milieu (especially the economic liberalization during and after the Reagan-Thatcher era), and economy peer effects (Ravago, Roumasset, and Balisacan 2022b).

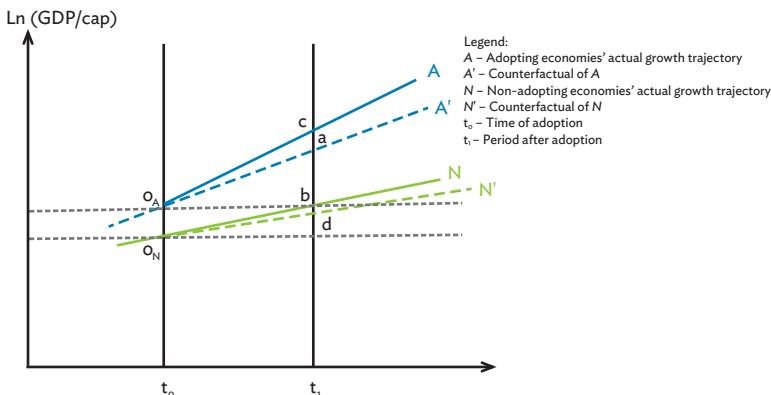
The literature on the role of competition policy in economic development is reviewed in Ravago, Roumasset, and Balisacan (2022b). There is a problem of reverse causality. We are interested in the effect of competition policy on measures of economic performance, say gross domestic product (GDP) growth, but GDP also influences a economy's propensity to adopt competition law. Borrell and Tolosa (2008) find that failing to account for this endogeneity overestimates the effect of competition policy on productivity by 18% and underestimates the role of other policies (especially trade openness) by 37%.

Buccirossi et al. (2013) created Competition Policy Indexes for 12 Organisation for Economic Co-operation and Development (OECD) countries using an instrumental variable approach to control for endogeneity. They found that competition policy had a positive and significant effect on total factor productivity growth.

Ravago, Roumasset, and Balisacan (2022b) use an endogenous switching model to estimate the effect of competition policy on economic growth. The results are illustrated in Figure 2.2. Adopting economies (A) grew faster than if they had not adopted (A'). But non-adopting economies (N) also grew faster than had they adopted (N'). On average, in other words, non-adopting economies were prudent in resisting adoption. (At the same time there may have been individual economies, possibly Hong Kong, China, where earlier adoption would have proved beneficial.) The result is strengthened once we add policy effectiveness to mere adoption.

The general inference is that competition should be tailored to the needs of individual economies, not copied *in toto* from developed economies such as the US and Europe. This leads to the important question of how competition policies can be appropriately fashioned to fit with an economy's level of development, sectoral composition, political and legal structure, and other factors.

Figure 2.2: The Effect of Competition Law Adoption on Per Capita Income



GDP/cap = gross domestic product per capita, \ln = in natural logarithm.

Source: Ravago, Roumasset, and Balisacan (2022b).

We can derive some insight into the prescription by documenting patterns regarding the nature of competition policy and its correlates regarding economy characteristics. Does the size of the authority budget grow faster or slower than GDP? Another hypothesis is that relatively new authorities must focus on investigation to get positive results and bolster their reputations. More established authorities may put more emphasis on competition advocacy so as to create a culture of competition both within companies and in the general public such that investigations are not as necessary.

More generally, does the emphasis on the four pillars of competition policy—cartels, mergers, abuses of market power, and competition advocacy—vary systematically across agencies, for example according to level of development. Relatedly, are there indications that resources and personnel are more effectively spent on some pillars than others? For example, it may be that resources spent on merger enforcement do not yield a high rate of return to relatively new authorities because of the complicated nature of those investigations. Some of these and other hypotheses will be explored further in Chapter 5.

2.4 The Nature of Competition Authorities in Asia

Another avenue of research involves exploring the nature of selected competition agencies. In particular is the competition authority subservient or largely constrained by other aspects of economic policy? Is it independent but in conflict with other agencies? Are lines of jurisdiction clear thus avoiding potential conflicts? Are there any authorities that pursue the same overall goal as other agencies and view themselves as primarily using different instruments for the same goal? We offer some brief comments about the authorities in the Philippines, the Republic of Korea, and Thailand to illustrate some of the questions to be pursued, including observations about enforcement intensity.

2.4.1 Philippines

The Philippine Competition Commission (PCC) was authorized in 2015 and became fully operational in 2018. During the interim, the PCC was involved in well-publicized telecom merger case that helped establish the young authority's reputation. It is a quasi-judicial body empowered to prohibit anticompetitive agreements and behaviors and review mergers and acquisitions that may lessen competition.

While the PCC has primary jurisdiction over all competition-related issues, it must consult sector regulators and allow them to submit opinions before the PCC makes its decision. The legal independence of the PCC can potentially be challenged, however, through budget cuts or through challenges via the Court of Appeals or the Supreme Court.

A more in-depth comparison of competition authorities in Asia is provided in Chapter 5.

2.4.2 Republic of Korea

Competition law was enacted in 1980 and the Korea Fair Trade Commission (KFTC) was created in 1981 as part of the sweeping reforms following the assassination of President Park Chung-hee in 1979 and the new government's attempt to correct and complement industrial policies including the abuses of the Chaebol system (Lee 2015). From 1987 to 1997, the competition law was refined and, with its additional enforcement mechanisms, is now regarded as one of the strongest in Asia. The KFTC has had notable success in building technical capacity, adapting procedures for timely enforcement, winning the trust of the public through competition advocacy, and securing its independence (Chang and Jung 2005). It has secured a number of convictions, notably of Choi Soon-Sil in 2017 for corruption during the Park administration.

The KFTC functions as an independent, quasi-judiciary body for the enforcement of competition policies. The KFTC secretariat supports the decision-making committee by conducting investigations and presenting case report. The KFTC also advocates on behalf of competition and consumers in other aspects of government policy making. It has said to have enhanced its reputation with the general public and other parts of government through consumer advocacy (Hur 2006).

2.4.3 Thailand

Thailand's Trade Competition Commission (TCC) was established in 1999. Despite the relatively high industry concentration¹ and receiving more than 100 complaints, the TCC did not punish a single violator (Thanitkul 2015; Nikomborirak 2005, 2006). The failure stemmed largely from the TCC's lack of independence; its chair, a politician, was also the Minister of Commerce. This lack of independence removes a potential check on rent-seeking, whereby political support is exchanged for the promotion of special interests (Lowi 1969; Olson and Zeckhasuer 1966).

A widespread recognition of the TCC's ineffectiveness led to Thailand's creating a new commission in 2017 that is independent of other parts of government in both operations and selection of commissioners (see also Ravago, Roumasset, and Balisacan 2022a, 2022b).

2.5 Conclusions

The engine of economic development and structural transformation is productivity growth spurred by specialization, innovation and investment coordination. These require extra-market institutions. For example, effective specialization requires deeper external governance (growth of the transactions sector) as well the growth of agency costs that are internal to the firm. In addition, investment coordination requires nonmarket mechanisms to solve the *assurance* (chicken and egg) problem. The challenge for competition policy is to curb anticompetitive agreements and behaviors without impinging on extra-market governance that complements markets and spurs productivity growth.

The theoretical foundations needed to inform competition policy are in need of further development. On the one-hand the public-interest

¹ The soap, detergent, vegetable oil, and instant noodle industries have about 8–15 firms, while the cement, beer, soda, and mirror and glass industries have about 2–6 firms each (Thanitkul 2015).

paradigm rests on an equilibrium construct with exogenous causes of market failure such as market structure and externalities. On the other hand, while the private-ordering view recognizes dynamics and the private governance arrangements that support specialization, investment coordination, and innovation, it lacks a modelling infrastructure that makes it operational.

Extending the private-ordering perspective to include coalition costs provides (ironically) a strong rational for competition policy beyond exogenous sources of market failure. Due to the bias in coalition costs, suppliers can easily “conspire against the public,” while consumers have a great difficulty in forming blocking coalitions. The purpose of competition agencies is therefore to act on behalf of consumers to exercise the missing countervailing power.

Augmenting the national income accounts to provide a better measure of aggregate consumer welfare would also help to orient efforts to revise competition and other policy instruments. The GDP can be revised to deduct natural, environmental, and produced capital, and defensive expenditures treated consistently with their contribution to *comprehensive national income* (Weitzman 2000; Roumasset et al. 2018).

We provide a preliminary exploration into the nature, causes, and consequences of competition policy. Competition policy adoption is associated with an economy’s level of development, the international milieu (especially regarding globalization), and pressure from international bodies and economy peers. A switching regression approach reveals that competition policy has increased economic growth, but that (on average) non-adopting economies were prudent to resist. Since the need to control rent-seeking is at least as important in lower-income economies, the implication is that competition policy needs to be tailored to level of development and other idiosyncratic economy characteristics. This in turn may require cross-economy coordination of competition policies, especially regarding the treatment of multinational corporations. As Rodrik (2020) observes international coordination need not involve policy uniformity.

Systematic variations in the nature of competition policies across economies may inform questions of design. The policies in the Republic of Korea, Thailand, and the Philippines illustrate characteristics at different maturity levels. The Republic of Korea’s commission is well established and strong. The young authority in the Philippines appears poised to become strong relative to its cohort. Despite its intermediate tenure, the old authority in Thailand was perceived to be weak, prompting the country to amend the law. The new authority has become an important part of Thailand’s economic environment.

How do competition policies vary across Asian economies? Does the relative emphasis on the four pillars of competition policy vary with an economy's level of development? For example, does competition advocacy consume a greater proportion of an authority's resources as it becomes more mature? How about the relative effectiveness of an authority's pursuits? It has been suggested, for example, that relatively young authorities and those with limited budgets have difficulty getting many results with merger cases because of the complex investigation needed for a successful resolution. These and similar question are explored in Chapter 6 along with possible explanations of the patterns.

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3

Diffusion and Adaptation of Competition Policy in Asia

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Tetsushi Sonobe, Yasuyuki Sawada, and Shintaro Ueda**

3.1 Introduction

After World War II, the number of competition law jurisdictions worldwide increased slowly until the 1980s and rapidly in the 1990s to date from about 30 to more than 130 (Voigt 2006; Cheng 2020). Most adopters in the recent few decades were developing economies. These observations seem natural for at least two reasons. First, it is well known in the literature on the diffusion of innovation that the cumulative rate of adoption, whether adoption concerns new ideas or products, is often represented by an S-shaped curve (e.g., Rogers 2003). Competition law and policy could be viewed as an innovation that took place in the United States before World War II. Second, after the Cold War ended in December 1989, many former socialist economies became transition economies in the early 1990s, and civil wars and other violent conflicts in Africa and Latin America considerably decreased in the 1990s and 2000s (Fukuyama 1992; Collier 2009). Thus, it can be viewed that the increase in the adoption rate of competition law and policy was a natural result of the rise in market economies and the increased need to promote and maintain market competition.

These views are not necessarily satisfactory, however. The S-shaped curve theory is not able to explain the timings of adoption by individual economies. It explains an overall tendency but not individual cases. The end of the planned economy and the arrival of peace are not able to

* The views expressed here are those of the authors and do not necessarily represent those of the Japan Fair Trade Commission.

explain why many peaceful and market-oriented developing economies did not adopt competition laws and policies earlier but only around the same time as newcomers. Even though their delays may be attributable to idiosyncratic reasons, there may also be a common reason that has not been articulated clearly or supported by data.

This chapter provides additional and common reasons why many developing economies adopted competition laws and policies in the 1990s and thereafter. It takes an Asian perspective but uses worldwide cross-economy panel data. Following ADB (2020) in our definition, Asia includes some former Soviet Union countries, such as Kazakhstan, and unitary socialist states with a market-oriented economy such as Viet Nam, as well as democratic states such as the Philippines. Competition law was adopted by Kazakhstan in 2008, Viet Nam in 2004, and the Philippines in 2015 (OECD 2016; Ravago, Roumasset, and Balisacan 2021). Asia also includes the People's Republic of China (PRC) and India, the two most populous developing countries in the world, which adopted competition law in 2007 and 1969, respectively. These individual country cases seem to suggest that both common and idiosyncratic factors induced adoption to occur in 1 to 2 decades in random order.

This chapter reviews the history of the diffusion of competition law and policy in Asia, where many adopters have been active participants in the global value chains and recipients of growing foreign direct investment. It hypothesizes that their adoption was intended to get the full benefit from the new phase of globalization characterized by a rapid increase in offshore production. We also hypothesize that the adoption and adaptation of competition policies have been triggered by financial crises and resulting market-oriented reforms. These hypotheses are tested with global cross-economy panel data using a regression analysis that identifies those explanatory variables that represent common reasons for adoption and adaptation, as opposed to idiosyncratic reasons. Consistent with the hypotheses, we find that the adoption and adaptation of competition policy have been inextricably linked with globalization in a broad sense.

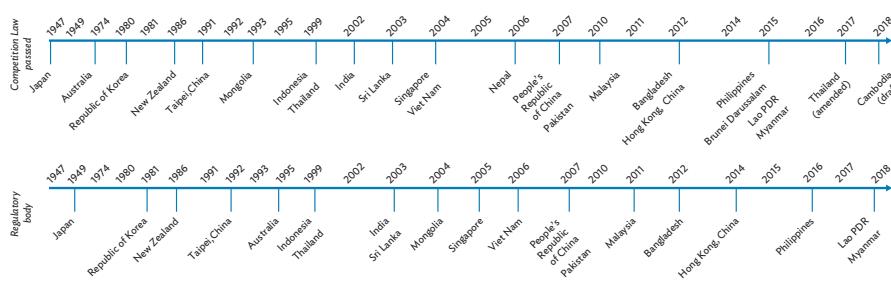
The chapter is organized as follows. The next section reviews the history of the enactment of competition law in Asia and advances some hypotheses. Section 3.3 explains the empirical strategy and describes econometric models and data, followed by Section 3.4, which discusses the regression results. Section 3.5 provides concluding remarks.

3.2 Historical Background and Our Hypotheses

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 United States' (US) occupation. The process included land reform and the break-up of zaibatsu (oligarchic corporate groups dominating the prewar economy in Japan, each of which consisted of a parent company, invested in by a family, and its subsidiaries with considerable market power in various industries). At the time, Japan was the third country, only to Canada and the United States, to have comprehensive competition law that includes regulation on cartels, mergers, and unilateral conduct.

Laws regulating anticompetitive practices have been enacted since the late 1960s following the original introduction of competition law in Japan. Similar laws were introduced in India in 1969, Pakistan in 1970, the Republic of Korea in 1975, Thailand in 1979, and Sri Lanka in 1987. However, many of these economies that introduced competition laws between the 1970s and 1980s often included provisions for excessive interventions in business activities and price controls to regulate conglomerates such as chaebols, the counterparts of Japan's zaibatsu in the Republic of Korea. In some of these economies, revisions to laws took place in the 1980s that either abolished the excessive control and regulations or provided only the anti-monopolistic type of regulations. The next adopters of the revised laws in Asia were two of the four Asian newly industrialized economies, the Republic of Korea which enacted the Monopoly Regulation and Fair Trade Act in 1980 and Taipei, China which passed the Fair Trade Act in 1991. In the Pacific, Australia introduced competition laws in 1974, while New Zealand introduced laws in 1986 (Figure 3.1).

This sequence of adoption in Asia is consistent with the hypothesis that the diffusion of competition policy was driven by the development of a market economy and the influence of the US, the pioneer of competition law. To capture the development of a market economy, Ravago, Roumasset, and Balisacan (2021) use gross domestic product (GDP) per capita together with indicators of economic freedom and regulatory quality as explanatory variables in their regression equation explaining whether an economy has already enacted competition law. To capture the US influence, they use an indicator of political freedom as well as that of economic freedom. They find that the logarithm of GDP per capita has a highly significant coefficient, even though the coefficients on the indicators of freedom and regulatory quality are statistically insignificant.

Figure 3.1: Timeline of Enactment of Competition Law in Asia

Lao PDR = Lao People's Democratic Republic.

Notes: Southeast Asia: nine economies with competition law, one with draft (Cambodia), one with no competition law (Timor-Leste); East Asia: six economies with competition law, one with no competition law (Democratic People's Republic of Korea); South Asia: five with competition law, one with draft (Afghanistan), one with competition policy (Bhutan); one with no competition law (Maldives).

Source: Ravago, Roumasset, and Balisacan (2021).

From the mid-1980s, discussion and negotiation on international trade and investment became intense in various forums, such as the General Agreement on Tariffs and Trade (GATT) Uruguay Round, for promoting free trade. This trend culminated in the commencement of the World Trade Organization (WTO) in January 1995. Many Asian economies joined the WTO immediately including Bangladesh; Brunei Darussalam; Hong Kong, China; India; Indonesia; Japan; the Republic of Korea; Malaysia; Pakistan; Philippines; Singapore; and Thailand, and some other Asian economies such as Cambodia; the PRC; Taipei, China; and Viet Nam joined later.¹ At the same time, the importance of competition policy was increasingly widely recognized, as reflected by the fact that more than 20 economies globally introduced competition laws between 1989 and 1994 as shown in Voigt (2006).

In our view, the increased globalization and the rapid diffusion of competition policy did not occur independently, but they are closely related to each other. As Baldwin (2016) argues, globalization in the 1990s and onward was not new, but it was globalization's second acceleration, which was caused by both the end of the Cold War and the rapid development of information and communication technology. These two causes significantly expanded the scale of international trade and capital flow while reducing the cost of communication drastically, thereby greatly lowering the cost or difficulty of offshore production

¹ See the list of WTO members available on the WTO website. https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm

in the form of foreign direct investment or global value chains, or both. Baldwin (2016) christened these changes the “Second Unbundling.”

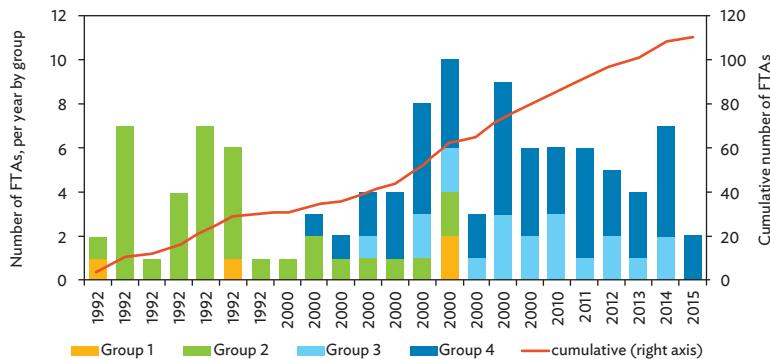
Although Baldwin (2016) does not mention it, the Second Unbundling has essential and obvious implications for the need for competition law and policy. Consider a number of producers or vendors in a developing economy assembling final products or producing intermediate inputs for a global buyer headquartered in a developed economy. The global value chain will fail to grow if developing economy producers are merged by a small number of tycoons into highly concentrated markets, which means higher prices and also makes cartels easier to execute. The government of the developed economy might have incentives to put pressure on the developing economy government to introduce a competition policy and to provide technical assistance to the latter for the development of competition policy including the enactment of competition law. In East Asia and Southeast Asia, regional value chains play equally important roles in economic growth as global value chains. Thus, similar concerns about disruption due to market concentration in procurement markets are likely to exist within this region. In other words, there could be pressure from other developing economies as well as developed economies. Moreover, developing economies might have another incentive to introduce a competition policy because they are interested in protecting domestic consumers from monopolization of domestic markets by foreign firms.

As is well known, increased globalization was associated with the proliferation of free trade agreements (FTAs) and economic partnership agreements (EPAs). Consistent with the above arguments, both FTAs and EPAs, whether bilateral or multilateral, have competition chapters to deal with anticompetitive activities in accordance with relevant laws to promote trade and investment, which would facilitate competition legislation and competition institution building.

As can be seen from Figure 3.2, the first Asian FTAs that surged in the 1990s were mostly traditional ones with only border policies. They primarily focused on trade in goods and centered on tariffs and other border measures that directly affected market access. The continued reduction of trade barriers in some parts of Asia through the GATT/WTO and FTAs made particularly East Asia and Southeast Asia even more attractive to foreign investment. In the last decade, the newly agreed FTAs basically contained multiple behind-the-border policies including competition policies and other regulatory frameworks. This trend accelerated especially after the PRC’s accession to the WTO in 2001. According to the WTO’s Working Group on the Interaction between Trade and Competition Policy (WGTCP), the WTO has been influencing the adoption of competition laws of its members. Chronologically, the WGTCP was established after the Ministerial Conference in Singapore

of 1996. Under the Doha Ministerial Declaration in 2001, the WGTCP has focused on competition issues such as core principles, including transparency, nondiscrimination, and procedural fairness; provisions on hardcore cartels; modalities for voluntary cooperation; and support for progressive reinforcement of competition institutions in developing economies through capacity building (WTO 2023).

Figure 3.2: Content of Free Trade Agreements in Asia, 1992–2015



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.

Note: Border policies cover tariff reductions in manufacturing and agriculture, anti-dumping, countervailing measures, Agreement on Trade-Related Investment Measures, Agreement on Trade-Related Aspects of Intellectual Property Rights, customs, export taxes, sanitary and phytosanitary measures, technical barriers to trade, and the movement of capital. Behind-the-border policies cover state enterprises, state aid, competition policy, intellectual property rights, investment, public procurement, and the General Agreement on Trade in Services. The categorization of border and behind-the-border policies is based on the methodology of Hofmann, Osnago, and Ruta (2017).

Source: Compiled by ADB (2020) from World Bank. Content of Deep Trade Agreements. <https://datacatalog.worldbank.org/dataset/content-deep-trade-agreements> (accessed 4 June 2019).

Moreover, the competition chapters in FTAs and EPAs also have provisions on international cooperation, sometimes including cooperation for capacity building and technical assistance concerning competition law and policies. Table 3.1 lists the bilateral/multilateral trade agreements concluded by Japan that had a competition chapter.

Although not shown in Table 3.1, Japan started technical assistance to the competition agencies of developing economies in the 1990s.

Table 3.1: Trade Agreements with Competition Chapter Concluded by Japan

	Economy/Region	Signature Date	Effective Date
1	Singapore	Jan 2002	Nov 2002
2	Mexico	Sep 2004	Apr 2005
3	Malaysia	Dec 2005	Jul 2006
4	Philippines	Sep 2006	Dec 2008
5	Chile	Mar 2007	Sep 2007
6	Thailand	Apr 2007	Nov 2007
7	Indonesia	Aug 2007	Jul 2008
8	ASEAN	Apr 2008	Jul 2008
9	Viet Nam	Dec 2008	Oct 2009
10	Switzerland	Feb 2009	Sep 2009
11	India	Feb 2011	Aug 2011
12	Peru	May 2011	Mar 2012
13	Australia	Jul 2014	Jan 2015
14	Mongolia	Feb 2015	Jun 2016
15	TPP11	Feb 2016 Mar 2018	Mar 2018
16	European Union	Jul 2018	Feb 2019
17	United Kingdom	Oct 2020	Jan 2021
18	RCEP	Nov 2020	Jan 2022

ASEAN = Association of Southeast Asian Nations, RCEP = Regional Comprehensive Economic Partnership, TPP = Trans-Pacific Partnership.

Sources: The Japan Fair Trade Commission homepage and Japan's Ministry of Foreign Affairs homepage.

For example, the Japan Fair Trade Commission (JFTC) began a group training course in 1994, focusing on competition law and policy, enforcement techniques etc., for developing countries worldwide. As of fiscal year 2022, the JFTC also provides bilateral technical assistance for Viet Nam, Mongolia, Malaysia, and Thailand through the framework provided by the Japan International Cooperation Agency² and technical assistance under the Japan–ASEAN Integration Fund.³

² See JFTC Annual Report FY2022 (https://www.jftc.go.jp/en/about_jftc/annual_reports/2022.html)

³ See <https://jaif.asean.org/project-brief/technical-assistance-for-asean-competition-authorities-to-strengthen-competition-law-enforcement-in-asean-region-second-phase/>

At both regional and global levels, multilateral international cooperation to promote competition policy in developing economies began in the 1990s. The Asia-Pacific Economic Cooperation (APEC) forum discussed at the 1994 Ministerial Meeting how to promote understanding of competition issues and study how competition law and policy influence the trade and investment flow in the region. Its workshops on competition policy started in 1995. The Competition Policy and Deregulation Group was organized in 1996 under the APEC Committee on Trade and Investment. The group was moved to the Economic Committee in 2007 and renamed the Competition Policy and Law Group.⁴ Similarly, other competition agencies of developed economies, the Organisation for Economic Co-operation and Development (OECD), and the United Nations Conference on Trade and Development (UNCTAD) considerably provided technical assistance for introducing competition laws and policies to developing economies.

In response, many developing economies in the region enacted competition laws and established competition agencies (Figure 3.1). While some Association of Southeast Asian Nations (ASEAN) economies had specific competition-related regulations (e.g., the Philippines), the introduction of competition law and institutions has yet to prevail in the mid-1990s. In 1997, however, the Asian financial crisis hit Asian economies, particularly severely in Indonesia, the Republic of Korea, Malaysia, and Thailand. In response, these badly affected economies tried to stabilize their economies using varying approaches. Indonesia, the Republic of Korea, and Thailand opted for International Monetary Fund (IMF) programs supported by bilateral and multilateral partners including the Asian Development Bank, which were tied to conditions such as raising interest rates and cutting government spending. Malaysia, in contrast, under the leadership of Prime Minister Mahathir Mohamad, decided not to go to the IMF for help and instead resorted to capital controls and a pegged exchange rate (ADB 2020). Under the IMF program, Indonesia and Thailand were required to undertake economic reforms that resulted in the introduction of competition laws in 1999.⁵ Particularly for Indonesia, to receive emergency support during

⁴ For details, see the homepages of Japan's Ministry of Foreign Affairs and the Competition Policy and Law Group: <https://www.mofa.go.jp/mofaj/gaiko/apec/soshiki/cplg.html>; <https://www.apec.org/Groups/Economic-Committee/Competition-Policy-and-Law-Group>

⁵ While Indonesia established an independent competition authority quite soon, Thailand had long been under the influence of the trade ministry and did not establish an independent competition authority (Trade Competition Commission) until recently. Such differences may have an influence on the activeness of competition law regulation and enforcement.

the financial crisis, the country exchanged a signed letter with the IMF to hasten the enactment of the competition law. That letter played a significant role for Indonesia in introducing the competition law. Indeed, the letter of intent between the Indonesian government and the IMF and the Memorandum of Economic and Financial Policies by the Indonesian government dated 29 July 1998 stated that the government will present the Bill on Business Competition no later than the end of December 1998 (Maarif 2001). Particularly, the letter of intent played a major role in accelerating the formulation of the Draft of Business Competition Law, which was enacted as Law No. 5 of 1999 concerning the Monopolistic Practices Prohibition and Unfair Business Competition (Maarif 2001). In sum, the 1997 economic crisis gave a new life to the development of business competition law in Indonesia (Maarif 2001).

The Republic of Korea encountered the financial crisis of 1997–1998 triggered by substantial depreciation of its currency at the end of 1997 after which the government opted for IMF programs supported by bilateral and multilateral partners including ADB. Under pressure from the IMF, the government amended the Monopoly Regulations and Fair Trade Act in 1998 and 1999 to facilitate economic and corporate restructuring and set robust competition environment (Jung and Chang 2006).

This possible channel of enacting competition law, triggered by an economic crisis, may be seen as a “natural experiment” caused by the unexpected crisis. While the conduct of macroeconomic policy has been heterogeneous across different economies of Asia, there was little doubt that by and large, governments in the region were able to successfully manage their economies even during several difficult decades (Stiglitz 1996). For example, despite the advent of the Latin American debt crisis in the 1980s and European currency crises in the 1990s, the frequency of economic crises in Asia had been under control since the early 1980s until the Asian financial crisis in the late 1990s as Reinhart and Reinhart (2015) show clearly in their Figure 3. Hence, the Asian financial crisis can be regarded as an unusual event in the history of Asia and the world.

The Asian financial crisis precipitated a series of comprehensive reforms within the region, characterized by the adoption and adaptation of competition policies. Consequently, while competition policy found its place within bilateral trade agreements, a substantial proportion of these accords primarily pertained to intraregional dynamics, exemplifying the internal impetus within Asia to cultivate more efficacious markets. It is noteworthy that this momentum was not invariably instigated by external coercion emanating from developed

economies. For instance, Japan's trade agreements, as elucidated in Table 3.1, remained predominantly oriented toward the Asian sphere until the advent of the Trans-Pacific Partnership (TPP11) in 2016 and the agreement with the European Union in 2018. Therefore, the nexus between the Asian financial crisis and the trajectory of trade agreements is indelibly interwoven, illustrating the profound influence of the former on the evolution of the latter.

In the 2000s, the PRC and India as well as a few ASEAN economies such as Viet Nam and Singapore enacted competition laws and established competition authorities, as mentioned earlier. In 2007, ASEAN agreed to establish the ASEAN Community and adopted the ASEAN Economic Community Blueprint to create a level playing field, which made the member countries commit to introducing national competition policies and laws by 2015. This spurred the enactment of competition law in Malaysia (2010), the Philippines (2015), Brunei Darussalam (2015), Myanmar (2015), the Lao People's Democratic Republic (2015), and finally in Cambodia (2021). In addition, Thailand and Viet Nam made revisions to their law to enhance their effectiveness in 2017 and 2018, respectively.

Major international forums for helping these new competition law jurisdictions include the OECD (Annual Global Forum on Competition started in October 2001), the International Competition Network, established in October 2001, the UNCTAD Expert Meeting on Competition Policy held in Geneva in 1997, and the Intergovernmental Group of Experts on Competition Law and Policy held annually since 1998.⁶ UNCTAD had a voluntary peer review with Indonesia in 2009, Mongolia in 2012, Pakistan in 2013, the Philippines in 2014, and Bangladesh in 2022. In August 2007, the ASEAN Economic Ministers endorsed the establishment of the ASEAN Experts Group on Competition as a regional forum to discuss and cooperate on competition policy and law, and has provided technical assistance in cooperation with the support of various development partners, especially Australia, New Zealand, Germany, and Japan through programs such as the ASEAN–Australia–New Zealand Free Trade Agreement Economic Cooperation Support Programme – Competition Law Implementation Programme since 2010, the ASEAN–German Competition Policy and Law in ASEAN Programme since 2010, and Technical Assistance for ASEAN Competition Authorities to strengthen Competition Law Enforcement in ASEAN since 2016. ASEAN also works with multilateral organizations such as the OECD and UNCTAD to promote competition policy in the region.

⁶ For details, see <https://unctad.org/meetings-search?f%5b0%5d=product%3A1453>

At the regional level, the JFTC initiated the East Asia top level officials' annual meetings in collaboration with the Asian Development Bank Institute (ADBI) in 2004. The OECD's Korea Policy Centre's Competition Programme started in May 2004 and has worked with competition authorities in the Asia and Pacific region to develop and implement effective competition laws and policies. In these forums, information and experience on competition policy were shared among regional stakeholders.

More recently, cooperation memorandums and arrangements including technical assistance provisions have been concluded between competition agencies. Table 3.2 lists the interagency cooperation memorandums and arrangements concluded by the JFTC. Similarly, the ASEAN Competition Action Plan 2016–2025 was drafted recently to further strengthen competition law and policy as well as promote regional cooperation.⁷

Table 3.2: Interagency Cooperation Memorandums and/or Arrangements including Technical Assistance Provisions Concluded by Japan Fair Trade Commission

Country	Counterpart Agency	Signature Date
Philippines	Department of Justice of the Republic of the Philippines	Aug 2013
Viet Nam	Competition Authority of the Socialist Republic of Vietnam	Aug 2013
Brazil	Administrative Council for Economic Defense (CADE)	Apr 2014
Korea, Republic of	Korea Fair Trade Commission	Jul 2014
Australia	Australian Competition and Consumer Commission	Apr 2015
Kenya	Competition Authority of Kenya	Jun 2016
Mongolia	Authority for Fair Competition and Consumer Protection	Mar 2017
Canada	Competition Bureau	May 2017
Singapore	Competition Commission of Singapore	Jun 2017
China, People's Republic of	State Administration of Market Regulation	Jun 2019
India	Competition Commission of India	Aug 2021

Source: Japan Fair Trade Commission website.

⁷ See <https://www.asean-competition.org/about-aegc-asean-competition-action-plan-acap-2016-2025>

In view of the proliferation of FTAs and EPAs along with globalization's Second Unbundling, together with their competition chapter and technical assistance provisions, it is natural to hypothesize that the increase in the adoption of competition policy was inextricably linked with the growing globalization in the 1990s and subsequent period.

3.3 Empirical Strategy and Data

This section describes the empirical procedure to test our hypotheses: The observed increases in the adoption of competition policy especially among emerging economies have been closely linked with the growing globalization and the economic crises during the recent period. The first hypothesis considers Asian economies that have obtained their membership of GATT/WTO, embracing the global trade liberalization regime since the initiation of GATT in 1948 and WTO in 1995. We test the impact of GATT/WTO accession on the adoption of competition policy. The second hypothesis places its focus on the role of post-financial crisis policy reforms in introducing competition laws and policies. In testing these two hypotheses, we also investigate the role of domestic governance in adopting competition policy. We also analyze both the adoption of competition law and the adaptation of competition policies.

3.3.1 Econometric Models

As the empirical framework, we postulate the following regression model:

$$D_{it} = Z_{it} \beta + u_{it}, \quad (1)$$

where D_{it} is an indicator variable that takes one if an economy i adopts or adapts a competition law at time t , and zero otherwise, Z_{it} is a set of covariates including economy and year fixed effects, and u_{it} is a well-behaved error term.

In examining the adoption of competition policies, the dependent variable, D_{it} , is quantified by two variables: First, "Law" which is an indicator variable that takes one when a competition law was in place for that given economy-year, and zero otherwise; and second, "Fine" that takes one if the competition law provides for fines violating the law, and zero otherwise. In other words, the former variable captures the

statutory status whereas the latter captures its ability to impose effective sanctions. As for the adaptation of competition policies, we employ the “Budget Size” of each economy’s competition agency as a dependent variable.

There are three main independent variables: The first one is “ WTO_{it} ”, which takes one if economy i is a member of GATT/WTO in year t , and zero otherwise. We also include 3-year leads and lags of the WTO variable so that we can capture preparation and time lag in adopting competition policies. Second, we include an indicator variable, “ $CRISIS_{it}$ ”, which takes one if an economy is hit by, at least, one of the six crises, i.e., a banking crisis, an exchange rate crisis, a stock market crisis, an excessive sovereign debt growth, or a default of debt repayments. For our analysis, we employ six data sources of economic crisis as described in the following section. Third, as part of determinants of adoption and adaptation of competition law, Z_{it} , we include aggregated governance level of each economy, “ WGI_{it} .”

3.3.2 Data

As for data, we construct cross-economy panel datasets, combining multiple data sources. First, on overall competition law characteristics, we employ Comparative Competition Law (CCL) data which cover the years from 1850 to 2010 originally from which we use a subset after 1945, depending on the economy (Bradford, et al. 2019). The data were amended by Ravago Roumasset, and Balisacan (2021), covering the period between 1947 and 2018 for Asia. The data on budget size were obtained from the dataset constructed by the Global Competition Review (GCR).

The governance variables are taken from the Worldwide Governance Indicators (WGI) project database which reports aggregate and individual governance indicators for over 200 economies and territories over the period 1996–2021 for six dimensions of governance: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. These aggregate indicators combine the views of a large number of enterprise, citizen, and expert survey respondents in industrial and developing economies. They are based on over 30 individual data sources produced by a variety of survey institutes, think tanks, nongovernment organizations, international organizations, and private sector firms (Kaufmann, Kraay, and Mastruzzi 2010). We constructed our governance variable, “ WGI_{it} ,” by taking a simple average of governance sub-indicators.

Data on economic crises have been taken from the global crises data⁸ constructed by Carmen Reinhart with her coauthors Kenneth Rogoff, Christoph Trebesch, and Vincent Reinhart. These include cross-economy panel data on banking crises, exchange rate crises, stock market crises, sovereign debt growth, and default. For our analysis, we employ six data sources of economic crisis. First, an indicator variable on the banking crisis variable which takes one if the following event arises: (i) bank runs that lead to the closure, merging, or takeover by the public sector of one or more financial institutions; or (ii) if there are no runs, the closure, merging, takeover, or large-scale government assistance of an important financial institution (or group of institutions) that marks the start of a string of similar outcomes for other financial institutions. Second, an indicator variable of systemic crises which takes one when either (i) an economy's banking system exhibits significant losses resulting in a share of nonperforming loans above 20% or bank closures of at least 20% of banking system assets or (ii) fiscal restructuring costs of the banking sector are sufficiently high, exceeding 5% of the GDP. Third, external debt crises involve outright default on the payment of debt obligations incurred under foreign legal jurisdiction, including nonpayment, repudiation, or debt restructuring into terms less favorable to the lender than in the original contract. Fourth, a currency crisis is defined as a situation where annual depreciations exceed the threshold of 15% per annum. Fifth, an inflation crisis is defined using a threshold of 20% per annum. Sixth, hyperinflation is defined as episodes where the annual inflation rate exceeds 500%. Based on these six sources of different crises, a crisis is defined as a situation where at least one out of the six crises happens.

Other macroeconomic variables are taken from Penn World Tables (Feenstra et al. 2015) as well as World Development Indicators of the World Bank. Table A3.1 in the Appendix shows definitions and summary statistics of the variables used in this study. The working sample for the analysis of competition law and fines with or without the economic crisis and governance variables is an unbalanced panel of 189 economies over the span of 1950 to 2020 (Table A3.2, Appendix). As for the regression analysis of budget size of competition agencies, we need to confine our unbalanced panel data set to that of 43 economies covering the period from 2005 to 2020 (Table A3.3, Appendix).

⁸ See <https://www.hbs.edu/behavioral-finance-and-financial-stability/data/Pages/global.aspx>

3.4 Empirical Results

Table 3.3 shows the estimation results of empirical equation (1) for the adoption of competition law in which we include leads and lags of crisis and WTO/GATT accession as the main independent variables. Few important empirical findings emerge. First, the estimated coefficient on the 3-year lead of the GATT/WTO variable, WTO_{it+3} , is positive and statistically significant both for “Law” (i.e., an indicator variable for a competition law) and “Fine” (i.e., the competition law specifying fines for violating the law) in all the specifications. This means that 3 years before accession to GATT/WTO, an economy has a higher probability of enacting and implementing competition law. We believe this strongly supports our hypothesis of the globalization and competition policy nexus. Second, per capita GDP has positive and significant coefficients on most of the specifications, indicating that economic development, usually accompanying structural transformation to nonfarm sectors, induces an economy to adopt competition law. Indeed, the share of the service sector in GDP has positive and statistically significant coefficients in Specifications (3) and (9), suggesting that the expansion of services in each economy facilitates adoption of competition policies.

In Table 3.4, we report estimation results of the encompassing specification for the adoption of competition law with leads and lags of crisis and WTO/GATT accession as well as. First, the lead WTO variable continued to be positive and statistically significant, supporting the hypothesis of the institutional globalization leading to the enactment of competition law. Second, we observe that the contemporaneous and 3-year lag of the CRISIS variable is statistically significant in Specification (1), (2), and (3). This is consistent with our hypothesis that a financial crisis may induce the crisis-hit economy to adopt competition law as part of post-crisis, market-oriented economic reform, although its robustness may not necessarily be warranted because in the Specifications (4), (5), and (6), with economy fixed effects, its statistical significance disappear. Third, as for the average governance indices, “WGI,” the quality of contemporaneous governance plays a key role in adopting competition law. In contrast, its 2- and 3- year lag variables have a negative and statistically significant coefficient. This may represent substitutability between de jure regulation of fair competition and de facto governance levels suggesting that having good governance may delay adoption of a statutory framework. Finally, as before, per capita GDP has positive and significant coefficients, respectively, in Specifications (2) and (5). These results imply that economic and market development might have incentivized an economy to adopt competition law.

Table 3.3: Effect of Participation in GATT/WTO on Competition Policy

Variables	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law
WTO _{t+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 _{t+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 _{t+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*** (0.0323)	0.103*** (0.0302)	0.0670** (0.0297)	0.0734** (0.0316)	0.0639** (0.0310)												
WTO _t	0.0250* (0.0133)	0.0244* (0.0127)	0.0289* (0.0143)	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 _{t-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)	0.0053 (0.0113)												
WTO _{t-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 (0.00855)												
WTO _{t-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)	0.000601*** (0.000386)	0.000608*** (0.000331)	0.0135*** (0.000386)	0.0121*** (0.000331)	0.00121*** (0.000331)	0.000694*** (0.000241)	0.00071*** (0.000241)	0.00071*** (0.000241)												
Services GDP share		0.00378** (0.00167)			-0.00201 (0.00158)		0.00315* (0.00151)		0.00315* (0.00151)		-0.000549 (0.00153)													

continued on next page

Table 3.3 continued

Variables	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Fine											
Industrial GDP share		-1.60e-05 (0.00172)											-0.00134 (0.00168)										-0.00248* (0.00148)	
Per capita GDP		0.00775*** (0.00188)											0.000620 (0.00142)										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)	-0.200*** (0.0371)	-0.214*** (0.0549)	0.152*** (0.0512)	0.0959* (0.0512)	0.0901* (0.0333)	0.0901* (0.0333)	-0.191*** (0.0333)	-0.204*** (0.0424)										
Economy FE	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	
Year FE	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	
No. of Economies	189	189	189	189	189	189	189	189	189	189	189	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	9,604	9,604	9,604	9,604	9,604	9,604	8,750	8,750	8,750	8,750	8,750	8,750	8,750	8,750	8,750	8,750	8,750	
Number of id_economycode	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	

FE = fixed effect, GATT = General Agreement on Trade and Tariffs, GDP = gross domestic product, WTO = World Trade Organization.

Notes: Economy-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.

Source: Authors.

Table 3.4: Encompassing Regression of Competition Law

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Law	Law	Law	Law	Law	Law
WTO _{it+1}	0.0294 (0.0185)	0.0265 (0.0181)	0.0287 (0.0183)	0.0142 (0.0198)	0.0128 (0.0198)	0.0141 (0.0198)
WTO _{it+2}	0.0450** (0.0184)	0.0351* (0.0183)	0.0351* (0.0180)	0.00299 (0.0183)	0.00418 (0.0185)	0.00485 (0.0183)
WTO _{it+3}	0.0974*** (0.0287)	0.103*** (0.0275)	0.0824*** (0.0275)	0.0886*** (0.0297)	0.0953*** (0.0295)	0.0901*** (0.0292)
WTO _{it}	-0.00570 (0.0155)	6.86e-05 (0.0148)	0.00358 (0.0143)	0.0160 (0.0149)	0.0175 (0.0149)	0.0171 (0.0150)
WTO _{it-1}	0.0455*** (0.0118)	0.0364*** (0.0110)	0.0341*** (0.0112)	-0.00372 (0.00901)	-0.00343 (0.00908)	-0.00361 (0.00908)
WTO _{it-2}	-0.0634*** (0.0150)	-0.0513*** (0.0144)	-0.0491*** (0.0136)	-0.00577 (0.00934)	-0.00461 (0.00937)	-0.00378 (0.00946)
WTO _{it-3}	0.0649*** (0.0209)	0.0423** (0.0209)	0.0498** (0.0204)	-0.0383* (0.0210)	-0.0392* (0.0206)	-0.0368* (0.0209)
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)

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Table 3.4 *continued*

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Law	Law	Law	Law	Law	Law
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)
Population		0.000925*** (0.000186)	0.000889*** (0.000176)		0.000552*** (0.000176)	0.000561*** (0.000184)
Services GDP share			0.00176 (0.00157)			-0.00111 (0.00158)
Industrial GDP share			-0.000549 (0.00169)			-0.00149 (0.00172)
Per capita GDP		0.00596*** (0.00191)			0.00254** (0.00115)	
Constant	0.171*** (0.0362)	0.117** (0.0489)	0.107** (0.0480)	-0.223*** (0.0355)	-0.223*** (0.0406)	-0.232*** (0.0441)
Economy FE	NO	NO	NO	YES	YES	YES
Year FE	NO	NO	NO	YES	YES	YES
No. of Economies	189	189	189	189	189	189
Observations	9,604	9,604	9,604	9,604	9,604	9,604
Number of id_economycode	189	189	189	189	189	189

FE = fixed effect, GDP = gross domestic product, WGI = Worldwide Governance Indicators, WTO = World Trade Organization.

Note: Economy-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.

Source: Authors.

3.4.1 Adaptation and Enforcement of Competition Policies

Enacting competition law and including fines for violating the law may not guarantee actual implementation and enforcement, or in short, “adaptation,” of competition law. To investigate the adaptation of competition policies, we employ the “Budget Size” of each economy’s competition agency as a dependent variable. The data have been collected by a unique survey of competition agencies and authorities in Asia conducted by the authors. As before, we included three main independent variables, “ WTO_{it+1} ,” “ $CRISIS_{it}$,” and “ WGI_{it} .” According to the empirical results shown in Table 3.5, none of the estimated coefficients is statistically significant. Yet, when we use conventional variance and covariance matrices, it is notable that the 2- and 3-year lagged $CRISIS$ variables, as well as the contemporaneous WGI variable have positive and significant coefficients (Table A3.4, Appendix). These results suggest that the role of market-oriented reforms, induced by economic crises, and the overall quality of governance play a crucial role in facilitating the adaptation of competition policies.

Table 3.5: 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 (0.569)	-0.514 (0.544)	-0.542 (0.572)	-0.191 (0.282)	-0.168 (0.262)	-0.232 (0.299)
WTO_{it+2}	0.705 (0.707)	0.890 (0.895)	0.844 (0.850)	-0.0122 (0.383)	0.385 (0.478)	0.432 (0.510)
WTO_{it+3}	0.185 (0.287)	0.119 (0.246)	0.237 (0.336)	0.485 (0.656)	0.189 (0.383)	0.185 (0.385)
WTO_{it}	0.131 (0.139)	0.0737 (0.0999)	0.192 (0.198)	-0.195 (0.283)	-0.309 (0.409)	-0.310 (0.418)
WTO_{it-1}	-0.752 (0.745)	-0.787 (0.782)	-0.629 (0.622)	-0.626 (0.608)	-0.606 (0.589)	-0.532 (0.520)
WTO_{it-2}	0.635 (0.643)	0.629 (0.643)	0.504 (0.519)	1.267 (1.284)	1.213 (1.255)	1.115 (1.169)
WTO_{it-3}	-0.378 (0.422)	-0.497 (0.543)	0.154 (0.202)	-1.671 (1.778)	-1.641 (1.718)	-1.072 (1.186)

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Table 3.5 *continued*

Variables	(1) Budget Size	(2) Budget Size	(3) Budget Size	(4) Budget Size	(5) Budget Size	(6) Budget Size
CRISIS _{it+1}	0.0835 (0.0984)	0.110 (0.130)	0.0999 (0.121)	0.200 (0.259)	0.234 (0.301)	0.222 (0.295)
CRISIS _{it+2}	-0.0799 (0.0965)	-0.0931 (0.112)	-0.0728 (0.0966)	-0.0979 (0.141)	-0.135 (0.193)	-0.148 (0.208)
CRISIS _{it+3}	-0.0656 (0.0942)	-0.137 (0.161)	-0.0635 (0.0973)	-0.195 (0.219)	-0.258 (0.280)	-0.235 (0.261)
CRISIS _{it}	0.0331 (0.0561)	0.0154 (0.0512)	0.0638 (0.0748)	0.299 (0.313)	0.284 (0.302)	0.314 (0.333)
CRISIS _{it-1}	-0.368 (0.377)	-0.382 (0.392)	-0.340 (0.350)	-0.369 (0.399)	-0.396 (0.428)	-0.397 (0.427)
CRISIS _{it-2}	-0.426 (0.426)	-0.413 (0.415)	-0.440 (0.444)	-0.701 (0.709)	-0.719 (0.734)	-0.702 (0.719)
CRISIS _{it-3}	0.616 (0.631)	0.668 (0.682)	0.630 (0.644)	0.906 (0.959)	1.033 (1.057)	1.052 (1.073)
WGI _{it+1}	4.353 (4.401)	4.487 (4.537)	4.367 (4.412)	5.555 (5.789)	5.611 (5.805)	5.501 (5.690)
WGI _{it+2}	-3.497 (3.444)	-3.369 (3.309)	-3.462 (3.405)	-3.425 (3.432)	-2.944 (3.026)	-2.956 (3.042)
WGI _{it+3}	0.0648 (0.151)	0.0477 (0.140)	0.0516 (0.144)	0.618 (0.702)	0.498 (0.546)	0.529 (0.572)
WGI _{it}	0.102 (0.396)	0.134 (0.455)	0.221 (0.502)	0.404 (0.845)	0.123 (0.744)	0.264 (0.791)
WGI _{it-1}	-3.512 (3.459)	-3.406 (3.366)	-3.446 (3.423)	-3.687 (3.808)	-3.884 (3.996)	-3.809 (3.948)
WGI _{it-2}	1.771 (1.735)	1.955 (1.932)	1.767 (1.750)	1.317 (1.474)	1.485 (1.583)	1.381 (1.484)
WGI _{it-3}	1.326 (1.356)	1.616 (1.664)	1.376 (1.431)	2.299 (2.388)	2.875 (2.947)	2.791 (2.879)
Population		0.0201 (0.0283)	0.0163 (0.0245)		0.103 (0.117)	0.101 (0.114)
Services GDP share			-0.181 (0.191)			-0.119 (0.144)

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Table 3.5 *continued*

Variables	(1) Budget Size	(2) Budget Size	(3) Budget Size	(4) Budget Size	(5) Budget Size	(6) Budget Size
Industrial GDP share			-0.188 (0.197)			-0.162 (0.173)
Per capita GDP		-0.0249 (0.0281)			-0.0261 (0.0351)	
Constant	0.0196 (0.138)	0.288 (0.542)	-2.430 (3.160)	0.297 (0.433)	-0.843 (1.276)	-4.442 (6.752)
Economy FE	NO	NO	NO	YES	YES	YES
Year FE	NO	NO	NO	YES	YES	YES
No. of Economies	43	43	43	43	43	43
Observations	430	430	430	430	430	430
Number of id_economycode	43	43	43	43	43	43

FE = fixed effect, GDP = gross domestic product, WGI = Worldwide Governance Indicators, WTO = World Trade Organization.

Notes: Economy-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 or missing population variable; dummy variable for missing services GDP share, and dummy variable for missing industrial GDP share.

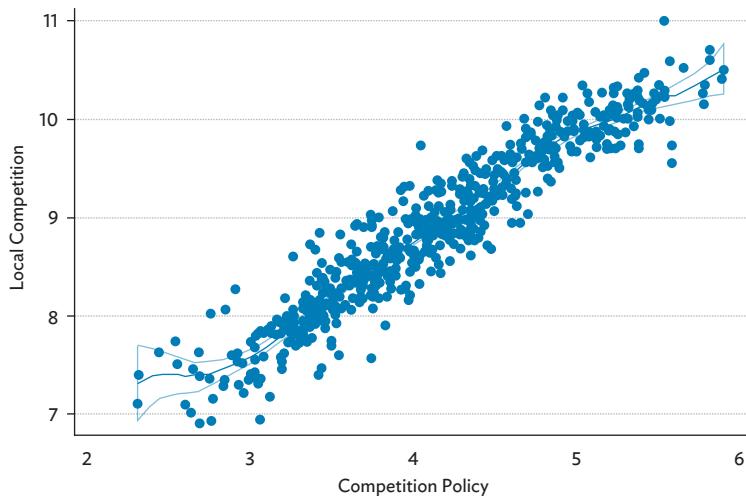
Source: Authors.

To approach the issue of adaptation from an alternative perspective, we have leveraged data from the World Economic Forum's *Global Competitive Report* for 2017–2018, focusing on the examination of competition policy enforcement. Within this dataset, a window spanning from 2009 to 2014 offers insights into market competition dynamics. Specifically, we have extracted two key variables. The first variable is the effectiveness of the "competition policy" variable that is based on the question, "In your economy, how effective are anti-monopoly policies at ensuring fair competition?" with answer choices ranging from 1 = not effective at all to 7 = extremely effectively. The second variable is a composite index of "local competition" combining two variables of (1) intensity of local competition based on the question, "In your economy, how intense is competition on the local markets?" with answer choices ranging from 1 = not intense at all to 7 = extremely intense and (2) extent of market dominance based on the question, "In your country, how do you characterize corporate activity?" with answer

choices ranging from 1 = dominated by a few business groups to 7 = spread among many firms.

Figure 3.3 presents the outcomes of our estimation results obtained through a semi-parametric regression model of Robinson (1988). This model investigates the relationship between the “local competition” variable and the effectiveness of competition policy. Notably, our analysis reveals a robust positive correlation between these two variables across the entire spectrum of their values. This finding underscores the notion that effective competition policies exert a favorable influence on market competition dynamics. It is our contention that this empirical observation lends support to the proposition that the efficacy of both *de jure* and *de facto* competition policies, both in terms of adoption and adaptation, can significantly contribute to the enhancement of overall market competition.”

Figure 3.3: Effectiveness of Competition Policy and Market Competition



Source: Authors.

3.5 Conclusions

This chapter has discussed issues regarding the diffusion and adaptation of competition policy in Asia. To this aim, we postulated and empirically tested a hypothesis that the increase in the adoption of competition policy was inextricably linked with the growing globalization during the period. Growing globalization included the Asian financial crisis leading to market reforms in the region that were complementary to the development of trade.

As a background, we noted that competition law jurisdictions have proliferated over the last 4 decades in which the majority of the new adopters are developing economies. In particular, the adopters in Asia first emerged as producers, exporters, and service providers under the proliferation of free trade agreements and economic partnership agreements, many of which explicitly or implicitly required the signatory economies to have competition policies.

We tested the hypothesis using cross-economy panel data on the enactment of competition law and the budget of competition authorities. Empirical results using global data show that before accession to GATT/WTO, an economy had a tendency to enact a competition law. In an adaptation of competition policies, market-oriented reforms triggered by the Asian financial crisis seem to play a critical role. Both years leading to accession and years after crisis variables are significant. We also found that governance level matters in adopting competition laws and policies, using variables that measure perceived government effectiveness and corruption eradication.

Based on novel survey data, we also discovered a robust correlation between the perceived effectiveness of competition policy and the level of local competition. This supports our argument that both the adoption (*de jure*) and implementation (*de facto*) of competition policies work together to foster competitive markets.

The findings in this chapter hold significant policy implications for competition policy development in Asia:

1. **Early Adoption of Competition Laws:** The observation that economies tend to enact competition laws before joining international trade organizations like GATT/WTO implies that economies should prioritize the establishment of competition regulations as part of their economic reform and development strategies. Early adoption can contribute to creating competitive market environments, which, in turn, can enhance trade and economic growth.
2. **Role of Market-oriented Reforms:** Market-oriented reforms, particularly in response to financial crises, have a substantial impact on the adaptation of competition policies. Policy

makers should recognize the potential of these reforms to facilitate competition policy implementation. In times of economic crisis, efforts to align economic policies with market-oriented reforms can lead to more effective competition policy enforcement.

3. Governance Quality Matters: The importance of governance quality, as measured by government effectiveness and anti-corruption efforts, in competition law adoption underscores the need for good governance. Policymakers should focus on improving governance quality to create an environment conducive to fair competition. Transparent, accountable, and effective government institutions are essential for enforcing competition policies.
4. Importance of Effective Implementation: The correlation between the perceived effectiveness of competition policies and the level of local competition highlights the significance of not only adopting but effectively implementing these policies. Policymakers should consider that policy adoption (*de jure*) alone is insufficient; equal emphasis should be placed on practical enforcement (*de facto*) to foster competitive markets.
5. Globalization and Trade Agreements: The link between competition policy proliferation and compliance with trade agreements underlines the role of international agreements. Policymakers should recognize that international trade deals often include competition policy requirements. Engaging with such agreements can promote competition policy harmonization and create a conducive environment for cross-border business.

In summary, this chapter suggests that governments in Asia should prioritize early adoption of competition laws, leverage market-oriented reforms, improve governance quality, and ensure effective policy implementation. Recognizing the interplay between policy adoption and implementation can enhance competitive market dynamics in the context of globalization and financial crises. Compliance with international trade agreements that involve competition policy provisions is also a strategic move. These policy implications are critical, especially for developing economies, to sustain economic growth and development because the existence of effective competition laws and competition agencies seems to be closely related to the overall productivity enhancements of national economies with better governance (Voigt 2009).

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Appendix

Table A3.1: Summary Statistics of Variables Used

Variables	Description	(1)	(2)	(3)	(4)	(5)
		N	mean	sd	min	max
year	Calendar year	13,258	1,985	20.34	1,950	2,020
competition_law_in_place	This variable is a dummy variable coded as 1 when a competition law was in place for that given economy-year	10,210	0.436	0.496	0	1
remedies_fines	This variable indicates whether the law provides for fines as a remedy for violating the law	8,990	0.345	0.475	0	1
pop	Population (in millions)	9,719	33.05	119.9	0.0403	1,434
gee	Government Effectiveness	3,828	-0.0405	0.982	-2.447	2.437
rqe	Regulatory Quality	3,827	-0.0410	0.978	-2.645	2.261
rle	Rule of Law	3,884	-0.0688	0.987	-2.606	2.130
cce	Control of Corruption	3,837	-0.0687	0.999	-1.869	2.470
wgi_ave	Mean of for governance index (gee, rqe, rle, cce)	3,827	-0.0574	0.958	-2.381	2.185
services_to_gdp	Services, value added (% of GDP)	7,065	50.12	12.63	4.792	98.62
industry_to_gdp	Industry (including construction), value added (% of GDP)	7,521	26.96	12.50	2.365	90.51
gdppc	Per capita GDP (\$thousand)	9,719	12.43	18.48	0.245	283.5
gatt_wto_cont	This variable is a dummy variable coded as 1 when an economy has access to the General Agreement on Tariffs and Trade (GATT) or the World Trade Organization (WTO)	13,258	0.502	0.500	0	1
crisis	This variable is a dummy variable coded as 1 when an economy experiences any of the following crises: banking crisis, systemic crisis, inflation crisis, or currency crisis	13,258	0.126	0.331	0	1
budget_bn	Budget of the Fair Trade Commission (\$billion)	537	2.068	15.60	0.000175	139

Table A3.2: Coverage of Economies and Years for Tables 3.3 and 3.4

Economy	From	Until	Economy	From	Until	Economy	From	Until
Afghanistan	1950	2010	Gambia	1965	2020	Nicaragua	1950	2020
Angola	1975	2010	Guinea-Bissau	1974	2010	Netherlands	1950	2020
Albania	1950	2020	Equatorial Guinea	1968	2010	Norway	1950	2020
Andorra	1990	2010	Greece	1950	2020	Nepal	1950	2020
United Arab Emirates	1971	2010	Grenada	1968	2010	Nauru	1999	2010
Argentina	1950	2020	Guatemala	1950	2020	New Zealand	1950	2020
Armenia	1991	2020	Guyana	1965	2020	Oman	1971	2010
Antigua & Barbuda	1965	2010	Honduras	1950	2020	Pakistan	1950	2020
Australia	1950	2020	Croatia	1992	2020	Panama	1950	2020
Austria	1950	2020	Haiti	1950	2010	Peru	1950	2020
Azerbaijan	1991	2020	Hungary	1950	2020	Philippines	1950	2020
Burundi	1962	2020	Indonesia	1950	2020	Palau	1994	2010
Belgium	1950	2020	India	1950	2020	Papua New Guinea	1950	2020
Benin	1959	2020	Ireland	1950	2020	Poland	1950	2020
Burkina Faso	1959	2020	Iran	1950	2020	Korea, Democratic People's Rep of	1950	2010
Bangladesh	1971	2010	Iraq	1950	2010	Portugal	1950	2020
Bulgaria	1950	2020	Iceland	1950	2020	Paraguay	1950	2010
Bahrain	1971	2010	Israel	1950	2020	Qatar	1971	2020
Bahamas	1973	2010	Italy	1950	2020	Romania	1950	2020
Bosnia and Herzegovina	1992	2020	Jamaica	1962	2020	Russian Federation	1950	2020
Belarus	1991	2020	Jordan	1950	2020	Rwanda	1962	2010
Belize	1973	2010	Japan	1950	2020	Saudi Arabia	1950	2020
Bolivia	1950	2020	Kazakhstan	1991	2020	Sudan	1956	2010
Brazil	1950	2020	Kenya	1963	2020	Senegal	1959	2020
Barbados	1965	2020	Kyrgyz Republic	1990	2020	Singapore	1965	2020
Brunei Darussalam	1984	2010	Cambodia	1953	2010	Solomon Islands	1978	2010
Bhutan	1950	2010	Kiribati	1979	2010	Sierra Leone	1961	2010

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Table A3.2: *continued*

Economy	From	Until	Economy	From	Until	Economy	From	Until
Botswana	1966	2010	St. Kitts and Nevis	1968	2010	El Salvador	1950	2020
Central African Republic	1959	2020	Korea, Republic of	1950	2020	San Marino	1991	2010
Canada	1950	2020	Kosovo	2004	2020	Somalia	1960	2010
Switzerland	1950	2020	Kuwait	1953	2020	Sao Tome and Principe	1975	2010
Chile	1950	2020	Lao PDR	1953	2020	Suriname	1975	2010
China, People's Republic of	1950	2020	Lebanon	1950	2010	Slovakia	1992	2020
Ivory Coast	1959	2020	Liberia	1950	2010	Slovenia	1992	2020
Cameroon	1960	2020	Libya	1951	2010	Sweden	1950	2020
Democratic Republic of the Congo	1960	2010	St. Lucia	1968	2010	Seychelles	1976	2010
Congo	1959	2010	Liechtenstein	1972	2010	Syria	1950	2020
Colombia	1950	2020	Sri Lanka	1950	2020	Chad	1959	2010
Comoros	1975	2010	Lesotho	1966	2010	Togo	1960	2010
Costa Rica	1950	2020	Lithuania	1991	2020	Thailand	1950	2020
Cuba	1950	2010	Luxembourg	1950	2020	Tajikistan	1991	2020
Cyprus	1960	2020	Latvia	1991	2020	Turkmenistan	1991	2010
Czech Republic	1992	2020	Morocco	1956	2020	Tonga	1975	2010
Germany	1990	2020	Monaco	1963	2010	Trinidad and Tobago	1962	2020
Djibouti	1977	2020	Moldova	1991	2020	Tunisia	1950	2020
Dominica	1968	2010	Madagascar	1960	2020	Türkiye	1950	2020
Denmark	1950	2020	Maldives	1965	2010	Tuvalu	1979	2010
Dominican Republic	1950	2020	Mexico	1950	2020	Taipei,China	1950	2020
Algeria	1962	2020	Marshall Islands	1991	2010	Tanzania	1961	2020
Ecuador	1950	2010	Macedonia	1993	2020	Uganda	1962	2010
Egypt	1950	2020	Mali	1959	2020	Ukraine	1991	2020
Eritrea	1993	2010	Malta	1964	2020	Uruguay	1950	2020
Spain	1950	2020	Myanmar	1950	2010	United States	1950	2020

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Table A3.2: *continued*

Economy	From	Until	Economy	From	Until	Economy	From	Until
Estonia	1991	2020	Montenegro	2006	2020	Uzbekistan	1991	2020
Ethiopia	1950	2020	Mongolia	1950	2020	St. Vincent and the Grenadines	1968	2010
Finland	1950	2020	Mozambique	1975	2010	Venezuela	1950	2020
Fiji	1970	2020	Mauritania	1959	2010	Viet Nam	1954	2020
France	1950	2020	Mauritius	1968	2020	Vanuatu	1981	2010
Gabon	1959	2020	Malawi	1964	2020	Samoa	1975	2010
United Kingdom	1950	2020	Malaysia	1957	2020	Yemen	1990	2010
Georgia	1991	2020	Namibia	1990	2020	South Africa	1950	2020
Ghana	1957	2010	Niger	1959	2010	Zambia	1964	2020
Guinea	1958	2010	Nigeria	1960	2010	Zimbabwe	1950	2020

Table A3.3: Coverage of Economies and Years for Table 3.5

Economy	From	Until	Economy	From	Until
Argentina	2005	2008	Japan	2005	2020
Australia	2005	2020	Republic of Korea	2005	2020
Austria	2005	2020	Lithuania	2009	2020
Belgium	2005	2020	Latvia	2014	2020
Brazil	2005	2020	Mexico	2005	2020
Canada	2005	2020	Netherlands	2005	2020
Switzerland	2005	2020	Norway	2005	2020
Chile	2008	2020	New Zealand	2005	2020
Colombia	2015	2020	Pakistan	2010	2016
Czech Republic	2006	2020	Philippines	2016	2020
Germany	2005	2020	Poland	2005	2020
Denmark	2005	2017	Portugal	2005	2020
Spain	2005	2020	Romania	2015	2020
Finland	2005	2018	Russian Federation	2005	2020
France	2005	2020	Singapore	2015	2020
Greece	2005	2020	Slovakia	2006	2011
Hungary	2006	2014	Sweden	2005	2019
Indonesia	2012	2020	Türkiye	2011	2020
India	2014	2019	Taipei,China	2010	2020
Ireland	2005	2018	Viet Nam	2010	2020
Israel	2005	2020	South Africa	2005	2020
Italy	2005	2020			

Table A3.4: 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)

continued on next page

Table A3.4: *continued*

Variables	(1) Budget Size	(2) Budget Size	(3) Budget Size	(4) Budget Size	(5) Budget Size	(6) Budget Size
WGI _{it+2}	-3.497 (2.305)	-3.369 (2.312)	-3.462 (2.368)	-3.425 (2.272)	-2.944 (2.283)	-2.956 (2.280)
WGI _{it+3}	0.0648 (0.686)	0.0477 (0.693)	0.0516 (0.708)	0.618 (0.681)	0.498 (0.681)	0.529 (0.678)
WGI _{it}	0.102 (2.524)	0.134 (2.526)	0.221 (2.597)	0.404 (2.450)	0.123 (2.437)	0.264 (2.442)
WGI _{it-1}	-3.512 (2.450)	-3.406 (2.460)	-3.446 (2.519)	-3.687 (2.367)	-3.884 (2.366)	-3.809 (2.364)
WGI _{it-2}	1.771 (2.412)	1.955 (2.415)	1.767 (2.477)	1.317 (2.346)	1.485 (2.344)	1.381 (2.332)
WGI _{it-3}	1.326 (1.907)	1.616 (1.912)	1.376 (1.960)	2.299 (1.890)	2.875 (1.894)	2.791 (1.897)
Population		0.0201* (0.0105)	0.0163* (0.00965)		0.103** (0.0435)	0.101** (0.0434)
Services GDP share			-0.181 (0.163)			-0.119 (0.177)
Industrial GDP share			-0.188 (0.155)			-0.162 (0.158)
Per capita GDP		-0.0249 (0.0338)			-0.0261 (0.0394)	
Constant	0.0196 (14.09)	0.288 (13.93)	-2.430 (15.48)	0.297 (2.020)	-0.843 (2.202)	-4.442 (3.807)
Economy FE	NO	NO	NO	YES	YES	YES
Year FE	NO	NO	NO	YES	YES	YES
No. of Economies	43	43	43	43	43	43
Observations	430	430	430	430	430	430
Number of id_economycode	43	43	43	43	43	43

Note: Conventional, plain 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.

4

Should Competition Laws in Asia be Redesigned to Improve Economic Outcomes?

R. Ian McEwin

4.1 Asia's Experience with Competition Law

Economic analysis is important to an effective competition law. Most economies conduct little research to see whether differences in local business practices are relevant and whether local legal systems can adequately incorporate economic evidence into competition law decisions. It is difficult to empirically assess the economic effectiveness of competition laws, but a good start is the joint research being conducted by the Comparative Competition Law Project at the law schools at Columbia University and the University of Chicago.¹ However, “The [Competition Law Index] CLI is not meant to serve as a ranking of competition laws in terms of quality, appropriateness, or effectiveness.” (Bradford and Chilton 2018). Noneconomic goals are often now proposed for competition laws that place even less importance on economics. Asian competition laws are mainly based on those of the European Union (EU) and the United States (US). Pressure is placed on economies to follow competition laws in developed economies without specific attention to institutional differences, levels of economic development, and local business practices. Differences in business practices are often explained by cultural factors not economic costs (Mackie 2000) and so differences based on economic conditions are ignored.

We should understand differences in business practices because: “... the law defines the formal rules, but [what] we should ultimately be concerned with the “ways by which the game is actually played”

¹ See <https://comparativecompetitionlaw.org>.

(Aoki 2007). This chapter argues that more economic research needs to be done on actual business practices in Asia and their relevance to competition laws. Institutional differences may also justify different approaches that better improve Asian economic outcomes.

Modern competition law began in Canada and the US in the late 19th century, prompted by growing fears of increased economic concentration and their threat both to market competition and political processes. The US Sherman Act 1890 left enforcement to administrative agencies supervised by courts. The EU places greater reliance on administrative processes but with appeals to the courts. All countries in Southeast Asia now have competition laws.

Economies vary in their use of economics in competition law design and enforcement. Initially, local economists lack the specialised skills to understand local business practices and determine their impact on price, output, innovation etc within a competition law legal framework. Lawyers in new competition law regimes also lack adequate economic understanding and so how to prove economic facts in legal settings. The outcome is too much reliance placed on decisions from other economies.

Two policy questions underpin the design and drafting of a new competition law. What business practices to prohibit and who should control their enforcement? Jurisdictions usually leave design to a mixture of economists, lawyers, and generalist policymakers. At least in theory, economists are concerned with identifying local anticompetitive business practices and assessing their likely impact. On the other hand, lawyers generally look to the form of the legislation and consider competition laws in other jurisdictions to determine their local relevance. Policy makers try to ensure that the new competition law fits in with general policy goals and other economic policies.

In practice, lawyers dominate both competition law design and administration. Because the economics of competition law cases are too complex to depend on simple legal rules, since the 1960s competition law has been gradually: "... moving away from rules (*ex ante*, limited factor liability determinants) toward standards (*ex post*, multi-factor liability determinants)" (Crane 2007).

Legal liability depends on the standards of proof required, the acceptance of economic evidence and the availability of microeconomic data which is generally less available in undeveloped countries. When competition laws are copied then *ex ante* rules (or standards) are derived from another economy's practical legal experience in perhaps different economic circumstances that may not be suitable for new jurisdictions. Conglomerates in Asia are of particular importance in Asian economies, but their origins differ, ranging from state-sponsored conglomerates in Northeast Asia to family conglomerates in Southeast Asia mainly

established due to prejudice and lack of contract enforcement. (McEwin and Chokesuwattanaskul 2022).

Once competition law prohibitions are determined, the next step is to decide who should administer the prohibitions—lawyers, economists, generalists, or a mixture? An economy's traditional regulatory methods usually determine this issue, informed by what seems to work in practice elsewhere. Principal-agent theory, initially developed in economics but now important in political science may help design (Miller 2005). For example, it is “conventional ... to model legislation as a principal delegating power to an agent, where either a court or an agency acts as the agent in implementing the legislation.” (Carlton and Picker 2007). Former US Supreme Court Justice Breyer describes how the US legal system determines competition law outcomes in practice:

... Rules that seek to embody every economic complexity and qualification may well, through the vagaries of administration, prove counter-productive, undercutting the very economic ends they seek to serve. ... concluding that the administrative virtues of simplicity outweigh the occasional “economic” loss. (*Barry Wright Corp. v. ITT Grinnell Corp* United States Court of Appeals, First Circuit 724 F.2d 227, 1st Cir. 1983: 234).

Decisions on complex economic issues may be determined within a legal framework that may include the goal of economic “simplicity.” But is Breyer right to conclude that administrative simplicity “outweigh[s] the occasional economic loss”? Even if true in the US, is it also true in other economies? This seems unlikely.

As competition law only focuses on copied business practices, the overall impact of a new competition law may not be considered—hence the need for economic evaluation of overall changes. The same anticompetitive practice can have different impacts in different markets and in different economies. Can legal systems properly take account of these differences? This seems unlikely, even though legal systems pay greater attention these days to competitive effects.

Since the 1960s, US courts have increasingly applied economic reasoning influenced by the Chicago School. Courts adopted a *consumer welfare standard* that focuses on maximizing output, which is relatively easy to measure and forecast. EU competition law began to develop in the 1950s especially with the establishment of a common market following the 1957 Treaty of Rome and the 1993 Treaty of the European Union (Maastricht Treaty) that led to a common competition law regime across the EU. The European Commission administers EU competition law

subject to appeals to EU courts. EU competition law prohibits similar anticompetitive *practices* as the US and has, since the early 2000s, also adopted the same economic approach as the US, i.e., moved toward a case-by-case assessment of economic effects.

Legal systems differ between the US and European countries. The US has a common law jurisdiction while European countries and most economies in Asia have civil law systems (the EU legal system is built around Treaty law). This may have important implications for the way economics is introduced and used by the courts. Surprisingly, there does not seem to be much (if any) research on the mechanics and efficacy of the actual introduction and use of economic evidence into different legal systems.

In common law systems courts interpret general statutory legal prohibitions constrained by previous judicial decisions. Civil law jurisdictions rely less on judicial precedent and focus more on the interpreting of legislation in relation to the facts of each case. For example, the EU “defines competition more as a process or rivalry that in turn encourages sensitivity to ‘equal opportunity’ for competitors.” (Abbott 2021)

There are often calls for greater competition law integration across economies (the Association of Southeast Asian Nations [ASEAN] for example). This means adopting similar goals, institutions, and enforcement tools, irrespective of level of development. But even then, different legal systems may mean the same conduct is treated differently because of differences in the impact of the same conduct as well as differences in the way economic facts are treated by different legal systems. For example, in merger decisions the same legal test may be applied (substantial lessening of competition) but different conclusions reached on impact not only because of different economic effects but also different ways of requiring and assessing economic evidence.

There is an extensive business school literature that shows that Asian business practices are sometimes different. But these differences do not seem to be generally recognized in the design and operation of Asian competition law (McEwin and Chokesuwwattanaskul 2022). In practice, economic models are used for predictive purposes that use simplifying assumptions that are not descriptively accurate of complex reality. Market effects are mostly modelled in two dimensions, i.e., price and output, under rationality assumptions designed to facilitate prediction (not describe actual decision making) where everything else is considered constant (*ceteris paribus*).

Motivations for introducing competition laws in Asia differ. Some were introduced following international pressures tied to aid packages or free trade agreements. But their legislated goals depend on policy

objectives governed by local economic, political, social, institutional, and legal considerations. Goals differ between economies but now most agree that economic efficiency should be the main goal and that in small economies “it is vital that the goals of competition policy be clearly, consciously, and unambiguously defined, and that economic efficiency be given primacy over other goals, at least in most settings. (Gal 2007)

While promoting economic goals is now common in Asia, fairness has always been important.

... fairness suggests reliance on some sort of non-efficiency goals in these laws and confusion with industrial policy. A strong emphasis on fairness also suggests insufficient political support for a strong competition law and policy in these Asian jurisdictions. (Liu 2004)

Kazuhiko Takeshima, former chairperson of the Japan Fair Trade Commission (JFTC) provides a cultural explanation for adopting fairness and suggests a (surprising) extension of competition law to conduct by nondominant firms. (Takeshima 2005). Normally, fairness issues are covered by consumer protection legislation not competition laws. While the US was initially mainly concerned with economic concentration, in the 1880s it also considered fairness. As Scherer notes: “to the extent that prices were raised, economists of virtually every mainstream persuasion stressed not misallocation but unfairness.” (Scherer 1990)

Japan was the first country in Asia to introduce competition law with the Antimonopoly Act in 1947. At that time, Japan gave priority to industrial policy and “harmonious cooperation rather than competition between businesses.” (Shanahan 2005). Japanese competition law was initially influenced by US antitrust but gradually developed its own approach (Wakui 2018).

Japanese law included many features of the US antitrust laws “... but was much more detailed and stringent, as the United States feared that against the background of traditional Japanese thinking, American antitrust laws would be misinterpreted.” (Shalaevskaya 2020). In addition, vertical restraints were covered under provisions dealing with private monopolization or unfair trade practices. Concerned with economic concentration in Japan at the time, other economic reforms were introduced aimed at breaking up the *zaibatsu* system and the abolition of the *tosei dantai* (control associations).

Initially, the JFTC was an agency of the Ministry of Public Management, Home Affairs Post and Telecommunications Government but the Organisation for Economic Co-operation and Development (OECD) criticized this model for its failure to prevent anticompetitive

mergers: “if the JFTC advises that it has concerns, the parties either correct the problem or abandon their plans.” (Shalaevskaya 2020). In 2003 the JFTC was transferred to the Cabinet Office and became an independent agency.

The People’s Republic of China (PRC) introduced its Anti-Monopoly Law in 2008. Like other jurisdictions it covers anticompetitive agreements, abuse of dominant position, anticompetitive mergers but included one additional area, administrative monopolies (the abuse of administrative powers by government agencies to exclude or restrict competition). Ju and Lin (2020) in a recent assessment of the PRC’s law say their “... use of economics in its AML [anti-money laundering] enforcement is consistent with international best practice.”

The Republic of Korea developed its industries through protection rather than competition, which led to little foreign competition and a concentration of economic power. The Monopoly Regulation and Fair Trade Act was passed in 1980. In 1994, the Korea Fair Trade Commission (KFTC) and its secretariat became independent of the Economic Planning Board and the status of the KFTC chairperson was raised to ministerial level. An important early focus of the KFTC was on structural issues relating to big business conglomerates or *chaebols*.

The 1997 Asian financial crisis upset cozy pre-existing government-business relations in both Indonesia and Thailand and led to the introduction of competition law in both countries because policymakers believed that government approved anticompetitive practices contributed to the crises. While the International Monetary Fund (IMF) imposed, as a condition for financial support, that Indonesia introduce a competition law, it did not impose the same condition on Thailand even though, arguably, Thailand was in worse economic shape at the time than Indonesia. Despite the common cause, Indonesia, and Thailand each designed quite different competition laws and institutions (McEwin 2014b). Other economies followed often driven by free-trade agreements and pressure from other ASEAN countries.

All 10 countries in ASEAN have now introduced competition laws, mostly based on those of the EU. The ASEAN Competition Action Plan (ACAP) in Strategic Goal 5 notes that ACAP is “Moving towards greater harmonization of competition policy and law in ASEAN” (ASEAN Secretariat 2016). But, in practice, harmonization seems more concerned with achieving similar international best practice than promoting effective local economic outcomes based on regional business practices, economic and institutional conditions.

4.2 The Importance of Economics to Competition Law Design and Operation

Institutions are important to economic growth. To properly understand business practices and the way they influence growth requires understanding their evolution and adaption to local economic conditions. One approach is to use comparative economics which compares different market-based economic systems and whether differences between their laws and legal systems and their administering institutions impact on economic growth.

Djankov et. al (2003) argue for a new comparative economics that examines differences in institutions "...and their consequences for economic performance." These institutions include competition law but there seems to be a common belief that competition laws should be the same. Over the last 20 years the International Competition Network, the OECD, and the World Bank as well as the EU and the US have pressured economies to adopt similar competition laws (through free trade agreements, loan requirements, etc.) and that they should be administered within legal systems despite institutional and economic differences which suggest solving competition law issues differently. Before the introduction of competition law, competition problems may have been handled by economies themselves through custom or other regulatory means. In fact, simply copying laws may be wrong as:

A legal and regulatory system that is perfectly suitable to France may yield inefficiently high levels of regulation and state ownership when transplanted to countries with lower civic capital. (Djankov et al. 2003)

The importance of economics in competition law depends on a an economy's legal system. There are three main modern legal systems in Asia, all derived from Europe. They are civil law, common law, and socialist law. There are differences between civil and common law systems:

Structurally, the two legal systems operate in very different ways: civil law relies on professional judges, legal codes, and written records, while common law on lay judges, broader legal principles, and oral arguments. ... At the same level of development, French civil law countries exhibit heavier regulation, less secure property rights, more corrupt and less efficient governments, and even less political freedom than do the common law countries. (Glaeser and Shleifer 2002)

French civil law influenced Spanish, Portuguese, and Dutch systems. Spanish civil law initially influenced the Philippines, but now the US common law system dominates commercial laws including competition law. German civil law was adopted by Japan, which in turn influenced the PRC, the Republic of Korea, and Taipei, China (a hybrid with socialist law). England exported common law to its colonies in Asia including Brunei Darussalam, India, Malaysia, and Singapore. The former Soviet Union was the source of laws in socialist countries like Viet Nam, which was also influenced by the French civil law system. Indonesia has a civil law system based on the Dutch. Thailand, despite never being colonized has a civil law system with some elements of common law.

Judges in common law systems are more independent than in civil law systems—in the latter judges are normally recruited into the civil service after graduation while common law judges are selected from experienced private practitioners. In some civil law jurisdictions judges can move backward and forward between judicial office and the civil service.

There is evidence that the common law produces better economic outcomes:

This effect appears to occur through a more independent and predictable judicial system rather than any different substantive law. (Cross 2007)

Competition laws are designed to improve economic welfare and so, ultimately, economics should help to determine competition law outcomes. Clear competition laws promote business certainty *ex ante*, but care should be taken to ensure that promoting business certainty does not result in inflexible legal rules and enforcement where economic welfare takes second place. This is particularly important for mergers and abuse of dominance cases where good regulatory outcomes depend on comparing likely actual economic outcomes, i.e., with and without the alleged anticompetitive conduct.

One way competition law can help to promote economic outcomes is through precise goals. One way is to use object clauses in legislation. Goal vagueness creates judicial uncertainty about priorities and means that decisions made by courts and regulators are likely to focus on the meanings of words in legislation (for example, the meaning of the word competition) rather than whether enforcement improves economic welfare by, for example, lowering consumer prices, improving internal business efficiency and greater innovation.

While the US introduced competition law in 1890, it was not until the 1970s that US courts regularly started to incorporate economics.

This was mainly due to the Chicago School which showed that business practices previously thought to be anticompetitive were, in fact, be pro-competitive by lowering price and increasing output. Hovenkamp and Scott-Morton describe this as follows:

... at mid-twentieth century. Enforcement at that time was excessively interventionist. Courts often either used no economics or poor economics to make decisions. ... Here was a place where the Chicago School call to use economics in antitrust analysis would generate less enforcement—and have the handy side effect of being correct. (Hovenkamp and Scott-Morton 2020: 1848).

US courts started to determine liability under a rule of reason (or cost-benefit analysis) to determine whether the benefits of the conduct outweigh the costs. This meant that economists involved in cases had to fully inform themselves of the facts of each case and base their use of economic theory on those facts. However, sometimes newly adopting economies around the world copy not only competition legislation but even decisions from other economies irrespective of differences in their laws and economic circumstances. One explanation for this is the complexity of the economics involved which local courts cannot deal with. Copying decisions for international approval is easier.

Economic efficiency became central to competition law in the US in the 1970s. But understandings of economic efficiency differed. Bork was influential in the greater use of economics and defined “consumer welfare” to mean “the wealth of the nation,” i.e., total welfare (Hovenkamp 2020). But, confusingly, Bork called it *consumer welfare* not total welfare (Bork 1967).

Economists have long distinguished between consumer welfare and total welfare. To economists, total welfare is the sum of consumer surplus and producer surplus while consumer welfare is simply consumer surplus. To adopt consumer surplus as the goal means that competition law action should only be taken if there will be a net gain to consumers (and so efficiencies like cost savings are only considered if consumers benefit from lower prices or improved products). Assessing total welfare requires balancing the two kinds of surplus to determine whether total surplus is increased. Courts focus on particular cases and so have difficulty doing this. So, the question naturally arises—would these policy tradeoffs be better made by government within a cost-benefit framework?

A distinction should be made between the economic analysis of law (where economists use economic tools to explain and model the

likely impact of laws and legal institutions) and law and economics that look initially at the way the legal system works in practice, then assess whether economic models describe legal reality and if not, suggest changes to the economic theory. Calabresi (2016) argues that the former has been more important to law and economics. This is also largely true for the way economics is used in competition law.

Economic factors provide the main rationale for competition law—competition is good while monopoly is bad because prices are higher and output lower under monopoly. Competition forces businesses to continually improve production processes and products to survive. Economics models the effects of business practices. Practices are judged to be anticompetitive if prices rise and/or output falls and there are no offsetting efficiencies.

In practice, however, opposing economists argue (within legal frameworks) about the efficiency of various practices and judges decide. So judges determine what is economically desirable. But are they likely to reach desirable economic outcomes? After reviewing the public choice literature dealing with competition law, Shughart and McChesney (2010) conclude that: "... no one should ever have expected antitrust to serve the interests of consumers in the first place." Similar concerns can be expressed in Asia.

4.3 Legal Systems and Economic Outcomes

Legal systems can only improve economic outcomes if courts are "... equipped to handle sophisticated economic arguments. Competition laws must make choices between clear, yet complex, legal rules and less precise, more flexible, standards that consider specific facts" (World Bank and OECD 1999).

The latter allow judges more discretion. In practice, "... the rule/standard distinction gets phrased as specific v. general or *ex ante* v. *ex post*" (Clermont 2020).

An obvious policy question, rarely asked, is why should legal systems determine economic outcomes? Courts have limited capacity to assess economic evidence so perhaps other policy options should be considered including:

- Allowing courts to continue to administer competition laws but using simpler economic tests in legislation, e.g., asking whether the alleged anticompetitive practice "reduces price" or "increases output"?
- Delegating economic assessment to economists outside the legal system. Courts would ensure procedural fairness. To work this would require a legal test designed to assess net economic benefits.

US competition law “finds itself in the midst of a creeping transition from rules to standards ... flexible technocratic expertise has replaced legalist conceptualism” (Crane 2007). This trend increases the importance of economists to competition law enforcement. The EU as it increasingly uses economics has followed the same path.

Rules are prescribed in advance by the rule-maker in statutes and prescribe the likely outcome given a finding of relevant facts by the decision maker, e.g., a fine for driving faster than the speed limit. Rules are easier to draft but require greater *ex ante* research about the actual merits of the business practice being targeted. On the other hand, standards give the decision maker greater discretion to determine liability, etc., within broad goals. In practice, this means that liability for rules is determined by legislatures while standards liability is determined by regulators and judges.

Following Friedman (1953) it is important to recognize that: “... most disagreements about policy come, *not from disagreements on values*, but on disagreements about the likely effects of economic policies” (Wenzel 2019). So, it is important to determine the impact of laws in advance. Only economics, *not law*, contains tools to predict likely economic outcomes in the real world. Lawyers simply predict the way courts are likely to apply pre-determined legal rules to legally provable fact situations—not the economic consequences of those decisions. In addition, economics also help to understand why business practices develop and survive (and whether they are efficient).

There are different schools of economics and the kind of economics to use. Obviously, the economic school and model that provides the best predictions should be used. Competition lawyers still debate the correct school of economics to adopt, usually put (simplistically) in terms of interventionist versus non-interventionist approaches. There is also a need to assess which model best explains business practices given the available data (Wright 2012).

But this is easier said than done. Economists hold a range of views as to the meaning of economic efficiency. They differ significantly as to the likely effects of government intervention. Although goals and legal tests differ there has been considerable harmonization (perhaps better phrased as copying) over the last 20 years. This has happened despite the International Competition Network trying to adopt a “... member-driven approach that avoids top-down, lowest-common denominator harmonization of competition law and policies across the world” (ICN 2022).

Combining law and economics creates problems in all jurisdictions implementing competition law, irrespective of economic and legal sophistication because “... judges are not selected for business acumen and are not penalized for bad decisions” (Easterbrook 1999). Rules of

evidence determine whether economic evidence is accepted by courts—and may exclude evidence that economists may find useful. The weight placed by economists on different kinds of economic evidence may be different to the weight placed by lawyers in regulatory agencies or judges in court. Judicial economic expertise and rules of evidence differ between economies so similar cases may be decided differently, depending on the evidence admitted.

In common law systems, judges rely on conflicting expert opinion to determine the likely effects of anticompetitive conduct. To overcome lack of economic expertise, competition economics courses are sometimes conducted for judges where the focus should be on the underlying concepts “rather than on vocational memorization of particular doctrinal formulations” (Elhauge 2008).

However, lawyers in new jurisdictions tend to focus on “doctrinal formulations”—mainly from other jurisdictions. Given differences in competition laws and goals, economic conditions and business practices, economists are in a much better position to provide analysis as “... the issues of economic causality can be complex. They require 1) awareness of numerous factors that may influence economic outcomes as well as 2) the capacity to relate those factors to each other to produce a sound analytical conclusion” (Gerber 2004).

It is difficult to define goals *ex ante* so it may be better to have a general overall economic welfare test like “... conduct that reduces economic welfare is unlawful and conduct that increases economic welfare is lawful” (Melamed 2017).

Lawyers use inductive reasoning, i.e., by analogy comparing the circumstances of the case under investigation with similar fact-specific cases to determine what legal principles would be used by regulators and the courts to decide cases under review. On the other hand, economists use deductive reasoning (scientific method) to develop economic models that can predict the effect of anticompetitive conduct on economic variables such as price and output.

Economic understanding (via the economics of industrial organization) has developed over decades in the US, however, legal systems adopt new economic understandings slowly with a long lag. New theories may also increase the costs of operating the legal system (Hovenkamp 2010).

Friedman distinguished between positive and normative analysis, i.e., “what is” vs. “what action should be taken” (Robert and Zeckhauser 2011). However, determining outcomes is not often welcome in policy debates where ideological and vested interest groups dominate. It is easier to criticize economics without understanding it. Balancing differences and priorities in goals is an important task in administering competition law. This is especially true in new jurisdictions where

regulators and courts have limited economic expertise and experience—or where domestic business interests control political outcomes and noneconomic goals are promoted. But whatever the goals pursued, competition law design and administration should aim at achieving them in the most accurate and least cost way.

There are some important differences between the common law family (including Malaysia, Singapore, the United Kingdom, and the US) and the civil law family (Chinese, French, German, Japanese, Thai, etc.) in both substantive law provisions as well as procedural law, which impacts on the way economic evidence is presented and decided (Pejovic 2001).

Civil law economies have codes or statutes which guide judges in applying and interpreting the law to the specific facts of each case. Codes are intended to cover all possible situations and where they do not provide general principles that courts should apply. Common law economies also have codes (or statutes) to apply but courts are bound by decisions by higher courts in similar cases. Because civil lawyers focus on applying codified laws they tend to be more conceptual. Lawyers in common law economies focus on previous cases and tend to be more concerned with differences in factual situations. They are generally considered more pragmatic.-

While there are differences in substantive law between economies, differences in procedural law are greater, which can impact on the way economic evidence is received. The common law system is adversarial where judges are neutral and make decisions based on the actual cases put by the opposing parties. Civil law is inquisitorial, and judges are more active—the judge determines issues and questions witnesses. Opposing parties do not have the right to cross examine. It is up to the judge to determine ultimate truth based on her own involvement in the case which can include calling her own witnesses. In civil systems the parties argue the applicability of the law to the current facts whereas in the common law parties argue the applicable law and the applicability of any precedents. Because issues and the law are determined by judges in civil law jurisdictions there is a greater chance that judicial bias will determine outcomes.

In common law systems, the lawyers from each side prepare their own witnesses—which includes witnesses on the relevant economics. Preparation of witnesses is normally prohibited in civil law jurisdictions. Oral evidence (which is subject to cross-examination in common law systems) is given considerable weight in the common law while greater weight is given to written evidence in the civil law.

Economists are often called as expert witnesses in common law jurisdictions. Each side appoints and pays “their” expert witness who supports their sides case (and considers the facts derived from the client).

In civil law jurisdictions economic witnesses (called court experts not expert witnesses) are appointed by the court and are expected to be impartial (and so are not briefed by clients).

4.4 Are Asian Business Structure and Practices Different?

While anticompetitive business practices are likely to be the same across economies (price-fixing, abuse of dominance, etc.) the way these are carried out and their transparency may depend on the kind of business organization involved and relevant regulation. For example, business groups (BGs) may carry out the same transaction differently depending on local regulation, taxation etc. This may impact on external monitoring, including by regulators and may disguise the actual degree of market power that BGs have in practice. BGs may obtain an advantage because intra-group conduct and cross-subsidies may be difficult for a regulator to see and analyze.

Conglomerates are important in Asia. A 2013 McKinsey report noted that “Conglomerates are shaping the competitive landscape in Asia. Would-be rivals must understand them to compete with them” (Hirt, Smit, and Yoo 2013). Hence their importance to competition law design in Asia. Conglomerates and their importance differ between Asia and the EU and the US (McVey 1992). What is important in Asia is the high degree of economic power held by families. Some attribute the success of *The Asian Century* to conglomerates because:

“The post-Meiji model in Japan of the vertically integrated business conglomerate, *zaibatsu*, was to some degree the precursor of the Korean *chaebols* as well as many Chinese and Indian family-owned conglomerates. Furthermore, the bank-led model of capitalism in effect almost ensured that capital would be concentrated in a few companies which would enjoy a lower weighted average cost of capital than immediate competitors. This they could afford to engage in the sort of vertical integration that entrenches long-term cost competitiveness as well as the horizontal integration that comes with superior access to financial capital.” (Magdin 2022)

Similar business practices exist across Asia.. Southeast Asia “ ... has become increasingly linked with the rest of East Asia, economically, culturally, and strategically” (Reischauer and Fairbank 1958). These

business practices may differ in some ways from those in the West. Witt and Redding (2013) note that the conventional “varieties of capitalism (VOC) dichotomy is not applicable to Asia ... Asian business systems (except Japan) cannot be understood through categories identified in the West.”

Redding (1995) notes there have been three kinds of successful Asian business models: the overseas Chinese, Japanese *keiretsu*, and the Korean *chaebol*. Witt and Redding (2013) provide a table of differences in business practices prepared by leading experts on the 13 Asian economies. Japan was not clustered with other Asian economies but instead bundled together with European countries. Table 4.1 reproduces the data from Indonesia, the Philippines, Thailand, the Republic of Korea, and Japan.

Table 4.1: Business Practices in Selected Asian Countries

Measure	Indonesia	Philippines	Thailand	Republic of Korea	Japan
Financial system - main source funds	banks	Banks	banks	banks, nonbank financial	banks
Business groups	yes	Yes	Glum thurakit	Chaebols	Keiretsu
Internal structure	top-down	top-down	top-down	top-down	participatory
Extent delegation	low	Low	low	low	medium-high
Ownership	family	Family	family	public	public
Controlling owner	family	Family	family	family	firms
Interpersonal trust	high	High	high	high	high
Rule of law (trust)	-0.63	-0.54	-0.20	0.99	1.31
State type	predatory	Predatory	developmental, developmental predatory	residual development	
Regulatory quality	-0.38	-0.26	0.19	0.98	

Source: Witt and Reading (2013).

Financing is usually based on relationships and state direction and for the long term “... will tend not to be withdrawn quickly in response to adverse developments, as would typically be the case in Anglo-Saxon environments” (Witt and Redding 2013).

All Asian economies have large business groups. Usually, they are big conglomerates owned and/or controlled by a single owner—either a family or the state. Central control of diversified conglomerates means considerable potential for anticompetitive conduct. In Japan, business groups (*keiretsu*) do not have a single owner or controller, because competition laws were introduced during the US occupation. Other Asian firms reflect their societies and are hierarchical and controlled from the top. As a result of the top-down control there is little delegation apart from Japan. Trust is important, both in business as well as in the legal regulatory/system. When law and regulation are weak business cannot rely on them to enforce contracts or regulate fairly.

In the absence of undeveloped legal systems to enforce contracts, etc., interpersonal trust becomes important, i.e., trust based on past experiences. Asian societies build stronger networks both within the family and between friends than in Western societies and use them for business purposes. But they do not necessarily involve friendships (Pyatt 1996).

Do these different kinds of capitalism influence competition law design and regulation? There is negligible economic research on this issue despite fact that Chinese business practices have had considerable impact in all East Asia. Asian conglomerates are:

... Asian-run and family dominated conglomerates, two distinct and defining characteristics of the typical Asian conglomerate continuously surface and have been shown to differentiate themselves widely from their counterparts in the US and the other developed economies worldwide. First, the ownership and control of Asian corporations is often concentrated among a few large families; and second, close affiliation within Asian corporate groups (and/or between these businesses and their governments) is the norm (Mirza, 2005).

Credit Suisse (2011) found that the total market capitalization of family businesses equals “34% of total nominal Asian GDP.” Further, Mirza (2005) notes:

Family based conglomerates are characterized by **tight control, with key family members (in some cases only one person) and top cadres responsible for important corporate decisions.** Therefore, a secured position on the board of directors of an Asian conglomerate does not necessarily guarantee significant corporate influence within the organization.

Chung (2004) describes the importance of ownership groups to early economic development in both Japan and the Republic of Korea as follows:-

... the purpose of interlocking ownership is to inflate the controlling shares for founder families and managerial elites. For example, according to the Korea Fair Trade Commission, the chief executive officers (CEOs) of the top twelve Korean BGs owned only a cent of their BGs in 2004, but they effectively controlled their affiliate companies because interlocking ownership gave them 40 percent controlling shares.

Western conglomerates are usually comprised of legally independent companies each with its own directors responsible only to its one group of shareholders. On the other hand, control-based BGs (CBBGs) while comprised of legally independent companies, are controlled by a single family which has relevance to possible anticompetitive practices:

BGs in Japan and Korea are the products of their nation's industrialization programs that often relied on political expediency rather than economic rationale ... Because CBBGs in Japan and Korea are substantially different from the conglomerates in Western economies, BG theories that are applied to Western economies do not adequately explain the emergence of CBBGs in Japan and Korea (Chung 2004).

Something similar happens in Southeast Asia, mainly due to initial prejudice against Chinese families who, to survive in the 19th century, had to operate outside established, if undeveloped, markets through bamboo networks which is a "... a group of companies under the strong, tight control or ownership of (usually) a single person or family" (Mackie 2000).

The Australian Department of Foreign Affairs and Trade researched Chinese family groups in Southeast Asia and found that:

Many ethnic Chinese family businesses in East Asia expand by acquiring anever-increasing number of companies, rather than enlarging existing companies ... The interlinking of the top Chinese conglomerates not only strengthens the economic position of the ethnic Chinese business community throughout the region, but also its political leverage in the region's individual economies. (DFAT 1995)

Witt and Redding (2013) find similarities between the PRC and India. Also, of importance to Asian networks and are relations between boards, family control, and government (Carney, Child, and Li 2020).

What does a different economic organization mean for competition law design and operation? Interlocking directorships have been a concern in developed competition law countries by facilitating collusion through information exchange on prices, mergers, innovation, and profit shifting, etc. (Waller 2011). Evaluating whether conglomerate mergers are anticompetitive is difficult in practice. Changes in organizational structure may lead to greater internal collusion across markets. Regulators may have difficulty deciding who is really making decisions because of information difficulties (Pham 2018).

Different business practices mean that competition laws should reflect those differences. Business practices are studied in business schools, not economics departments. While much of this business school research is largely qualitative due to lack of data, it seems better at understanding why business practices may be different. Given different business practices and institutional capacities, business school literature can help to both better design competition laws and inform competition law decisions and administration in Asia.

4.5 Conglomerates are Important in Asia— Should Asia Adopt a Different Competition Law Approach to Non-Horizontal Mergers?

Vertical mergers involve mergers between firms in the same supply chain whereas conglomerate mergers occur where the acquiring and acquired firms are neither competitors nor in a customer-supplier relationship.

Asian conglomerates often diversify through vertical and conglomerate mergers. McKinsey research for example:

McKinsey research found that over the past decade, the largest conglomerates in PRC and India expanded their revenues by more than 20 percent a year, while conglomerates in Republic of Korea exceeded 10 percent annual revenue growth. These companies diversified at a blistering pace, making an average of one new business entry every 18 months. The nature of those moves was striking nearly half of the companies favoured businesses that were completely unrelated to the parent companies' operations. (Hirt, Smit, and Yoo 2013).

Also, in the PRC:

In 2020, the number of vertical and conglomerate transactions accounted for 16 percent (78 transactions) and 34 percent (160 transactions), respectively, of the merger filings. Even so, the fact that 50 percent (or more) of merger filings had vertical or conglomerate elements in 2019 and 2020 represents a far greater share than in 2011, when vertical and conglomerate transactions accounted for only 8 percent and 26 percent, respectively. (Zhang, Li, and Duh 2022).

While horizontal mergers occur between firms supplying substitutable products, non-horizontal mergers usually involve complementary products. This means non-horizontal mergers are more difficult to assess because the focus is not on overlapping markets between the merging parties. So structural presumptions are more difficult to determine *ex ante* to serve as a guide for regulators unlike in horizontal mergers. For non-horizontal mergers, market shares are even less useful as a screen. Courts have established “a presumption of harm from horizontal mergers that is not applied for vertical and conglomerate mergers” (OECD 2020).

Economic theory has traditionally focused on markets as the unit of analysis both to determine market power and to assess its impact on competition. By assessing the impact of mergers within markets in which the merging firms operate may mean that economic analysis ignores their impact more broadly in the longer term. Asian family conglomerates operate across a range of markets but usually have centralized control and are more concerned with overall long-term group profits. This may allow the conglomerate to merge with inefficient firms but then cross-subsidize them in the longer term to drive their competitors out of business. More research needs to be undertaken to see whether conglomerates operate in ways not covered by the usual economics used in merger (and abuse of dominance) analysis. As Witt suggests, labelling a merger category “is a helpful starting point for developing a solid theory of harm, but little more” (Witt 2022).

During the 1950s and 1960s, using the Harvard Structure-Conduct-Performance framework, economists viewed vertical integration as likely to be anticompetitive. Concern was usually expressed about a likely increase in exclusionary practices that shut competitors out of markets and how monopoly could be leveraged from one market into others. During the 1960s and 1970s these traditional concerns were

replaced by Chicago School economics as transaction cost economics provided efficiency reasons for vertical integration. The Chicago School argued for a careful evaluation of the likely losses from increased market power compared to any efficiency gains.

More recently, post-Chicago economists, using game-theory, developed models that identified theoretically possible scenarios that reduce competition and so consumer welfare. Now, the economic literature recognizes that economic policies towards vertical mergers should recognize the possibility that they can both provide incentives to foreclose “competitors from markets and raise rival” costs (through higher input prices, for example) and facilitate collusion that need to be balanced against possible economic efficiencies.

Vertical integration combines successive stages of the production of goods and services within a single firm. Economists define firms in terms of either the sole ownership of the assets used to produce goods or services or alternatively as a nexus of contracts between owners and inputs to production (Jensen and Meckling 1976). Vertical mergers can eliminate “hold-up,” i.e., where an investment useful to both firms does not occur. Firm A produces a homogenous input that is sold to downstream firms, including Firm B. A and B negotiate short-term contracts that specify price. Suppose A could invest in a machine that produces better inputs for B and so allow B to make greater profits—but cannot be used by B’s downstream competitors. B persuades A to invest and offers to pay a higher price for inputs. Firm A knows that once the investment is made only B can use it and so could renege on the contract and not pay the higher price. A would be reluctant to invest in a new machine for fear of being held-up. Final consumers are likely to be better off with a merger.

A vertical merger may yield other efficiencies including reduced negotiating costs between A and B, guaranteed supply, better supply chain management, reduced inventories, etc. As described above, this is usually complicated. There is usually no change in the structure of either the upstream market or the downstream market (only a change in the name of the integrated company) so no change in concentration in any relevant market. So, it is important to assess both the benefits and costs of a vertical merger.

A vertical merger can eliminate double marginalization which is where the vertical merger eliminates double mark-ups on cost when two separate firms at different levels in a vertical relationship sell and then resell a product (Spengler 1950). Eliminating the double market lowers prices for consumers and increases consumer welfare. But a vertical merger may permit the newly merged firm to raise its rivals’ costs and foreclose its competitors from the market—information on this is more likely from competitors.

Should competition agencies make any competitive presumptions vertical mergers? There is disagreement about this. For example, Lafontaine and Slade (2021) do not find sufficient empirical evidence to support presumptions and argue that each vertical merger should have a careful examination. Riordan and Salop (1995) stress that simply looking at market concentrations before the proposed merger does not tell us whether vertical integration is likely to harm consumers through higher prices etc.

Baker et. al. (2019) also argue for less reliance on presumptions and a more comprehensive evaluations of vertical mergers including introducing a rebuttable presumption that a vertical mergers harm competition. Their "... overall concern is to reduce false negatives (including under-deterrance), while keeping false positives (including over-deterrance) low." The Federal Trade Commission withdrew these 2020 guidelines in 2021. About-half of vertical mergers involved information exchanges, remedied by conduct restrictions and most of the rest involved input or customer foreclosure that are more complex to evaluate because of the considerable number of competitive impact possibilities.

The main harm usually identified for conglomerate mergers is that they allow for market power in one market to be leveraged into another market or used to prevent new competition in existing markets. And so "... the concern is that an increase in product range allows the merged entity to take some action that lessens the competitive constraints that it faces, thereby giving rise to a unilateral incentive to increase prices to the detriment of consumers" (Gore et al. 2013). The economic literature on leveraging focuses on tying and bundling of products in nearby markets.

The US "experienced a wave of conglomerate mergers in the 1960s, which was driven in part by overly restrictive antitrust policies towards horizontal and vertical mergers" (Kolasky 2002). The US does not make a distinction between vertical and conglomerate mergers, having concluded that standard theories of horizontal and vertical harm already capture what the OECD Secretariat describes as "conglomerate effects" (OECD 2020).

In evaluating conglomerate mergers, while the US is mainly concerned with economic efficiency and so protecting competitive processes, not competitors, the EU prohibits conglomerate mergers "because they will make the merged firm a stronger competitor that may ultimately be able to drive rivals from the market" (OECD 2020). However, in practice, there may not be much difference between the EU and the US (Witt 2022).

Diagonal mergers combine firms or assets at different stages of *competing supply chains*. For example, a merger between a manufacturer of laptop computer parts and a manufacturer of desktop computer chips.

These companies are neither horizontal competitors nor located in the same vertical supply chain. However, if laptop computers compete with desktop computers, then there could be concerns about future competition (Dechart 2020).

Conglomerate mergers are important in digital markets as large high-tech companies acquire suppliers or customers to expand. Such acquisitions can be procompetitive because consumers benefit from the combination of complementary assets and improved interoperability between products. However, they may pose competition issues because they may lead to bundling and tying which can prevent new entry if new entrants cannot profitably enter both markets.

While there has been some convergence in the approach taken by the EU and the US towards conglomerate mergers, there are some important differences. For example, for conglomerate mergers:

... the EU focuses on the merger's effect on competitors, while the United States focuses on consumers or prices; the EU focuses more on single firm dominance and monopolies, but the United States focuses on collective dominance, collusion, and differences in conglomerate effects; and lastly there are differences in efficiency considerations. (Karacan 2004)

It is usual in all the above scenarios to see companies as separate for competition law purposes. But where business groups in Asia are concerned the main problem is that competing (or potentially competing firms) are often controlled by a single person where identities are hidden and so the true anticompetitive impact of conduct and mergers may be hidden. Separate entities may not be acting in their own best interests. Instead, the controlling person may be maximizing overall group or conglomerate profits. Losses in some areas are more than compensated elsewhere within the group. This may justify a different approach in Asia for conglomerates compared to the EU and the US. Competition agencies in Asia should be aware of the need to design enforcement around these differences.

4.6 Conclusion

This chapter has focused on the role of economists and lawyers in trying to achieve good economic outcomes in practice within legal institutions and constraints imposed by *ex ante* laws. After examining the role of both economists and lawyers in dealing with anticompetitive practices, it concludes that economists should play a more important role both in the analysis of economic conditions in competition law cases as well as

determining whether interventions through regulatory and legal means are likely to improve economic outcomes. This should not be left to lawyers within the legal system.

At present outcomes are more likely to depend on pre-determined words in statutes rather than a proper examination of the impact on economic welfare. This has implications for economies in Asia who have different business practices, economic conditions, and regulatory institutions.

Differences in business practices and corporate forms in Asia may also justify a different approach to the economic analysis of competition law and prohibited practices. This was illustrated in this chapter using the example of non-horizontal conglomerates mergers. No single firm would be allowed to grow to the size and overall dominance that conglomerates occupy in Asia. And yet centrally controlled conglomerates are treated by competition laws as if they were simply a collection of single separately controlled firms. This suggests that Asia treat conglomerates differently than the way they are treated in the US and Europe. Further research on Asian business practices may justify different approaches in other areas of competition law.

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5

The Structure, Conduct, and Performance of Competition Agencies in Asia*

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5.1 Introduction

A competition authority's *structure* entails characteristics of the organization, its hierarchy, independence, percentage of the government budget, training, and orientation of personnel (e.g., legal or economic). *Conduct* includes protocols for pursuing cases, the nature of explicit and implicit guidelines for market studies, the pursuit of market reviews, and the extent of coordination with other government agencies. The *performance* of the competition authority includes metrics of enforcement intensity (e.g., number and severity of fines, criminal referrals, outcomes of merger cases, other antitrust actions (Bradford

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et al. 2019), and other dimensions of quality related to best practices. These elements—structure, conduct, and performance—are all metrics of the nature of competition policy. Thus, in this chapter, we inquire into the extent to which competition agencies are oriented to addressing the causes of anticompetitive practices. To what extent are those differences driven by rational responses to the differences and problems across countries, political economies, and other factors? What statistical patterns relate competition policy metrics to country characteristics?

Our objective is to document and subsequently explain the stylized facts of competition policy and provide a comparative assessment of competition agencies in selected countries in Asia and the Pacific. Previous studies have focused primarily on developed economies but developing countries in Asia have just adopted competition policy in recent decades. Documentation of country competition policies includes legislation, implementing rules and regulations, other rules and procedures, and guidelines for prosecuting cases, among others (e.g., defining a market, types of evidence to be gathered, thresholds for proceeding, etc.). We also collected information on the governance of these authorities, including staffing and organization and the explicit or implicit constitution of the authority (e.g., rights, responsibilities, incentives, and the mechanisms of decision-making and dispute resolution). We look at answers to questions such as—What explicit and implicit guidelines are used in the execution of market studies? What triggers the launch of market studies? What investigative powers does the competition authority have? Does the authority engage in market reviews to determine priorities for improving efficient allocation in the overall economy? What are the guidelines for such market reviews?

To this end, we conducted a focus group discussion and a survey of competition agencies in Asia regarding their structure, conduct, and performance. We augmented the survey instrument from Bradford et al. (2019) on competition law and enforcement, which primarily covers competition agencies in developed countries, using data up to 2010. As such, their data does not cover recently established competition agencies in Asia. To meet our study's objectives and to be more apt for most countries in the Asia and Pacific countries, we added new questions and modified some of theirs. A total of 13 out of 31 target competition-agency respondents across Asia and the Pacific participated in the survey. Using our primary data, we create a competition policy index to aggregate the competition policy characteristics and compare and contrast competition authorities' structure, conduct, and performance across Asian countries.

Given the multivariate nature of the data and our objective to aggregate characteristics of competition agencies, we used Principal

Component Analysis (PCA) and iterative PCA to create Competition Policy Indexes (CPIs). We ranked the competition agencies that participated in the survey according to their CPIs and related country characteristics. We also relate these indexes to country characteristics using secondary data to document and explain the stylized facts of competition policy in Asia.

This chapter is organized as follows. Section 5.2 reviews related literature on the structure, conduct, and performance of competition agencies across economies; Section 5.3 presents our data and methodology using PCA and iterative PCA; and Section 5.4 discusses the results and relates aggregate characteristics of competition agencies to their age and country characteristics, notably economic freedom and level of economic development. Section 5.5 presents concluding remarks and offers some policy implications and recommendations.

5.2 Review of Related Literature

An economy's size and development level have often been identified as factors in the adoption of competition law (Forslid, Häckner, and Muren 2011; Palim 1998; Ravago, Roumasset, and Balisacan 2022a). Competition policy and corresponding enforcement are relatively new endeavors for most small economies across Asia, only coming into existence in the last 2 decades mainly due to external pressures from free trade agreements and international organizations. These endeavors were primarily based on well-established regimes such as the United States (US) and Europe. Competition law and the structure, conduct, and performance of most competition agencies in the Association of Southeast Asian Nations (ASEAN) have been closely modeled after those of Europe (McEwin and Chokesuwwattanaskul 2021).

The structure of competition agencies is primarily influenced by the goals reflected in a economy's laws. These laws typically include three objectives: to deter or stop antitrust infringement, to penalize infringing parties, and to compensate the victims (Jerez 2015). Most competition law regimes in the Asia and Pacific region focus on merger control, the prohibition of anticompetitive agreements, and abuse of dominance (OECD 2018). Others also have consumer protection and/or other regulatory powers (OECD 2018).

The strength and scope of a competition agency's authority are shaped mainly by its position in the administrative structure of its respective jurisdiction. Some authorities have complete autonomy, while others are attached to a specific ministry or government agency. More often than not, independence from other government branches allows authorities to be more effective in competition enforcement, as in

the cases of the Republic of Korea, the Philippines, and, more recently, Thailand. The Republic of Korea's and the Philippines' competition authorities both function as independent quasi-judiciary bodies and are considered relatively strong authorities for their level of maturity. On the other hand, the Trade Competition Commission (TCC) of Thailand was initially attached to the Ministry of Commerce. During that time, the authority had failed to impose any penalties amidst the numerous complaints it had received. Recognizing this, the amended Trade Competition Act of 2017 grants the new TCC its much-needed independence for more effective competition enforcement (Ravago, Roumasset, and Balisacan 2022b).

The size of the economy has also proved to be a factor in a competition authority's structure, particularly in the size of personnel and budget. Typically, the bigger the economy, the greater are the human and financial resources devoted to the competition authority. In terms of staff, this can be seen in the cases of the Brazil, Canada, the European Union, Japan, and United States, with agency employees ranging from 400 to over 1,000. For the budget, this is exemplified by countries such Australia, the People's Republic of China, Japan, United Kingdom, and United States, with budgets ranging from \$59 million to \$288 million in 2010, far beyond the median agency budget of \$3.3. million (Bradford et al. 2019).

Arguably the most significant determinant of a competition agency's structure relates to the goals of its competition law regime. Generally, the main purpose of competition law is economic efficiency and consumer welfare (Bradford et al. 2019; Gal 2005; Ravago, Roumasset, and Balisacan 2022b), with development, protection of exports and small businesses, and industrial and social policies increasingly emerging as objectives (Bradford et al. 2019). In the Asia and Pacific region, these objectives are addressed by prohibiting anticompetitive agreements, abuse of dominance, unfair competition provisions, and merger control (OECD 2018).

The conduct of competition agencies has evolved. Traditionally, competition policy takes a legal or form-based approach wherein certain practices are prohibited regardless of consequences. Since the 1990s, however, there has been a shift to a more economic or effect-based approach as exemplified by trends in the US and Europe, where facets of individual cases are thoroughly reviewed, and economic tools are utilized to predict effects or determine counterfactual scenarios (OECD 2021; Voigt 2009). Economic analysis provides an analytical framework for the review of possible market failures and levels of competition as well as efficient versus inefficient outcomes and the effect of the conduct in question on markets (OECD 2021).

Many of the younger competition authorities have embraced this economic approach, as exemplified by the conduct of market studies. Specifically, in Asia and the Pacific, young authorities screen industries and conduct more in-depth market studies to build knowledge and ensure effective competition in selected markets. Between 2015 to 2020, the region recorded a country average of 5.3 completed market studies annually, slightly more than its OECD counterparts, except for 2020 (OECD 2021).

Regarding cases pursued, hardly any literature elaborates on specific guidelines that competition authorities follow. Available studies only provide recommendations, cautioning young competition authorities with limited enforcement budgets to ensure that the net harm prevented for a specific case (including benefits lost) is greater than the costs of undertaking an investigation (Gal 2005). A clear set of criteria must also be in place to avoid undermining competitive market processes and creating business uncertainties (Adhikari and Knight-John 2004). In the Russian Federation, cases are usually focused on minor investigations to control prices. Given its highly-concentrated market, the Russian Federation's authority tends to intervene frequently, thus having strikingly more investigations than its counterparts in other developed countries (Bradford et al. 2019).

Apart from conducting market studies and investigations, competition authorities play a critical role in instigating public acceptance and awareness of competition policies and promoting a competitive environment for economic activities. *Competition advocacy* is an important enforcement tool as it can motivate compliance and increase deterrence effects. Moreover, it allows market participants to be proactive, collecting relevant information and filing complaints with the authority, thus increasing enforcement levels and reducing resources needed by the power to detect anticompetitive activities (Gal 2005). In many young competition authorities in Asia and the Pacific, enforcement activities are still relatively low as their priorities center on advocacy and creating a competition culture (OECD 2021). Many institutions and scholars emphasize the need for advocacy. However, some academics maintain that such efforts should be left to independent think tanks, academics, and pro-market private interest groups. Furthermore, competition agencies have insufficient political support and popularity to effectively mitigate regulatory barriers and promote a culture of competition (Rodriguez and Menon 2016).

The performance of the competition authority includes measures of intensity such as the number and severity of fines, criminal referrals, outcomes of merger cases, other antitrust actions, and other dimensions of quality. In this chapter, performance refers to *enforcement intensity*

rather than performance dimensions of the economy, such as price-cost margins and productivity growth. In the Asia and Pacific region, merger cases have grown, although, in 2020, only about 98% of the reviews concluded without remedies against the merging parties. Very few cases have been undertaken in the region for abuse of dominance provisions and cartel enforcement (OECD 2021).

The ineffectiveness of competition agencies in developing countries can be attributed to several factors. Some scholars have pointed out that underperformance may be a result of searching for clear proof of cartel violations that is difficult to find (Rodriguez and Menon 2016). In addition, most competition agencies do not have the means to analyze the role and relevance of the advantages of the array of transaction costs and other difficulties that led to the formation of the cartel groups in the first place. Thus, it is important to underscore that while patterning competition rules and processes after established regimes may lead to similar activities, such as pursuing cartels and lowering prices, it may have varying welfare impacts across countries. In the case of cartels, McEwin and Chokesuwanaskul (2021) cited Singapore as an example where business groups are considered good because they provide “fair” prices that are not too high for consumers but high enough for producers to earn profit. Some scholars maintain that competition objectives such as pro-market liberalization, economic efficiency, consumer welfare, and “best practices” fail to recognize that powerful industry groups convey substantive, and often pro-competitive, benefits to the proper functioning and stability of the state (see also the discussion of investment coordination in Roumasset, Ravago, and Balisacan, Chapter 2 of this volume).¹ These numerous, often contradictory, and unattainable policy goals can burden the enforcement agenda in developing countries (Rodriguez and Menon 2016).

A contrarian view is that cartels can be the main focus of competition agencies, given that errors are potentially less in this area (Neven and Zenger 2008). Determining the counterfactual and deterrent effects may be relatively more straightforward. Neven and Zenger (2008) suggested that the limited resources of the authorities should be focused on the search and evaluation of additional evidence on the importance of the deterrence effect. Similarly, Auer, Mann, and Bowman (2021) acknowledge the resource constraints of competition agencies, especially among those in ASEAN countries. They suggested

¹ Under the Obama and Biden administrations, progressive forces in the US have supported the New Brandeisism seeking to “do away with consumer welfare as an antitrust standard and re-establish other political considerations as a legitimate objective for the antitrust laws” (Levine and Wright 2021).

that enforcement efforts should center on areas with the highest return on investment that can lead to increased innovation and avoidance of the most harmful anticompetitive conduct, such as cartels and mergers that monopolize markets.

However, Bradford et al. (2019) cautioned against inferring the strength of antitrust regimes or effectiveness of enforcement levels from the number of investigations a competition authority has. They argue that some regimes can achieve deterrence without investigating most of the anticompetitive activities occurring in their jurisdictions.

Ultimately, the practical and reliable enforcement of competition policy is crucial, inasmuch as flawed enforcement may prove counterproductive, stimulating behavior that the law was intended to prevent and stifling genuine competition (Schinkel and Tuinstra 2004). For instance, firms that would otherwise behave competitively are motivated to collude as a precautionary measure when they face the risk of being unjustly sanctioned when complying with the law. In this regard, Auer, Manne, and Bowman (2021) recommended following the US approach of focusing on consumer welfare as a single unifying objective rather than the multi-objective EU approach, thereby avoiding inevitable contradictions. Such an approach also facilitates distinguishing between pro-competitive and anticompetitive conduct without prejudging specific market structures or mandating particular doctrinal rules. In addition, the US approach applies an effects-based analysis that allows it to adapt to the ever-changing economic findings, potentially making it less vulnerable to political influence.

There is scant literature analyzing the structure, conduct, and performance of competition agencies in Asia. The available literature is comprised more of organizational reports. Furthermore, available studies with comparative datasets such as Bradford et al. 2019 and Bradford and Chilton 2018 often focus on developed countries with established competition authorities. Moreover, given that the main focus of those studies was to provide indexes and databases, their analyses were limited, and implications of the data for the structure, conduct, and performance of authorities were not fully explored. To this end, this study aims to fill this gap by documenting stylized facts and analyses among competition agencies in Asia and the Pacific, including developing countries with nascent competition sectors and authorities.

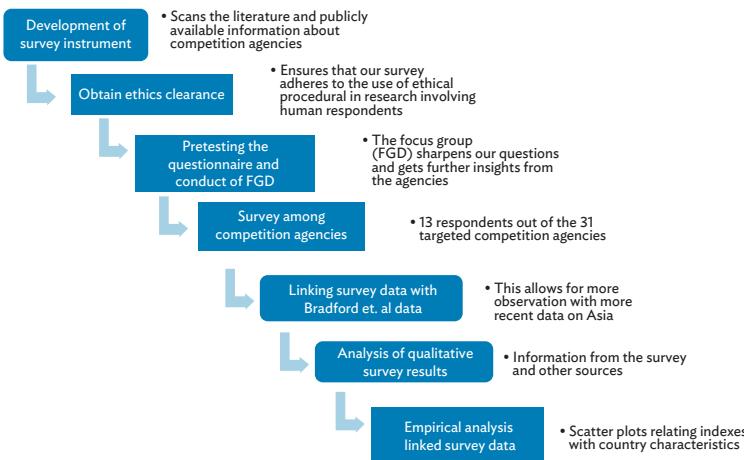
5.3 Methods and Data

Figure 5.1 presents the flow chart of our study from data collection to analysis. Before conducting our survey to collect data, clearance from the Ateneo University Research Ethics Office ensured that our survey

followed the protocols and ethical procedures in conducting research, specifically the voluntary nature of responding to the survey, consent from the respondents, and confidentiality of identifiable information by the respondents.

Our focus is on the structure, conduct, and enforcement-performance of competition agencies in Asia. Previous surveys that collected data on competition agencies mainly covered developed countries, but few are from developing Asian economies since they have only recently adopted modern competition laws. Figure 3.1 in Chapter 3 presents the timeline of the adoption of competition law in Asia. Ahead of most Asian economies, Japan formally introduced competition policy legislation in 1947 with its Anti-monopoly Law. New Zealand and the Republic of Korea enacted competition laws in the 1980s, and Indonesia and Thailand in the 1990s. More economies in Asia and the Pacific followed suit in the current millennium. The latest additions include Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, Myanmar, and the Philippines. As of 2020, 20 economies in Asia and the Pacific, including Australia and New Zealand, have competition laws in place. These economies are the focus of our study.

Figure 5.1: Flow Chart of the Study



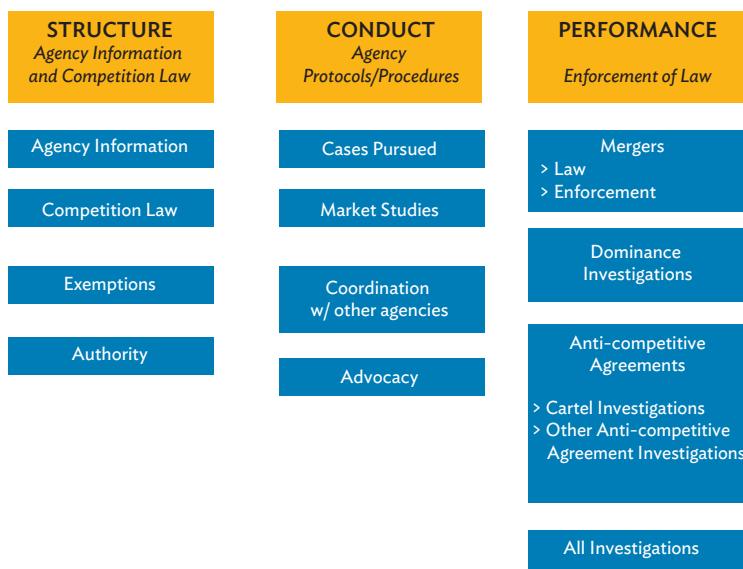
Source: Authors.

5.3.1 About the Survey

We conducted an online survey among competition agencies in Asia in September and October 2022. We augmented the survey instrument from Bradford et al. (2019) on competition law and enforcement. Questions were modified, and new questions were added to meet our study's objectives and be more appropriate for most countries in the Asia and Pacific region. We pre-tested the survey instrument with two competition agencies, the Philippine Competition Commission (PCC) and the Trade Competition Commission of Thailand (TCC). After the pre-test, we conducted separate focus group discussions with the team of respondents from the PCC and the TCC to gather their feedback and suggestions for the questionnaire and to solicit further insights. These discussions helped us refine and polish the survey instrument for the official survey rollout. We also conducted a focus group discussion with representatives from the Australian Competition and Consumer Commission to obtain insights into the experience of a relatively mature competition agency.

Figure 5.2 provides an overview of the content of our survey instrument. We formulated questions according to competition agencies' structure, conduct, and performance. Under structure, we asked for information about the agency, including its year of establishment, budget, and the number of staff. We also asked about key provisions in their competition law, including the goals of their respective laws. Under conduct, questions were more qualitative. Respondents were asked to describe their protocols in pursuing cases, the conduct of their market studies, the nature of coordination with other government agencies, and their advocacy activities. Under performance, we requested qualitative information and quantitative historical data on their merger cases, dominance investigations, and anticompetitive agreements.

Invitations to participate in the survey were emailed to the heads of agencies. We used Survey Monkey, an online subscription-based platform, to conduct the survey. The survey was open for 6 weeks. Thirty-one countries from the regional members of the Asian Development Bank and members of the International Competition Network, were invited to participate in the survey. Out of the 31 target countries, 13 countries responded to the survey. The survey instrument consists of time-series questions covering 2011–2021 and questions with binary responses.

Figure 5.2: Overview of the Survey InstrumentSurvey Questionnaire

Source: Authors' survey.

5.3.2 Constructing Competition Policy Indexes Using Principal Component Analysis

We constructed competition policy indexes to aggregate the competition policy characteristics and compare competition authorities' structure and performance across Asian economies. Given various indicators of nature, conduct, and performance, we sought to create indexes of agency resources, enforcement intensity, and quality of competition regimes. Using our survey data from 13 competition agencies in Asia, we computed the following indexes: Competition Policy Index of Resources, Competition Policy Index of Enforcement Intensity, and overall Competition Policy Index (CPI). We refer to the overall CPI as the Quality of Competition Regime CPI. Rather than apply subjective weights to the individual variables (e.g., as in Bradford and Chilton 2018), we use the methods of PCA (Jolliffe 2014) and iterative PCA (Husson

and Josse 2012). For each set of indicators, we allow PCA to reduce the dimensionality of the data and, following Kaiser's Rule, to apply weights to the principal components, thereby creating a single index.

The Index of Resources aggregates the information on the financial and human resources of the agencies. It tells the amount and the quality of the financial and human resources a competition authority can rely on when performing its tasks. The Index of Enforcement Intensity captures in a single number the intensity of enforcement by competition agencies. It includes information on mergers, abuse of dominance, cartel cases and investigations. The Index of Resources and the Index of Enforcement Intensity were computed annually covering 2011 to 2021.

Our survey includes several time-invariant binary responses covering various aspects of the agency's structure, conduct, and performance. Considering this, we combine the 2021 data on budget, human resources, mergers, abuse of dominance, cartel cases, and investigations with the time-invariant binary data to compute the overall CPI. The overall CPI captures the quality of the competition policy regime in a single number. We define the quality of the competition policy regime as the ability of the competition authority and their laws to deter anticompetitive behaviors of firms operating in their respective jurisdiction. We take key features of competition agencies to constitute the overall CPI. This includes elements relating to structure, such as the degree of independence of the competition authority concerning political or economic interests, the scope of the investigative powers the competition authority holds, the level of the overall loss that can be imposed on firms and their employees if these are convicted; and the size and the quality of its financial and human resources. Features related to conduct include the presence or absence of market studies relating to priority sectors and the presence or absence of coordination with other government agencies. Features related to performance (enforcement intensity) consist of the toughness of a competition authority, which is given by its level of activity and the size of the sanctions imposed on firms and their employees in the event of a conviction.

PCA is a technique that simplifies a dataset by reducing its dimensionality while retaining most of the variation in the original data. It involves identifying the data's most important features or principal components and then projecting the data onto a lower-dimensional space defined by these components. The first principal component is the direction in the data that explains the greatest variance. The second principal component is the direction explaining the second largest variance, and so on. Each principal component is a linear combination of the original variables and is orthogonal to the other principal components. In other words, they are independent and capture distinct

data variation sources. The top k principal components are retained, where k is much smaller than the original number of variables.

The PCA algorithm begins with the covariance matrix of the dataset consisting of original variables and showing how the different variables in the data are related to one another. PCA then calculates the eigenvectors and eigenvalues of the covariance matrix. Eigenvectors are the directions in the data that explain the most variance. Eigenvalues indicate the importance of specific elements in the system. They represent the amount of variance explained by each eigenvector. Thus, removing the small eigenpairs will retain and describe the original data. PCA sorts the eigenvectors in descending order of their eigenvalues, with the eigenvector corresponding to the highest eigenvalue being the first principal component, the eigenvector corresponding to the second highest eigenvalue being the second principal component, and so on. Then PCA projects the data onto the principal components. Each principal component is a linear combination of the original variables, weighted by the values in their corresponding eigenvector. Thus, PCA is a linear transformation of data. The number of principal components to retain depends on the amount of variance that needs to be explained. We applied Kaiser's (1960) criteria of keeping components with greater eigenvalues. By selecting only the top few principal components we reduce the dimensionality of the data while maintaining most of the important information. PCA highlights the most important aspect of variation in the data.

However, the standard PCA cannot be applied directly in the presence of missing values. The iterative PCA, also known as the EM-PCA algorithm (Husson and Josse 2012), addresses the issue of missing values. The iterative PCA imputes the missing values with estimates based on the observed data. This imputation step can be performed at each iteration of the iterative PCA algorithm, which updates the principal components based on the complete data. The iterative PCA method we used in our analysis is implemented in the function of the R package, named "missMDA" (Josse and Husson 2016). We only apply the iterative PCA when the missing values are in between years. When the entire series is missing for one observation, either these variables drop or the index for this country will not be calculated. We take the nearest value as our imputation for key variables like budget, particularly for Australia, Indonesia, Malaysia, and Papua New Guinea. We take the growth of the continuous available series for staff size and apply it to the missing years. We take the mean of their ratios to total staff for the legal and economic staff variable and use it for the missing years.

When the data distribution is non-normal or when there are outliers, it is best to transform and standardize the data before running PCA (Maadooliat, Huang, and Hu 2015). We follow Buccirossi et al. (2011) in normalizing and standardizing the variables. The budget expressed in the local currency unit is converted to US dollars using the purchasing power parity (PPP) exchange rate and then divided by the country's nominal gross domestic product (GDP). This considers the size and level of economic development, allowing for comparing countries. The value is then divided by the highest corresponding value held by any country in the sample so that the range of the data becomes zero to one. The number of staff members is divided by the real GDP (constant in 2015 US dollars), allowing for a meaningful comparison between countries. To standardize the range of the data from zero to one, the value is then divided by the highest corresponding value held by any country in the sample. The number of legal and economic staff is divided by the total staff. The resulting value is then divided by the highest corresponding value held by any country in the sample.

Table 5.1 presents summary statistics of normalized key time series variables to calculate the Index of Resources and Enforcement Intensity. Variables representing country characteristics from secondary sources are also presented.

To explain the construction of the indexes, we use the calculation of overall CPI as an illustration. We computed the Index of Resources and Index of Enforcement Intensity following the same method but annually.

Table 5.1: Summary Statistics of Normalized Key Time Series Variables

Description	N	Mean	SD	Min	Max
Age	100	11.99	9.12	0	35
<i>for Index of Resources</i>					
Annual budget	106	0.3	0.34	0	1
Number of staff	106	0.17	0.33	0	1
Number of legislative staff	100	0.32	0.31	0	1
Number of economic staff	100	0.4	0.34	0	1
<i>for Index of Enforcement Intensity</i>					
Number of mergers filed	106	0.14	0.3	0	1
Number of mergers reviewed	106	0.14	0.3	0	1
Number of mergers reviewed in-depth; phase 2	106	0.11	0.31	0	1
Number of mergers resolved with remedies	106	0.16	0.33	0	1
Number of mergers blocked	106	0.11	0.31	0	1
Number of withdrawn merger notification	106	0.12	0.3	0	1
Number of dominance investigations launched	106	0.15	0.31	0	1
Number of dominance investigations resulted with fines	106	0.13	0.33	0	1
Median length of dominance investigation	106	0.26	0.38	0	1
Number of dominance investigation closed with remedy	106	0.11	0.3	0	1
Number of cartel investigations started	106	0.18	0.32	0	1
Number of cartel investigations closed with remedy	106	0.14	0.32	0	1
Median length of a cartel investigation	106	0.22	0.35	0	1
Number of cartel investigations seeking criminal remedy	106	0.04	0.19	0	1
Number of cartel investigations ended criminal remedy	106	0.03	0.16	0	1
Number of other investigations initiated	106	0.17	0.32	0	1
<i>Country Characteristics</i>					
Scores of economic freedom	121	7.04	0.84	5.83	8.62
GDP per capita 2015 Constant	121	11,586	17,814	938	59,341

GDP = gross domestic product, N = number, SD = standard deviation, Min = minimum, Max = maximum.

Notes: 13 economies; years 2011 to 2021.

Sources of basic data: Authors' survey, economic freedom scores are 1 to 10, low to high from Fraser Institute (2022), GDP per capita is from World Development Indicators.

The principal component scores of each country's competition agency were obtained (implemented in Stata, see Table A5.3, in Appendix). The scores are calculated as the sum of each variable's factor loadings multiplied by that variable's value. This is given by Equation (1):

$$PC_{j,i} = \sum_{k=1}^m (l_{j,k,i}^2 \times S_{k,i}) \quad (1)$$

where $PC_{j,i}$ is the principal component score of country i in component j ; $l_{j,k,i}$ is the factor loading of variable k of country i in component j ; $S_{k,i}$ is the value of country i 's variable k ; $j = PC$ $k = \{1,2,\dots,m\}$; and $i = \text{country} = \{1,2,\dots,13\}$.

The principal components are the new variables that summarize the variability in the original data. The eigenvectors in Table A5.2 represent the direction of maximum variation in the data. The larger the corresponding eigenvalue, the more important the direction is in describing the variability in the data. Each eigenvector is a weighted linear combination of the original variables. The weights on each variable indicate the degree to which that variable contributes to the direction of maximum variability. The weights also identify which variables are most important in describing the variability in the data. For example, in Table A5.2, principal component 1 (Comp1) registered high eigenvectors for the variables Number of mergers filed, Number of dominance investigations launched, Number of other investigations initiated, Number of mergers reviewed, and Number of mergers reviewed in-depth, phase 2. This means that these variables vary together, and Comp1 increases as these variables increase. They tell us about how active a competition agency is in conducting investigations and cases. Comp2 in Table A5.2 is high in the variables *lawreq_not-r* (Mandatory notification of merger or acquisition) and in *xcartel_ex-t* (Exemption of export cartels), but *lawreq_not-r* decrease and *xcartel_ex-t* increase with an increase in Comp2. Eigenvectors are always orthogonal (perpendicular) to each other, meaning they are independent sources of variability in the data.

The eigenvalues in Table A5.1 represent the variation each eigenvector explains. Once the eigenvalues are obtained, Kaiser's (1960) rule of considering only principal components with positive eigenvalues is applied. From Table A5.1, the number of components to be considered in computing the overall CPI is 10.

The overall CPI is calculated as the sum of the weighted contribution of each of the ten (10) principal components in the total variation explained by the 10 principal components. The variance weights are denoted by θ_j obtained using the formula, $\theta_j = \nu_j / \nu$, where ν_j is the proportion explained by component j (See Table A5.1, "Proportion"

column); ν is the cumulative variation percentage explained by the n th principal component following Kaiser's rule. In the computation of the overall CPI, $n = 10$ and the cumulative variation is 1.00 (A5.1, Comp 10, last column). The formula for the overall CPI is given by Equation (2).

$$CPI_i = \sum_{j=1}^n \theta_j PC_{j,i} \quad (2)$$

where $PC_{j,i}$ is the estimated principal component score of country i in component j ; θ_j is the variance weight of PC_j ; j is the principal component where $j = 1, 2, \dots, n$; and i is the country where $i = 1, 2, \dots, 13$. The computed overall CPI considers each component's impact or weighted contribution, which is influenced by high levels of correlation between the predicted scores of each variable.

5.4 Results and Discussion

The Competition Policy Indexes are a summary of information that can help younger competition agencies in Asia identify areas of need. It will also help understand the link between conditions and outcomes, revisit and evaluate policies, and compare performance over time and with other competition agencies.

5.4.1 Structure

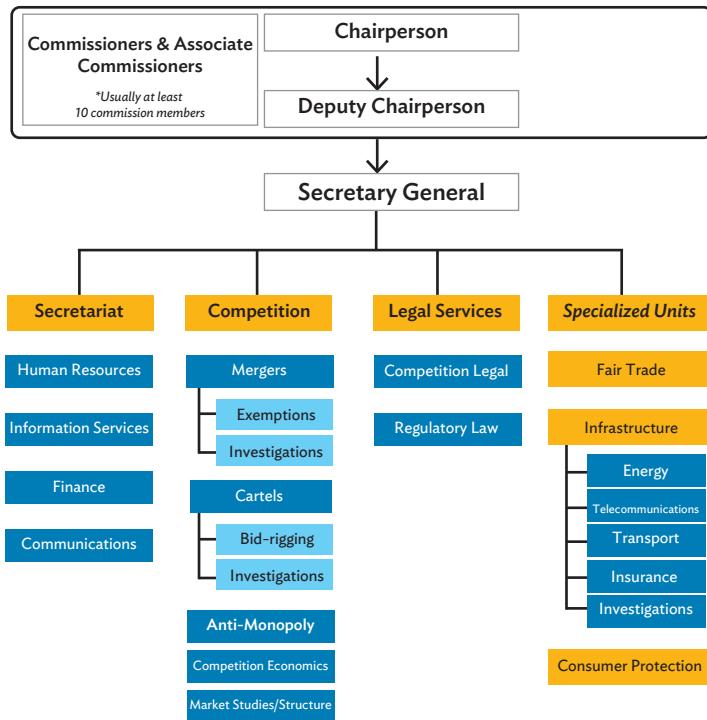
The *structure* of competition agencies refers to the characteristics and composition of the organization—a critical factor determining effective antitrust enforcement. Several factors affect the organizational structure of competition agencies, including maturity, independence, dual or multiple roles of the authority, the law itself and its objective, leadership, and financial and staff resources.

Probing the structure of competition agencies reveals a glaring difference between old and young competition agencies. Figure 5.3 presents an illustrative example. Young competition agencies tend to have fewer major units than their mature counterparts, with complex systems involving multiple specialized units. Examining their organizational charts, competition agencies that have been in operation for about 20 years, such as in Australia, New Zealand, and Papua New Guinea, have a more customized setup. They have specific units to monitor particular sectors or specific aspects of the market. Specific sectors they monitor include electricity, gas, telecommunications, and motor vehicles, and particular aspects of the market they keep track

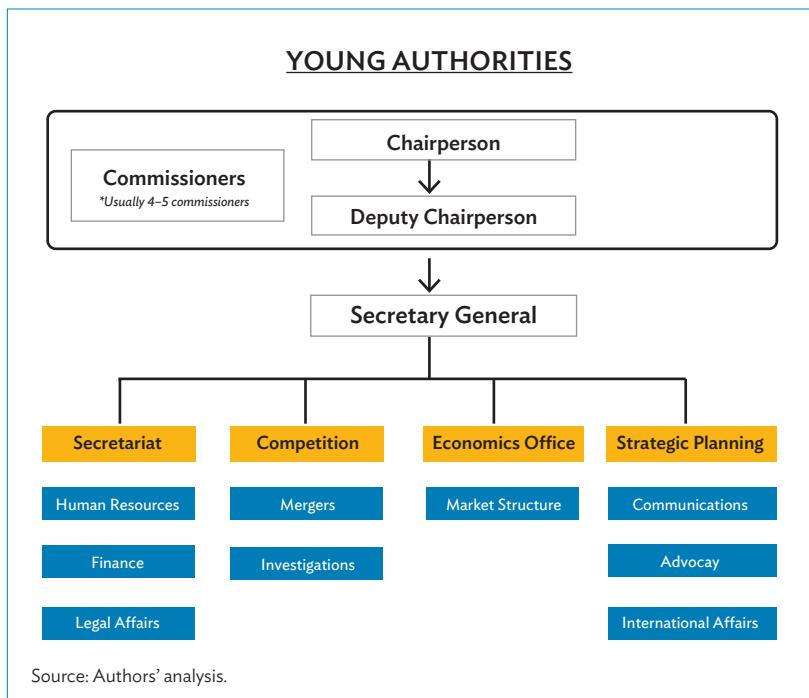
of are price-quality regulation or surveillance. Furthermore, although investigation and legal units exist in most agencies, the mature ones tend to have more. Unlike young authorities, these units are assigned particular areas to investigate or oversee, wherein all investigations or legal matters, regardless of nature, are handled by one unit alone. Mature authorities, albeit very few, also have regional offices across their jurisdictions.

**Figure 5.3: Organizational Structure –
Mature vs. Young Authorities**

MATURE AUTHORITIES



continued on next page

Figure 5.3 *continued*

Another factor that comes into play in an authority's structure is its position in the state's administrative structure and its mandate. Competition authorities can either have complete independence or be attached to a certain ministry or government agency, thus influencing enforcement and financial resources. Nonetheless, most respondent agencies have primary and exclusive jurisdiction over all competition matters. The independence of competition authority from political pressures or other regulators is important. Both *de jure* independence and *de facto* independence are important in avoiding influence from regulatory authorities in terms of decision making and budget, among others.

Many authorities also have dual roles in safeguarding competition and consumer protection matters. Examples include the Australian Competition and Consumer Commission, the US Federal Trade Commission, and the United Kingdom Competition and Market Authority. Regarding the primary objective, however, the priority varies, with some respondent agencies focusing on consumer welfare over total

welfare and vice versa. Efficiency, protection, and support for small and medium-sized enterprises and development were other important objectives for the respondent agencies.

Regarding competition law as such, most respondent agencies do not allow exemptions for export cartels, state-owned enterprises, and state-operated or designed enterprises. For a few economies, however, the passage of other laws has affected the applicability of their competition law in different industries. The telecommunications and energy sectors were often cited as having exemptions in this regard. For most respondent agencies, their competition law allows them to impose fines for violations of their rulings and refer cases to criminal courts, as they cannot directly impose criminal charges.

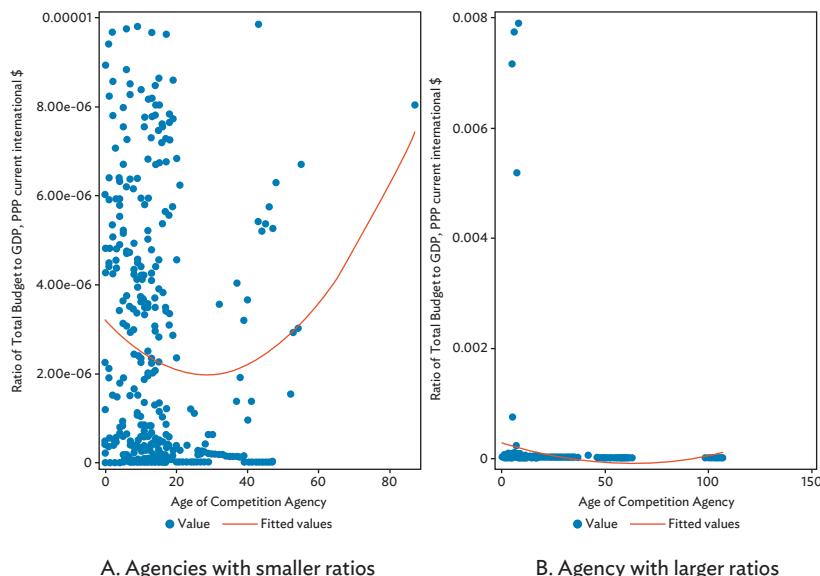
Another apparent similarity among competition agencies is the existence of dedicated units for different competition-related activities. Merger and acquisitions often have their own unit. Cartels are less likely to have one, whereas abuse of dominance hardly ever has a dedicated division. Competition advocacy and public engagement units are not as commonplace as well.

Regarding leadership, most authorities have a chairperson and four to five commissioners who make up the commission. The head of state usually appoints the chairperson, sometimes upon nomination and with corresponding approval from another branch of government (e.g., a legislative body, the Cabinet).

A critical indicator of what makes a good competition authority is its human and financial resources. We utilize the data from Bradford et al. (2019), which includes 126 economies from 1889 to 2010, and extend it up to 2021 with the data from our survey to have some economies that recently adopted competition laws to examine the patterns of the competition agencies' budgets. Figure 5.4 plots the ratio of the competition agency's budget to GDP (in PPP) against the age of the competition agency. Panel A shows competition agencies with smaller ratios of budget to GDP (< 0.00001005). Panel B shows those with higher ratios, specifically the competition agencies of Albania, Armenia, Australia, Bulgaria, Barbados, Canada, the People's Republic of China, Croatia, Cyprus, Czechia, Denmark, El Salvador, Estonia, Honduras, Israel, Italy, Japan, Latvia, Montenegro, Namibia, Nicaragua, Norway, New Zealand, Panama, Philippines, Papua New Guinea, Romania, Singapore, Sweden, Switzerland, South Africa, Türkiye, the US, the United Kingdom, Venezuela, and Zambia. While there is considerable diversity in the initial ratios, both panels show a modest tendency for the budget-to-GDP ratio to initially move downward during the agency's early years and then increase as the agency ages. This suggests an analog for Wagner's Law, albeit for spending on an individual agency

and agency age instead of GDP. After an initial spurt (from zero) when an agency is created, the ratio of spending to GDP decreases for a few years before increasing.

Figure 5.4: The Ratio of the Agency's Budget to GDP vs. The Age of the Agency



GDP = gross domestic product, PPP = purchasing power parity.

Sources of basic data: Bradford et al. 2019, World Bank World Development Indicators, and authors' survey.

Using our survey data, we computed our constructed Index of Resources for economies with available information on agency budget, staff size, legal staff, and economic staff (Table 5.1). Our constructed Index of Resources aggregates the information on the financial and human resources of the agencies. These combined resources of competition agencies serve as a *prima facie* indicator of effectiveness. The PCA method combines this information and produces a single number for the Index of Resources. As explained in Section 5.3.2, implementing PCA and applying Kaiser's rule results in only using Comp 1, rather than multiple principal components, for the construction of the Index

of Resources (i.e., its weight is 100%). For 2017–2021, the variables that registered the highest eigenvalues are the *number of legislative staff* followed by the *number of economic staff*. These variables vary together, and Comp1 of Index of Resources increases as these variables increase. However, from 2011–2016 the sign of the eigenvectors of the *number of economic staff* is negative, suggesting that this variable moves in the opposite direction as Comp1.

Table 5.2 presents the ranking according to the Index of Resources. By this measure, the Philippines ranks first, Viet Nam second, and Thailand third with relatively stronger human and financial resources in 2021. Human and financial resources, legal mechanisms, credibility-building tools, judicial competence, regulatory reform system, and public advocacy must be present to enforce competition laws effectively (Gal 2005). However, an authority's structure may not possess all of these instruments, thus limiting its effectiveness.

Table 5.2: Country Ranking according to Index of Resources

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Armenia	4	4	4	3	3	1	11	9	11	12	12
Australia	1	1	1	1	1	2	2	2	7	11	10
Bangladesh						5	9	10	8	8	8
Cambodia						4	13	13	13	13	13
Indonesia					5	6	8	8	9	6	7
Malaysia	3	3	3	4	4	9	4	6	5	5	6
New Zealand	2	2	2	2	2	3	3	4	6	10	11
Pakistan	6	6	6	6	7	7	10	11	10	9	9
Papua New Guinea	8	8	8	8	8	10	5	3	2	3	4
Philippines						11	1	1	1	1	1
Viet Nam	7	7	7	7	9	12	6	5	3	2	2
Saudi Arabia	5	5	5	5	6	8	12	12	12	7	5
Thailand							7	7	4	4	3

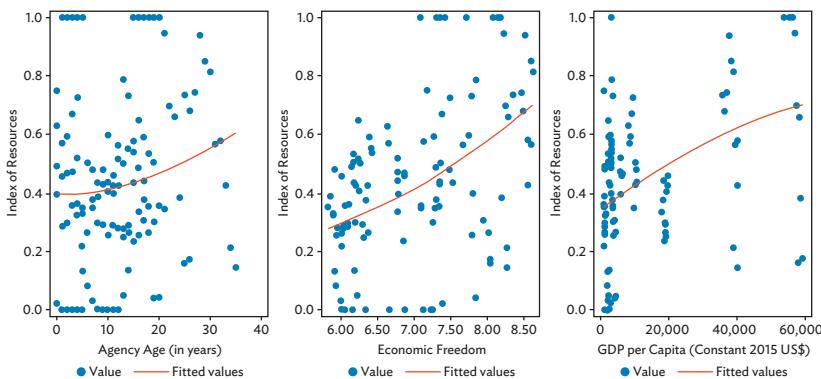
Note: Empty cells indicate that data are not available.

Source: Authors' calculations.

We use secondary data to relate our constructed Competition Policy Index of Resources to country characteristics. Figure 5.6 shows scatterplots and least squares quadratic regression lines of the Index of Resources against the age of the competition agencies, economic

freedom, and economic development. The degree of economic freedom is a composite index capturing the size of government, legal system and property rights, sound money, freedom to trade internationally, and regulation (Fraser Institute 2022). The Index of Resources displays a rough tendency to increase at an increasing rate as the agency matures and as economic freedom increases. On the other hand, the Index of Resources increases but at a decreasing rate as the GDP per capita rises. This pattern implies that at higher levels of GDP, the strength of competition agencies in terms of human and financial resources still gets stronger, but the incremental build-up is not as high as before. The patterns in Figure 5.5 are to be expected given that the bulk of training and capacity building of competition agencies occurs early on in the life of the agencies.

Figure 5.5: Competition Policy Index of Resources vs. Country Characteristics



GDP = gross domestic product.

Source of basic data: Authors' survey, Fraser Institute, and World Bank World Development Indicators.

Moreover, while we see a difference in the complexity of organizational structure between the younger and mature authorities, it is also possible that the agency's resources influence the evolution of the structure of the agency. The agency's resources, budget, and staff size depend on the size of the economy and its level of development. The size of the economy and the government budget may be a bigger factor

than the agency's maturity in the evolution of its structure. The size of the country and its economy may also influence whether the agency has regional offices. If agencies have more resources, they can afford more specialized units for handling more cases.

5.4.2 Conduct

The *conduct* of competition agencies refers to protocols for the pursuit of cases, the nature of explicit and implicit guidelines for market studies, the pursuit of market reviews, and the extent of coordination with other government agencies. Our information from the survey on this aspect of competition policy is more descriptive, thus preventing us from computing a Competition Policy Index of Conduct.

The conduct of competition agencies is largely influenced by the economy's legal systems, i.e., whether the economy follows a common law, a civil law, or a mixture of both. Common law is an uncodified legal system wherein judicial decisions are largely based on precedents. These precedents are maintained through court records or collections of case law such as yearbooks or reports. In contrast, civil law is a codified system with comprehensive, continuously updated legal codes that indicate all matters that can be brought before a court, the applicable procedure, and the corresponding punishment for each offense. Such codes can be categorized further into substantive, procedural, and penal (Berkeley Law n.d.). Table 5.3 lists economies in Asia and the Pacific with their corresponding legal systems.

Table 5.4 shows the details of the conduct of the respondent agencies. Consistent with the literature, almost all respondent countries use an economic-based approach in their agency's conduct through industry scanning and in-depth market studies. Government priority, the Herfindahl-Hirschman index, and the number of complaints received were often cited as considerations for undertaking such activities. When a competition agency strongly focuses on consumer protection, it purposely gathers a relatively large number of consumer complaints which they use as a basis for conducting market studies. However, care should be taken since consumer complaints are usually biased against the market closest to the consumer. It could misdirect competition agencies from investigating deeper issues in other parts of the supply chain.

Table 5.3: Legal Systems of Economies in Asia and the Pacific

Economy	Common Law	Civil Law	Others
Armenia		✓	
Australia	✓		
Bangladesh	✓		Islamic law
Cambodia		✓	
Fiji	✓		
Hong Kong, China	✓		Customary law
India	✓		Customary law and Islamic law
Indonesia		✓	Customary law and Islamic law
Japan		✓	Customary law
Jordan		✓	Customary law and Islamic law
Kazakhstan		✓	
Republic of Korea		✓	Customary law
Kyrgyz Republic		✓	
Kuwait		✓	Customary law and Islamic law
Malaysia	✓		Customary law and Islamic law
Mongolia		✓	Customary law
New Zealand	✓		
Oman		✓	Customary law and Islamic law
Pakistan	✓		Islamic law
Papua New Guinea	✓		Customary law
Philippines	✓	✓	
Qatar	✓	✓	Customary law and Islamic law
Saudi Arabia			Islamic law
Singapore	✓		Islamic law
Sri Lanka	✓	✓	Customary law
Taipei,China		✓	Customary law
Thailand		✓	
Uzbekistan		✓	
Viet Nam		✓	
Yemen	✓	✓	Customary law and Islamic law

Source: University of Ottawa (n.d.).

**Table 5.4: Conduct Competition Authorities
(survey respondents)**

Country	Does your agency conduct industry scanning (or general industry study) related to the priority sectors?		Does your agency conduct in-depth market studies?		Does your agency coordinate/collaborate with sector regulators on investigating competition cases in a specific sector?		Does your agency coordinate with other government agencies that are not sector regulators?	
	Yes	No	Yes	No	Yes	No	Yes	No
Armenia		✓	✓		✓		✓	
Australia	✓		✓		✓		✓	
Bangladesh	✓		✓		✓		✓	
Cambodia	✓		✓		✓		✓	
Indonesia	✓		✓		✓		✓	
Malaysia	✓		✓		✓		✓	
New Zealand		✓	✓			✓	✓	
Papua New Guinea		✓		✓	✓		✓	
Pakistan	✓		✓			✓	✓	
Philippines			✓				✓	
Saudi Arabia	✓		✓		✓		✓	
Thailand			✓				✓	
Viet Nam	✓		✓		✓		✓	
TOTAL	8	3	12	1	9	2	13	0

Source of data: Authors' survey.

Countries that do not carry out industry scans, such as Armenia, New Zealand, and Papua New Guinea, are all somewhat mature competition authorities (about 20 years old) and are thus assumed to already have a much better understanding of the competition conditions of their industries. Industry scans may be useful for younger agencies with limited resources as they can provide initial clues about specific industries with competition problems.

Regarding market studies, the respondent agencies' usual process entails the conduct of stakeholder surveys and interviews, online research, and reviewing available information in government policies,

media, and previous studies. Their market studies typically describe the supply and value chain; identify significant players/competitors; estimate market shares, concentration measures, and price-cost margins; and assess the competition impact of industry regulations/policies. Through such instruments, the competition agencies can determine emerging industries or sectors; the market's contribution to national income; investment and productivity levels; the existence of high barriers to entry or expansion; natural monopolies that should better emulate competition; gains that can be derived from innovation and improved distribution and business processes; areas of improvement in the regulations; the level of competition in the market; and other variables. Furthermore, market studies can be another tool for advocacy after identifying appropriate industries.

The conduct of the competition agencies also involves coordination with other sector regulators and government agencies on matters dealing with information and data exchange; study and research; harmonization of regulations; and, for some, even joint investigations. This was to be expected given the overlapping roles and responsibilities among agencies in some countries and the enactment of other laws that affected the applicability of the competition law.

In pursuit of competition investigations, several respondent agencies do not follow particular protocols and procedures, but among those that do, various similarities were observed. Regarding merger and acquisition cases, most countries require a pre-merger notification. But they differ in the notification thresholds. Some are determined based on an objective standard, such as assets or sales, in analyzing the effectiveness of the merger review process. Avoiding the market share threshold is preferable as it depends on how the market is defined. There is also a distinction between mandatory notification and voluntary notification. For mandatory notification, prior notification is desirable, as it is difficult to unscramble the egg. Whether or not mandatory or voluntary, the investigation team, composed of economists and lawyers, analyze the case by requesting information and documents from relevant parties, conducting research, and interviewing interested parties, such as the competitors, suppliers, and customers in the industry. In addition, the merger review will look into the number of assets and revenues of parties, violations of economic concentration (if any), or the potential lessening of market competition that the merger pushes through. After the review, the case will be forwarded to the head of the agency or the commission, who will either decide based on the information presented or require additional

investigation. The decision will be announced through a media release or the authority's website, stating the reasons for the decision. The duration of merger reviews varies per agency but is usually within 20 to 90 days. Those not following strict protocols and procedures still use concentration ratios and the Herfindahl–Hirschman index as indicative measures rather than stringent thresholds, as in the Fijian Competition Consumer Commission case. These indicators are mainly used to decide whether the case needs a longer and more thorough "two-phase" review or can be cleared within 30 days.

Regarding abuse of dominance and anticompetitive agreement cases, the investigations typically start upon receiving a complaint or referral. The investigation team then gathers information from the investigated party, stakeholders, or other market participants (competitors, suppliers, or customers), the public, experts, third parties, and publicly available sources. The team will then assess the market share, market power, effects of conduct, commercial justification, law breached, and the appropriate enforcement response. The case is then brought to the commission or the designated division to decide on the ruling. It is important to note that some authorities open administrative hearings before deciding on their ruling.

In comparing the investigation procedure of cartels and other antitrust behavior, there are further distinctions, such as between administrative procedure and criminal procedure, and whether the suspected violators of the competition law can have the opportunity to make arguments against the decision of the competition agencies at courts, among others.

Competition advocacy was a vital part of the respondent agencies' conduct. Most of them believe that it has enhanced the reputation of their organization. Their advocacy activities involve lectures, conferences, roadshows, moot court competitions on competition law, infographics, media publications and interviews, online videos, and business compliance programs. Their target audience includes private companies, government officials, and the general public. Most authorities also provide inputs to legislative bodies or executive agencies concerning competition matters as part of their advocacy. Educating the media about the concepts of competition policy is also seen as critical in raising awareness and the culture of competition. Table 5.5 provides more details on the respondents' answers on advocacy. Competition advocacy is important, especially for younger agencies, to grow competition culture and raise awareness of the role of competition law and policy.

Table 5.5: Conduct Advocacy Activities
(survey respondents)

Country	Does your agency pursue competition advocacy?		Does the law mandate the agency to provide inputs to legislative bodies or executive agencies/ministries?		Do you think competition advocacy has enhanced the reputation of your agency?	
	Yes	No	Yes	No	Yes	No
Armenia	✓		✓		✓	
Australia	✓			✓	✓	
Bangladesh	✓		✓		✓	
Cambodia	✓		✓		✓	
Indonesia	✓		✓		✓	
Malaysia	✓		✓		✓	
New Zealand	✓			✓		
Pakistan	✓		✓		✓	
Papua New Guinea	✓			✓		
Philippines			✓			
Saudi Arabia	✓		✓		✓	
Thailand			✓			
Viet Nam	✓		✓		✓	
TOTAL	11	0	10	3	9	0

Source of data: Authors' survey.

It has been recognized that coordination with other government policies is important in competition policy, while the independence of competition authority remains paramount in competition enforcement. Since the passage of the competition law in the Philippines, there has been a concerted effort to mainstream competition policy and cultivate the culture of competition in various government agencies. The country's national development plan includes a chapter dedicated to competition policy. Another good example is Fiji's competition agency. Their law and the accompanying National Competition and Consumer Policy give the agency a wide-ranging mandate to lobby the government to promote a culture of competition.

5.4.3 Performance

The *performance* of a competition authority includes metrics of enforcement intensity (e.g., number and severity of fines, criminal referrals, outcomes of merger cases, other antitrust actions, [Bradford et al. 2019]), and other dimensions of quality as related to best practices.

Regarding mergers and acquisitions, most respondent agencies stated that they consider the public interest in making a decision and that said objective is supported by the competition law and/or agency procedures. Table 5.6 provides the details on the agencies' responses to public welfare. In particular, most agencies have said they may allow an otherwise impermissible merger for the public interest or to prevent a business failure. On the contrary, they may prohibit a merger if it is found to have detrimental effects on public welfare or market competition. In general, however, younger economies consider public interest, broadly construed, rather than the narrower consumer welfare. Efficiencies and failing firm defense are considered in merger regulations of both matured agencies and younger agencies, although how these factors are applied is important for effective merger regulation.

In general, most respondent agencies balance their pursuit of competition along with other objectives in the public interest such as the development of small and medium-sized enterprises; development of industries, science, and technology, and product innovation; strengthening of competitiveness of enterprises in the international market; government priorities; and economic and social efficiencies; among others.² Almost all respondent agencies use the Herfindahl-Hirschman index, concentration ratios, and market shares as *prima facie* indicators of competition in their markets.

Most respondent agencies impose nonstructural or behavioral remedies more than structural ones, although the reported number of such measures is low. Relative to other anticompetitive activities, abuse of dominance cases were the ones that had a record of behavioral remedies among respondent agencies. Behavioral remedies reported include requiring periodic financial reports (from 3 months to a maximum of 3 years); elimination of all forms of prohibited agreements, and adherence to compliance programs for merger cases; directions to the enterprise to immediately prevent any dominant position; issuance of interim orders to restrain from any dominant activities, and directions to the enterprise to discontinue the dominant activities for abuse of dominance cases; and cease and desists orders concerning the infringed agreement and orders to independently determine their rate for cartel cases.

² As discussed in Chapter 2, public interest is increasingly being used as an umbrella term to include objectives beyond economic welfare.

Table 5.6: Mergers and Public Interest
(survey respondents)

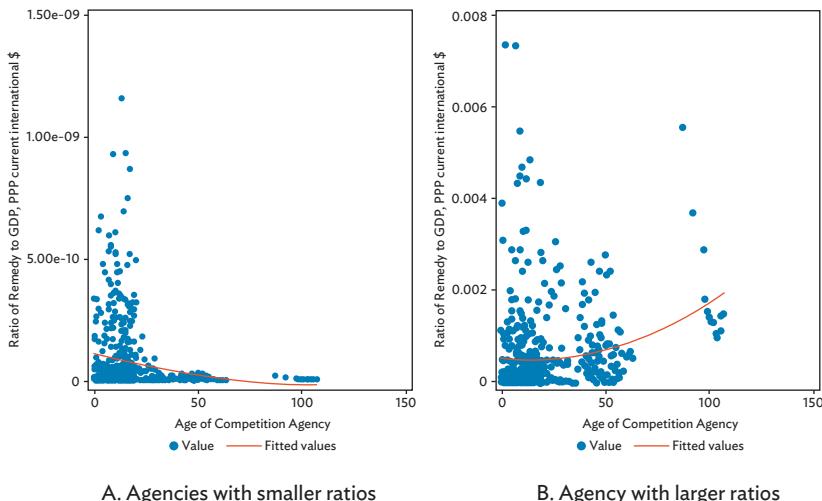
Country	Does your agency consider the public interest in your merger reviews?		Does the law or the agency rules/guidelines grant the agency the power to prohibit a merger if the merger runs contrary to the public interest?		Does the law or the agency rules/guidelines allow an otherwise impermissible merger for the sake of public interest?		Does the law or the agency rules/guidelines allow an otherwise impermissible merger to prevent a business failure?		Does the law or the agency rules/guidelines direct the agency to consider the effect of the merger on market competition, such as anticompetitive consequences for the structure of the market or possible barriers to entry?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Armenia	✓		✓		✓		✓		✓	
Australia	✓		✓		✓		✓		✓	
Bangladesh	✓		✓		✓		✓		✓	
Cambodia	✓		✓				✓		✓	
Indonesia	✓			✓		✓		✓	✓	
Malaysia		✓						✓		✓
New Zealand	✓		✓		✓		✓		✓	
Pakistan	✓		✓		✓		✓		✓	
Papua New Guinea	✓		✓			✓		✓	✓	
Philippines	✓			✓	✓		✓			
Saudi Arabia	✓		✓			✓	✓		✓	
Thailand		✓	✓			✓		✓		
Viet Nam	✓		✓		✓			✓	✓	
TOTAL	11	2	10	2	7	5	8	5	10	1

Source of data: Authors' survey.

We again extended Bradford et al. (2019), which includes 126 economies from 1889 to 2010, with our survey data. We computed the ratio of the number of remedies competition agencies imposed to GDP (in PPP terms for comparability). Figure 5.6 plots this ratio against the age of the competition agency. Panel A shows competition agencies with smaller ratios of remedies to GDP. Panel B shows agencies with higher ratios. The figure reveals that there are two types of competition agencies. One imposes remedies to safeguard competition even at a younger age and increasingly does so as it matures (Panel B). The other

agency type makes less use of remedies and even decreases their use as it matures (Panel A). This suggests that competition agencies may choose among the alternative tools and instruments at the outset and that these preferences persevere somewhat as the agency matures.

Figure 5.6: The Ratio of Remedies to GDP vs. Age of Agency



Sources of basic data: Authors' survey, Bradford et al (2019), and World Bank World Development Indicators.

Using our survey data, we calculated our constructed Competition Policy Index of enforcement intensity for countries that answered questions on mergers, abuse of dominance, and cartels (see the complete list of variables in Table 5.1). Our constructed Index of enforcement intensity aggregates the information on the tools and instruments competition agencies employ to enforce competition laws.

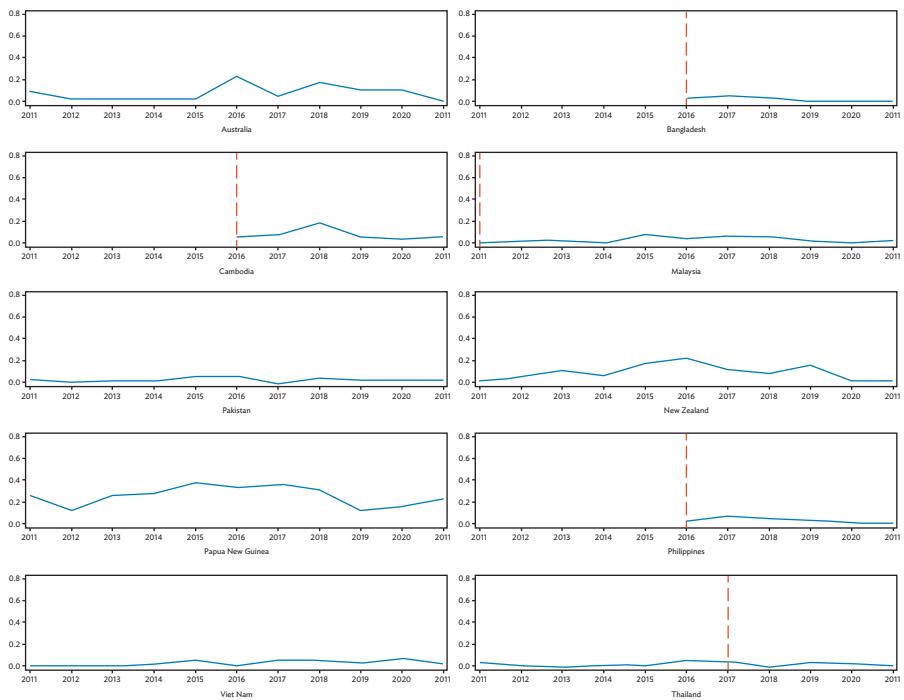
Applying Kaiser's rule in the implementation of PCA, the number of components considered in the creation of indexes ranges from two to five from 2011 to 2021. Comp1 has the highest eigenvalues ranging from 5 to 10, Comp2 and Comp3 have eigenvalues ranging from 1 to 3, and Comp4 and Comp5 have eigenvalues ranging from .1 to 2. As per Kaiser's rule, PCA only considers components with eigenvalues greater than one. As explained in Section 3.2, the eigenvalues represent the

variation that each eigenvector explains. The eigenvectors, on the other hand, represent the direction of maximum variation in the data. In all years, the variables that registered the highest eigenvalues for Comp1 are the number of mergers filed, number of mergers reviewed, number of mergers reviewed in-depth; phase 2, number of dominance investigations launched, number of dominance investigations resulting in fines, number of dominance investigations closed with remedy, number of cartel investigations started, and number of cartel investigation closed with a remedy. These variables vary together, and Comp1 of Index of Enforcement Intensity increases as these variables increase. On the other hand, the variables Number of mergers resolved with remedies and Number of mergers blocked have very low values of eigenvectors, and they move opposite with Comp1.

The PCA method produces one number summarizing the competition agencies' enforcement intensity per year. We calculate the Index of Enforcement Intensity as the sum of the weighted contribution of each principal component considered by Kaiser's rule for the year. The formula is explained in Section 5.3.2. Figure 5.7 shows the trends of this index by country from 2011 to 2021. Table 5.7 presents the ranking according to this index. By this measure, Armenia ranks first, New Zealand second, and Papua New Guinea third, with a relatively more vigorous intensity of performance in 2021.

We also relate this index to country characteristics. Figure 5.8 shows that while Enforcement Intensity generally increases with agency age, several agencies actually decrease punitive measures as the agency matures. Panels 1 and 3 suggest that a country increases its enforcement intensity as it matures and becomes more effective. An effective agency can then rely on firms' reticence to incur penalties and enhance by consumer advocacy instead of actually imposing those penalties. The positive correlation between enforcement and economic freedom shown in panel two underscores the notion that freedom is supported by the rule of law.

Figure 5.7: Index of Enforcement Intensity, by Country, 2011–2021



Note: The vertical dash line marks the year the country adopted the competition policy. The Index of Enforcement Intensity for Indonesia and Saudi Arabia were not calculated as they only provided information on the total number of investigations and not the breakdown.

Source of data: Authors' survey.

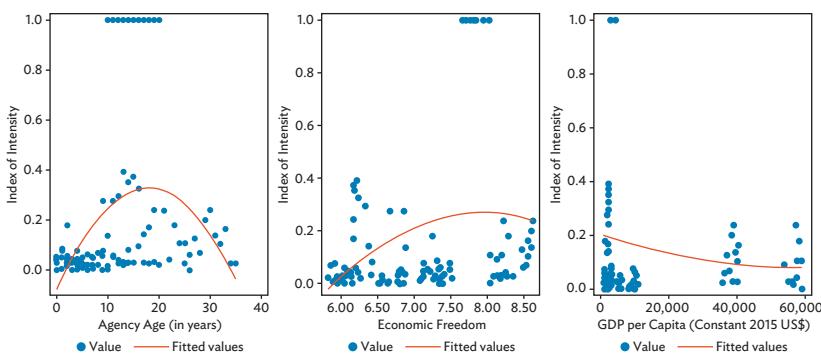
Table 5.7: Country Ranking According to Competition Policy Index of Enforcement Intensity

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Armenia	1	1	1	1	1	1	1	1	1	1	1
Australia	3	4	4	4	3	4	4	3	2	3	5
Bangladesh						9	9	10	10	10	11
Cambodia						11	5	4	4	8	8
Malaysia	8	6	6	8	7	6	8	8	11	11	9
New Zealand	4	3	3	3	5	3	3	5	7	5	2
Pakistan	5	5	5	5	4	5	11	6	6	6	7
Papua New Guinea	2	2	2	2	2	2	2	2	3	2	3
Philippines						10	6	7	8	9	10
Viet Nam	7	7	7	6	6	7	7	9	9	4	6
Thailand	6	8	8	7	8	8	10	11	5	7	4

Note: This ranking covers the 13 countries in the sample that responded to our survey.

Source of data: Authors' survey.

Figure 5.8: Index of Enforcement Intensity vs. Country Characteristics



Source of basic data: Authors' survey and World Bank World Development Indicators.

5.4.4 Overall Competition Policy Index: Quality of Competition Regime

The overall CPI captures the quality of the competition policy regime, which we define as the ability of the competition authority and their laws to deter anticompetitive behaviors. Calculation of the overall CPI includes the time-invariant binary variables covering various aspects of the agency's structure, conduct, and performance and the variables on budget, human resources, mergers, abuse of dominance, cartel cases, and investigations in 2021. Section 5.3.2 details the calculations.

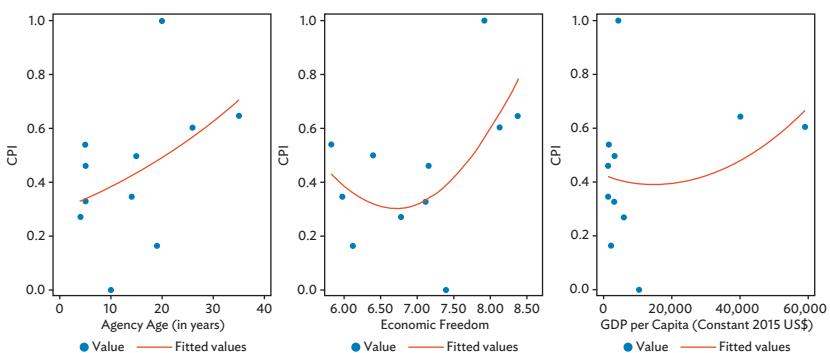
Table 5.8 presents the ranking according to the overall CPI. By this measure, Armenia ranks first, New Zealand second, and Papua New Guinea third with relatively higher quality competition regimes. We also relate the overall CPI to country characteristics. Figure 5.9 shows that this index of the quality of the competition regime is positively associated with the age of the competition agencies, similar to enforcement intensity. The positive association between agency quality and GDP per capita is notable since the enforcement intensity actually declines with GDP per capita. This suggests that agencies can become more effective over time even as they shift away from plausible penalties towards a more developed culture of competition.

Table 5.8: Country Ranking According to Overall Competition Policy (2021)

CPI 2021	
Armenia	1
Australia	3
Bangladesh	4
Cambodia	6
Malaysia	11
New Zealand	2
Pakistan	7
Papua New Guinea	10
Philippines	8
Viet Nam	5
Thailand	9

CPI = Competition Policy Index.

Source of data: Authors' survey.

Figure 5.9: Overall Competition Policy Index vs. Country Characteristics

CPI = Competition Policy Index, GDP = gross domestic product.

Source of data: Authors' survey.

5.5 Concluding Remarks

A competition authority's structure becomes more complex as the authority becomes more mature and its budget grows. Younger authorities tend to have fewer units than their mature counterparts, with several specialized units owing to their greater human and financial resources. However, it is also possible that the agency's resources influence the evolution of the structure of the agency. The agency's resources, budget, and staff size depend on the size of the economy and its level of development. Specifically, our Index of Resources shows an initial spurt due to training and capacity building at establishment, followed by slow then mildly increasing growth as agencies mature.

In terms of conduct, young authorities have been observed to use an economics-based approach by carrying out industry scans and market studies. This is seen as a good practice to understand industries better, thus allowing for better assessment and competency during investigations. Competition advocacy was a vital part of the respondent agencies' conduct. Most of them believe that it has enhanced the reputation of their organization. Competition advocacy is critical for younger agencies to grow competition culture and raise awareness of the role of competition law and policy in economic development.

The performance of young authorities is noticeably inferior compared to mature agencies, especially when looking into enforcement intensity. Our Index of Enforcement Intensity is positively correlated with the age of the agency with young agencies having low incidences of both cases and executed penalties. This may be due both the low budgets and the relative inability of younger agencies to pursue cases that are likely to be successfully resolved. This highlights the need for enforcement resources to be largely allocated to investigations that will likely prove fruitful. These successful endeavors are important for competition agencies to gain the public's confidence. Enforcement and advocacy are complementary. On the one hand, successful enforcement cases can be used as the basis of advocacy. On the other hand, effective advocacy helps to create a culture of competition, allowing enforcement resources to be better focused.

Our measure of agency quality shows a positive association with the age of competition agencies and GDP per capita, even as ostensible enforcement slows down or even declines. This may be because agencies tend to shift their focus as they mature from ostensible prohibitions and penalties to a greater reliance on advocacy and the underlying threat of punitive measures.

Our tentative recommendations from these positive patterns are as follows. To improve effectiveness, young agencies should focus on easier cases to prosecute, such as cartel cases wherein tangible evidence of an agreement can be produced (see also McEwin, Chapter 4 of this volume). As an agency matures and becomes more effective, given an independent structure, it can shift its focus to harder cases and to consumer advocacy, thereby creating an environment with greater compliance even without increasing punitive measures. Given that competition is complementary with other aspects of development policy that increase productivity, competition policy should be closely coordinated with industrial, trade, and other economic policies.

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Appendix: Calculation of overall CPI

Table A5.1: Principal Components and/or correlation

Number of obs	=	11	Number of comp.	=	10
			Trace	=	50
			Rho	=	1.0000
Rotation: (unrotated = principal)					
Component	Eigenvalue	Difference	Proportion	Cumulative	
Comp1 |	13.7022	6.17649	0.2740	0.2740	
Comp2 |	7.52566	.500799	0.1505	0.4246	
Comp3 |	7.02487	1.21216	0.1405	0.5651	
Comp4 |	5.8127	1.07152	0.1163	0.6813	
Comp5 |	4.74119	.887043	0.0948	0.7761	
Comp6 |	3.85414	1.28761	0.0771	0.8532	
Comp7 |	2.56653	.322592	0.0513	0.9045	
Comp8 |	2.24394	.787908	0.0449	0.9494	
Comp9 |	1.45603	.383257	0.0291	0.9785	
Comp10 |	1.07278	1.07278	0.0215	1.0000	
Comp11 |	0	0	0.0000	1.0000	
Comp12 |	0	0	0.0000	1.0000	
Comp13 |	0	0	0.0000	1.0000	
Comp14 |	0	0	0.0000	1.0000	
Comp15 |	0	0	0.0000	1.0000	
Comp16 |	0	0	0.0000	1.0000	
Comp17 |	0	0	0.0000	1.0000	
Comp18 |	0	0	0.0000	1.0000	
Comp19 |	0	0	0.0000	1.0000	
Comp20 |	0	0	0.0000	1.0000	
Comp21 |	0	0	0.0000	1.0000	
Comp22 |	0	0	0.0000	1.0000	
Comp23 |	0	0	0.0000	1.0000	
Comp24 |	0	0	0.0000	1.0000	
Comp25 |	0	0	0.0000	1.0000	
Comp26 |	0	0	0.0000	1.0000	
Comp27 |	0	0	0.0000	1.0000	
Comp28 |	0	0	0.0000	1.0000	
Comp29 |	0	0	0.0000	1.0000	
Comp30 |	0	0	0.0000	1.0000	
Comp31 |	0	0	0.0000	1.0000	
Comp32 |	0	0	0.0000	1.0000	
Comp33 |	0	0	0.0000	1.0000	
Comp34 |	0	0	0.0000	1.0000	
Comp35 |	0	0	0.0000	1.0000	
Comp36 |	0	0	0.0000	1.0000	
Comp37 |	0	0	0.0000	1.0000	
Comp38 |	0	0	0.0000	1.0000	
Comp39 |	0	0	0.0000	1.0000	
Comp40 |	0	0	0.0000	1.0000	
Comp41 |	0	0	0.0000	1.0000	
Comp42 |	0	0	0.0000	1.0000	
Comp43 |	0	0	0.0000	1.0000	
Comp44 |	0	0	0.0000	1.0000	
Comp45 |	0	0	0.0000	1.0000	
Comp46 |	0	0	0.0000	1.0000	
Comp47 |	0	0	0.0000	1.0000	
Comp48 |	0	0	0.0000	1.0000	
Comp49 |	0	0	0.0000	1.0000	
Comp50 |	0	.	0.0000	1.0000	

Table A5.2: Principal Components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Comp8	Comp9	Comp10	Unexplained
merger_file_o	0.2550	-0.0709	0.0435	-0.0663	-0.0205	0.0134	0.0790	0.0467	-0.0775	-0.0018	0
merger_num_o	0.2527	-0.1019	0.0344	-0.0407	-0.0191	-0.0112	0.0047	0.0709	-0.0862	-0.00705	0
merger_pro_o	0.2528	-0.0867	0.0607	-0.0808	-0.0103	0.0119	-0.0239	0.0119	-0.0019	-0.0304	0
merger_cons_o	0.0056	0.1244	-0.0207	0.1159	0.0431	-0.1750	0.1533	0.4867	0.1649	0.1748	0
merger_blo_o	-0.0156	-0.1492	-0.2303	0.0137	-0.0846	0.0795	0.2319	-0.1970	0.0748	-0.0542	0
merger_wit_o	-0.0195	-0.2328	-0.0559	-0.2644	-0.0214	-0.1452	-0.2062	0.0167	0.0103	0.0075	0
domi_g_ratio	0.2538	-0.0983	0.0412	-0.0690	-0.0124	0.0214	-0.0237	-0.0167	0.0103	0.0031	0
domi_s_ratio	0.2513	-0.0912	0.0575	-0.0799	-0.0292	0.0093	-0.0494	-0.0093	-0.0093	-0.0261	0
domi_n_ratio	0.1647	-0.1966	-0.0811	-0.0959	0.0228	0.0940	-0.0950	0.0736	0.0736	0.1513	0
domi_y_ratio	0.2520	-0.0900	0.0523	-0.0779	-0.0221	0.0132	-0.0300	0.0028	0.0129	-0.0198	0
cartel_inv_o	0.2235	-0.0719	0.0810	-0.0893	-0.0942	0.0867	-0.1346	-0.1275	-0.1207	-0.0827	0
cartel_y_ratio	0.2500	-0.0856	0.0614	-0.0966	-0.0198	0.0094	-0.0319	0.0193	0.0193	-0.0391	0
cartel_dur_o	0.1928	-0.1861	-0.1274	-0.0721	-0.0621	0.0589	-0.1341	-0.0303	-0.0303	-0.0442	0
cart_d_ratio	-0.0886	-0.0752	0.1536	-0.1081	0.0816	0.3517	0.0160	0.1475	-0.1798	0.1025	0
combined_a...	0.2531	-0.0984	0.0499	-0.0580	-0.0114	0.0335	-0.0458	-0.0137	0.0255	-0.0076	0
budget_ratio	0.1139	-0.2304	-0.0590	-0.1369	-0.2464	0.0038	-0.0666	-0.0053	-0.0053	-0.0357	0
staff_ratio	0.2096	-0.0694	0.0146	-0.0396	-0.0748	0.0649	-0.1902	-0.1158	0.0683	0.4144	0
legalstaff_o	-0.0767	-0.1131	-0.1780	-0.1275	-0.2837	0.0348	-0.1743	-0.0346	-0.0346	-0.0346	0
ecountstaff_o	-0.0535	-0.2104	-0.0189	0.0086	0.2043	-0.2079	-0.3066	0.0392	-0.0909	0.0377	0
has_jurisdn	0.1247	0.0063	-0.1583	0.2783	-0.0030	-0.0129	-0.1010	0.1662	0.1662	-0.1294	0
reg_has_audv	-0.1362	0.0134	-0.2273	-0.1030	-0.1030	-0.0556	-0.3065	0.1360	0.1360	-0.0005	0
role_overlap	-0.1070	0.0563	0.1414	-0.1886	-0.1791	0.2186	-0.1341	0.0143	0.2014	-0.1632	0
other_laws_d	-0.0839	0.1462	-0.1763	0.0369	0.1841	-0.1540	-0.0231	0.2676	0.2676	-0.2842	0
excarrl_ext	0.1300	0.2440	-0.0369	-0.1040	0.2058	0.0538	-0.0359	0.0929	0.0198	-0.0019	0
sue_exemt	-0.0002	-0.2107	0.0375	-0.0773	-0.0361	-0.1724	0.2901	-0.2562	-0.2912	-0.0252	0
sopde_exemt	-0.0905	-0.0152	0.1957	-0.0531	0.0212	0.3730	0.1206	0.0770	0.0549	-0.0921	0
monopoly_e_t	-0.1877	-0.0897	0.0740	-0.1175	-0.1577	-0.1380	-0.1931	-0.1855	-0.2191	-0.0445	0
oth_cat_ext	0.0749	-0.1601	-0.1164	-0.2172	-0.1395	-0.1479	-0.0886	-0.1635	-0.3255	-0.1803	0
fines	0.0404	-0.0345	0.2825	0.2055	-0.0695	0.0749	0.0328	-0.1237	-0.2338	0.0354	0
crime_penas	0.1148	0.1821	0.1439	0.1366	0.0667	-0.1261	-0.1506	0.1864	0.3291	-0.1436	0
allow_disp	0.1031	-0.0792	0.1970	0.1144	0.0101	-0.2500	0.2375	0.0624	0.1928	-0.0001	0
merger_app_1	0.0664	0.0985	0.0563	0.2840	0.2462	0.1616	0.1125	-0.0581	-0.1161	0.0013	0
handbook	-0.1157	-0.1903	-0.0171	-0.1920	-0.0207	-0.1113	0.1321	-0.2648	-0.1037	-0.0223	0
industry_s_g	-0.0657	0.1393	0.0207	0.1274	-0.3782	-0.0399	-0.0173	-0.0351	-0.0619	-0.0223	0
indepth_st_s	0.0156	0.1508	-0.2904	-0.0143	0.0851	-0.0780	-0.2354	-0.0949	-0.0770	0.0344	0
redcoordin	0.0854	0.0053	-0.0920	0.0157	-0.3182	0.0201	-0.0400	-0.0400	0.2234	0.2379	0
competition	0.1059	0.1586	-0.2114	0.0790	-0.2347	-0.0080	0.0064	0.0596	0.1015	-0.1436	0
law_mandat_t	-0.0023	-0.1759	0.2219	0.0721	-0.1874	-0.1408	-0.2271	-0.0792	-0.0274	-0.0183	0
enhance_re-n	0.0826	-0.0902	0.0583	0.0839	-0.3937	-0.0337	-0.0337	-0.0337	-0.0657	-0.0831	0
share_lega-n	0.0478	-0.1555	0.2739	0.0602	0.0675	-0.0646	-0.1906	-0.1906	-0.1296	-0.0313	0
lawreq_not-r	0.0305	-0.2678	0.0709	0.2646	0.0265	0.0139	-0.0025	-0.0195	0.0039	-0.0160	0
mandatory_f	-0.1224	-0.1940	0.0287	0.2930	0.0328	0.0053	-0.0114	-0.0224	-0.0052	0.0039	0
dominant_p-n	0.0611	0.1187	0.2384	0.2031	0.1201	0.0623	-0.0916	-0.1439	-0.0415	-0.0415	0
public_int-t	0.1163	0.1082	-0.0559	0.2767	-0.1083	-0.1080	-0.1339	-0.2094	-0.0133	-0.0710	0
grant_proh_r	0.0895	0.0630	-0.0616	0.2258	0.0240	-0.1408	-0.1826	-0.0583	-0.0583	-0.0706	0
allow_merg-t	0.1024	0.1685	0.1419	0.1159	0.1020	-0.1735	0.1231	-0.0010	-0.1232	-0.4281	0
share_lega-n	0.1052	0.1739	0.1098	0.1191	0.0914	-0.0234	-0.1814	-0.1814	0.3630	0.0909	0
law_merg-t	0.1346	0.1428	-0.1467	0.2058	-0.0443	0.0974	0.0782	0.0782	0.0141	-0.1235	0
balance_fi-s	0.1411	0.2198	0.0588	0.1428	-0.0592	0.0489	0.1117	0.1117	0.2020	0.2265	0
liniency_p-y	0.0838	0.0805	-0.1304	-0.0341	-0.0075	-0.2646	-0.3817	-0.1531	-0.2275	-0.3817	0

Note: See Table A5.4 for variable definition.

**Table A5.3: Scoring Coefficients
sum of squares(column-loading) = 1**

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Comp8	Comp9	Comp10
merger_f1~o	0.2550	-0.0709	0.0435	-0.0663	-0.0205	0.0134	0.0790	0.0467	-0.0775	0.0018
merger_num~o	0.2557	-0.1014	0.0344	-0.0407	-0.0191	-0.0112	0.0047	0.0709	-0.0862	-0.0705
merger_pro~o	0.2558	-0.0867	0.0607	-0.0808	-0.0103	0.0119	-0.0239	0.0119	-0.0019	-0.0304
merger_con~o	0.0056	0.1244	-0.0257	0.1169	0.0431	-0.1750	0.1633	0.4867	-0.1649	0.1748
merger_b10~o	-0.0156	-0.1492	-0.2903	0.1137	0.0846	-0.1795	0.2379	-0.1970	0.0748	-0.0542
merger_wir~o	0.0195	0.2328	-0.0880	-0.0559	0.2644	-0.0169	-0.1482	0.2062	0.1435	0.0031
domi~g_ratio	0.2558	-0.0983	0.0412	-0.0690	-0.0124	0.0214	-0.0237	-0.0167	0.0103	-0.0075
domi~n_ratio	0.2553	-0.0912	0.0575	-0.0799	-0.0292	0.0093	-0.0494	-0.0011	-0.0093	-0.0261
domi~n_ratio	0.1647	-0.1966	-0.1811	-0.0999	0.0278	0.0940	0.0790	-0.0950	0.0736	0.1513
domi~y_ratio	0.2520	-0.0900	0.0623	-0.0779	-0.0221	0.1322	-0.0300	0.028	0.0129	-0.0198
cartel_inv~o	0.2225	-0.0719	0.0810	-0.1089	0.0942	0.0867	-0.1346	0.1275	-0.0207	-0.0827
cart~y_ratio	0.2500	-0.0856	0.0614	-0.0966	-0.0198	0.0094	-0.0319	0.0193	0.0197	-0.0391
cartel_duru~o	0.1928	-0.1861	-0.1274	-0.0721	0.0621	0.1341	-0.0303	0.0307	-0.0642	
cart~d_ratio	-0.0886	-0.0752	0.1536	-0.1081	0.0816	0.3517	0.0160	0.1475	-0.1798	0.1025
combined_a..	0.2531	-0.0984	0.0499	-0.0590	-0.0114	0.1335	-0.0458	-0.1137	0.0255	-0.0076
budget_ratio	0.1139	0.2304	-0.0590	-0.1369	0.2464	0.0038	0.0066	-0.0000	-0.0053	-0.0357
staff_ratio	0.2086	-0.0694	0.0146	0.0396	-0.0748	0.0649	-0.1902	-0.1158	0.0883	0.4144
legalstaff_o	-0.0767	-0.1131	0.1780	-0.1295	0.1597	-0.2837	0.0348	-0.1743	-0.0392	-0.0346
econstaff_~o	-0.0535	-0.2104	-0.0169	0.0095	0.2043	-0.2079	0.3066	0.0392	-0.0909	0.0577
hans_jurisd~n	0.1247	0.0063	-0.1583	-0.2793	-0.0030	-0.1229	-0.1010	0.1662	0.1860	-0.1294
req_has_an~y	-0.1382	0.0134	0.2273	-0.1020	-0.1030	-0.0656	0.0365	0.0724	0.0300	0.0005
role_overlap	-0.1070	0.0563	0.1414	-0.1886	-0.1791	0.2186	0.1341	0.0043	-0.2014	-0.1682
other_law~d	-0.0839	0.1462	0.1763	0.0369	0.1841	-0.1540	-0.0231	-0.1791	0.2676	0.2842
xcartel_~ext	0.1300	0.2440	-0.0369	-0.1140	0.2058	0.0538	-0.0339	0.0929	0.0198	-0.0019
soe_~exempt	-0.0002	0.107	0.0375	-0.0773	-0.0636	0.1724	-0.2901	-0.2562	-0.2912	-0.0252
sope_~exempt	-0.0905	-0.0152	0.1957	-0.0531	0.0212	0.1730	0.1206	0.0770	0.0449	-0.0821
monopoly_e~t	0.1877	0.0897	0.0740	-0.1175	-0.0577	0.1380	0.1991	-0.1855	-0.2191	-0.0045
oth_cat_ext~t	0.0749	0.1601	0.1164	-0.2172	0.0395	-0.1479	0.0886	-0.1635	-0.3255	-0.1803
Fines	0.0404	-0.0345	0.2825	0.2055	-0.0695	0.0749	0.0328	-0.1237	-0.2338	0.0354
crime_pena~s	0.1148	0.1821	0.1439	0.1366	0.0667	-0.1261	0.1506	-0.1626	0.1864	0.3291
allow_distr~n	0.1031	-0.0792	0.1970	0.1144	0.0100	-0.2500	0.2375	0.0644	-0.1928	-0.0901
merger_app~1	0.0664	0.0085	0.0563	0.2840	0.2462	0.1616	0.1125	-0.0581	-0.1161	0.0013
handbook	0.1157	0.1903	-0.0171	-0.1920	-0.0852	-0.1113	0.1321	0.2648	-0.1477	0.1037
industry_s~g	-0.0657	0.1393	0.0207	0.1274	-0.3782	-0.0399	-0.0173	-0.0351	-0.0619	-0.0623
indeph_st~s	0.0156	0.1508	0.2904	-0.1443	-0.0851	-0.0780	-0.2554	0.1949	-0.0770	-0.0544
reg_coordin~n	0.0854	0.0053	-0.0920	0.0157	-0.3182	-0.0201	0.2229	-0.0400	0.2234	0.2379
competitio~y	0.1039	0.1586	-0.2114	-0.0790	-0.2347	-0.0080	0.0596	0.0105	-0.1436	

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Table A5.3 continued

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Comp8	Comp9	Comp10
law_mandat-t	-0.0023	-0.1759	0.2219	0.0721	-0.1874	-0.1408	-0.2271	0.0792	0.0291	0.0183
enhance_re-n	0.0826	0.0902	0.0583	0.0839	-0.3997	-0.0337	-0.0317	-0.0320	-0.0657	-0.0831
share_lega-n	0.0478	-0.1555	0.2739	0.0602	0.0679	-0.0646	0.1906	0.1910	0.1236	-0.0313
lawreq_not-r	0.0305	-0.2678	0.0709	0.2646	0.0265	0.0139	-0.0025	-0.0195	0.0039	-0.0160
mandatory_f	-0.1224	-0.1940	0.0287	0.2930	0.0328	0.0053	0.0114	-0.0224	0.0052	0.0339
dominant_p-n	0.0611	0.1187	0.2584	0.2011	0.1201	0.0623	-0.0916	0.0274	-0.1439	0.0415
public_int-t	0.1163	0.1082	-0.0659	0.2767	0.1083	-0.1080	0.1339	-0.2096	-0.0133	-0.0710
grant_proh-r	0.0885	0.0630	-0.0616	0.2258	0.0240	0.3409	0.0401	0.1826	-0.0583	-0.0706
allow_merg-t	0.1024	0.1685	0.1419	0.1159	0.1020	-0.1735	0.1231	-0.0010	-0.1232	-0.4281
allow_merge-e	0.1052	0.1739	0.1098	0.1191	0.0914	-0.0234	-0.1814	-0.3630	0.0909	-0.1356
law_mergert	0.1346	0.1428	-0.1467	0.2518	-0.0443	0.0974	0.0782	0.0141	0.0129	-0.1235
balance_fis	0.1411	0.2198	0.0588	0.1428	-0.0592	0.0489	0.1117	0.1145	0.2020	0.2625
liniency_p-y	0.0838	0.0805	-0.1904	-0.0341	-0.0075	-0.2646	-0.0348	-0.1531	-0.3817	0.2275

Note: See Table A5.4 for variable definition.

Table A5.4: Variable Definition

Variable	Variable description
merger_fil_o	Number of mergers filed
merger_num_o	Number of mergers reviewed
merger_pro_o	Number of mergers reviewed in-depth; phase 2
merger_con_o	Number of mergers resolved with remedies
merger_blo_o	Number of mergers blocked
merger_wit_o	Number of withdrawn merger notification
domi_g_ratio	Number of dominance investigation launched
domi_s_ratio	Number of dominance investigation resulted with fines
domi_n_ratio	Median length of dominance investigation
domi_y_ratio	Number of dominance investigation closed with remedy
cartel_inv_o	Number of cartel investigations started
cart_y_ratio	Number of cartel investigation closed with remedy
cartel_dur_o	Median length of cartel investigation
cart_d_ratio	Number of cartel investigation seeking criminal remedy
combined_a..	Number of other investigations initiated
budget_ratio	Annual Budget
staff_ratio	Number of staff
legalstaff_o	Number of legislative staff
econstaff_~o	Number of economic staff
has_jurisd_n	Does the law provide your agency primary, original, and exclusive jurisdiction over all competition matters?
reg_has_au_y	Do any industry-specific regulators have authority over competition matters in their respective industry?
role_overlap	Are there overlaps with your agency in terms of roles and responsibilities?
other_laws_d	Are there other laws that were passed that affected the applicability of the competition law (e.g. exemption of agriculture, telecommunications, etc.)?
xcartel_ex_t	Are export cartels exempted from the application of the law?
soe_exempt	Are state-owned enterprises exempted from the application of the law?
sopde_exempt	Are designated monopolies exempted from the application of the law?
monopoly_e_t	Are designated monopolies exempted from the application of the law?

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Table A5.4 *continued*

Variable	Variable description
oth_cat_ex~t	Are there other categories of enterprises exempted from the application of the law that were not mentioned in the previous questions?
Fines	Does the law or the agency rules/guidelines impose fines for the violation of its rulings (e.g. violating an order to stop a prohibited activity)?
crime pena~s	Does the law or the agency rules/guidelines allow the competition agency to impose criminal penalties for violations relating to anti-competitive agreements, abuse of dominance, or anti-competitive mergers and acquisitions?
allow_disp~n	Are the disposition of assets and/or breaking a company up into divisions or separate companies allowed by the law as a remedy for non-merger-related competition violations?
merger_app~l	Can the agency make the approval of a merger conditional on divestiture or allow it to force divestiture if the firms proceed with the merger?
Handbook	Do you have an existing handbook or similar documents to refer to for the protocols/procedures in pursuing a case?
industry_s~g	Does your agency conduct industry scanning (or general industry study) relating to the priority sectors?
indepth_st~s	Does your agency conduct in-depth market studies?
reg_coordin~n	Does your agency coordinate/collaborate with sector regulators on investigating competition cases in a specific sector?
Variable	Variable description
competitio~y	Does your agency pursue competition advocacy?
law_mandat~t	Does the law mandate the agency to provide inputs to legislative bodies or to executive agencies/ministries?
enhance_re~n	Do you think competition advocacy has enhanced the reputation of your agency?
share_lega~n	Does your agency share legal jurisdiction over merger review with other sector regulators?
lawreq_not~r	Does the law or the agency rules/guidelines require the companies to notify the agency of any merger, acquisition, or similar transaction covered by the merger provisions in the law (if any)?
mandatory_~f	Does the law or the agency rules/guidelines provide for mandatory pre-notification of mergers?
dominant_p~n	Does the law or the agency rules/guidelines direct the agency to consider the dominant position or market share of the merged entity?
public_int~t	Does your agency consider public interest in your merger reviews?

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Table A5.4 *continued*

Variable	Variable description
grant_proh~r	Does the law or the agency rules/guidelines grant the agency the power to prohibit a merger if the merger runs contrary to public interest?
allow_merg~t	Does the law or the agency rules/guidelines allow an otherwise impermissible merger for the sake of public interest?
allow_merg~e	Does the law or the agency rules/guidelines allow an otherwise impermissible merger to prevent a business failure?
law_merger~t	Does the law or the agency rules/guidelines direct the agency to consider the effect of the merger on market competition, such as anti-competitive consequences for the structure of the market or possible barriers to entry?
balance_fi~s	Does the law or the agency rules/guidelines require the competition authority to balance findings based on competition principles (e.g. prohibiting the substantial lessening of competition, preventing foreclosure, etc.) against other policy objectives or interests (e.g., industrial policy, protection of MSMEs, etc.)?
leniency_p~y	Does your agency have a leniency policy? (Note: This includes cooperation, leniency, or immunity policies, however termed under national law).

6

Pillars of Competition Policy: The Philippines in the Context of Developing Asia

Leni Papa, Danilo Lorenzo Atanacio, and Arsenio Balisacan

6.1 Introduction

Competition law and policy have proliferated across the world. There are now more than 125 jurisdictions that have a competition law regime and most of them have active competition authorities (OECD 2020a). This is, in part, due to the efforts of international and regional organizations (the Organisation for Economic Co-operation and Development, the United Nations Conference on Trade and Development, GIZ, the International Competition Network, the World Bank, the Association of Southeast Asian Nations, and the East Asia Top Level Officials' Meeting on Competition Policy, to name a few), that have advocated the need for competition law and policy and called for convergence with “best practices” in designing and enforcing competition law and policy.

Global convergence is, however, far from reality, nor even desirable, as discussed in other chapters of this volume. Notable differences in the substantive design of the three operational pillars of competition policy—merger control, competition enforcement, and competition advocacy—around the globe are evident. Even in cases where there are similarities in the provisions of competition laws, the implementation of such laws has been different, especially for countries in transition (Hayashi 2020; Yoo 2020; Jung and Chang 2006).¹

¹ For example, Japan’s Antimonopoly Act, largely inspired by the Sherman Act, was considered “more stringent” than the United States’ law but was not strictly enforced for more than 20 years due to the Japanese government’s focus on industrial rehabilitation. The Republic of Korea’s government similarly did not see competition enforcement as a high priority during the early years of the Monopoly Regulations and Fair Trade Act.

The applicability of competition principles to developing economies with small markets are far from uniform. These principles may be at odds with other national policy objectives that could undermine the independence and effectiveness of a competition authority. Competition agencies from developing countries also face common institutional obstacles, such as insufficient in-house capability and resources to detect or prevent anticompetitive conduct of private firms, poor coordination with sector regulators, and barriers to competition that stem from government policies that seek to achieve non-competition-related objectives. Experiences of developing countries conflict with the assumption that the same mechanisms of promoting competition, enforcing the law, and implementing policies would apply in a similar manner to less advanced economies as they do in developed jurisdictions.

This chapter reviews the conceptual underpinnings of and divergent experiences in the three operational pillars of competition policy in developed and developing countries. It explores the challenges in transplanting and enforcing the developed world's formulation of competition policy lock, stock, and barrel into developing countries. By identifying general trends and patterns in the developing countries' implementation of competition policy and evaluating how they relate to the nuances of the Philippine experience, this chapter highlights lessons that may help strengthen the Philippines' competition policy perspectives as it continuously evolves. The chapter concludes that competition policy in a developing country is part and parcel of the economic development agenda and that the "best practices" for competition regimes in developing jurisdictions are not a one-size-fits-all solution. Instead, they must be critically evaluated in light of a country's level of economic development, political economy and institutional arrangements, history, and culture.

The chapter is organized as follows. Section 6.2 discusses the broader economic and political history of the Philippines and explores competition policy's expected contribution to the country's goal of achieving inclusive growth. Sections 6.3 to 6.5 elaborate on the analytical framework that underpins the rationale and logic for the three pillars of competition policy. It then highlights the conceptual and institutional issues in operationalizing these pillars in developing countries. These issues are viewed from the prism of the Philippines, in light of the evolution of the Philippine Competition Act (PCA) and the Philippine Competition Commission's (PCC) experiences since its establishment in 2016. It proceeds to explain why the Philippine experience veered away from the trend. Finally, Section 6.6 provides implications for competition policy design and administration.

6.2 The Philippine Context

The World Bank classifies the Philippines as a lower-middle-income country with a gross national income per capita of \$4,230 in 2023.² Following a record 9.5% contraction owing to the effects of the pandemic and policy response challenges in 2020, the Philippine economy's recovery is proving to be robust, with economic growth recorded at 5.7% in 2021, 7.6% in 2022, and 5.5% in 2023 (Philippine Statistics Authority 2024). Policymakers expect the economy to expand by 6.0% to 7.0% in 2024, 6.5% to 7.5% in 2025, and between 6.5% to 8.0% from 2026 to 2028 (DBCC 2024).

Since the 1980s, the Philippine economy has seen significant transformation—although modest by East Asian standards—through policies that liberalized trade, privatized and deregulated state-owned or state-sanctioned monopolies, and opened up the domestic sector to greater competition.

For example, in manufacturing, Aldaba (2008) and Medalla, Quimba, and Rosellon (2020) estimate that price cost margins fell in the post-trade reform period. From an average of 0.27 in what might be considered the pre-trade reform period (1972–1998), price-cost margins fell to less than half by 2014. This is an indication that greater competitive pressure from global trade has lowered the level of rents enjoyed by players in the manufacturing sector.

Nevertheless, similar to other developing economies in Asia, the Philippines continues to suffer from policy distortions, market concentration, and a continuing culture of rent-seeking activities.³ The dominance of a few market players continues to remain entrenched, increasing risks of collusion and abuses of dominance, and perpetuating the so-called “economic oligarchy.” From 2010 to 2019, the country lagged behind its regional peers in overall competitiveness, as measured in various Global Competitiveness Reports. Under the indicator of “Extent of Market Dominance,” the Philippines has consistently obtained the lowest score in the past decade, reflecting the perception that the Philippine competition landscape is generally characterized by the dominance of a few business groups (Figure 6.1 and Figure 6.2).

² Using the Atlas method.

³ Governance challenges and weak institutions have often been cited as persisting constraints to the country's development, with perceptions of corruption remaining. The Philippines' rank in Transparency International's 2022 Global Corruption Index is 116th out of 180 territories.

Table 6.1: Estimated Price Cost Margin Before and After Trade Reforms

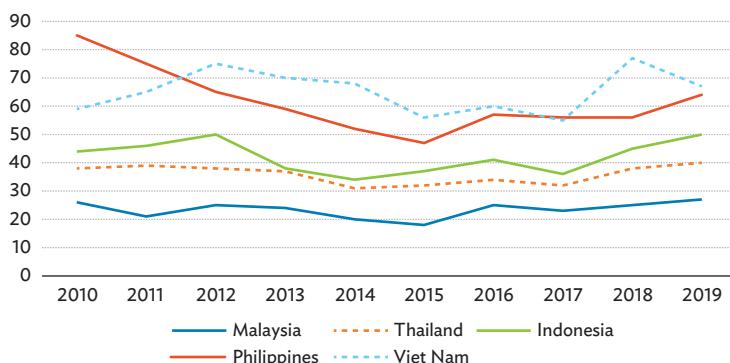
Year	Period	Adjusted PCM
1972–1975	Pre-Trade Reform	0.31
1976–1980		0.18
1981–1985		0.26
1986–1990		0.23
1991–1995		0.29
1996–1998		0.34
Year	Period	Adjusted PCM
2006	Post-Trade Reform	0.12
2008		0.09
2010		0.10
2012		0.07
2014		-2.11
Adjusted PCM (excl. C27 and C30)*		
2006		0.12
2008		0.12
2010		0.12
2012		0.23
2014		0.13

PCM = price cost margin.

Note: *The sectors C27 and C30 refer to the sectors of electrical equipment and manufacture of other transport equipment, respectively. In Table 13 of Medalla, Quimba, and Rosellon (2020), the authors calculated the adjusted PCMs in the Post-Trade Reform period, with and without these sectors with high negative PCMs. The authors justify this exclusion by considering the sectors as possible outliers and as sectors that are export-oriented.

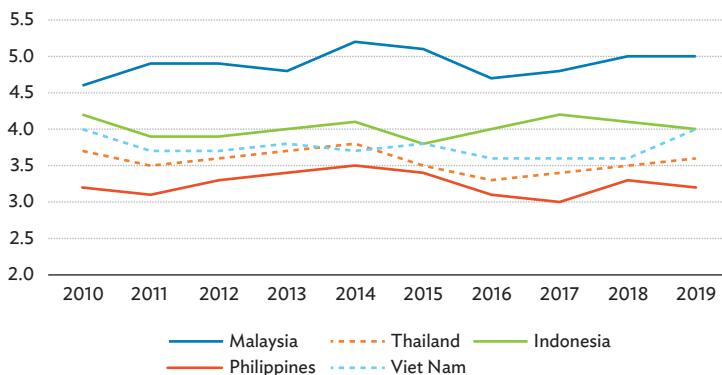
Source: Data from Table 15 of Aldaba (2008) and Table 13 of Medalla, Quimba, and Rosellon (2020).

Figure 6.1: Overall Global Competitiveness Index Rank of the Philippines and its Southeast Asian Neighbors



Source: Data compiled by authors from various *Global Competitiveness Reports* (World Economic Forum 2010–2019).

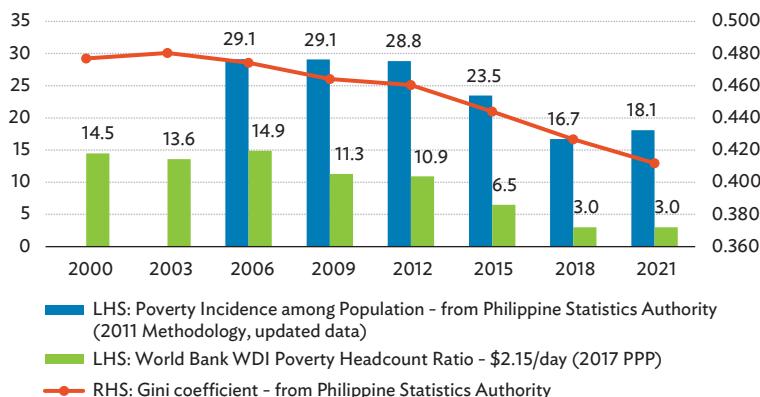
Figure 6.2: Extent of Market Dominance in the Philippines and its Southeast Asian Neighbors



Source: Data compiled by authors from various *Global Competitiveness Reports* (World Economic Forum 2010–2019).

Moreover, the country's track record in improving the living standards of its poorest citizens still stands in stark contrast to those of its East Asian peers. In part, this is because the depth and breadth of reform efforts have been insufficient in addressing the critical constraints to rapid and sustained growth and development, particularly in dismantling barriers to effective competition and enabling a more equitable distribution of opportunities.

Official estimates of the country's poverty incidence show improvements over time, albeit at a slow pace, matched with high but steadily falling inequality (Figure 6.3).

Figure 6.3: Philippine Poverty and Inequality

WDI = World Development Indicators.

Note: Comparable poverty incidence data from the Philippine Statistics Authority (PSA) are not available for 2000 and 2003. For the (unpublished) PSA back estimates of poverty incidence among the population in 2006, 2009, and 2012, these refer to special computations made by deflating the 2015 food thresholds using the 2012-based regional consumer price index (CPI) for food and used the same national food expenditure to total basic expenditure (FE/TBE) ratio of 0.6983. This was done by the PSA to have comparable estimates with the years 2015, 2018, and 2021, based on the 2011 methodology.

Source: Data compiled by authors. Data on poverty incidence among population gathered from the Philippine Statistics Authority (2006–2021), with unpublished data (2006–2012) obtained from authors' personal communication with the PSA (23 October 2023). Data on poverty headcount ratios at \$2.15/day (2017 purchasing power parity) gathered from the World Bank World Development Indicators (2000–2021). Data on Gini coefficient gathered from the Philippine Statistics Authority (2000–2021).

Recognizing the Philippines' long history of inequality and poverty, the 1987 Constitution emphasized equality and improving the lives of the underprivileged as goals of the national economy (Tatad vs Secretary 1997).⁴ Competition policy in the Philippines can be traced to the same historical struggle for economic and social reforms aimed at achieving inclusive development (Balisacan and Papa 2020). Reflecting the foregoing constitutional principles, the PCA⁵ states that the enhancement

⁴ Article XII, Section 1, 1987 Constitution. In the case of Tatad vs Secretary (1997), the Supreme Court explained that the Philippines' "distinct free enterprise system is dictated by the need to achieve the goals of [its] national economy as defined by section 1, Article XII of the Constitution."

⁵ Section 2, PCA.

of economic efficiency and promotion of competition should be done “pursuant to” the following threefold goals: first, a more equitable distribution of opportunities, income, and wealth; second, a sustained increase in the amount of goods and services produced by the nation for the benefit of the people; and third, an expanding productivity as the key to raising the quality of life for all, especially the underprivileged (Constitution 1987; Journal of the Senate of the Philippines 2014). Thus, the object of antitrust enforcement in the Philippines is not merely confined to economic efficiency or the preservation of competitive processes to protect consumer welfare, but is permeated by the foregoing “public interest” considerations (Balisacan and Papa 2020).

Indeed, the recognition of competition policy’s significance within the overall development policy of the Philippines led to its inclusion in the two Philippine Development Plans (PDP) after the enactment of the PCA in 2015, the PDP 2017–2022 and the PDP 2023–2028.⁶ Thus, rather than existing in a policy vacuum, the underlying frameworks and tools of competition policy are expected to contribute to achieving objectives such as increasing economic opportunities, raising productivity and accelerating economic growth, and ultimately, reducing poverty and raising overall socioeconomic welfare.

6.3 Merger Control

Merger control involves the review of mergers⁷ to determine whether they have an adverse effect on competition.

Jurisdictions with a merger control regime have increased in recent decades. As of 2019, 135 jurisdictions around the world have merger laws or regulations that authorize competition authorities to review certain transactions (OECD 2021). The Asia and Pacific region has seen a significant uptick in the number of new merger control regimes, in addition to a number of jurisdictions that have adopted notable improvements to their existing merger regime (OECD 2021).

⁶ The Philippine Development Plan is the Philippines’ development blueprint which identifies strategies for attaining the country’s socioeconomic targets for the medium term. The plan provides assessments of sectoral issues and constraints, identifies targets to be met within the plan period, and lays out policies and programs—including priority legislative measures—that must be carried out and passed in order to meet such targets.

⁷ In this chapter, “merger” refers to a complete union of two or more companies, or a more one-sided takeover or the transfer of parts of one firm to another. The European Union, which distinguishes mergers and acquisitions, uses the umbrella term, “concentrations.”

The main competition concern related to mergers is the reduction of competitive pressure or increase in market power which can result in the reduction of quality or other non-price benefits or higher prices charged to consumers. For example, mergers between direct competitors may result in the outright elimination of a competitor and the creation of a dominant entity that would have the ability and incentive to raise prices, lower quality, and cut down on efforts to innovate. On the other hand, mergers between two entities along different levels of the value chain may result in integrated operations that could encourage the foreclosure of critical inputs or customer bases to competitors. While different jurisdictions apply different specific theories of harm for each merger case, most of these fall under the following broad categories: unilateral effects, coordinated effects, vertical effects, and conglomerate effects.

The operational features of merger control, summarized below, also vary across jurisdictions:

- Whether transacting parties have an obligation to notify the competition authority of pending or completed transactions (mandatory, voluntary, or hybrid)
- The definition of a notifiable transaction
- The criteria for establishing notification thresholds
- Whether the transacting parties have to report notifiable transactions to the competition authority before the consummation of the transaction and obtain the approval of the competition authority before the execution of the transaction (pre- or post-merger)
- Number of phases of review (one or two phases)

To promote greater policy predictability, employ rigorous methods of analysis, and to avoid attempts to inject political factors in the evaluation of mergers, many jurisdictions have accepted the norm of undertaking economic analyses to determine the effects of mergers. In this process, competition authorities check different types of evidence, such as actual effects in consummated mergers, direct comparisons based on historical events or natural experiments, and changes in concentration caused by the merger, and the presence of direct competitors (Elhauge and Geradin 2011). Competition authorities generally do not block or prohibit mergers unless such transactions will (or have the potential to) significantly lessen competition (SLC) in the relevant market.⁸

⁸ The SLC legal test is denominated differently across jurisdictions. In other regimes, the legal test is called significant impediment to effective competition, dominance, substantial lessening of competition. All are concerned with the increase in market power or reduction of competition.

After a review, competition authorities can either prohibit the transaction, approve the transaction without any conditions, or approve the transaction subject to conditions. Global experience shows that most mergers are approved without any conditions, as they are not expected to harm competition (OECD 2020a).⁹ Mergers can actually result in cost efficiencies in production, research, and development, resulting in a net gain in total welfare.

Pursuant to recommended practices from developed countries, many jurisdictions use an economics-based competition analysis in their merger control regimes (OECD 2020b). Economic analysis has been seen as a way to eliminate discretion from the competition authority and prevent political factors and rent-seeking interests from seeping into an otherwise objective evaluation (Hovenkamp and Morton 2020). A number of leading competition authorities have opted to adopt variations of the welfare standard, following a general consensus that the basic objective of competition law is to “protect and preserve competition as the most appropriate means of ensuring the efficient allocation of resources in free market economies,” which is manifested by lower consumer prices, higher quality products, and better product choices (Bork 1978; Hovenkamp 2013).

6.3.1 Merger Control in Developing Countries

Is *ex-ante* merger control important in developing countries?

Warnings have been raised against the pitfalls of merger enforcement in developing countries, especially those which have a new competition regime (OECD 2011). One argument stems from the competition authority’s limited technical capacity to undertake complicated economic modeling and analysis of mergers, limited institutional and human resources, and underdeveloped competition culture. Following this concern, competition agencies have been urged, initially, to focus their resources on, gain experience, and build a reputation in *ex post* activities (i.e., undertaking enforcement actions against anticompetitive agreements and abuses of dominant position), before focusing on resource-intensive *ex ante* merger reviews (Marcos 2006). Another argument is that merger review discourages foreign investment, which is a much-needed source of capital in developing countries with small markets (Clougherty and Zhang 2021).

⁹ The OECD reported that in 2020, only 0.2% of transactions were prohibited. 93.6% of notifications were cleared during the first phase of review without remedies.

The literature however highlights the need for a robust merger control regime in developing countries due to their unique economic characteristics (Cheng 2021). Developing countries have small, fragmented, less competitive domestic markets that are highly concentrated. Institutions are weak and market failures are common. Poverty and inequality persist, with the majority of consumers having poor access to information and being unable to form effective coalitions to counter influence-peddling by industrial producers.

In this scenario, competition authorities play a role as a countervailing force, on behalf of consumers, to make markets work better by preventing the consummation of mergers that significantly impede competition and reinforce barriers to the entry of new competitors. By protecting consumer welfare, competition policy enhances economic efficiency. This brings the economy closer to its potential, creating more productive employment opportunities, raising growth, and reducing poverty (Balisacan 2019).

Welfare approach, public interest considerations, and industrial policy

Commentators point out that the simple goal of increasing efficiency does not suffice for developing countries facing widespread poverty and inequality. They argue that developing countries must look at standards beyond “whether conduct decreases aggregate consumer or total wealth” (Fox 2007). The debate goes beyond choosing between total welfare or consumer welfare, with discussions on whether developing countries should include objectives that are outside the core of economic goals of competition law, generically referred to as “public interest considerations” (PICs), growing in recent years (Feintuck 2004; OECD 2016a).

One serious challenge in the inclusion of PICs in merger analysis is that it complicates the enforcement of merger control. This happens in two ways. First, there are no clear, objective, and measurable criteria to determine what constitutes “public interest.” This vagueness could be used as a convenient justification to exempt certain competition infringements from the scope of competition enforcement. Second, in cases where the law clearly defines public interest or provides basic principles to consider in determining its scope, the assignment of welfare weights to potential winners and losers of enforcement action may influence the prioritization of competing goals. This creates uncertainties in enforcement and raises the cost of compliance to competition policy. It can also expose the competition authority to influence-peddling by interest groups (Balisacan 2019).

No consensus on PICs has been reached. Notably, most of the jurisdictions surveyed in this chapter stated that they consider public interest in deciding merger cases. The nature of PICs and the manner of their incorporation into the merger control process vary widely across jurisdictions (Blachucki 2014). In India, the central government may supersede the Competition Commission's merger case decision when it is "necessary in the public interest so to do" (Section 56 of the Competition Act 2002). One of the more widely studied examples of PIC consideration in merger review is South Africa, where the Competition Commission and the Competition Tribunal are required to assess the effect of the merger on five categories of PICs: a particular industrial sector or region; employment; the ability of small and medium-sized enterprises or firms controlled or owned by historically disadvantaged persons to become competitive; the ability of national industries to compete in international markets; and the promotion of a greater spread of ownership (to increase the level of ownership by historically disadvantaged persons and workers) (Raslan 2016b; South Africa Competition Act 1998, no. 89).

Ultimately, however, debating whether PICs can and should be included in a merger analysis framework designed around welfare considerations can ultimately be assessed in terms of their contribution to welfare.

Mandatory vs. voluntary notification system

While notification systems are designed following the legal, institutional, and economic framework of each jurisdiction, they are broadly categorized into mandatory or voluntary, or a combination of the two. The pros and cons of the two systems are summarized in Table 6.2.

Table 6.2: Pros and Cons of Mandatory and Voluntary Merger Notification Regimes

Notification System	Pros	Cons
Mandatory	<ul style="list-style-type: none"> • Does not rely on businesses' own substantive assessment: brighter line with notification thresholds determining notifiability of mergers. • Allows concentrating enforcement resources on merger review, rather than on merger detection. • Higher potential to prevent anticompetitive mergers occurring in non-transparent or private industries. • Raises overall antitrust awareness. • Legal certainty. 	<ul style="list-style-type: none"> • Potential to focus on problematic or complex mergers since the trigger for notification is a substantive merger assessment.
Voluntary	<ul style="list-style-type: none"> • Highly dependent on notification thresholds. • Risk of notification resources being spent on unproblematic mergers (type I errors). 	<ul style="list-style-type: none"> • Highly dependent on businesses' antitrust awareness and enforcers' screening tools. • Triggered by, and highly dependent on, companies' own substantive assessment. • Resources needed to screen and detect potentially harmful mergers • Higher risk of missing potentially harmful mergers that went unnoticed (type II errors).

Source: Adopted from OECD (2014) and Cheng (2021). Notification Procedures are summarized in OECD (2014). OECD Merger Recommendation and ICN Recommended Practices for Merger

Voluntary regimes are not seen as advisable in developing countries. Agency understaffing, resource-limitations, as well as an underdeveloped competition compliance culture can lead to greater risk of missing anti-competitive mergers in less visible markets. Notably, several jurisdictions that originally had voluntary notification regimes have also shifted, or are planning to shift to a mandatory regime, such as Australia (Sims 2021), Chile (OECD 2014), and the United Kingdom

(Competition and Markets Authority 2020). Malaysia (OECD 2019; GCR 2021) and Cambodia (Consumer Protection Competition and Fraud Repression Directorate-General 2021) are also exploring the adoption of a mandatory notification regime.

The majority of jurisdictions that have merger control follow a mandatory pre-merger notification regime, wherein competition authorities undertake their review before the parties complete or consummate their transactions (OECD 2021). In this scenario, merger control is used as an *ex-ante* tool, or one that seeks to prevent rather than remedy the effects of competitive harm, the latter being what happens with *ex-post* tools in enforcement actions related to anticompetitive agreements and abuse of dominance.

Notification thresholds are put in place to attempt to balance a level of enforcement that captures all the transactions that lead to significant market power or to a significant lessening of competition in a relevant competition market, while not overly burdening the agency or the parties to other transactions that have no competition concerns.

6.3.2 The Philippine Experience in Merger Control

The PCC's pre-merger mandatory notification regime

Section 12(b) of the PCA gives the PCC the mandate to review proposed mergers and acquisitions; determine thresholds for notification; determine the requirements and procedures for notification; and, upon exercise of its powers to review, prohibit mergers and acquisitions that will substantially prevent, restrict, or lessen competition in the relevant market.

The PCC has a mandatory pre-merger notification system that has two phases. Merging entities whose transactions breach both the size of party and size of transaction thresholds are mandated by law to notify the PCC and seek the agency's clearance before the transaction is consummated.

Most mergers analyzed by the PCC do not have the effect of substantially lessening competition. From 2016 to 2021, a total of only six transactions resulted in the issuance of a Statement of Concerns. This constitutes only 2.4% of the cumulative number of transactions that have been notified with the PCC. Further, there has only been one prohibited transaction between 2016 and 2021, which is 0.4% of the total number of notifications (Table 6.3).

Table 6.3: Annual Statistics on Merger Review for the Philippines

Year	Number of transactions notified	Number of <i>motu proprio</i> * reviews opened	Number of transactions that resulted in the issuance of a Statement of Concerns	Number of transactions prohibited
2016	68	0	0	0
2017	62	1	2	0
2018	48	2	3	0
2019	41	1	1	1
2020	24	2	0	0
2021	7	0	0	0
Total	250	6	6	1

Note: **Motu proprio* is a Latin term meaning “on one’s own initiative.” In the context of the Philippine Competition Act, it means merger reviews initiated by the Philippine Competition Commission.

Source: Data from the PCC Mergers and Acquisitions Office.

Examining the types of merger approvals, majority of transactions that undergo review in a given year are cleared or approved in Phase 1 without the need for any commitments from the notifying parties (Table 6.4).

Table 6.4: Types of Approvals under the Philippine Competition Commission’s Merger Review Regime

Year	No. of transactions approved in Phase 1 without commitments	No. of transactions approved in Phase 1 with commitments	No. of transactions approved in Phase 2 without commitments	No. of transactions approved in Phase 2 with commitments	No. of <i>motu proprio</i> reviews approved without commitments	No. of <i>motu proprio</i> reviews approved with commitments
2016	12	0	0	0	0	0
2017	40	0	2	2	1	0
2018	37	0	1	1	0	1
2019	27	0	3	0	0	0
2020	19	0	0	1	1	0
2021	4	0	0	0	0	0

Note: **Motu proprio* is a Latin term meaning “on one’s own initiative.” In the context of the Philippine Competition Act, it means merger reviews initiated by the Philippine Competition Commission.

Source: Data from the PCC Mergers and Acquisitions Office.

Adhering to the SLC standard in merger review

As discussed in Section 6.2, the PCA provides that competition enforcement in the Philippines (in the form of enhancing economic efficiency, preventing economic concentration, and penalizing all forms of anticompetitive acts for consumer welfare) should be done “pursuant to” the following threefold constitutional goals of the national economy: (i) a more equitable distribution of opportunities, income, and wealth; (ii) sustained increase in the amount of goods and services produced by the nation for the benefit of the people; and (iii) expanding productivity as the key to raising the quality of life for all, especially the underprivileged. By interpreting the statutory text and the legislative history of the PCA, the normative question of whether Philippine competition law and policy should take poverty reduction and social equity into account is answered in the affirmative. The mechanism for the consideration of such values, however, remains controversial. Unlike the Competition Act of South Africa, which expressly allows the internal interface of considering an exhaustive list of public interest considerations in merger assessment (Raslan 2016a, 2016b; South Africa Competition Act 1998, no. 89), the PCA does not provide any parameter for the inclusion of poverty or inequality considerations in the substantive assessment of anticompetitive actions. Rather, the PCA only mentions the standard of “substantially preventing, restricting, or lessening competition in the relevant market” (the SLC standard) to guide the scrutiny of cases (Philippine Competition Act, R.A. 10667, 2015).

The PCC has had no chance to test if the constitutional goals of the national economy can be used in the substantive evaluation of cases. In all of its merger decisions, the PCC has chosen to stick to evidence-based competition analysis when evaluating whether the merger would substantially lessen competition, dispensing with public interest considerations when ruling on cases. In 2018, the PCC reviewed Japan Tobacco International Philippines Inc.’s acquisition of Mighty (Tobacco) Corp. The PCC faced the issue of “whether the merged entities’ ability to raise prices should matter, given that the products concerned were cigarettes and tobacco products, which are recognized health risks. In other words, even if the merger would result in higher prices for cigarettes, given the public interest of ensuring the health of the nation’s citizenry, should the PCC prohibit the merger?” (Bernabe 2019). The PCC decided not to incorporate the foregoing public interest issue into its analysis, concluding that “there are more appropriate policy instruments available to the government in addressing its public health objectives” (Bernabe 2019).

First blocked merger

The PCC's first time blocking a merger is significant insofar as it provides competition practitioners and stakeholders from the public and private sectors a clear and "textbook" example of the kind of merger and acquisition that could be detrimental to the Philippine market under the consumer welfare approach.

The transaction, a proposed acquisition by Universal Robina Corporation (URC) of Central Azucarera Don Pedro, Inc. (CADPI) and Roxas Holdings, Inc.'s (RHI) assets, involved the sugar industry's midstream and downstream segments, which consisted of the activities of sugar cane milling and refining, as well as the production, distribution, and sale of raw sugar, refined sugar, and molasses.

The PCC's Mergers and Acquisition Office identified that pre-transaction, URC and CADPI-RHI's milling facilities would compete with one another through their offers and planters' comparisons of planter-miller sharing agreements, sugar recovery rates, as well as monetary and non-monetary incentives provided by the sugarcane milling entities to the planters. Without such a competitive constraint, a monopoly is created leading to a substantial lessening of competition. The PCC found the parties' proposed commitments to be insufficient (Philippine Competition Commission 2019). The merger-to-monopoly transaction directly removes competition: it would have created a market structure and dynamic that provides incentives for one party to potentially engage in exploitative and exclusionary conduct to the detriment of either its suppliers or customers. If the transaction had pushed through, it is likely that the welfare of sugarcane planters would have been reduced through more unfavorable terms in the planter-miller sharing agreement, lower quoted theoretical recovery rates, and decreased incentives.

Avoiding the "additional red tape" label

The Philippines has one of the highest costs of doing business in the Association of Southeast Asian Nations. Excessive administrative burdens also make it difficult to start and grow businesses (World Bank 2018).

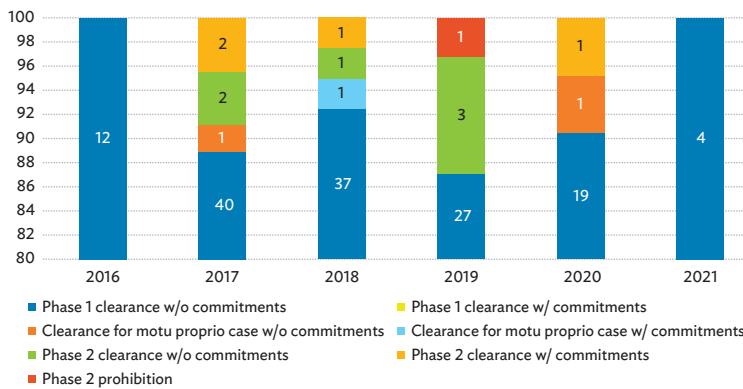
To get the business community's support for the PCC and the PCA, it was crucial to avoid being seen as "additional red tape" that will only add to the cost of doing business in the Philippines. The PCC went to great lengths to explain the merger review process to stakeholders, especially those in the business sector. The PCC also entered into a number of memorandums of agreement with sector regulators such as the Securities and Exchange Commission, *Banco Sentral ng Pilipinas* (Central Bank), and the Department of Trade and Industry, among others, in an attempt to resolve overlaps in processes.

These did not prevent criticisms against the PCC's merger review operations, with allegations that the PCC took too long to review a transaction, and asked for too much information and too many documents.

To address concerns from stakeholders, the PCC simplified its merger processes for certain types of transactions and issued rules on expedited merger review, the merger rules for solicited public–private partnership (PPP) projects, the merger rules on unsolicited PPP projects, and the merger rules for joint venture projects covered by the National Economic and Development Authority (NEDA) Joint Venture Guidelines.

Data from the PCC show that from 2016 to 2021, most transactions, or more than 90%, obtained clearance in either Phase 1, Phase 2, or under *motu proprio*¹⁰ review without requiring commitments or competition remedies (Figure 6.4). This is broadly in line with the trends seen in other Asia and Pacific jurisdictions (Figure 6.5) and shows that minimizing transactions costs to encourage commercial activity need not be at the expense of protecting market competition.

Figure 6.4: Types of Merger Decisions Issued by the Philippine Competition Commission

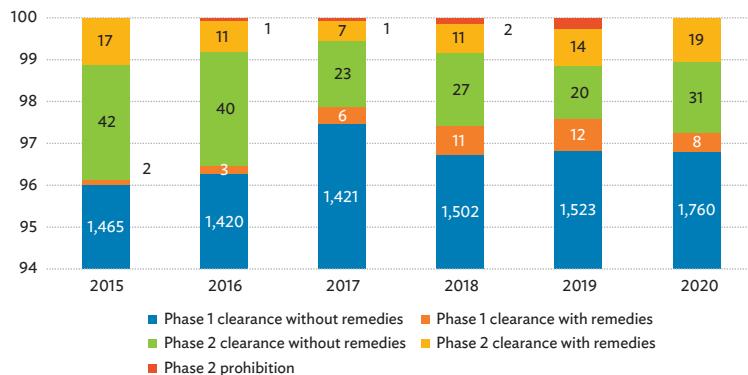


Note: *Motu proprio* is a Latin term meaning “on one’s own initiative.” In the context of the Philippine Competition Act, it means merger reviews initiated by the Philippine Competition Commission.

Source: PCC Mergers and Acquisitions Office.

¹⁰ *Motu proprio* is a Latin term meaning “on one’s own initiative.” In the context of the Philippine Competition Act, it means merger reviews initiated by the Philippine Competition Commission

Figure 6.5: Types of Merger Decisions among Asia and Pacific Jurisdictions



Source: OECD (2021).

Beyond concerns about the merger review process, broader changes to the merger review regime have been proposed. In early 2018, Senate Bill No. 1711 sought to amend Section 17 of the PCA by increasing the notification thresholds for merger review from the original level of ₱1 billion to a level of ₱10 billion. The PCC argued that the adjustment of the merger notification threshold would have profound implications not only for the number of mergers and acquisitions that would be notified to the agency, but also for the effects this might have on the market should anticompetitive transactions escape the agency's scrutiny due to the higher thresholds. The PCC had already undertaken several initiatives to ensure that its policy on the merger notification thresholds balances the desire to review transactions that are sufficiently material and may harm competition through durable change, and the need to keep merger control manageable and the costs proportionate and reasonable both to the government and to private parties (OECD 2016b). The PCC has adjusted its merger thresholds several times to ensure that the thresholds maintain their real value over time and relative to the size and structure of the economy.

Design of remedies

In its Merger Remedies Guide, the International Competition Network (ICN) distinguishes between two types of remedies: structural and behavioral (ICN Merger Working Group 2016). Structural remedies, in the form of divestitures, licensing, rescission, dissolution, and the like, are

generally one-time remedies that directly enable competitive structures to prevail in the identified relevant market/s after the transaction is consummated. On the other hand, behavioral remedies prescribe the behavior of the merged entity by stipulating conditions under which the entity may conduct its operations (ICN Merger Working Group 2016). Competition agencies typically prefer structural instead of behavioral remedies as they entail low ongoing monitoring costs and are relatively easier to administer (ICN Merger Working Group 2016).

The PCC, however, does not have the flexibility to favor structural over behavioral remedies since the PCA provides that the PCC can only impose structural remedies such as “adjustment or divestiture orders for corporate reorganization or divestment when there is no equally effective or less burdensome behavioral remedy.” (Philippine Competition Act, R.A. 10667, 2015).

The PCA-imposed limit in the design of remedies was first illustrated in the Grab-Uber case. Without notifying the PCC, Grab Holdings, Inc., and MyTaxi.PH, Inc. acquired Uber B.V. and Uber Systems, Inc. in March 2018. The transaction involved Uber obtaining 27.5% ownership in Grab, exiting the ride-hailing market, and leaving Grab as the dominant player. The PCC immediately recognized the transaction as a competition concern that would require an in-depth merger review. Grab offered voluntary commitments, which the PCC accepted after several months of discussions. These commitments effectively sought to bind Grab to behavior that is consistent with a competition landscape in which Uber did not exit. These involved three broad sets of commitments: (i) those that held Grab to prescribed service-quality metrics and service-improving behavior; (ii) those that sought to keep Grab’s fares transparent and not extraordinarily above pre-transaction averages; and (iii) those that sought to maintain vigorous competition for driver-partners by ensuring non-exclusivity arrangements and establishing a monitoring system for Grab’s incentives and promos (PCC 2018a).

These so-called “behavioral commitments” were monitored via a third-party trustee, Smith & Williamson (PCC 2018b). Throughout the monitoring period from 10 August 2018 to 31 October 2019, the PCC, through the third-party monitor, found Grab to have violated its undertaking several times, including the PCC’s interim measures, leading to the imposition of fines totaling ₱16.15 million (approximately \$278,947). Questions remain as to whether Grab’s behavioral commitments are enough to guarantee the entry or expansion of competitors into the market (Bernabe 2020). Policymakers should evaluate whether behavioral commitments are to be retained as the default option in the PCA in light of PCC’s experience.

6.4 Enforcement Against Anticompetitive Agreements and Abuse of Dominant Position

The second pillar of competition policy is “competition enforcement” or the application of competition laws by way of investigation or proceedings conducted by the competition authority. For purposes of this chapter, competition enforcement refers to the investigations or proceedings undertaken by the competition authority in relation to anticompetitive agreements and abuses of dominant position. It is distinguished from the review of business filings under merger control and research, studies, or surveys that have the objective of examining the general economic situation or general conditions in specific industries.

Anticompetitive agreements pertain to agreements among competitors that unreasonably restrain competition. These types of practices are otherwise referred to as “concerted practice,” “unfair collaborative acts,” or “cartels.” Abuse of dominant position involves single-firm exploitation of market power or the use of illegal means to gain or retain market power, occurring when a dominant enterprise engages in an activity that prevents or reduces competition in a market. This type of conduct is labelled as “unilateral conduct,” “misuse of market power,” or “monopolization” in other jurisdictions.

The types of business practices considered abusive vary on a case-by-case basis and across jurisdictions. Although significant differences exist among jurisdictions, the various types of abusive conduct condemned under competition laws can be categorized into two broad categories: exclusionary (where the dominant enterprise tries to suppress competition by excluding its competitors through conduct such as predatory pricing; tying and bundling; refusal to supply; exclusive dealing; and barriers to entry) and exploitative abuses (where the dominant firm uses its market power to extract rents from consumers through conduct such as excessive pricing and imposing unfair trade conditions).

In some cases, abuse of dominance may be pursued when cartel-like agreements are suspected but are difficult to prove. For example, service companies may implicitly agree to limited competition by making it inconvenient for a customer to switch to a different supplier. Each of the competing firms engaging in similar such practices may be found to be limiting competition, even without evidence of an explicit or implicit agreement.

In assessing whether there has been an abuse of dominant position, the following elements must be proven: the market power of the offending enterprise, abuse of such market power, and impact of the abuse on the

market. How market power is assessed varies across jurisdictions. Cheng (2021) classifies these approaches into two categories: full market and presumption approaches (Table 6.5).

Table 6.5: Comparison of the Full Market Approach vs. Presumption Approach

Approach	Description	Advantages	Disadvantages
Full market power inquiry approach	The competition authority takes into account all relevant circumstances such as entry barriers, market shares, countervailing market power	The assessment is seen to be more precise and relevant	Analysis is complicated and time-consuming
Presumption approach	The competition authority relies on a rebuttable presumption of dominance based on an easily ascertainable metric such as market share. Burden is shifted to the defendant to disprove dominance	Simplifies the market power analysis for the competition authority Allows the competition authority to focus on the competitive effects of the conduct	May create false positives (in cases where the defendant fails to rebut the presumption) and false negatives (when the authority fails to establish dominance)

Source: Cheng (2021).

6.4.1 Competition Enforcement in Developing Countries

Should developing countries focus on cartels or abuse of dominance?

Certain commentators have advised countries to focus their enforcement actions against cartels on two grounds. First, the evidence required to prove cartels is simpler. Cartels can be proven by mere proof of an agreement between cartelists, while in abuse of dominance allegations, competition authorities must prove several elements: the dominance of the offending enterprise, abuse of such dominance, and impact on the market. Second, cartels are seen as detrimental to poor people since they frequently involve sectors that impact the consumption of poor households (Sokol and Stephan 2013).

A number of commentators underscore the importance of enforcement actions against abuses of dominance in developing countries due to the special economic characteristics of such countries (Brusick and Evenett 2008; Gal and Fox 2015). Small and fragmented economies naturally tend to be highly concentrated, with a handful of enterprises controlling important sectors and prone to exclusionary strategies. Many of these enterprises developed their dominance from privileges granted by the state (e.g., issuance of licenses, permits, use of non-tariff barriers).

Considering that competition authorities in developing countries are less well-financed than their counterparts in advanced countries, the former should explore and design simpler rules and standards appropriate for their capabilities, and consider adjustments to prevailing perspectives in the enforcement of competition law. (Gal and Fox 2015; Rajagopalan and Tabarrok 2021; Waked 2016; Cheng 2021). For example, in investigating a potential abuse of dominance, competition authorities in developing countries may not have sufficient technical expertise or financial resources to undertake a costly in-depth economic analysis of market conditions to determine market power. Alternatively, rules which create presumptions of market power based on market shares can reduce the administrative burden on competition agencies.

Prioritization of sectors

Literature highlights the importance of prioritization for competition agencies in ensuring the efficient use of resources, guiding the agencies' work, and providing transparency to stakeholders (UNCTAD 2013). Competition agencies in developing and emerging economies may have developmental objectives in their competition laws. To deliver on this development agenda, competition agencies may need to prioritize interventions in labor-intensive industries and markets that deeply impact poor people (OECD 2013; Jennings 2015; World Bank 2017). The Competition Commission of South Africa, recognizing its responsibility to "contribute solutions" to the country's economic challenges, targets seven priority sectors (food and agro-processing, healthcare, intermediate industrial inputs, construction and infrastructure, banking and financial services, information and communication technology, and energy) for proactive intervention (Competition Commission of South Africa n.d.).

The failure to prioritize may result in a number of negative consequences. Historical accounts show that it can lead to the misallocation of funds and personnel to investigations and projects of marginal importance, instead of matters of great public interest (Hyman and Kovacic 2015). Moreover, taking on too many cases can clog the

competition authority's case docket, damage the agency's reputation for effectiveness, and tarnish the trust in the agency (Muris 2005). Worse, competition agencies distracted by trivial matters may miss crucial time-bound interventions.

6.4.2 The Philippine Experience

Since its establishment, the PCC has opened a total of 33 preliminary inquiries, with 23 of these opened *motu proprio*. Of the 33, a total of 30 full administrative investigations were opened.

Throughout the years, the PCC has gradually increased its caseload, reflecting its growing capacity and ability to receive and process complaints, select sectors to prioritize, and manage its investigations. For each year, the majority of the preliminary inquiries that were opened were initiated *motu proprio* by the PCC (Figure 6.6).

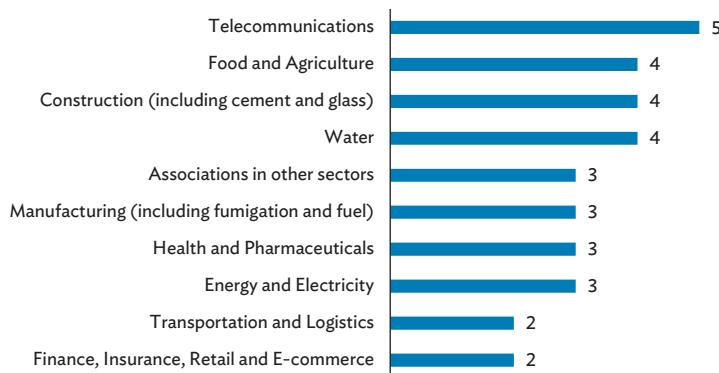
Figure 6.6: Investigations Opened by the Philippine Competition Commission



Note: **Motu proprio* is a Latin term meaning “on one's own initiative.” In the context of the Philippine Competition Act, it means merger reviews initiated by the Philippine Competition Commission.

Source: PCC Competition Enforcement Office.

Figure 6.7 displays the sectoral breakdown of the preliminary inquiries opened by the PCC from 2016 to 2021. The top four sectors include telecommunications (five preliminary inquiries opened), food and agriculture (four), construction (four), and water (four).

Figure 6.7: Sectoral Breakdown of Preliminary Inquiries

Source: PCC Competition Enforcement Office.

Due to the lengthy and often adversarial nature of the investigation and litigation process, competition concerns may linger or persist and thereby cause reductions to consumer welfare or harm to competition. While the PCC recognizes that litigation as a course of action can lead to deterrence and the building up of antitrust jurisprudence, it has learned from experience that there may be circumstances when a non-adversarial course of action can lead to the cessation of conduct, address the competition issues that have been identified, and thereby provide immediate relief to the stakeholders that are being harmed, as illustrated in the Urban Deca case discussed in Section 6.4.2. The Commission Enforcement Office thus issues show cause orders and enforcement advisory letters to concerned entities in order to achieve these objectives. The PCC issued four show cause orders and 11 enforcement advisory letters in 2021.

The PCC's first abuse of dominance case

In 2019, the PCC's Competition Enforcement Office found that exclusivity arrangements entered into by Urban Deca Homes Manila with an internet service provider (ISP) precluded competing ISPs from providing their services to the residents of the condominium, who brought the matter to the attention of the PCC. Upon investigation, the Enforcement Office discovered that the sole ISP that was allowed to operate provided slower internet services at prices that were significantly higher than what competing ISPs would offer for comparable services. The entity was charged with a violation of the provisions related to

abuses of dominance. This was the PCC's first such case and can be considered a defining moment for competition policy in the country.

Over several months, the PCC and the entities negotiated for a motion of settlement on which the public was allowed to provide comments. The PCC was successful in imposing a ₱27.11 million fine, together with terms and conditions that Urban Deca Homes and its parent company, 8990 Holdings, Inc., must follow to rectify its anticompetitive conduct. The entities were ordered to cease their conduct and to apply these terms and conditions to their nine housing projects.

This case has served as an effective advocacy tool for the PCC. Following this case, the PCC received similar complaints from residents and homeowners of condominium and subdivision developments against exclusive dealings with internet operators. As of March 2022, the eight developers have already voluntarily complied with the PCC's Enforcement Advisory Letters and opened their properties to other internet service providers.

Challenges to competition enforcement in the Philippines

Under its competition enforcement function, the PCC has encountered several challenges that have served as critical lessons for a young competition authority.

First, the PCC has learned that a bottom-up approach has proven to be an efficient and useful process for case intake. Queries, complaints, and concerns that emanate from consumers, businesses, or other institutions and organizations often contain information and leads that could prove useful in the competition authority's investigative process. On the other hand, these inputs from external stakeholders may also be evaluated by the PCC's case intake committee as non-competition issues which are better addressed by sector regulators or other enforcers of the law. In this case, the competition authority can close the complaint and focus its resources on competition issues. The Competition Enforcement Office conducts initial assessments as a more efficient means of identifying promising leads on which the PCC could allot its scarce resources such as time and manpower. Table 6.6 differentiates the Initial Assessment stage from the Preliminary Inquiry.

It thus becomes critical for the PCC to raise awareness among business, consumer, and professional groups and let these stakeholders know how the PCC can help them. These efforts effectively multiply the PCC's "eyes and ears" on the ground and allow it to heighten its market surveillance for potentially anticompetitive conduct. Business groups, most especially those whose constituent members are micro, small, and medium-sized enterprises (MSMEs), are more aware and knowledgeable of the commercial practices that prevail in an industry

Table 6.6: Characteristics of the Initial Assessment and Preliminary Inquiry

Procedure	Initial Assessment	Preliminary Inquiry
Objective	According to the Competition Enforcement Office's Guidelines for the Conduct of an Initial Assessment of Alleged Violations of the Philippine Competition Act, its purpose is “to determine the propriety of opening a preliminary inquiry based on information that an agreement or conduct is allegedly in violation of Sections 14 or 15 of the Philippine Competition Act.”	Rule II, Article I, Section 2.1 of the PCC Rules of Procedure states that it is “to ascertain whether there are reasonable grounds to conduct a Full Administrative Investigation for any violation of the Act, its implementing rules, or other competition laws.”
Origin	Opened by the Competition Enforcement Office	Opened by an order of the PCC
Powers	Cannot issue compulsory processes	Can issue compulsory processes
Timeline	Within 6 weeks from commencement thereof, but may be reasonably extended; terminates with closure or recommendation to open a <i>motu proprio</i> preliminary inquiry	Rule II, Article I, Section 2.6 of the PCC Rules of Procedure states that it is to “be completed by the Enforcement Office within ninety (90) days from the commencement thereof.”

Source: PCC Rules of Procedure, Internal Guidelines of the PCC Competition Enforcement Office.

and are thus in a good position to provide information to the PCC. This is why the PCC has exerted efforts to conduct educational workshops with MSME groups and created the iCLP, an online educational portal for competition law and policy, for their benefit. This accessible learning hub contains multiple resources that can help inform businesses and stakeholders on what anticompetitive conduct may look like and how anticompetitive mergers and acquisitions may affect them.

Second, the PCC's case teams have encountered difficulties in obtaining data from sector regulators and other government agencies. This has been the case, despite having memoranda of agreement with other agencies that should facilitate the sharing of data and information. Unlike in mergers and acquisitions, where parties to the transaction have the incentive to provide information that would facilitate the PCC's review (and clearance, if the transaction indeed carries no anticompetitive risk), entities that are under investigation often do not cooperate and are hesitant to provide granular data on their operations. Hence, information obtained from the sector regulator or other government agencies becomes invaluable to the case team's

progress. Collaboration with other government agencies requires the establishment of networks and data infrastructure that can be used to inform investigations in a timely manner.

Third, existing relationships between private parties in oligopoly settings and governments, particularly sector regulators complicate the prosecution of competition cases. In countries with weak institutions, such as the Philippines, there have been incidents when a government entity, possibly unaware of its own anticompetitive policies and decisions and thinking that it would benefit the public if competitors agreed on a price, ends up sanctioning and “legitimizing” the cartel. Of course, it may very well be the case that regulatory capture is possible, whereby anticompetitive practices are enabled by captured policymakers through the granting of economic privileges to specific entities.

Limitations of one of the “best” enforcement tools — the leniency program

Leniency programs target enterprises that have participated in cartel activities and therefore are liable for infringing the prohibition against anticompetitive agreements, but who would nevertheless like to come clean and provide the competition authority or other law enforcement body with evidence of the cartel.

Leniency programs have been heralded as the “most effective tool for detecting and punishing cartels” (OECD 2019). Citing numbers from the European Union, Japan, the Republic of Korea, and the United States, the OECD reported “an enormous number of leniency applications across the globe” with “many competition authorities depending on them to conduct cartel investigations.”

While a number of developing nations have had active leniency programs, others have not been as successful (UNCTAD 2010). The OECD’s own survey has found that the existence of leniency programs does not always lead to leniency applications, with 53% of all leniency applications going to only four jurisdictions. 91.2% of all applications were filed with the top 20 most active leniency programs (OECD 2022). In the Asia and Pacific region, 78% of all leniency applications went to only three jurisdictions (OECD 2021). Experiences of competition authorities highlight that the success of leniency programs depend on certain conditions, including that the competition authority must have a strong cartel detection record even without the leniency program. The program must also be transparent and predictable, so that applicants know the consequences of failing to apply for leniency (OECD 2018).

As of writing, the Philippines is one of those jurisdictions with no single leniency application thus far. The PCC’s leniency program has been around since 2019, but the agency has not yet successfully

prosecuted a cartel case. The PCC's inability to derive immediate benefits from its leniency program can be attributed to several factors.

First, the PCC has yet to demonstrate the robustness of its competition enforcement operations (i.e., that it can successfully detect and prosecute cartels). The PCC has thus far only had a few cases which reached the stage where statements of objections were filed, understandably because of its infancy as a competition jurisdiction. Since competition policy is a relatively new concept in the Philippines, many enterprises may not even be aware that their practices amount to a cartel under the PCA. Those aware of the law will continue their highly profitable cartel activities as the PCC has not yet proven its capacity to detect, much less punish, cartels. Moreover, considering the infancy of the competition regime in the Philippines, the judiciary's capacity to appreciate and adjudicate competition issues remains to be seen.

Second, there is a low level of trust in the institutions implementing the leniency program. This is expected since the Philippines, like most low-income countries, is presided over by weak institutions known for "unstable and inconsistent rules and enforcement" (Fabella 2018). Widespread corruption, the Philippine government agencies' dismal record of protecting whistleblowers, and recent failures to prevent massive leaks of personal data reinforce this distrust (Chi 2016; Spencer 2021). Whistleblowers may be discouraged from reporting a cartel since the PCC has not yet demonstrated the ability to guarantee the safety of the leniency applicant and the confidentiality of the data that they will share.

PCC's prioritization of sectors for competition enforcement

Together with NEDA, the PCC explicitly identified the development or societal objectives that competition policy is best suited to address, the measurable development outcomes (targets) expected from its implementation, and the ways by which the competition policy complements the other policy tools of the government to achieve society's development goals.¹¹

The PCC began the identification of priority sectors through the National Competition Policy Review, a comprehensive review of the Philippine competition landscape. This involved a review of

¹¹ The Philippine Development Plan 2017–2022 seeks to "enhance market competition by fostering an environment that penalizes anti-competitive practices, facilitates entry of players, and support its regulatory reforms to stimulate investments and innovation." Chapter 16 of the plan (Leveling the Playing Field through a National Competition Policy) provides the strategic framework (targets and strategies) for the implementation of the National Competition Policy.

government policies, regulations, and administrative issuances that inhibit competition. Through the National Competition Policy Review and the inputs of other government agencies, sectors involving goods and services that are essential to poverty reduction, generation of new livelihood and employment opportunities, and spillover effects on other sectors in the economy were identified. The National Competition Policy Review produced a paper that became a key document in the drafting¹² of the National Competition Policy Chapter of the PDP 2017–2022. The PDP 2017–2022 served as the country’s development blueprint, which determines priorities for resource allocation and the policy direction of government agencies for the medium term. The PDP 2017–2022 identified agriculture, manufacturing, power generation, electricity, telecommunications, and transportation as the medium-term priority sectors. It also identified competition issues that needed to be examined and addressed by the competition authority. These include distortive government policies, regulations, laws, and issuances, including those actions that:

- allow for the existence of government-owned monopolies;
- authorize private monopolies;
- control the entry and expansion of market players; and
- provide goods and services that can be provided by private entities.

Following the priority sectors identified in the PDP 2017–2022, the PCC has periodically announced enforcement priorities to sharpen its goals, minimize arbitrariness in case selection, maximize the impact of enforcement actions, and achieve efficiency in the deployment of limited resources (Kovacic and Lopez-Galdos 2016).

As previously discussed, Figure 6.7 displays the sectoral breakdown of the preliminary inquiries opened by the PCC from 2016 to 2021. Throughout the years, these investigations have aligned with the priority sectors that have been identified by the PCC.

The use of prioritization filters allows the PCC to enforce competition law in a way that limits deviation from the welfare standard of competition policy while recognizing the relative effectiveness of other policy tools in achieving other societal goals such as equity (Balisacan 2019).

¹² By NEDA, with the assistance of the PCC.

6.5 Competition Advocacy

Competition advocacy is the promotion of competition principles in policy discussions and among public and private stakeholders and civil society (UNCTAD 2014). It includes all activities undertaken by competition authorities to promote a competitive environment by means of non-enforcement mechanisms (ICN 2002). This includes: (i) promoting a competitive environment; (ii) advising governments and public bodies on the role of competition in legislative and regulatory policies; and (iii) raising the awareness of the private sector and civil society on the benefits of competition for consumer welfare, economic growth and sustainable development (UNCTAD 2021). The International Competition Network (ICN) classifies competition advocacy activities under two broad categories: (i) activities directed at other authorities that issue laws and regulations, and (ii) activities targeting all other elements of society to raise their awareness of the benefits of competition and the role competition policy plays in promoting and protecting competition (ICN 2002).

International experience shows that competition advocacy and enforcement mutually reinforce each other (ICN 2002). Competition advocacy complements enforcement by deterring anticompetitive practices from occurring in the first place, by raising awareness about the benefits of competition, the consequences of anticompetitive practices, and the penalties of violating the competition laws. It also facilitates the efficient and effective use of limited government resources.

6.5.1 Competition Advocacy in Developing Countries

The importance of competition advocacy to competition agencies in developing countries has been widely studied and there is no debate as to why it has to be done (Clark 2005). The recommendations from international organizations on what competition agencies need to do seem rather simple: identify the stakeholders, maintain operational independence, have sufficient resources for advocacy efforts, acquire credibility as a competition advocate, provide advice to the government, educate the stakeholders, and cooperate with other public authorities (Clark 2005). What has not been extensively discussed is “how” developing countries should do it considering the myriad challenges they face.

Fels and Ng (2013) point out two main limitations of the traditional competition advocacy approach when applied in developing countries. First, it fails to recognize the extent of the political challenges involved in amending anticompetitive laws and policies. Competition authorities

cannot simply barge in since the state plays a significant role either as the regulator or a competitor in the market. Interest groups may have a stake in maintaining the status quo.

Second, the traditional approach fails to consider the importance of institutional arrangements in ensuring the effectiveness of competition advocacy. Unlike developed countries that are only preoccupied with expanding the economic pie, developed countries are burdened with other urgent concerns such as reducing poverty. Developing countries cannot afford to look at competition policy as disjointed from other considerations but must discover how “it fits into the picture.” Unless competition policy is seen as part of a set of tools used to achieve broader development goals, it might be regarded as less important than other public interests that could possibly have anticompetitive effects. To facilitate the inclusion of competition principles into the consciousness of the policymakers, it is useful to adopt a “national competition policy” approach in competition advocacy. In this regard, the competition authority goes beyond merely cooperating with other government agencies. It has to make the rest of the government bureaucracy understand how competition policy contributes to achieving the country’s development targets (Fels and Ng 2013).

6.5.2 The Philippine Experience

Mainstreaming competition policy in the national socioeconomic agenda

With their extensive experience in working in and with the public sector and pursuant to the advice of once-young competition agencies, the PCC’s leadership realized early on that a whole-of-government approach is crucial for the competition authority to progress in its advocacy efforts. The PCC also recognized that buy-in from the leadership of these government agencies and their appreciation of the benefits of competition is critical to facilitate the sharing of information and data and temper pushback.

Thus, one unique step that the PCC undertook in its first few days was to mainstream competition policy in the government’s development agenda. Together with NEDA, the PCC explicitly identified the development or societal objectives that competition policy is best suited to address, the measurable development outcomes (targets) expected from its implementation, and the ways by which the competition policy complements the other policy tools of the government to achieve society’s development goals.

This exercise started with the National Competition Policy Review, as discussed in Section 6.4, and resulted in the inclusion of an entire chapter on competition (Chapter 16) in the PDP 2017–2022, a first in the country’s socioeconomic planning history. Continued recognition of competition policy as a critical policy lever is manifested in the PDP 2023–2028, which also devotes an entire chapter to the topic.¹³

Considering that the Philippines is a developing country, the inclusion of competition policy serves to underscore the need for its contribution to the government’s thrust of raising productivity, promoting equality of opportunities, and making economic growth more inclusive. The PCC and NEDA’s advocacy efforts bore fruit when the Joint Memorandum on the National Competition Policy (NCP) was issued on 30 July 2020. This policy is expected to guide government departments, bureaus, offices and instrumentalities, government-owned or -controlled corporations (GOCCs), and local government units in the design and adoption of pro-competitive government interventions. The NCP stands on three pillars: (i) the effective enforcement of the PCA; (ii) the enactment of pro-competitive government regulations; and (iii) the internalization of the competitive neutrality principle.

Further, on 20 October 2021, former Philippine President Rodrigo R. Duterte signed Administrative Order No. 44, mandating all national government agencies, local government units, and state-owned enterprises to comply with the NCP. Moving forward, the PCC looks to work with NEDA and other agencies of the government, together with development partners, to continuously develop the monitoring framework and its accompanying comprehensive implementation strategy under the NCP.

6.6 Conclusion

Competition policy is not framed in a vacuum. As country experiences show, the competition policy pillars are adapted to each jurisdiction’s needs and circumstances. They are situated in a particular space and time, including the country’s institutional legacies. In crafting competition policy for developing countries, policymakers need to

¹³ It is perhaps fortuitous that Arsenio Balisacan, one of the authors of this chapter, was able to champion competition policy (“leveling the playing field”) as a key priority under the Marcos Administration’s 8-Point Socioeconomic Agenda, which frames the strategies outlined in the PDP 2023–2028. Arsenio Balisacan, is President Ferdinand R. Marcos, Jr.’s secretary (minister) for Socioeconomic Planning.

consider the country's level of economic development, economic structure, development goals, political dynamics, and culture. Moreover, developing countries should not implement competition policy in isolation but should endeavor to mainstream it in its development agenda.

In the case of the Philippines, competition policy has roots in the country's struggle for social and economic reforms aimed at achieving inclusive development. It has emerged as a tool to address market inefficiencies and inequities perpetuated by the mutually reinforcing effects of policy action, market power, and political influence and power. Its implementation has recognized that its effectiveness as a "countervailing force" to promote total welfare rests on how it is mainstreamed in the development agenda.

Viewing the challenges faced by developing countries from the prism of the Philippine experience, competition authorities may consider the following policy recommendations for the design and implementation of the three pillars of competition:

6.6.1 Merger Review

- To address resource limitations, rather than foregoing merger control, competition authorities in developing countries may focus on reviewing transactions that are most likely to raise competition concerns, such as horizontal mergers.
- In designing a merger control regime, competition authorities must craft a system that captures all the transactions that lead to significant market power or to a significant lessening of competition in a relevant competition market, whilst not overly burdening the agency or the parties to other transactions that have no competition concerns.
- Competition authorities have to commit to regularly reassessing if the merger policy functions well as economic conditions change over time.

6.6.2 Enforcement

- Consider prioritizing enforcement in sectors involving goods and services essential to poverty reduction, generation of new livelihood and employment opportunities, and spillover effects on other sectors in the economy.
- Prioritization of competition interventions depends on the country's development stage and economic situation, legal framework, and the institutional framework of the enforcing agency. Competition agencies in developing countries should

avoid merely copying what has been or is being done by other jurisdictions, particularly advanced and large economies, in designing their prioritization strategy.

- To achieve the intended prioritization results, competition agencies must carefully practice and periodically evaluate its application.
- Competition authorities must assess if local conditions and institutional realities support the use of leniency programs as a primary detection tool.

6.6.3 Advocacy

- Competition authorities should focus advocacy efforts on what they identify as the key challenges of developing countries in competition policy enforcement. Competition authorities should also periodically collect and assess data on where anticompetitive practices are pervasive.
- Mainstreaming competition policy in the country's development agenda is necessary to ensure that the objectives of protecting consumer welfare and promoting efficiency remain aligned with objectives to raise productivity, promote equality of opportunities, make economic growth more inclusive, and reduce poverty in all its dimensions. In other words, rather than exist in isolation, competition policy must be harmonized with other policy instruments and tools in the country's development strategy.
- Advocacy efforts should also target consumers. Consumers in developing countries are disorganized in comparison to big businesses in a highly concentrated economic landscape, and it is difficult to translate their potential power into actual political effectiveness. Their interests are diffused, but there are scenarios where it would be relatively easier to get them on the side of competition policy. For example, cases affecting food and digital technology generate high interest among consumers.

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7

The Impact of Competition on Poverty and Inequality: The Case of the Philippines Using a Microsimulation Method

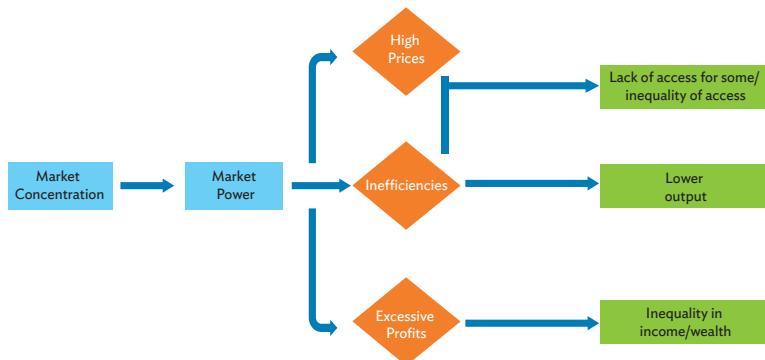
Karl Robert Jandoc, Geoffrey Ducanes, and Irene Jo Arzadon

7.1 Introduction

Developing countries tend to have many concentrated markets due to factors including the regulatory environment, difficulty of doing business, and others. These concentrated markets can impact poor people disproportionately because of constraints on product substitution and of restricted access to alternative markets. This will then lead to increased inequality between poor people and rich people.

However, studies to quantify this impact—that is, to determine to what extent market concentration affects distribution—are severely lacking mainly due to intensive data requirements that include information on prices, products, and markets. Moreover, the complication of any empirical exercise is compounded by the fact that the effect of market concentration on distribution is propagated through several channels (Figure 7.1). First, concentration can affect households through the “price channel,” that is, the exercise of market power enables firms to charge a markup that could restrict consumption, especially by poor people. Second, there may be inefficiencies such as those in the product markets. That is, substantial market power can constrain the development of alternative goods and services, for instance, when shopping platform algorithms restrict the choice of consumers or when a group of firms shuts out the development of cheaper product substitutes. There could also be inefficiencies in the labor market that could affect wages, which in turn, also has implications on income distribution.

Figure 7.1: Transmission Channel from Market Distribution to Welfare



Source: Authors.

In this chapter we use a simulation approach developed by Araar et al. (2018a) called the Welfare and Competition (WELCOM) tool to examine how changes in market concentration affect distribution. For instance, we can quantify how poverty and inequality changes by moving from an oligopolistic structure to perfect competition.

This microsimulation approach has certain advantages, i.e., that data requirements are minimal, and that only the following two things are needed: (i) a household survey such as the Philippines' Family Income and Expenditure Survey (FIES) that contains information of detailed expenditure lines, and (ii) information related to the market structure of the industry under study—such as demand elasticities and market shares—that can be obtained through the literature and other sources such as firm-level data.

Another advantage is that the tool is flexible inasmuch as it can accommodate various assumptions about the industry and also in various welfare measurements. It is also implementable in Stata.

There are also disadvantages. First, the tool ignores general equilibrium effects, and only concentrates on the impact on households. Moreover, it only examines the “price channel,” that is, it does not capture the effect through alternative channels such as the labor market and product markets. The tool also is not amenable to examine special market structures such as public monopolies.

This chapter examines the effect on welfare from improving competition. It examines the cases of two products—rice and telecommunications—for which expenditure patterns are different for poor people versus rich people. This has implications on the distributional effects of opening up competition in these sectors. The next subsection discusses the literature on competition and welfare and briefly describes the rice and telecommunications industries. Section 7.2 discusses our methodology and data sources. Section 7.3 presents and discusses the results. Section 7.4 concludes.

7.1.2 Literature

In line with the increased interest on inequality issues in recent years, there has been a growing literature, focused mainly on developed countries, estimating the contribution of market power to economic inequality, although the link between the two has long been recognized (e.g., Comanor and Smiley 1975).

The literature has focused on the net effect of two channels through which market power impacts income distribution: higher prices for consumers, and higher than competitive rents for business owners (Ennis, Gonzaga, and Pike 2019; Gans et al. 2019; Mayhew and Wills 2019). Richer households, although they pay more for goods, benefit disproportionately from increased business profits, as they are likely to have a higher share in the ownership of the businesses. Poor households, on the other hand, bear the higher prices but do not share in the increased profits, as they are less likely to have ownership share in the businesses.

Using data from the United States for 2016, Gans et al. (2019) estimated that removing market power would reduce overall inequality by reducing the income share of the top income quintile of households by 3 percentage points (from 64% to 61%), while increasing the share of the bottom three income quintiles by 2 percentage points (from 19% to 21%). This is mainly because the top quintile had an 89% share in corporate equity in 2016, whereas the bottom three quintiles only had a combined 5% share. They note, however, that inequality in the US has risen considerably in the past 3 decades, and would still be high even in the absence of market power.

Ennis, Gonzaga, and Pike (2019), using data for eight Organisation for Economic Co-operation and Development (OECD) countries (Canada, France, Germany, Japan, the Republic of Korea, Spain, the United Kingdom, and the United States), built a model to simulate the impact of removing market power. They estimated that removing market power would reduce the wealth of the richest 10% by 12% to 21%, for

an average country in their sample, while increasing the income of the poorest quintile by at least 11%. Based on their analysis, they said that the household groups that appear to be most harmed by market power are those in the second and third quintiles.

Decker et al. (2022) took a slightly different tack, measuring instead the impact of the enforcement of competition law on household inequality in the United Kingdom. Operationally, this involved the estimation of household savings due to price reductions caused by competition law enforcement. They found that over the 15-year period 2005 to 2020, average savings was 2.5% of the annual budget for the lowest-income households, 2.1% for the average household, and 1.8% for the highest-income household. They note, however, that in some years the impact of competition law enforcement was greater in the highest-income households, and depended on factors such as the enforcement tool used, the enforcement agency, sector targeted, and the number of enforcement actions taken.

The Philippine Rice Industry

Rice is one of the most essential commodities of Filipinos. About 93.4% of households reported its consumption (PSA 2017), and *palay* (rice that has not been husked) production covers 35% of the total area harvested (PSA 2017; Briones 2019). Generally, the rice market involves small-scale farmers who sell their produce directly to local traders or intermediaries, who then sell to wholesalers to connect with the retail market. Some areas have cooperatives to manage the system. In recent years, large-scale rice traders and processors entered the market to manage the supply domestically and internationally.

However, rice farmers face challenges in several aspects. In 2016, 69% of farming households were above the poverty threshold, and the average age of farmers was 56 years old (PhilRice 2023). Farmers also face high input costs (i.e., seeds, fertilizers, pesticides, irrigation, and machinery), land rent (43% of farmers do not own the land), climate change, and market forces (Manila Standard 2022). Rice importation has also increased since 2019 as a consequence of the Rice Tariffication Law (RA 11203) and with rice from Thailand and Viet Nam being cheaper compared to the local product.

In terms of market competition, the Philippine Competition Commission (PCC) has recently raised concerns about the existence of rice cartels among mill operators and wholesalers, as this results in anticompetitive outcomes such as supply tightness and price fixing (Briones 2019). There are also high barriers to entry in *palay* and rice trading, which result in market concentration increasing over time. The gross marketing margin is also higher in the Philippines compared to

Thailand, Indonesia, and Viet Nam. This results in excess profit affecting the final prices in the retail market.

Government intervention exists to address these challenges, with agencies implementing regulations for the sufficiency of rice supply, price stability, and the provision of financial and technical assistance. The Department of Agriculture oversees the development and regulation of the rice industry and implements policies and programs to improve rice productivity, quality, and sustainability. For example, the department provides fertilizer and seed subsidies, machinery, and insurance for farmers during dry and wet seasons. The department also manages the Rice Competitiveness Enhancement Fund, which is funded from tariff collections and is dedicated to programs enhancing the yield and production of farmers. The National Food Authority is the agency responsible for maintaining sufficient rice buffer stocks to be sourced only from local farmers. The Philippine Rice Research Institute and Bureau of Plant Industry provide technical assistance to help develop high-yielding and cost-reducing technologies for farmers. Financing support is also provided through the Agricultural Credit Policy Council, and the Land Bank of the Philippines. Since its inception, the PCC also probes the rice market system to ensure fairness in competition among suppliers.

The national government puts rice farmers and the rice industry as a priority: the Philippine Development Plan (PDP) 2023–2028 includes the sector's increased mechanization and infrastructure building as part of the national agenda. However, challenges persist and government agencies continue to find ways to mitigate the issues.

The Philippine Telecommunications Sector

Filipinos are heavy users of telecommunications products as they serve as a means to connect with families and friends, office colleagues, and commercial services. Every country needs an efficient telecommunications infrastructure for national security and emergency and/or disaster response. The types of services have evolved through the years—from fixed-line services to broadband (wired and wireless), mobile, and digital services. The need to connect grew even more during the novel coronavirus disease (COVID-19) pandemic, where offices were forced to have work-from-home arrangements and school classes were conducted remotely. Retail stores participated in e-commerce, and the government aimed for the digitalization of services such as the application for business permits and other documents. These digital platforms will be sustainable with a stable network operation of telecommunications companies.

The first firm to enter the telecommunications sector was the Philippine Long Distance Telephone Company (PLDT) in 1928, and it monopolized the market for decades. The market was liberalized in 1992 upon the enactment of the Public Telecommunications Policy Act of the Philippines (RA 7925). From then, a number of companies entered the market, such as Smart Communications, Globe Telecom, Bayan Telecommunications, and Digitel Mobile Philippines.

However, the lack of economies of scale and market fragmentation (brought by the shift of preference toward mobile broadband and digital services) has led to consolidations and mergers since the early 2000s. Further, constraints due to regulations, infrastructure, capital costs, and strategic actions of incumbents led to barriers to entry (Lizares 2018). This resulted in a highly-concentrated market relative to neighboring countries. Eventually, PLDT and Globe Telecom were left to be the major players, making the market duopolistic. The lack of market competition could explain why firms tend to set higher prices and provide lower quality services.

Government agencies such as the National Telecommunications Commission, the Department of Information and Communications Technology, and the PCC have taken steps to address competition issues. In 2016, the government sought a “third telco” to attract entrants to the market and increase competition. This led to the entry of DITO Telecommunity in 2021. The government also amended the Public Service Act in 2022, which changed the maximum foreign ownership of telecommunications firms from 40% to 100%. The aim is to attract foreign investments for the network infrastructure costs of potential entrants. In 2020, the Department of Information and Communications Technology provided guidelines on the Shared Passive Telecommunications Tower Infrastructure or the Common Tower Policy. This aims to increase the number of cell towers by allowing multiple companies to share the same infrastructure.

7.2 Methodology and Data

7.2.1 Theoretical Framework

There are three main models that can be assumed as alternative market conditions to be used for the simulations and to evaluate the effects of competition on welfare. These market models are (i) a monopoly, (ii) an oligopoly, and (iii) a partial collusive oligopoly.

In a monopoly, the firm's problem involves a decision on the level of output $q_M \geq 0$ considering the inverse demand function $p(q)$ and its cost function $c(q)$. That is,

$$\text{Max}_{q \geq 0} p(q) \cdot q - c(q) \quad (1)$$

From equation (1), the monopoly price $p_M \equiv p(q_M)$ is derived as

$$p_M = \frac{\eta}{1+\eta} \cdot c'(q) \quad (2)$$

Where η denotes the own-price demand elasticity faced by the monopolist.¹ The percentage difference, therefore, of a movement from a competitive market to a monopolistic structure is given by

$$\Delta P_M = -\frac{1}{1+\eta} \quad (3)$$

The WELCOM simulation approach can also accommodate an oligopolistic market structure. In particular, the simulation admits a Cournot oligopoly setting where there are a small number of firms simultaneously deciding the amount of output they will supply given the market clearing price (which, in turn, depends on the aggregate output of the firms).² Hence, an oligopoly member firm i faces the following profit maximization problem:

$$\text{Max}_{q_i} \Pi^i(Q) = q_i \cdot p(Q) - c_i(q_i) \quad (4)$$

Where q_i is firm i 's output, $c_i(q_i)$ is the firm-specific cost function, $p(Q)$ is the inverse demand function with aggregate output $Q = \sum_i q_i$ as the argument. Solving equation (4) for the equilibrium outputs yields a condition for the price change equation analogous to equation (3):

$$\Delta P_O = -\frac{1}{1+\eta \cdot N} \quad (5)$$

The last market structure that can be assumed in the simulation exercise is termed a partial collusive oligopolistic (PCO) structure. The difference between PCO and the traditional oligopolistic structure is

¹ To simplify the derivations of these equations, the model assumes a linear demand function and unit marginal cost. The full derivation is shown in Araar et al. (2018b).

² Cournot's model is an oligopoly framework in which companies producing identical products compete based on output quantities. It is a static, single-period model that illustrates the behavior of firms in an oligopoly market.

that in a PCO there are a few dominant firms with significant market shares coexisting with many small firms with fringe market shares. The dominant firms set the price (which the smaller firms take), which will maximize profits based on a residual demand curve, the leftover demand that the smaller fringe firms are unable to meet at any given price. Let the subscript D indicate the dominant firms and F the fringes. The profit, Π_D , of the dominant group is given by

$$\Pi_D = p(Q) \cdot Q_D - c(Q_D) \quad (6)$$

where Q_D is the output of the dominant group and $Q = \sum_{i \in D} Q_i + \sum_{j \in F} Q_j$ is the aggregate output. Further solving equation (6) yields the expression for the price increase moving from competitive market to PCO as:

$$\Delta P_{PCO} = -\frac{\phi_D}{\eta + \phi_D} \quad (7)$$

where ϕ_D is the market share of the dominant group.

The price changes indicated in equations (3), (5), and (7) will impact household welfare and to assess this impact requires a money-metric welfare measure. Let $V(p, m)$ be the indirect utility function which is a function of the price vector p and income m . We can think of an *equivalent income* as the income at which one can keep the level of utility unchanged after a price change, that is

$$V(p^r, m_e^t) = V(p^t, m^0) \quad (8)$$

where p^r and p^t are the price vectors in period r and t while m_e^t is the equivalent income which can also be expressed as the function:

$$m_e^t = f(p^r, p^t, m^0) \quad (9)$$

The equivalent variation is thus, with reference period either initial $r = 0$ or final $r = 1$:

$$EV = f(p^0, p^1, m^0) - f(p^0, p^0, m^0) \quad (10)$$

In other words, the equivalent variation (EV) is the change in income, at current prices, that would have the same effect on utility as would the change in prices, with income unchanged. The EV is the money-metric measure of the exercise we use in evaluating welfare changes.

7.2.2 The WELCOM Simulation Tool

The WELCOM simulation tool was developed to estimate how market competition reforms affect distribution (i.e., poverty and inequality). The tool is designed to be parsimonious—the main data requirements involve a representative household survey and assumptions about market shares and price elasticities of demand. From the household survey, the following information is obtained: (i) per capita welfare measure (either per capita income or expenditure), (ii) expenditure shares of the product or sector under examination (e.g., expenditures on rice and telecommunication services in this study), and (iii) estimates of the poverty line. There are also ancillary data the simulation needs, such as demand elasticities and market shares. The elasticities can be sourced from the literature or estimated by the researcher while market shares can be obtained via firm-level surveys or censuses or through the literature.

The WELCOM tool requires the user to identify the market structure of the industry to be examined. The tool admits three alternative structures, detailed in Section 7.2.1: (i) monopoly, (ii) oligopoly, and (iii) a partial collusive oligopoly (PCO). To calculate the price changes for the movements in market structure (e.g., moving from an oligopoly to a competitive market), the following data are needed to compute equations (3), (5), and (7): (i) if a monopoly is assumed, the only parameter required to be supplied by the user is the price elasticity of demand; (ii) if instead an oligopolistic market structure is assumed, then the user needs to input the number of firms and the demand price elasticity; and (iii) finally, under a PCO assumption, the simulation tool requires the market share of the dominant firms as well as the demand price elasticity.

The EV in equation (10) is computed by assuming a Cobb-Douglas utility function with $\alpha_{k,h}$ denoting the expenditure share of household h on product k . Following King (1983), and assuming initial prices are normalized in the initial period, the change in household welfare as measured by the equivalent variation is computed as:

$$\Delta m_h^{EV} = m_h \cdot \left[\frac{1}{(1+\Delta P_j)^{\alpha_{k,h}}} - 1 \right] \quad (11)$$

Where ΔP_j for $j \in \{M, O, PCO\}$ is the price change of the product as articulated in equations (3), (5), or (7) which depends on the assumed market structure.

7.2.3 Data Sources

We use the 2018 round of the Philippines' FIES to obtain household income and expenditures as well as the poverty lines needed to estimate changes in household welfare. The FIES is a nationwide survey of households that gathers detailed information on family income and expenditures every 3 years. The Philippine Statistics Authority, which undertakes the survey, utilizes a stratified random sampling technique with provinces and highly urbanized cities as sampling domain. The sample size of the 2018 FIES covered nearly 150,000 households. In the FIES, the expenditure items for rice include the categories (i) well-milled, premium, fragrant, polished, or glazed rice; (ii) regular milled and commercial rice; (iii) National Food Authority rice; and (iv) other varieties of rice not elsewhere classified. Table 7.1 shows that on average households devote 10.79% of their total spending to rice. The poorest deciles allocate more of their spending on rice compared to the richest deciles—for instance, the lowest decile (poorest tenth of households) allocate 19.99% of their spending for rice compared to only 4.02% for the top decile (richest tenth of households). The expenditure item we used for this study is the total spending on rice, regardless of variety.

**Table 7.1: Share of Rice to Total Spending,
by Per Capita Income Deciles
(%)**

Decile	Total Rice	Well-milled	Regular	NFA Rice	Other Rice
1	19.99	2.85	15.36	1.38	0.40
2	17.32	2.83	13.28	0.94	0.27
3	15.68	2.94	11.75	0.73	0.26
4	13.73	2.82	10.16	0.55	0.20
5	12.19	2.91	8.71	0.42	0.15
6	10.72	2.93	7.37	0.30	0.11
7	9.35	3.00	6.00	0.23	0.10
8	7.85	2.83	4.77	0.16	0.10
9	6.30	2.66	3.49	0.08	0.07
10	4.02	2.00	1.94	0.03	0.05
All Households	10.79	2.74	7.49	0.41	0.15

NFA = National Food Authority.

Source: 2018 Family Income and Expenditure Survey (FIES).

The expenditure items for telecommunication services in the FIES are (i) installation and subscription cost of personal telephone (landline), (ii) internet connection services, (iii) subscription of postpaid cellular phone, (iv) payment for prepaid communication,³ and (v) other telephone and telefax services not elsewhere classified. Table 7.2 shows that, on average, households devote 1.66% of their total spending to telecommunications services. However, in contrast to the case of rice, the richest deciles allocate more of their spending on telecommunications compared to poor people. Whereas the poorest decile's share of total spending is only 0.67%, the richest decile allocates 2.98% of their spending for telecommunications services. The expenditure item we used for this study is the total spending on phone and/or telefax services.

Table 7.2: Share of Telecommunications Services to Total Spending, by Per Capita Income Deciles (%)

Decile	Total Phone/ telefax Service	Landline Installation	Internet Connection	Postpaid Cellular	Prepaid Communication	Other Phone/ telefax Services
1	0.67	0.00	0.00	0.00	0.66	0.01
2	0.80	0.00	0.00	0.00	0.79	0.01
3	0.92	0.00	0.02	0.00	0.89	0.01
4	1.09	0.01	0.05	0.00	1.02	0.01
5	1.25	0.01	0.07	0.00	1.15	0.01
6	1.45	0.01	0.14	0.01	1.28	0.01
7	1.68	0.03	0.24	0.01	1.39	0.01
8	2.00	0.05	0.39	0.03	1.52	0.01
9	2.39	0.09	0.58	0.07	1.62	0.02
10	2.98	0.18	0.93	0.26	1.57	0.03
All Households	1.66	0.05	0.30	0.05	1.25	0.01

Source: 2018 Family Income and Expenditure Survey (FIES).

³ Prepaid communication is broken down into (i) electronic load, (ii) prepaid cell card, (iii) prepaid telephone card, (iv) prepaid internet card, and (v) prepaid internet broadband.

Other FIES data needed in our simulation include per capita income, family size, and official poverty lines generated by the Philippine Statistics Authority, as well as survey weights.

The elasticity parameters for our simulation are sourced from the literature. For rice, we used Lantican, Sombilla, and Quilloy (2013) which used the linear approximate almost ideal demand system to estimate elasticities.⁴ For telecommunications services, we used the reported price elasticity of Mahinchai (2012) where elasticities were obtained using a directional method using ordinary least squares (OLS) to estimate demand and supply and a two-step method using a probit maximum likelihood estimation in the first stage and OLS in the second stage to estimate the demand and supply equations. The elasticity used in this chapter is the average of the computed elasticities from both models.⁵

7.3 Results

7.3.1 Distributional Impacts of Market Concentration in the Philippine Rice Sector

For our simulation exercise, we assume that the market for rice is organized under a PCO structure. While competition issues are diffused through the value chain in rice—for instance, the importation, milling, wholesaling segments (Briones 2019)—this chapter assumes that the market share of the oligopoly group is $\phi_b = 0.30$.⁶ The price elasticity of demand for rice is $\eta = -0.5$, obtained from Lantican et al. (2013).

Table 7.3 shows that prices in the rice PCO market would be more than 2.5 times as high relative to the simulated perfect competition counterfactual. Note that this figure is an upper bound on the price level compared to a scenario where both market power and inefficiencies are absent. For instance, Jandoc and Roumasset (2018) calculated that the “implicit tariff”—which is the markup of domestic wholesale price

⁴ An alternative source of elasticity comes from the World Bank (2007), where the computed elasticity is -0.57 (compared to -0.5 used in this chapter). The results from this elasticity value are not reported in this chapter, but can be made available if requested from the authors.

⁵ World Bank (2005) assumes that the price elasticity for telecommunication services ranges from -0.5 to -0.6 .

⁶ We also consider other market shares corresponding to a “low” scenario where the oligopoly share is 15% and a “high” scenario where the oligopoly share is 45%. The results are not reported in this chapter but can be made available on request.

to free trade price—is at 41% while the “nominal protection rate”—which is the percentage markup of the efficient wholesale price over the free trade price of rice—is at 10%. There are also other sources of inefficiencies or competition issues that could generate excess profits in the rice sector.⁷

The steps indicated in Table 7.3 show scenarios of a gradual decrease in the market share of the dominant group. Note that the simulation is agnostic on the source of this market share decrease—it can come from reforms in the rice sector, for instance, loosening of land ownership rights which makes consolidation (and therefore investments) possible. It can also come from technological advances, infrastructure spending, and other factors that increase productivity or encourage entry into different segments of the value chain. The steps, therefore, can be interpreted as what would happen to market share from incremental reforms that potentially lead to a theoretically long-run perfectly competitive market. Here, we see that as the market share of the oligopoly group decreases by half (from 30% to 15%), the price decreases to only 85% higher than the the perfect competition counterfactual. Figure 7.2 shows the complete evolution of prices of the decrease in market shares of the collusive oligopoly group.

Table 7.3: Estimated Price Change and Related Parameters

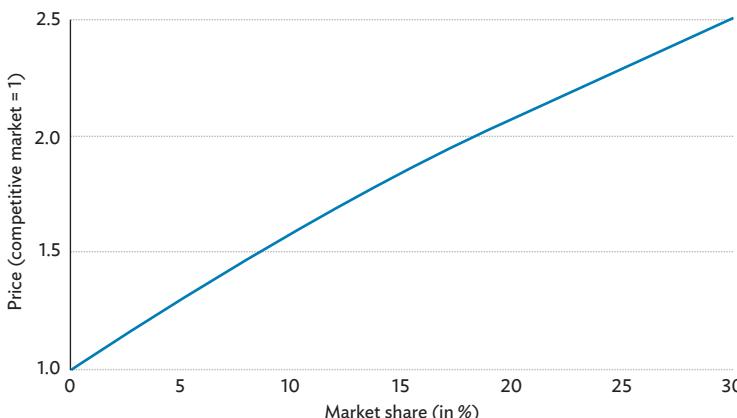
PCO Market	Step 1	Step 2	Step 3	Competitive Market
$\phi_D = 0.30$	$\phi_D = 0.15$	$\phi_D = 0.10$	$\phi_D = 0.075$	$\phi_D = 0$
$\eta = -0.5$	$\eta = -0.33$	$\eta = -0.27$	$\eta = -0.24$	$\eta = -0.15$
$p^1 = 2.50$	$p^1 = 1.85$	$p^1 = 1.59$	$p^1 = 1.45$	$p^0 = 1.00$

PCO = partial collusive oligopoly.

Source: Authors' calculations based on WELCOM simulation tool.

⁷ Dawe et al. (2008) and Bordey et al. (2016) conclude that the structure of the marketing sector is not unduly concentrated. This implies that any excess profits have resulted from collusion in the industry, either within the private sector and/or with government agents.

Figure 7.2: Market Share of Dominant Group and Rice Prices



Source: Authors' calculations based on WELCOM simulation tool.

Table 7.4 shows the decile groups' mean per capita income along with the estimated impact on expenditures on rice by reducing concentration in the rice market. The second column shows the mean per capita income of each decile. The third column denotes the increase in spending on rice in per capita terms in a counterfactual perfectly competitive rice market. The fourth column is the ratio of the third and second columns in percentage terms. Since the expenditure of rice constitutes a higher proportion of total spending on lower deciles, the relative impact is highest in the poorest segment of the population. The table shows that when moving from a concentrated market to perfect competition, the increase in household spending on rice will be equivalent to 15.4%, 12.4%, and 10.3% of per capita income for the first, second, and third deciles, respectively. On the other hand, the impact would only be 4.1%, 3.1%, and 1.5% of per capita income for the richest eighth, ninth, and tenth deciles, respectively.

Table 7.4: Expenditures on Rice and Potential Distributive Impact of Greater Competition

Decile	Mean Per Capita Income	Absolute Impact	Relative Impact
1	18,879.5	2,910.3	15.4
2	27,433.4	3,399.6	12.4
3	34,388.6	3,537.5	10.3
4	41,868.0	3,612.5	8.6
5	50,426.3	3,671.2	7.3
6	60,934.6	3,743.5	6.1
7	74,772.9	3,789.6	5.1
8	95,301.5	3,878.9	4.1
9	130,693.8	3,992.7	3.1
10	286,065.0	4,179.0	1.5
All Households	82,078.2	3,559.5	4.3

Note: Authors' estimates using 2018 Family Income and Expenditure Survey and the WELCOM simulation tool. Absolute impact is the impact on expenditures moving from a concentrated to a competitive market. Relative impact is the ratio of absolute impact over mean per capita income (in percent).

This increase in relative purchasing power of the lower deciles will have a salutary impact on poverty and inequality. Table 7.5 shows that moving from a concentrated to a more competitive rice market (with the corresponding price decrease derived from this change) reduces the poverty incidence by 4.85 percentage points and the Gini index by 1.96 points. The 4.85 percentage-point decrease in the poverty headcount translates into around 5.13 million fewer poor people in 2018. While this figure represents an upper bound on possible poverty reduction, Figure 7.3 Panel (a) shows that halving the market share of the collusive group from 30% to 15% will result in about a 2.7 percentage point decrease in poverty incidence, or about 2.9 million people lifted out of poverty. The same drop in market share will also decrease the Gini index by about 1 point (Figure 7.3 Panel [b]), which emphasizes that there will also be significant distributional gains of improving efficiency through competition in the short to medium run.

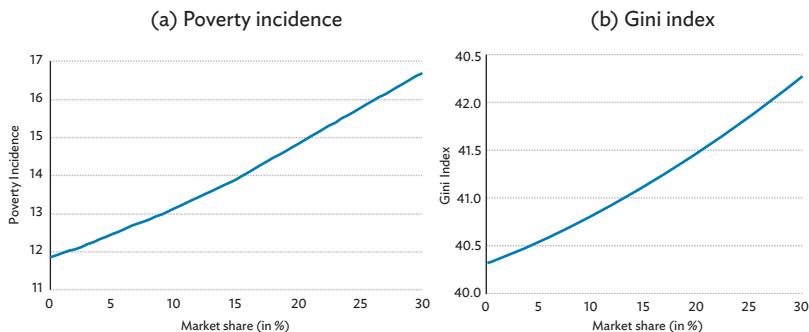
Table 7.5: Estimated Effects on Poverty and Inequality of Changes in Competition in Rice Sector

	Poverty Indicators			Inequality Indicators		
	Headcount	Gap	Severity	Gini	A(0.5)	GE(0)
Baseline	16.71	3.86	1.33	42.27	0.15	0.30
Moving to competition	11.86	2.38	0.74	40.31	0.14	0.27
Difference	-4.85	-1.48	-0.59	-1.96	-0.01	-0.03

Note: The results for poverty and inequality are calibrated to reflect official published statistics.

Source: Authors' calculations based on the WELCOM simulation tool.

Figure 7.3: Effect on Poverty and Inequality of Moving from a Concentrated to a Competitive Rice Market



Note: The results for poverty and inequality are calibrated to reflect official published statistics.

Source: Authors' calculations based on WELCOM simulation tool.

7.3.2 Distributional Impacts of Market Concentration in the Philippine Telecommunications Sector

In contrast to the rice market where we assumed a partial collusive oligopoly structure, in this exercise we assume that the telecommunications market is organized under a duopolistic Cournot structure. The price elasticity of demand is assumed to be $\eta = -0.54$ sourced from Mahinchai (2012). Table 7.6 shows that the duopolistic structure results in a 48% higher price compared to

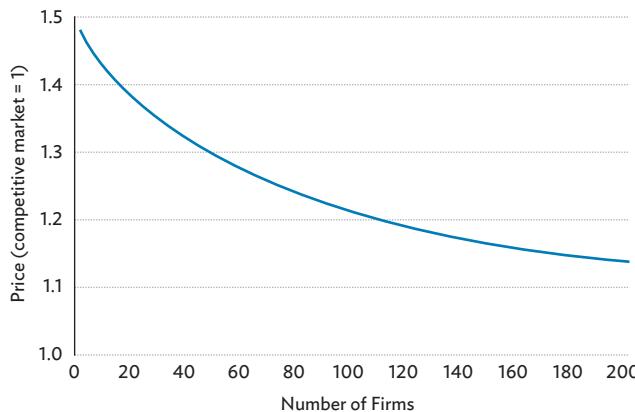
the perfect competition scenario, where we have a sufficiently large number of telecommunication firms. In contrast to Table 7.3 earlier, the incremental steps in Table 7.6 indicate an increase in the number of firms up to the hypothetical competitive structure. Adding a third firm to the duopoly decreases prices but not by very much (around a percentage point compared to the duopoly). In fact, more entrants will have a diminishing marginal effect on the price, as seen in Figure 7.4—that is, the decrease in prices will be slower with each additional entrant.

Table 7.6: Estimated Price Change and Related Parameters (Telecommunications)

Oligopoly Market	Step 1	Step 2	Step 3	Competitive Market
Firms = 2	Firms = 3	Firms = 4	Firms = 6	Firms = ∞
$\eta = -0.54$	$\eta = -0.37$	$\eta = -0.28$	$\eta = -0.20$	$\eta = -0.03$
$p^1 = 1.48$	$p^1 = 1.47$	$p^1 = 1.46$	$p^1 = 1.45$	$p^0 = 1.00$

Source: Authors' calculations based on WELCOM simulation tool.

Figure 7.4: Number of Firms and Telecommunication Prices



Source: Authors' calculations based on the WELCOM simulation tool.

In contrast to rice, telecommunication services are consumed by the richer segments of the population, and hence constitute a higher proportion of total spending compared to poor people. Table 7.7 shows that, indeed, the relative impact is highest among the three richest deciles. Moving from a duopoly to perfect competition would increase household spending on telecommunication services by an equivalent of 0.3%, 0.3%, and 0.4% of per capita income for the first, second, and third deciles, respectively 0.8%, 0.8%, and 0.7% of per capita income for the richest eighth, ninth, and tenth deciles, respectively.

**Table 7.7: Expenditures on Telecommunications
and Potential Distributive Impact of Greater Competition**

Decile	Mean Per Capita Income	Absolute Impact	Relative Impact
1	18,879.5	52.0	0.3
2	27,433.4	89.3	0.3
3	34,388.6	134.2	0.4
4	41,868.0	198.1	0.5
5	50,426.3	255.4	0.5
6	60,934.6	366.7	0.6
7	74,772.9	517.9	0.7
8	95,301.5	714.9	0.8
9	130,693.8	1,076.0	0.8
10	286,065.0	2,004.1	0.7
All Households	82,078.2	390.2	0.5

Note: Authors' estimates using 2018 Family Income and Expenditure Survey and the WELCOM simulation tool. Absolute impact is the impact on expenditures moving from a concentrated to a competitive market. Relative impact is the ratio of absolute impact over mean per capita income (in percent).

The upshot is that the decrease in poverty will be relatively mild, compared to a commodity like rice where poor people consume more in relation to their total spending. Moreover, it is plausible that since the rich benefit more in relative terms, it can be the case that inequality may increase. Indeed, Table 7.8 shows that the price decrease obtained by moving from a duopoly to a more competitive telecommunications market reduces poverty incidence by 0.14 percentage points (around 146,000 less poor people in absolute terms) but increases the Gini index by 0.09 points. Figure 7.5 Panel (a) shows that the decrease in

poverty incidence will be slower than the one calculated for rice in Figure 7.3 Panel (a), and inequality, as measured by the Gini index, will be monotonically increasing (Figure 7.5 Panel [b]). However, this does not mean that the distributional impact obtained by improving competition in the telecommunications sector is limited. One must bear in mind that the distributional effect in the WELCOM model only reflects those obtained through the “price channel” or the poverty and inequality effect of reductions in the price of telecommunications services. It is plausible that the benefits of improved competition in the telecommunications sector will be felt through other channels, such as increased entrepreneurial activity, increased employment, or improved human capital.

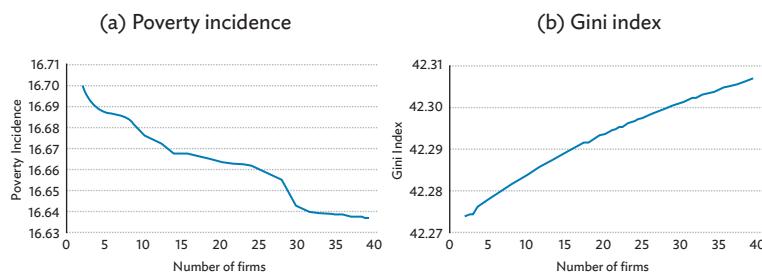
Table 7.8: Estimated Effects on Poverty and Inequality of Changes in Competition in Telecommunications Sector

	Poverty Indicators			Inequality Indicators		
	Headcount	Gap	Severity	Gini	A(0.5)	GE(0)
Baseline	16.71	3.86	1.33	42.27	0.15	0.30
Moving to competition	16.57	3.82	1.31	42.36	0.15	0.30
Difference	-0.14	-0.04	-0.01	0.09	0.00	0.00

Note: The results for poverty and inequality are calibrated to reflect official published statistics.

Source: Authors' calculations based on the WELCOM simulation tool.

Figure 7.5: Effect on Poverty and Inequality of Moving From a Concentrated to a Competitive Telecommunications Market



Note: The results for poverty and inequality are calibrated to reflect official published statistics.

Source: Authors' calculations based on the WELCOM simulation tool.

7.4 Conclusion

Competition authorities, especially in developing countries, are interested to know how market concentration can potentially affect poverty and inequality. The kinds of traditional empirical research currently at their disposal, however, are time intensive, human capital intensive, and data intensive. This chapter demonstrates how the WELCOM simulation tool can address these constraints and complement more detailed empirical studies in informing competition policy. The tool will prove to be useful for “just-in-time” studies needed to determine the impact of market power to distributional concerns. Moreover, the data requirements of the simulation tool is parsimonious: the researcher only really needs (i) household income and expenditure surveys, and (ii) parameters relating to price elasticity of demand and market structures. Information on (ii) can be sourced from existing literature or can be assumed to be in the range of plausible scenarios.

This chapter illustrates the application of the simulation tool to two sectors where spending patterns differ for different segments of the population. The first commodity, rice, is a staple where poor people devote a large portion of their budgets and the second commodity, telecommunications services, are mainly consumed by the richer population. The tool quantifies the change in purchasing power from the decrease in consumer prices brought about by moving from a concentrated market to a hypothetical perfect competition structure. For rice, since the commodity takes a larger share of total spending for poor people, the distributional impacts are substantial—an upper bound of a 4.85 percentage point drop in poverty headcount and a 1.96 percentage point drop in the Gini index. This suggests that improving competition in the rice sector may be an effective mechanism to address equity concerns without sacrificing efficiency (Kaplow and Shavell 2002). In other words, better competition policy may be superior to other redistribution policies (e.g., using tariffs for input subsidies or crop insurance) in terms of economic costs and its penalty on productivity.

In contrast, telecommunications services are mainly consumed by the rich and therefore the price decrease brought about by improvements in competition is found to have a modest impact on poverty reduction and has even marginally increased inequality. This result highlights the constraints of the WELCOM simulation tool. As articulated by Roumasset, Ravago, and Balisacan (Chapter 2 of this volume), the promotion of overall welfare should be the goal of competition policy and overall or total welfare takes into account interactions of many markets and channels. Since the tool only examines the effect on poverty and inequality propagated through change in prices, it is

silent on other factors or channels such as those that affect the labor or product markets. For instance, excessive market power may constrain the development of alternative goods and services, as is the case when shopping platform algorithms restrict the choice of consumers or when a group of firms shut out the development of cheaper product substitutes. Better competition policy could therefore facilitate the development of new and cheaper products as it limits anticompetitive practices. Hence, in the context of the telecommunications sector, competition may spur more technological (e.g., better internet speed) or marketing (e.g., value added services such as digital finance) changes that could benefit consumers—even poor people—in the long run.

The simulation tool is also silent on the labor market effect of improved competition. Better competition can affect employment and wages, which could also affect income distribution beyond the price channel. In the case of telecommunications, better service quality from increased competition can affect the entry of entrepreneurs, decrease costs of existing businesses, or even improve human capital through more efficient communication, as well as through faster acquisition and processing of information.

While these limitations are recognized, the simulation tool as used in this chapter serves as an invaluable model in determining *ex ante* distributional effects in a timely, convenient and in a less data-intensive manner, and it should be in any developing country competition authority's analytical arsenal.

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PART III

Emerging Issues and Challenges of Competition Policy in Asia

8

An Effective Regulatory Environment to Foster Domestic Market Competition in Asia

Roberto Martin Nolan Galang and Graciela Miralles Murciego

8.1 Key Elements of Effective Competition Policy Frameworks and the Asian Context

Promoting market competition generates cost reductions, drives innovation, and improves productivity growth (Acemoglu, Antràs, and Helpman 2007; Aghion and Griffith 2008). In contrast, weaker competition diminishes productivity level and growth by (i) reducing the incentives of firms to innovate and upgrade production (Aghion et al. 2005; Bloom, Draca, and Van Reenen 2011; Nickell 1996), (ii) causing resource misallocation across firms and sectors (Bartelsman and Dhraymes 1998; Olley and Pakes 1992), and (iii) limiting the entry of

* The chapter builds on extracts and inputs from key analytical pieces developed by the World Bank Group as part of technical assistance provided to the Philippine Competition Commission and the National Economic and Development Authority, including the 2018 report “Fostering Competition in the Philippines: The Challenge of Restrictive Regulations” (World Bank 2018a), the notes “Selecting Sectors for Pro-Competition Reform in the Philippines” (World Bank 2020), and “The Philippines: Embedding Competitive Neutrality Principles in State-Owned Enterprises” (World Bank 2019). The reports were developed on the basis of the methodologies of the World Bank Group Markets and Technology Global Unit, notably the Markets and Competition Policy Assessment Toolkit. Additional authors of these reports include Sara Nyman, Ryan Kuo, Seidu Dauda, Leandro Zipitria, Tilsa Ore Monago, under the guidance of Martha Martinez Licetti and the Philippine Country Management Unit.

The article was submitted on January 2023 and includes the data publicly available as of that date.

The chapter reflects the views of the authors and does not necessarily reflect the views of the World Bank Group.

more productive firms and the exit of unproductive ones (Eslava et al. 2013; Hopenhayn 1992; and Jovanovic 1982). The degree of competition in network and enabling sectors such as telecommunications, energy, transport, and financial services is critical for international competitiveness (Goodwin and Pierola 2015). If there is competition in these key markets, other sectors will benefit from lower input costs and/or higher input quality because these services are generally procured locally. Instead, when market regulations are suboptimal, restrictions to competition end up hampering productivity growth. Although government interventions in markets are sometimes justified and indeed necessary, poor interventions that limit entry or reinforce dominance impose undue burdens for firms or facilitate collusion or result in discretionary decisions hindering market contestability.

In addition, promoting robust market competition also significantly benefits poor people. Lower prices, more choices, and better quality are key benefits associated with more competitive markets. This impact is amplified for low-income households as boosting competition can lower consumer prices in markets for key staple goods and basic services that are essential for poor people and raise returns to small producers (Begazo and Nyman 2016).

Governments can intervene in economies directly through state-owned enterprises (SOEs) or indirectly via regulations that dictate allowable market behavior. Governments generally invoke the control of strategic resources and the improvement of the distribution of wealth and power as justifications to directly participate in economic activities through SOEs. Employment and industrial policies may also be major drivers for developing a large presence of SOEs in the market. In times of crisis, state ownership is often used to rescue private businesses affected by systemic economic and financial problems. Such government bailouts for private firms in critical condition are carried out for a variety of reasons, including the protection of employment, industrial policy considerations, and other strategic and political motivations. Similarly, governments typically intervene indirectly via regulations in order to influence market outcomes towards policy objectives such as equity and safety and to address market failures.

Given its impact on development, governments should promote a broad approach to competition policy, including through national competition policies designed to mainstream competition principles in policy making across different levels of government (national and/or subnational) and sectors. International experience demonstrates that the introduction of a comprehensive national competition policy framework can yield substantial economic gains by promoting competition. Aligning the strategies of the competition agencies and sector regulators would reduce conflicts and ensure a stable environment for firms. Agency

involvement in formulating pro-competitive regulations can in turn have a substantial impact on competition and market efficiency, particularly with respect to regulated sectors, state involvement in commercial activities, and price controls. Removing barriers to competition has been shown to result in significant productivity improvements. In Australia, for instance, the implementation of the National Competition Policy increased gross domestic product by at least 2.5% in the 1990s (Productivity Commission 2005).

An effective competition policy framework is based on three complementary pillars: fostering pro-competition regulations and government interventions, measures to guarantee competitive neutrality in markets, and effective economy-wide enforcement of competition law. These pillars, summarized in Table 8.1, rely on an effective institutional set up that is able to foster and guarantee healthy market conduct. In this sense, competition policy goes far beyond the enforcement of antitrust law, and governments need to include the promotion of regulations to enable firm entry and rivalry, while removing distortions to the level playing field, especially to those granted to state-owned enterprises or other favored firms.

Table 8.1: Comprehensive Competition Policy Framework

Fostering Competition in Markets		
Pro-competition regulations and government interventions: opening markets and removing anticompetitive sectoral regulation	Competitive neutrality and non-distortive public aid support	Effective competition law and antitrust enforcement
Reform policies and regulations that strengthen dominance: restrictions to the number of firms, statutory monopolies, bans on private investment, lack of access regulation for essential facilities	Control state aid to avoid favoritism and minimize distortions on competition	Tackle cartel agreements that raise the costs of key inputs and final products and reduce access to a broader variety of products
Eliminate government interventions that are conducive to collusive outcomes or increase the costs of competing: controls on prices and other market variables that increase business risk	Ensure competitive neutrality including vis-a-vis SOEs	Prevent anticompetitive mergers
Reform government interventions that discriminate and harm competition on the merits: frameworks that distort the level playing field or grant high levels of discretion		Strengthen the general antitrust and institutional framework to combat anticompetitive conduct and abuse of dominance

SOE = state-owned enterprise.

Source: World Bank (2017). Adapted from Kitzmuller and Licetti (2012).

8.1.1 Pro-Competition Regulations

The first pillar of a successful competition policy is ensuring that government policies and regulations do not generate unnecessary barriers to entry or distort the playing field by favoring specific firms. Regulations are those rules, generally overseen by the government, that aim to influence the behavior of players within the business environment and, eventually, the economy. This definition includes regulations enacted by governments, standards set by sector regulators and limitations imposed by professional organizations.

Regulations that inhibit certain market behaviors can often be justified on social or economic grounds and are important to achieve relevant policy objectives. Such rules are usually driven by legitimate social and economic objectives. Government intervention may be justified by equity goals, such as poverty reduction, or by economic considerations, such as efficiency. The latter may be required when market forces alone cannot deliver the socially optimal outcome, for example in the case of market failures such as natural monopolies, or the presence of externalities.

However, there are many circumstances where policy interventions distort competition and, in turn, harm welfare. In some cases, existing regulations (or lack thereof) may be the result of historical processes which have not taken into account their distortive effects on markets or go beyond what is strictly necessary in terms of restrictiveness. In other circumstances, the main market participants may exercise their lobbying power to influence rule setters (a phenomenon that the literature calls “regulatory capture”). One of their goals may be to obtain rules that reduce the degree of competitive pressure they face.

Reducing the level of competition could have severe implications for the private sector, consumers, and the whole economy. It is thus fundamental for policymakers to ensure that the costs of regulatory interventions will not outweigh the benefits. Policymakers will maximize the positive impact of regulations by seeking alternative options that minimize distortions to market functioning while still achieving their ultimate policy objective.

The risk that regulation may hinder the development of well-functioning markets can be mitigated by considering competition principles when designing regulations and state interventions. One of the most important components of a successful competition policy is to ensure government policies and regulations do not unnecessarily restrict entry, facilitate collusion, increase the cost of competing or distort the level playing field by providing undue advantages to specific firms.

For instance, in the road transport sector, several Asian countries have enacted rules and regulations that impact competition. In 2017, Viet Nam increased entry requirements for trucking licenses to limit atomization, which also impacted entry of new firms (World Bank Group 2018). In Thailand, the Central Land Transport Control Board has the power to issue decisions on the maximum number of transport operators (OECD 2021) while Myanmar and Indonesia require freight forwarders to become members of trade associations to operate (OECD 2021). In the Philippines, multiple permits required to operate trucks imposed by several regulators (e.g., land transport regulators, port operators, economic zones, and local governments) can limit the ability of firms to compete nationally. While individual trucking rules may not be perceived as overly restrictive, the combination of multiple restrictions—including at the subnational level—may reinforce dominance on specific routes (World Bank Group 2018b). Many Association of Southeast Asian Nations (ASEAN) countries, including Indonesia, the Lao People's Democratic Republic (Lao PDR), the Philippines, and Viet Nam impose restrictions to foreign investors in freight forwarding and logistics (OECD 2021).

By embedding competition principles in policy making, potential distortions from regulations can be minimized. For example, licensing requirements may be implemented to protect consumers from poor quality services or unsafe products, but they may also inadvertently protect incumbents by making market entry overly difficult for newcomers. To guard against this, regulators should ensure that requirements do not unduly burden firms and restrict entry. To this end, the advocacy mandate of competition authorities plays a critical role, from reviewing regulation that may impact competition to analyzing more broadly competition conditions. The competition authorities can help to identify market restrictions and less distortive interventions.

8.1.2 Competitive Neutrality

The second pillar for an effective competition policy is the implementation of competitive neutrality principles. Competitive neutrality entails having all enterprises—public or private, domestic or foreign—face the same rules and ensure that the government's involvement in the marketplace through ownership of, or contact with, firms does not confer undue competitive advantages to any market participant (OECD 2015). It covers all forms of direct and indirect public government interventions in markets.¹

¹ Note by the European Union (EU 2015).

The implementation of a competitive neutrality framework should also include measures to limit distortions of state support measures or state aid. State support can take various forms, including tax exemptions, loan guarantees, provision of resources at below market prices, subsidies, and capital injections. If not properly designed, state aid may provide an undue advantage to specific firms and reinforce a dominant position, thus facilitating anticompetitive behaviors, or it may reduce a firm's incentive to make investments, thus generating market inefficiencies.

In this context, state-controlled enterprises often enjoy privileges and immunities that are not available to their private competitors. These privileges, which are not necessarily based on better performance, superior efficiency, better technology, or superior management skills, give SOEs significant advantages over their rivals. Privileges and immunities may distort competition in the market between state-owned and privately-owned rivals and even risk crowding out the private sector. Competitive neutrality aims at limiting these privileges and immunities with a view to maximizing consumer welfare and fostering growth and development.

While the degree of state involvement in markets is the prerogative of each country, reviewing the economic outcomes of state intervention is important to balance economic and noneconomic policy objectives and their effects on market functioning. SOE presence in the economy can deter competition in multiple ways: At a basic level, private firms are often prohibited outright from sectors with SOEs. Even where private participation is allowed, SOEs may foreclose competition due to state-linked advantages such as special regulatory treatment, preferential access to infrastructure or financing, subsidization, or noncommercial motives. Thus, in general, it is important to ensure that the participation of the government in the economy remains subsidiary to that of the private sector. In other words, the state should provide only those goods and services that the private sector cannot effectively provide itself. With respect to indirect regulatory interventions, the policy objectives for intervention should be balanced against such interventions' impact in terms of deterring entry, restricting the ability of firms to differentiate and compete, and restricting customer choice (Office of Fair Trading 2009).

We provide examples from the region to illustrate potential gaps regarding competitive neutrality. For instance, the widespread presence of public enterprises along multiple value chains in Viet Nam, paired with state support measures may stifle competition and distort the level playing field (World Bank 2018). In the Philippines, dual functions of the Philippine Port Authority as regulator and operator can result in

conflicts of interest. In Myanmar, governments benefit from an exemption from the Merchant Shipping Act, including the requirement to obtain an operating permit. Similarly, in the Lao PDR, SOEs in the freight transport sector, including road, waterway, and railway, are not required to obtain a business operator license that private operators must obtain in order to operate (OECD 2021).

Resolving competitive neutrality issues require understanding the principles to guide the practical implementation of a level playing field for public and private operators. These are divided into two conceptual blocks: firm-level principles—which are focused on the separation of commercial and noncommercial activities of SOEs—and principles embedded in cross-cutting regulatory frameworks and sectoral policies.

8.1.3 Competition Enforcement and Institutional Frameworks

The third pillar of an effective competition policy framework is a competition regulatory and institutional framework that eliminates and sanctions anticompetitive behavior, limits negative effects of mergers and acquisitions, and advocates for embedding competition principles in key markets.

Most economies in Asia and the Pacific have had competition regulatory frameworks in place for years. Since the mid-1990s, competition laws have been approved in Singapore (1994);² Thailand (1999);³ Indonesia (1999);⁴ Taipei, China (2002);⁵ Viet Nam (2004);⁶ the People's Republic of China (2008);⁷ Malaysia (2010);⁸ and the Philippines (2015).⁹ Australia and New Zealand passed their competition laws earlier, in 1974¹⁰ and 1986,¹¹ respectively. Table 8.2 shows the years when

² The Competition Act, 1994.

³ Trade Competition Act B.E 2542, 1999.

⁴ Law No.5 of 1999 on the Prohibition of Monopolistic Practices and Unfair Competition.

⁵ Fair Trade Law, 2002.

⁶ Competition Law, 2004.

⁷ The Anti-Monopoly Law of the PRC was approved in 2008 after 13 years of drafting and deliberation. See *Guidebook to Competition Law in Asia Pacific* (2013), p. 13.

⁸ Competition Act, 2010.

⁹ Philippine Competition Act, 2015.

¹⁰ Trade Practices Act, 1974.

¹¹ Commerce Act, 1986.

Table 8.2: Competition Laws and Competition Authorities in Selected Countries in Asia and the Pacific

	Year of Enactment of Current Competition Law	Year of Specific Act or Law for the Creation of the Authority	Year when the Authority Started Operations
Australia	1974	1974	1974
Cambodia	2021	2021	2022
China, People's Republic of	2007	2007	2008
India	2003	2003	2003
Indonesia	1999	1999	2000
Korea, Republic of	1980	1981	1981
Malaysia	2010	2010	2012
Myanmar	2015	2015	2017
Pakistan	2010	2007*	2007
Philippines	2015	2015	2016
Thailand	2017	1999	1999
Viet Nam	2019	2004	2006

Note: The current Competition Act of Pakistan was enacted after the Competition Commission of Pakistan started operations based on the original Competition Ordinance No. LII passed in 2007.

Source: World Bank (2018a).

competition regulatory and institutional frameworks were adopted for a selected set of countries in the region.

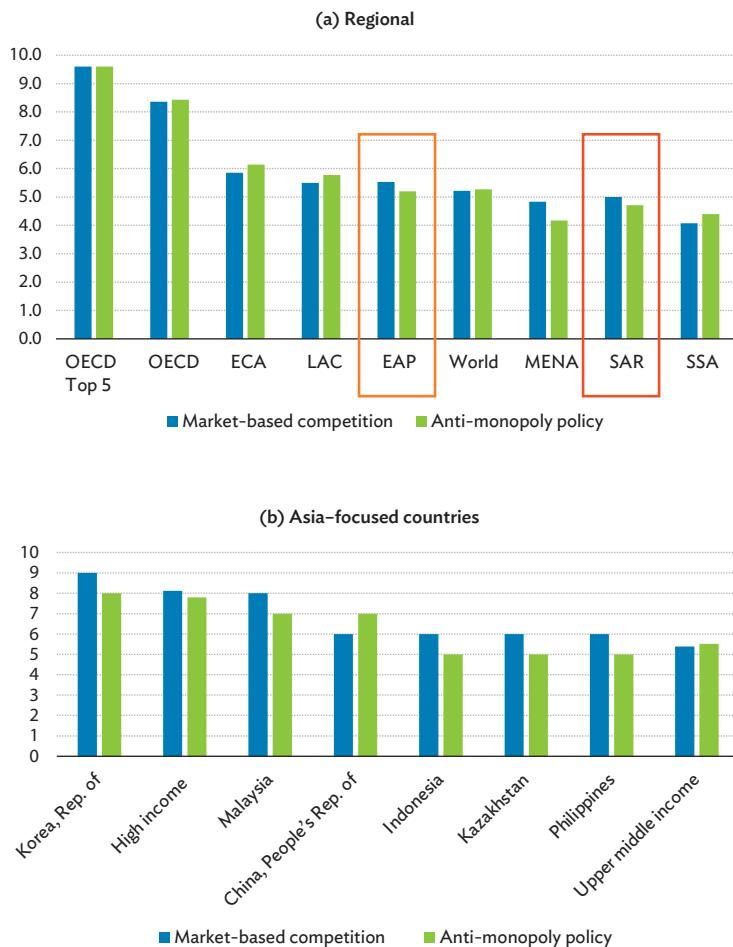
Effective implementation of competition law and policy depends on several elements beyond the law itself. First, it is important to have an adequate institutional structure and resources. Second, more specific rules and skills are needed to enforce the law and use its powers and mechanisms to investigate and prevent anticompetitive practices and mergers. Finally, to encourage competition across the economy, authorities should collaborate with other government bodies and inform government interventions through fact-based market studies and advisory opinions. These aspects are the focus of other chapters in this book.

8.1.4 Competition Indicators for Selected Asian Countries

Competition policies in Asia are perceived to be weaker than in other regions, notably Europe and Central Asia and Latin America and the Caribbean, although significant variations within regions persist. Across various regions of the world, the latest indicators from the Bertelsmann Stiftung's Transformation Index (BTI) suggest that the fundamentals of market-based competition—i.e., regulatory interventions that enable competition—are less developed in the East and South Asian regions (i.e., East Asia and Pacific [EAP] and South Asia Region [SAR]), compared to the Organisation for Economic Co-operation and Development (OECD) member states, although EAP performs better than SAR (Figure 8.1a). SAR ranks only second to the sub-Saharan Africa region with significant variations across the small sample of countries from the region selected based on the availability of additional indicators.¹² Within these countries, the Republic of Korea features the highest perception of competition, even better than the average high-income country, while the Philippines exhibits the lowest, although it performed better than the average upper middle-income country (Figure 8.1b). In turn data from the Economist Intelligence Unit show that investors' perception regarding the risks associated to lack of competition are mainly associated with vested interests and/or cronyism and unfair competitive practices followed by price controls and discrimination against foreign companies, although the latter two are associated by investors to a lesser extent (Figure 8.2).

¹² The focused countries in the Asia and Pacific region are Australia, the People's Republic of China, Indonesia, Japan, Kazakhstan, the Republic of Korea, Malaysia, New Zealand, and the Philippines. Australia, Japan, and New Zealand, however, do not have BTI data.

Figure 8.1: Perceived Market-Based Competition and Antitrust Policy across Regions and for Selected Asian Countries
 (higher values = higher competition and stronger policy in place)

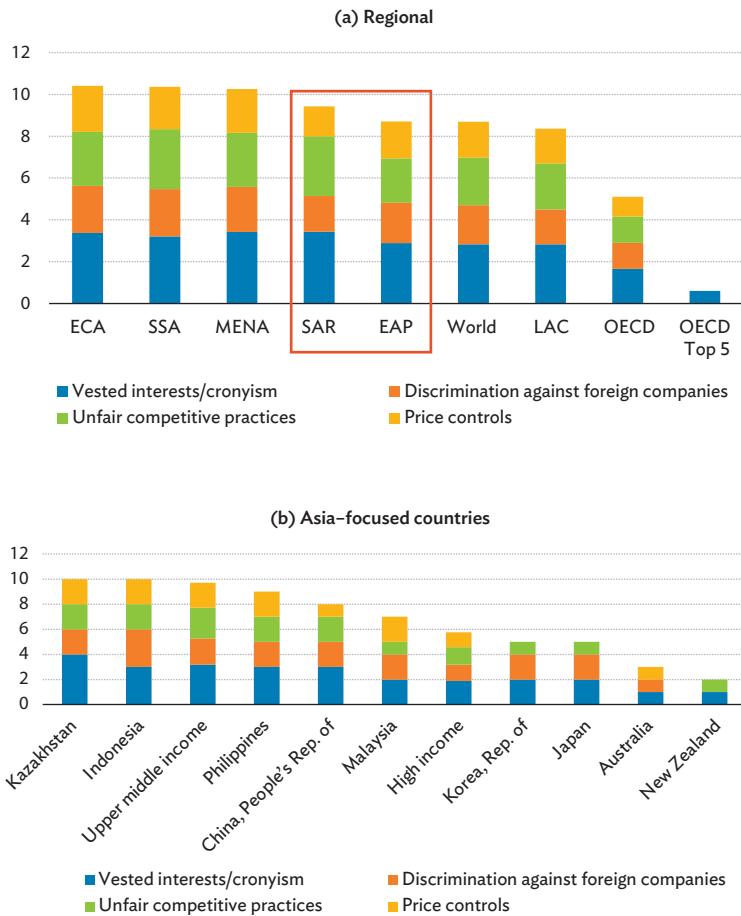


OECD = Organisation for Economic Co-operation and Development, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, EAP = East Asia and Pacific, MENA = Middle East and North Africa, SAR = South Asia Region, SSA = sub-Saharan Africa.

Note: The Bertelsmann Transformation Index (BTI) is a perception indicator based on in-depth assessments of countries and is managed by the Bertelsmann Stiftung. The responses reflect the situation in the country at the end of January 2021. The scores vary from 1 (worst) to 10 (best). Australia, Japan, and New Zealand do not have BTI data.

Source: World Bank staff elaborations based on Bertelsmann Transformation Index (BTI 2022).

Figure 8.2: Perceived Business Risks Related to Weak Competition Policies across Regions and for Selected Asian Countries (component score, 0–4, with 4 = worst)



OECD = Organisation for Economic Co-operation and Development, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, EAP = East Asia and Pacific, MENA = Middle East and North Africa, SAR = South Asia Region, SSA = Sub-Saharan Africa.

Note: The EIU Risk tracker is a perception indicator as reflected by the Economist Intelligence Unit. The graph shows an aggregation of four indicators each scored on a scale from 0 (very little risk) to 4 (very high risk).

Source: World Bank staff elaborations based on data from the Economist Intelligence Unit (EIU) Risk Tracker, September 2022.

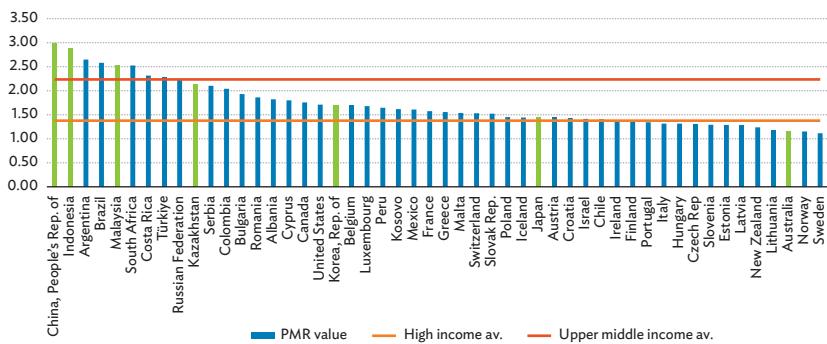
While these multi-country surveys provide useful information on the extent of market competition across countries, indicators based on the quality of regulations are key to better understand existing red flags and provide better guidance to government reformists.

To this end, in the late 1990s, the OECD developed Product Market Regulation (PMR) indicators to measure the degree to which regulations promote or inhibit competition in key sectors of the economy, notably network industries.¹³ These indicators, originally developed for OECD member states, have been applied to a number of less developed economies and emerging markets, in most cases jointly with the World Bank Group, to capture barriers to competition in two high-level policy areas: (i) distortions induced by state involvement in markets, and (ii) barriers to domestic and foreign entry. Each of these areas captures an aggregation of specific policy issues. The PMR indicators allow us to compare selected Asian countries for which the data is available with the other high and upper middle-income countries included in the PMR data set. The PMR databases cover 57 high and upper middle-income countries, eight of which are from the Asia and Pacific region—Australia, the PRC, Indonesia, Japan, Kazakhstan, Malaysia, New Zealand, and the Republic of Korea (Figure 8.4).

Despite the presence of some regional top performers such as Australia and New Zealand, PMR indicators confirm the existence of relatively restrictive regulatory frameworks for the countries in the sample. Countries like the PRC, Indonesia, and Malaysia are among those with higher levels of distortion induced by state participation in markets, not only due to the scope of public ownership but also due to the lack of mechanisms for the simplification and evaluation of regulations. In turn, the sub-indicator on barriers to domestic and foreign entry is mostly driven by barriers in network and service sectors, while most countries in the same remain relatively open to trade and investment.

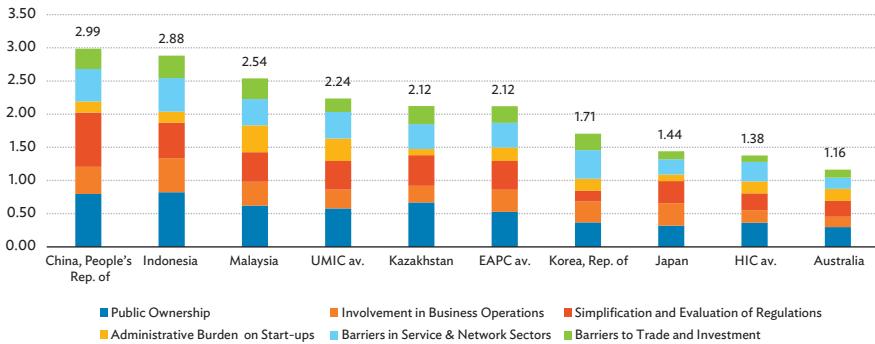
¹³ The methodology and key findings of the PMR for OECD countries are presented in Nicoletti et al. (1999), Conway et al. (2005), and Wolff et al. (2010). Areas addressed by the methodology shed light on economy-wide and key sectors regulatory restrictions on twelve topics: electricity; gas; telecom; post; transport; water; retail; professional services; other sectors; administrative requirements for business start-ups; treatment of foreign parties; others such as governance of public-controlled enterprises or antitrust exclusions and exemptions. In 2018 the PMR methodology was updated and is available at <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>. The new methodology includes additional areas such as regulatory quality and the integration of competition principles in regulatory impact assessment, competitive neutrality, and other subsectors such as taxis and additional professional services. The PMR indicators do not reflect the extent to or manner in which laws and regulations are enforced. Hence, a country that has competition-friendly laws “on the books,” but that does not enforce such laws, would still obtain a favorable score.

Figure 8.3: Economy-wide Product Market Regulation Score, 2022
(higher score means more restrictive regulations)



Source: OECD PMR indicators and OECD-World Bank indicators for Albania, Argentina, the PRC, Kosovo, Malaysia, Peru, and Serbia.

Figure 8.4: Decomposition of High Level Product Market Regulation by Sub-indicators for Asian Countries and Comparators, 2022



EAPC = East Asia and Pacific countries; UMIC = upper middle-income countries; HIC = high-income countries.

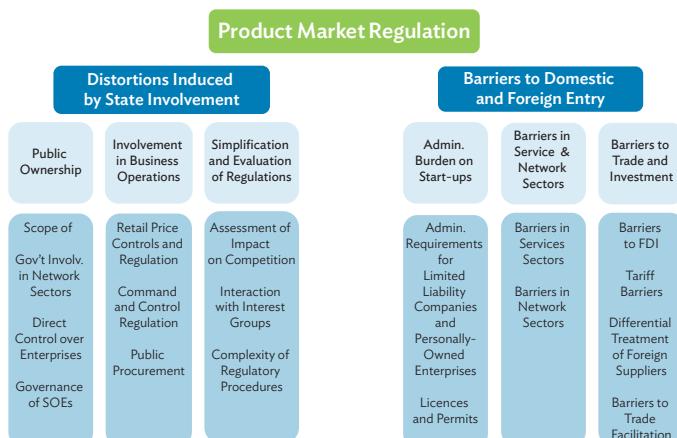
Source: OECD PMR indicators and OECD-World Bank PMR indicators for the PRC and Malaysia.

Box 8.1: Utilizing the Product Market Regulation Database to Facilitate Competition Reforms

The Product Market Regulation (PMR) database contains a detailed set of internationally comparable indicators that measure the extent to which regulations foster or limit firm entry and competition in areas of the product market where competition is viable. The economywide PMR indicators measure the extent of regulatory barriers to firm entry and rivalry in wide-ranging and important policy areas such as the state's involvement in economic activities, regulatory procedures and administrative burdens that inhibit business formation and growth, and tariff barriers and treatment of foreign suppliers that hamper foreign investment and trade. For the economywide indicators, the scores assigned to each of the answers are aggregated to capture the extent of regulations in 18 low-level policy areas. The low-level indicators are then aggregated into seven mid-level indicators. The seven mid-level indicators are further aggregated into three high-level indicators (state control, barriers to entrepreneurship, and barriers to trade and investment). Finally, the three high-level indicators are aggregated into an overall PMR indicator (Figure A).

Whereas some answers to the questionnaire are quantitative, others are qualitative. To facilitate analysis of qualitative answers, the Organisation for Economic Co-operation and Development converts all responses into numerical scores. The scores range from 0 to 6, with higher scores indicating that regulations are more restrictive of competition. The numerical scores assigned to each of the answers are aggregated into economywide and sectoral scores following a standardized process.

Figure A: Schema of Economywide Product Market Regulation Indicators



SOE = state-owned enterprise.

Source: OECD Product Market Regulation Database Schema (2018).

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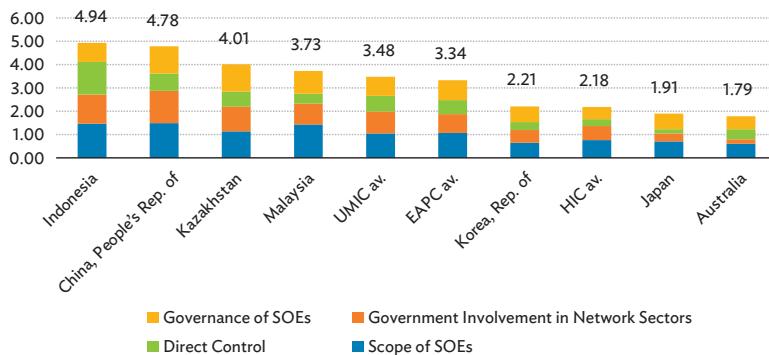
Box 8.1 *continued*

PMR indicators and sub-indicators provide an entry point to identify regulatory red flags and how countries in the database compare to each other at the qualitative level as well to identify good performers and regulatory trends. Figures B and C provide the decomposition of just two of these sub-indicators: public ownership and burdens on start-ups, as an example of the level of details that policymakers can quickly assess through the PMR index.

On the one hand, PMR data show that public ownership restrictions are more prevalent in Indonesia and the PRC, mainly due to the scope of SOE participation in markets as well as government involvement in network sectors. In addition, restrictions related to corporate governance are also significant in Kazakhstan and Malaysia. This low-level indicator covers competitive neutrality aspects including lack of separation between commercial and not commercial activities of SOEs as well as other privileges for SOEs such as exemptions from the application of certain laws or access to financing not available for the private sector.

On the other hand, administrative burden to start-ups is an area where most of the Asian countries in our sample do better than their peers, mostly due to low administrative requirements for limited liability companies and personally-owned enterprises to register and relatively light licenses and permits across the sample, except for Malaysia.

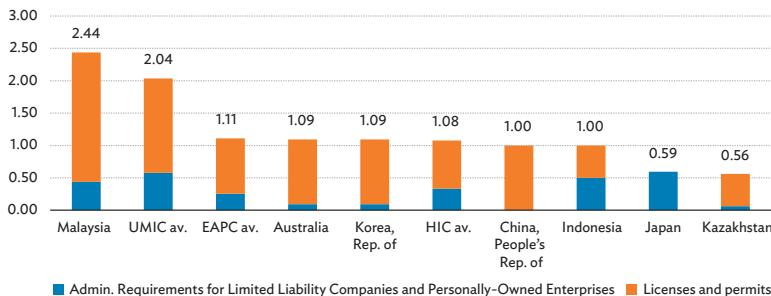
Figure B: Decomposition of Public Ownership Product Market Regulation Sub-indicator for Asian Countries and Comparators, 2022



continued on next page

Box 8.1 *continued*

Figure C: Decomposition of Administrative Burden on Start-Ups Product Market Regulation Sub-Indicator for Asian Countries and Comparators, 2022



Source: OECD PMR indicators and OECD- World Bank Group PMR indicators for the PRC and Malaysia.

The PMR indicators offer a first step toward designing a roadmap for pro-competition regulatory reform. They enable governments to compare both economy-wide and sector-specific regulatory frameworks with peers and learn from successful experience of previous reforms. Nevertheless, regulation needs to be adapted to the specificities of the country, the sector, and ultimately, the market. Therefore, additional tools are needed. This has been the experience of the Philippines, a country that implemented a battery of pro-competition reforms in the past 10 years building on a combination of tools, including PMR indicators.

In the next section, we discuss the Philippine experience as a case study to better understand the challenges and opportunities faced by countries when implementing pro-competition reforms.

8.2 Implementing Competition Policy Through Strategic Regulatory Reforms: The Experience of the Philippines

Although being one of the last countries in the region to pass a competition law, the Philippines has made significant progress to promote competition through a battery of strategic reforms. The Competition Act was adopted by the Philippine Congress in July 2015 after more than fifteen years in the making. The adoption of this law was the result of both regional commitments undertaken in the context of the ASEAN,¹⁴ as well as internal support by Congress. While competition provisions existed in different legislative instruments, multiple attempts at passing a competition law had been moving through the legislative mill since the 1990s with no success, in part due to a reluctant business community.

The Competition Act also resulted in the creation of the Philippine Competition Commission (PCC) equipped with a mandate to prosecute anticompetitive behavior, limit negative effects of mergers and acquisitions, and advocate for pro-competition reforms. In addition, the PCC was granted the power to assist the National Economic and Development Authority (NEDA), in consultation with relevant agencies and sector regulators, to formulate a national competition policy.¹⁵ In this context, the Philippine Development Plan published by NEDA in 2017 included a comprehensive competition chapter covering not only the enforcement of the Competition Act but also the review of regulation that restricted competition, and the assessment of competitive neutrality to level the playing field between public and private operators (NEDA 2017).

An analysis published by the World Bank Group in 2018 revealed that regulatory restrictions seemed to be insulating incumbents from competition, especially in network industries. PMR indicators built together by the World Bank Group and the OECD in 2017 identified high domestic entry barriers due to burdensome licenses and permits together entry imitations to foreign operators in a number of sectors. Sector-specific restrictions in network industries went from lack of key tools to promote competition such as unbundling of the local loop in telecommunications to restrictions in the number of competitors

¹⁴ The ASEAN Regional Guidelines on Competition Policy encouraged member states to have in place nation-wide Competition Policies and Laws by 2015 as part of the ASEAN Economic Community Blueprint.

¹⁵ Established by Section 12 of the Philippines Competition Act.

allowed in key markets such as road freight, shipping and operation of infrastructure in air transport and railways. Finally, price controls and other regulations restricting competition in input markets, such as professional services, appeared to hinder the competitiveness of downstream firms (World Bank 2018a).

Additional analysis conducted by the World Bank Group on the implementation of competitive neutrality principles identified a number of gaps that went from lack of a clear definition and/or separation of commercial and noncommercial activities performed by SOEs as well as privileged access to financing and other regulatory protections benefiting government owned or controlled corporations. For instance, the 2003 Government Procurement Reform provided an exception to competitive bidding in the case of agency-to-agency agreements,¹⁶ which were widely used by government owned or controlled corporations (World Bank 2019).

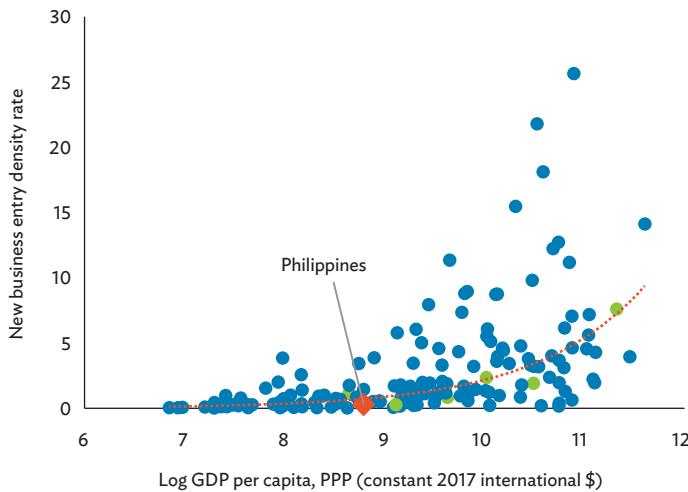
8.2.1 Economy-Wide Reforms

Low business entry rate can stifle competition in domestic markets, curb productivity dividends, and hinder innovation. The statistics shown in Figures 8.5 and 8.6 demonstrate how poorly the Philippines does compared with its middle-income neighbors in promoting the establishment of new firms. The lack of new firms limits the dynamism of the country's economy—as new ideas, business models, and products—take much longer to permeate the different markets.

On the one hand, entry in many Philippine markets has been traditionally challenging due to numerous operating permits and licenses to be obtained from different agencies, often requiring regular renewals. In the logistics sector, trucks require permits from the Land Transportation Franchising and Regulatory Board and the Land Transportation Office, registration with the Philippine Ports Authority, as well as air and sea freight forwarding accreditation provided by the Civil Aviation Authority and the Fair Trade and Enforcement Bureau. In addition, local entities, economic zones, and ports need to provide permits for passage. As discussed above, some sectors even have direct caps and bans on entry by new firms. The proliferation of restrictive regulations was often due to the lack of inter-institutional cooperation between regulators, which ended up formulating their own legal processes independently.

¹⁶ Government Procurement Reform Act (RA 9184), articles IV and XVI, sections 10 and Sec.53 (e). See also the Implementing Guidelines on Agency-to-Agency Agreements (<http://www.gppb.gov.ph/issuances/Guidelines/Agency-to-Agency%20Arrangements.pdf>)

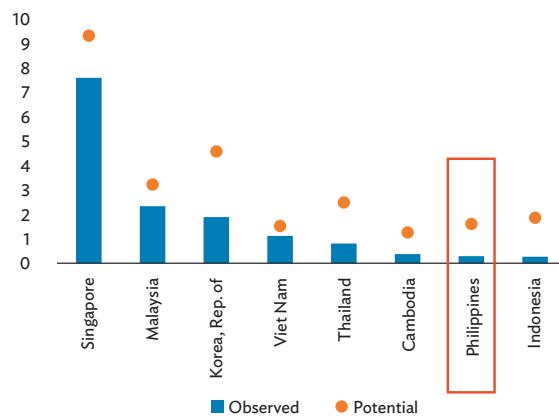
Figure 8.5: New Business Entry Density Rate (average) and Income, 2006–2018



Note: New business entry density is defined as the number of newly registered formal private limited-liability firms per 1,000 working-age people (aged 15–64).

Source: World Bank staff based on Enterprise Surveys and World Development Indicators (WDI) database, 2006–2018.

Figure 8.6: New Business Entry Gap, 2006–2018



Note: The bars show the average observed density rate for the period 2006–2018, and the dots show the benchmark predicted by a (linear) regression with average 2006–2018 observed density rate as the outcome variable and (the log of) average 2006–2018 GDP per capita adjusted for (2017) purchasing power parity as the predictor.

Source: World Bank staff based on Enterprise Surveys and WDI database, 2006–2018.

In response to such concerns, the Philippine Congress passed the Ease of Doing Business and Efficient Government Services Delivery Act in 2018 creating the Anti-Red Tape Authority (ARTA). ARTA's strength does not only lay on their mandate to eliminate undue regulatory burden and conduct regulatory impact assessments on new regulations, including competition impact, but also on their ability to convene multiple stakeholders and foster coordination.

Working in isolation, regulators may end up imposing disparate but related licensing requirements, thus creating bureaucratic barriers for companies trying to comply with the individual procedures. Through the analyses and consultations conducted by ARTA, the government has created working committees to coordinate their policies and regulations through a systematized process. As an example, ARTA worked with the Bureau of Internal Revenue to limit application requirements and easing business entry through a single process. Similar streamlining has been initiated by the Securities and Exchange Commission, including the reduction in the minimum number of incorporators, the elimination of minimum capital requirements, and the removal of the notarization requirements for new business registrations. These reforms culminated in 2021 with the launch of the Central Business Portal that compiles these procedures into a single online step.¹⁷

On the other hand, for decades, the Philippines has been placed among the economies with the highest restrictions to foreign investments, surpassed only by countries like Ethiopia, India, and Zimbabwe (World Bank STRI 2008). Key sectors, (e.g., public utilities, and economic activities, from public procurement¹⁸ to regulated professional services¹⁹) had been traditionally limited to Filipino firms based on provisions embedded in the country's Constitution,²⁰ further restricting competitive pressures and foreign investment. Building on these Constitutional provisions, the Philippines Foreign Investment

¹⁷ These reforms helped reduce administrative burden for registering a business, moving from 33 days and 13 steps to only 3 days and six steps (ARTA Accomplishment Report 2022).

¹⁸ Section 12 of Article XII of the Constitution of the Philippines stating that: "The State shall promote the preferential use of Filipino labor, domestic materials and locally produced goods, and adopt measures that help make them competitive".

¹⁹ Section 14 of Article XII of the Constitution of the Philippines stating that: "The practice of all professions in the Philippines shall be limited to Filipino citizens, save in cases prescribed by law." For instance, entry to all four regulated professions namely accountants, architects, engineers, and lawyers is restricted for non-Filipino nationals.

²⁰ Section 1 of Article XII of the Constitution establishes that "the State shall protect Filipino enterprises against unfair foreign competition and trade practices."

Act²¹ limited foreign investment in a number of industries, including utilities, retail, restaurants, and hotels (Table 8.3). Moreover, the public procurement framework²² not only restricts tenders in public utilities

Table 8.3: Maximum Share of Foreign Direct Investment by Sector

Sector	Maximum Share of FDI in 2015 (%)	Maximum Share of FDI in 2020 (%)
Mass media, including internet businesses	0	0
Small retailers	0	0
Private worker recruitment firms	25	25
Advertising	30	30
Electricity	40	100
Gas	40	40
Telecommunications	40	100
Collection and distribution of water	40	40
Water transport	40	100
Operation of air transport infrastructure	40	100
Operation of road infrastructure	40	100
Restaurants and hotels	40	Lowered
Financial institutions	40	100
Contracts for supply of materials, goods, and commodities for SOEs	40	40
Exploration, development, and utilization of natural resources	40	40
Domestic market enterprises (produces goods and services solely for the domestic market)	40	Lowered

FDI = foreign direct investment, SOE = state-owned enterprise.

Source: Annex 3, Tenth Regular Foreign Investment Negative List. Executive Order 184 (2015).

²¹ Foreign Investment Act (Republic Act No. 7042, 1991)

²² Section 43 of Government Procurement Reform Act (Republic Act No. 9184, 2002) states: "Consistent with the country's obligations under international treaties or agreements, goods may be obtained from domestic or foreign sources and the procurement thereof shall be open to all eligible suppliers, manufacturers and distributors. However, in the interest of availability, efficiency and timely delivery of Goods, the Procuring Entity may give preference to the purchase of domestically produced and manufactured goods, supplies and materials that meet the specified or desired quality."

to Filipino companies but it also favors local bidders in those markets where foreign companies are allowed to participate.²³

Early on, Filipino policymakers understood that a Constitutional amendment to address these restrictions did not have sufficient traction. The public feared that the process for eliminating the economic restrictions in the Constitution could lead to the removal of the political safeguards embedded in the document. Thus, NEDA utilized its economic planning mandate to champion the opening of key sectors to foreign investors without having to undergo constitutional reform. To this end, NEDA advocated for a narrower interpretation of the notion of *public utilities*. Article XII Section 11 of the Philippine Constitution restricts the operations of public utilities to companies that are 60% owned by Filipino nationals. However, no legal definition of what constituted a public utility had been established. This legal vacuum resulted in interpretations built upon individual court cases and specific sector regulations *assuming* that certain industries and activities were meant to be reserved for Filipino companies.

This legal definition came through the approval of the Public Service Act Amendment in 2022. This historic Act restricted the concept of public utilities to electricity transmission and distribution, petroleum pipeline transmission, water and sewerage pipeline distribution, seaports, and public utility passenger vehicles. In turn, it opened to foreign entry key network industries including telecommunications, railways, expressways, airports, and shipping.

The Public Services Act Amendment was passed in conjunction with other measures prioritized by the government, such as the Foreign Investment Act and the Retail Trade Liberalization Act, to further open up the Philippine economy to foreign investors. The Foreign Investment Act and the Retail Trade Liberalization Act lowered the capital threshold for foreign investors to open small and medium-sized enterprises and retail businesses in the Philippines, respectively. The passage of these laws was strongly supported by NEDA and the PCC that were designed to limit the scope of the Foreign Investment Negative List and provide more areas for foreigners to invest in the country.²⁴

²³ The 2016 Revised Implementing Rules and Regulations of the Republic Act No. 9184 at Section 43.1.2. The Procuring Entity shall give preference to materials and supplies produced, made, and manufactured in the Philippines, subject to the conditions herein below specified. The award shall be made to the lowest Domestic Bidder, provided his bid is not more than fifteen percent (15%) in excess of the lowest Foreign Bid.

²⁴ The Retail Trade Liberalization Amendment (RTLA) Act lowers the investment threshold for 100% foreign-owned retailers from \$2.5 million to \$500,000. The Foreign Investments Act (FIA) expansion of domestic market enterprises that may be 100% foreign owned.

To further promote pro-competition reforms, NEDA and the PCC passed a joint memorandum in July 2020 providing the basic policy framework to embed competition principles across sectors and economic activities. This memorandum was followed by an Administrative Order from the Office of the President signed in October 2021 that constitutes the basis for the adoption of a National Competition Policy in the Philippines. The order integrates the requirement for government agencies to implement competition reforms with a monetary bonus mechanism to encourage compliance. The alignment of performance incentives with competition outcomes strengthens the ability of the PCC and NEDA to promote pro-competition reforms by public bodies at different government levels and across sectors.

In parallel, both institutions launched the new Philippine Development Plan 2023–2028, which, for the second time mainstreams competition reform into the national economic blueprint. The current chapter adopts a framework that recognizes the complementarities between pro-competition reforms and digitalization initiatives designed to promote consumer welfare. The strategy identifies specific outcomes and targets for the country, including specific legislative measures to further enhance competition in key markets.

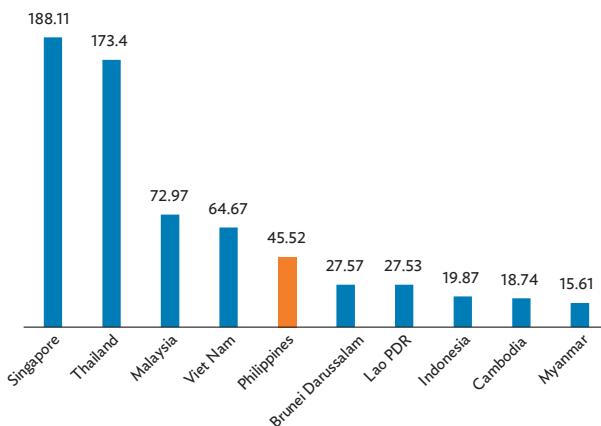
8.2.2 Sector Specific Reforms—Telecommunications

The PCC also understood the importance of pro-competition reforms at the sectoral level. Over the past few years, the PCC has entered into memorandums of agreement with regulators such as the Securities and Exchange Commission, the Energy Regulatory Commission, Bangko Sentral ng Pilipinas, and the Insurance Commission. These instruments cover the sharing of information, review of mergers and acquisitions, and joint work to embed competition principles in their respective sectors. The PCC also undertook sector analyses to better understand market conditions, identify potential red flags for competition, and advocate for reforms in water, telecommunications, e-commerce, coconut, land transportation, and agro-chemical and pesticides. In addition, the PCC has also conducted competition regulatory impact assessments on to determine whether specific regulations in telecommunications, trucking, rice, and water utilities could hinder competition.

Telecommunications is a sector where pro-competition reforms showed results early on. Telecommunications has been one of the sectors where restrictive regulation together with limited foreign entry most significantly impacted market outcomes and hindered consumers. As identified by the 2018, the World Bank Group analyses on regulatory restrictions in the Philippines, limited regulatory capacity of the National Telecommunications Commission had prevented the

implementation of important pro-competition reforms, such as allowing for number portability and unbundling of the local loop. Furthermore, ownership was highly concentrated between two companies largely due to restrictions on foreign direct investment (FDI). Limiting FDI in the sector not only insulated Philippine telecommunications operators from foreign competition but also restricted investment in infrastructure, perpetuating market concentration (World Bank 2018a). In addition, restrictions to build and access infrastructure further reinforced the position of the two largest players operating in all market segments, i.e., fixed-line, mobile telecommunications, and broadband services. As recently as 2020, Filipino consumers experienced slower download speeds at 45.52 Mbps and paid more as a percent of income at 7.85% than consumers in most ASEAN countries.²⁵

Figure 8.7: Fixed Broadband Median Download Speed (Mbps), 2020

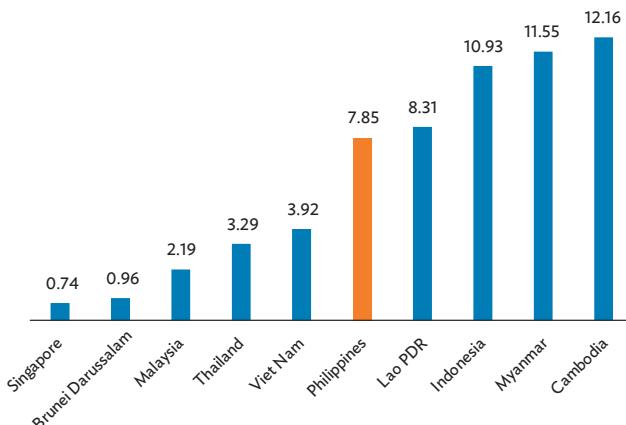


Mbps = megabits per second.

Source: Ookla Speedtest Global Index.

²⁵ Ookla. Speedtest Global Index – Monthly comparisons of internet speeds from around the world. <https://www.speedtest.net/global-index>. Speedtest, August 2019 reported that “At 16.76 Mbps, the country’s mobile broadband speed is much lower than the global average of 32.01 Mbps.”; <https://www.speedtest.net/global-index> Opensignal. The State of Mobile Network Experience: Benchmarking Mobile on the Eve of the 5G revolution. https://www.opensignal.com/sites/opensignal-com/files/data/reports/global/data-2019-05/the_state_of_mobile_experience_may_2019_0.pdf. Reported a 3G/4G mobile average download speed at 7 Mbps, compared to the regional average of 13.26 Mbps. <https://www.opensignal.com>

**Figure 8.8: Fixed Line Monthly Broadband Cost
(% of Monthly GNI per Capita), 2020**



GNI = gross national income.

Source: ITU (2017) from The Economist – The Inclusive Internet Index 2021.

In a move toward enhancing competition in the sector, the national government, with the support of NEDA and the PCC, implemented a series of reforms from strengthening institutional safeguards through the creation of the Department of Information and Communications Technology (DICT) to the award of a third telecommunications license through an open and competitive selection process,²⁶ and the approval of the Mobile Number Portability Act²⁷ to lower the switching costs of subscribers between providers.

To further promote market entry, the PCC, ARTA, and the DICT worked on a number of measures to facilitate the expansion of infrastructure and the elimination of market barriers to entry. First, the DICT and the PCC cooperated on the issuance of the Common Tower

²⁶ National Telecommunication Memorandum Circular No. 09-09-2018 (Rules and Regulations on the Selection Process for a New Major Player in the Philippine Telecommunications Market), available at <http://ntc.gov.ph/wp-content/uploads/2018/MC/MC-09-09-2018.pdf>

²⁷ The Mobile Number Portability Act (MNPA) was signed into law in February 2019; the rules implementing the MNPA were issued on 11 June 2019 and took effect on 2 July 2019. <https://news.mb.com.ph/2020/01/02/gatchalian-urges-telcos-to-implement-mobile-number-portability-act/>

Policy.²⁸ Aimed at creating a market for independent tower companies, including foreign players, resulting in breaking the existing duopoly and improved internet connectivity during a period of elevated demand given the quarantine restrictions during the COVID-19 pandemic. Second, ARTA and the DICT, supported the passage of a joint memorandum circular to streamline the processing time and requirements of permits, licenses, or clearances needed for the construction of common towers. Another memorandum was later passed to apply similar procedures to the construction of new telecommunications poles and the laying of cable required for broadband fiber.

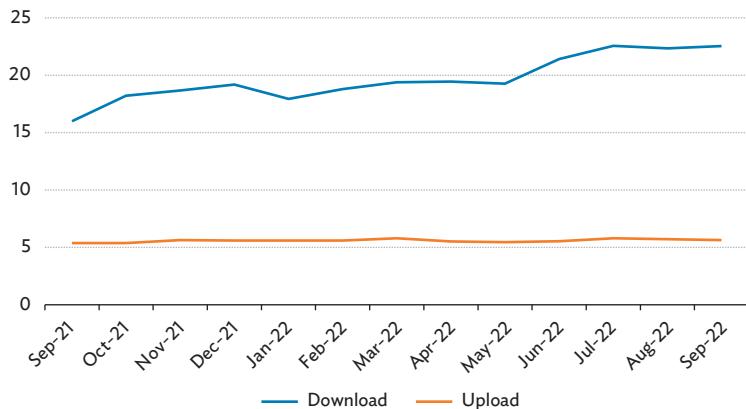
These reforms simplified the application process to build new infrastructure, reduce compliance costs and increased the number of cell towers permitted to 68,711 towers in the 18 months following the reform, compared with 9,363 towers the period immediately prior.²⁹ More competition in the sector has also been translated into improvements in the internet speeds. From September 2020 to September 2021, the year these reforms came into place, fixed broadband speeds almost doubled (from 45 megabits per second (Mbps) to around 79 Mbps) and mobile internet speeds significantly improved also (from 16 Mbps to 22.5 Mbps) (Figures 8.9 and 8.10).³⁰ The improvements in the speed and breadth of coverage have spurred the expansion of the digital economy in the Philippines, especially during the pandemic lockdowns.

²⁸ To address the demand for more cell towers in the country, the government has mandated the sharing of telecommunication towers through DICT Department Circular No. 8 issued on 29 May 2020 (Common Tower Policy).

²⁹ Based on the Anti-Red Tape Authority Accomplishment Report 2018-2022. The report documented that the reforms reduced from 30 to 8 the number of permits needed to establish a cellular tower. It also reduced the number of days to secure the permit from 241 to 16 days.

³⁰ Ookla www.speedtest.net (accessed 30 September 2022).

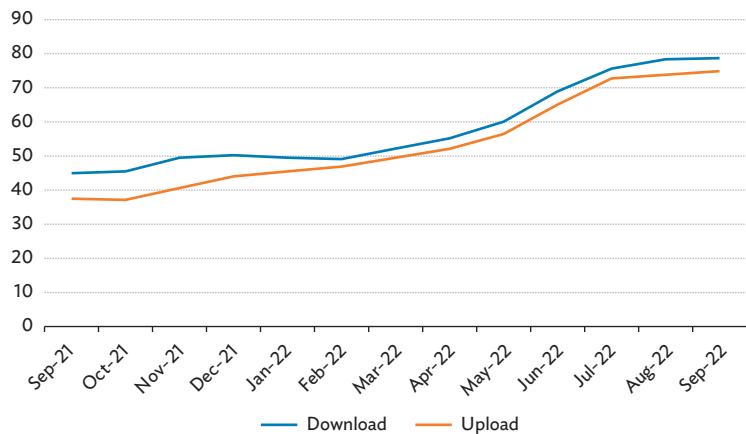
Figure 8.9: Mobile Monthly Median Download Speed (Mbps) for the Philippines, September 2021 to September 2022



Mbps = megabits per second.

Source: Ookla.

Figure 8.10: Fixed Broadband Median Download Speed (Mbps) for the Philippines, September 2021 to September 2022



Mbps = megabits per second.

Source: Ookla.

Despite these early successes, the PCC remains cognizant of the need to maximize the value of their advocacy mandate by further engaging with the regulators. As outlined by the commissioners themselves, the PCC goal is to leverage the knowledge and also the data of sector-specific regulators to support evidence-based decision making. While one fits all solutions do not exist, interinstitutional cooperation between the PCC and sector regulators remains critical to keep pushing for regulatory frameworks that promote competition and private sector led growth (Ramit-Medrano 2023).

8.3 Conclusion

Economic studies confirm the importance of competition to foster growth and inclusive economic development. Yet, many government regulations may inadvertently restrict market entry and protect incumbents, leading to a sub-optimal allocation of resources and a reduction in the market efficiency. Enhanced competition rewards more the efficient producers and incentivizes firms to invest in better technologies, leading to improved consumer choice that benefits poor people significantly. The effective implementation of competition policies through pro-market regulation in key sectors, a level playing field between public and private operators and tools to identify and sanction anticompetitive practices and limit negative effects of mergers is key to foster better market outcomes that benefit consumers. On the other hand, competitive neutrality removes distortions granted to favored firms or state-owned enterprises, and fosters a more vibrant private sector.

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9

Market Power of Agri-Food Supply Chains in Developing and Emerging Asia

Takayuki Kai and Tetsushi Sonobe

9.1 Introduction

In April 2019, the European Union (EU) outlawed 16 unfair trading practices (UTP) to strengthen farmers' position in the agri-food supply chain (EU Directive 2019/633). In July 2021, the Biden administration issued Executive Order on Promoting Competition (EO 14036), which directed the United States (US) Department of Agriculture to address the impacts of the consolidation and decreased competition in the agri-food sector on farmers. Both the directive and the executive order highlighted the concern that the market power of agri-food firms has increased significantly as the industry has consolidated.

The consolidation in food retail and manufacturing is not unique to developed countries. It is common to emerging markets and developing economies. Agri-food supply chains in emerging markets and developing economies have modernized and achieve phenomenal growth since the 1990s, providing a greater variety of quality food, convenience, and lower prices for consumers and higher prices for farmers (e.g., Reardon and Timmer 2007; Barrett et al. 2022). Their growth has been associated with mergers and shakeouts among themselves and the decline of traditional retailers and wholesalers, hence industrial consolidation and market concentration. The question arises as to whether this concentration will become a threat to farmers and consumers in the emerging markets and developing economies.

In this chapter, we aim to address this and related questions from the perspective of developing and emerging Asia. For this purpose, the chapter explores how modern food retailers and manufacturers have grown and how their growth and consolidation have impacted

consumers and farmers. In so doing, we rely much on existing studies rather than our own data analysis. One reason is that data analysis on the issue would be too technical to fit the purpose of this book. Another reason is that, reflecting the importance of the issue, many excellent studies from across the world have been conducted, and comprehensive reviews of them have been provided by leading scholars, such as Sexton and Xia (2018), Barrett et al. (2022), and Crespi and MacDonald (2022). This chapter provides a non-technical summary of recent findings and views on the impacts of agri-food supply chain consolidation in developing and emerging Asia.

The emerging markets and developing economies have lagged several decades behind developed economies in the modernization of food retailing and manufacturing. The early adopters and the late comers share similar processes of modernization, but the later comers, especially the People's Republic of China (PRC), India, and Viet Nam, have had faster transition (Reardon, Timmer, and Minten 2012). The first question we ask in this chapter is what the impacts of modern retailing and manufacturing of foodstuffs on consumers and farmers in Asia have been so far. The answer is that there have been many good impacts and a few negative ones.

We will then ask what will be the impacts in Asia in the future? Since simple projection for the future based on Asian experiences in the past alone is unreliable, we will review empirical studies of the recent experiences of the United States and Europe, which have been ahead of Asia. We will also pay attention to the recent rise of online retailing of foodstuffs across the world.

A lesson learned from the literature is that every major agri-food supply chain, whether led by a retailer or a manufacturer, whether headquartered in Asia or another region, has developed a system that generates huge profits from large-scale operation relative to capital invested, without manipulating prices by exercising market power. Another lesson is that to keep the system working well, major agri-food supply chains may refrain from substantially raising food prices in retail markets or reducing farmgate prices for agricultural products. It does not follow, however, that agri-food supply chains will never abuse market power in a cunning way that we do not know yet.

In the next section, we will provide an overview of the modernization of food retailing and manufacturing in developing and emerging Asia. Section 9.3 discusses the increased concentration in food retailing and its impacts on consumers. Section 9.4 turns to vertical coordination between farmers and their buyers (i.e., food retailers and manufacturers) and discusses the impacts of increased concentration on farmers, especially the prices that farmers receive. Section 9.5 concludes

by summarizing the major lessons from the literature and commenting on the implications for competition policy in Asia.

9.2 Diffusion of Modern Technologies of Food Retailing and Manufacturing in Asia

9.2.1 Modern Technologies

Modern food retailers such as supermarkets, hypermarkets, warehouse clubs, and convenience stores, are very different from traditional grocery stores. A key feature of modern food retailing is that the distribution process is integrated with the network of self-service retail stores. Modern retailers realize economies of scale arising from the large-scale operation of distribution and mass selling. They provide customers with the convenience of one-stop shopping. They reduce cost further by inventing a way to substitute skilled full-time workers with unskilled part-time workers (Bronnenberg and Ellickson 2015). They expand their networks of stores from primary cities to secondary and tertiary cities and rural areas. They expand the range of categories that they deal in from processed food to fresh produce. They broaden their coverage of customer segments from relatively rich consumers to ordinary ones (Reardon, Timmer, and Minten 2012).

Concurrently, food manufacturers in developing economies experienced modernization and grew large in operation size. Food manufacturing includes diverse processing and packing subsectors, ranging from flour milling and cookie manufacturing to fruit and vegetable canning and coffee and tea manufacturing, from frozen fishery product manufacturing to animal slaughtering and meat processing. Modern food manufacturing is capital intensive and its technologies exhibit economies of scale. To realize scale economies arising from the large-scale use of machinery, they need a stable and large-quantity flow of supply of raw materials, i.e., agricultural products, which have as uniform shapes and sizes as possible. To realize such efficient supply of materials, modern food manufacturers coordinate farmers.

9.2.2 Diffusion of Modern Retailing Technology in Asia

In Asia, Japan saw the growth of modern food retailing first, followed by the newly industrialized economies in East Asia and then by Southeast Asian countries (other than Viet Nam, which joined them later). Table 9.1 is adapted from Reardon, Timmer, and Minten (2012) to illustrate how rapidly the sales of major retail chains selling food grew in Asian countries during the 2000s. The four countries in the upper panel

of the table, i.e., Indonesia, Malaysia, the Philippines, and Thailand, started the modernization of food retailing in the mid- to late 1990s. The three countries in the lower panel, i.e., the PRC, India, and Viet Nam, experienced modernization several years later. The rightmost column of the table shows the number of large food chains headquartered in the sample country. Since the database covers only leading or major retail chains selling food in each country, the sales level and even growth rates reported in the table may be significantly underestimated.

Table 9.1: Sales of Leading Modern Food Retail Chains in Developing Asia, 2000s

Countries	Sales (\$ billion)			Annual Compound Growth (%)			Real GDP 2000-2008	No. of Leading Chains Followed
	2001	2005	2009	Sales 2001-2005	Sales 2005-2009	Sales 2001-2009		
Indonesia	1.8	4.0	7.3	22.1	16.2	19.1	5.2	14
Malaysia	2.0	3.6	7.1	15.8	18.5	17.2	5.5	16
Philippines	1.9	3.5	6.8	16.5	18.1	17.3	5.1	13
Thailand	5.4	10.9	17.7	19.2	12.9	16.0	5.2	21
PRC	13.1	40.2	91.5	32.4	22.8	27.5	10.4	47
India	0.2	0.9	5.1	45.6	54.3	49.9	7.5	33
Viet Nam	0.1	0.7	2.0	62.7	30.0	45.4	7.7	16

GDP = gross domestic product, PRC = People's Republic of China.

Notes: Raw data were taken from www.Planetretail.net by Reardon, Timmer, and Minten (2012). For each country, the sales figures are some of all of the chains that sold at least some food and were followed by Planet Retail. The data cover mostly the lead chains at the national level but unlikely smaller chains that operated local or regional levels.

Source: Table 1 in Reardon, Timmer, and Minten (2012).

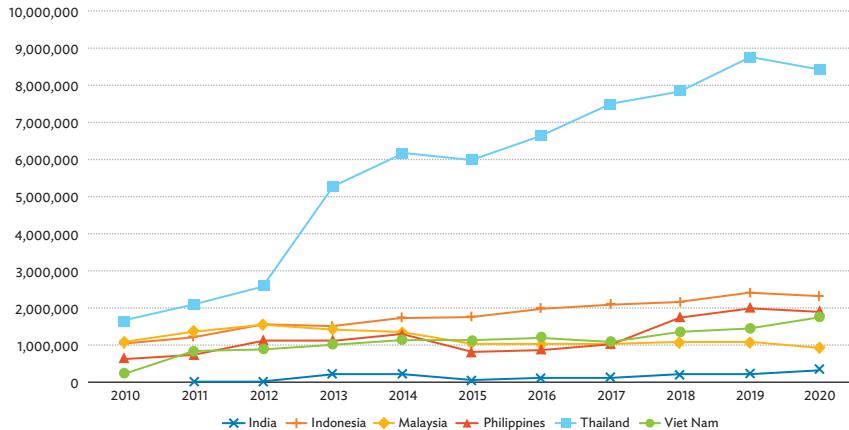
The message of Table 9.1 is twofold. First, the growth of the sales of the food chains was much faster than the gross domestic product (GDP) of their countries in the 2000s. Since food demand would grow at most in proportion to GDP, the food chains' sales grew faster than food demand, suggesting that there was substantial decline in other sellers of foodstuffs in these countries. Second, the latecomer countries listed in the lower panel had faster growth of food chains than the countries in the upper panel.

One might wonder why modern food retailers could grow fast. Their massive investment in distribution centers and retail stores increases their fixed costs but reduces marginal costs to considerably low levels. As they increase the size of operation, their average cost (or unit cost) declines. In short, they enjoy scale economies and are motivated to expand the scale of operation to realize scale economies further and to earn more profits, which will be reinvested in the expansion of operation. Such a circular causation would make rapid growth possible.

Another question might arise as to why the supermarket revolution did not take place earlier in developing countries. There must be several factors. Modern distribution systems would not work well without sufficient development of transportation infrastructure in the economy where retailers operate. Supermarkets' labor-saving innovation, which replaced skilled full-time workers with unskilled part-time workers, would not be much advantageous until economic development pushed up wage rates. Government policy would matter as well. For example, in the presence of laws restricting foreign direct investment (FDI) in the commercial sector, the adoption of modern retailing technology would be financially and technologically difficult, which seems to be the case in India and the Philippines (Reardon, Timmer, and Minten 2012).

Figure 9.1 shows the sales growth of the three largest firms selling food, respectively, in the same countries other than the PRC during the 2010s. The PRC is not included because the sales of the largest three firms in the PRC are too large for the figure. The data are taken from the Orbis database, one of the largest data services in the world. In this figure, although the growth of Thai retailers stands out, food retailers in India and Viet Nam, which started from small sizes, continued to grow quickly in the 2010s.

Figure 9.1: Sales of The Three Largest Retailers in Selected Developing Countries in Asia (\$ 1,000)



Notes: The sales of the three largest retailers shown are 3-year moving averages.

Source: The Orbis database.

Table 9.2 shows the names of the three largest food retailers in each of the same six countries in 2010, 2015, and 2020.¹ Interestingly, India's Innovative Retail Concepts Private Limited is an online food and grocery store. The impact of online retailing will be discussed in the next section. PT Sumbar Alfaria Trijaya Tbk (known as Alfamart) is a convenience store chain in Indonesia. AEON, a Japanese distribution brand, operates in Malaysia and Viet Nam. Thailand's CP All is the sole operator of 7-Eleven convenience store in the country and was established by the Charoen Pokphand Group, the country's largest conglomerate. In 2020, the group purchased a large Thai retail chain upon approval by the Office of Trade Competition Commission to form a retail monopoly. Viet Nam's Vincommerce is a part of Vingroup, the largest private-sector conglomerate in the country, which started about 30 years ago as a producer of instant noodles.²

¹ Note also that the chains selling food included in Table 9.2 are not necessarily food retailers that focus on food. This is why the table includes Jollibee, the Philippines largest hamburger restaurant chain.

² While Vincom operate shopping malls, other two subsidiaries of Vingroup operate supermarkets (VinMart) and convenience stores (VinMart+).

Table 9.2: The Names of Three Largest Food Retailers, Selected Countries, 2010, 2015, and 2020

		2010	2015	2020
India	No. 1		Innovative Retail Concepts Private Limited	Innovative Retail Concepts Private Limited
	No. 2		Al-Sameer Exports Private Limited	Al-Sameer Exports Private Limited
	No. 3		Royal Canin India Private Limited	Pine Labs Private Limited
Indonesia	No. 1	PT Sumber Alfariya Trijaya Tbk	PT Sumber Alfariya Trijaya Tbk	PT Sumber Alfariya Trijaya Tbk
	No. 2	PT Hero Supermarket Tbk	PT Hero Supermarket Tbk	PT Tigaraksa Satria Tbk
	No. 3	PT Tigaraksa Satria Tbk	PT Tigaraksa Satria Tbk	PT Hero Supermarket Tbk
Malaysia	No. 1	GCH Retail (Malaysia) Sdn Bhd	GCH Retail (Malaysia) Sdn Bhd	Nestle Products Sdn. Bhd
	No. 2	Aeon Co. (M) Bhd	Nestle Products Sdn. Bhd	Aeon Co. (M) Bhd
	No. 3	7-Eleven Malaysia Holdings Berhad	Aeon Co. (M) Bhd	7-Eleven Malaysia Holdings Berhad
Philippines	No. 1	Jollibee Foods Corporation	Jollibee Foods Corporation	Jollibee Foods Corporation
	No. 2	Robinson's Supermarket Corporation	Grand Union Supermarket, Inc.	Robinson's Supermarket Corporation
	No. 3	L.P.T. Marketing Company, Inc.	Red Ribbon Bakeshop Inc.	Sanford Investments Corporation
Thailand	No. 1	CP All PCL	CP All PCL	CP All PCL
	No. 2	Siam DCM Co., Ltd.	Ek-Chai Distribution System Co., Ltd.	Ek-Chai Distribution System Co., Ltd.
	No. 3	B and B Express Co., Ltd.	Central Food Retail Co., Ltd.	Central Food Retail Co., Ltd.
Viet Nam	No. 1	Vietnam Intimex Joint Stock Corporation	Vincommerce General Commercial Services Joint Stock Company	Vincommerce General Commercial Services Joint Stock Company
	No. 2	Ha Nam Food Joint Stock Company	Espace Big C Thang Long	Bach Hoa Xanh Trading Joint Stock Company
	No. 3	First Vietnam Joint Stock Company	PI Co Joint Stock Company	Aeon Vietnam Company Limited

Note: Sales data for Indian retailers in 2010 are not available.

Source: Orbis database.

9.2.3 Diffusion of Modern Food Manufacturing Technology in Asia

Turning to food manufacturing during the 2010s, large food manufacturers had the level and growth of sales comparable to large food retailers in the same country. This suggests that the rapid growth of agri-food supply chains in Asia was led not only by retailers but also manufacturers. Presumably, the rapid growth became possible in food manufacturing because mechanization increased fixed cost but reduced marginal cost, creating scale economies and inviting a circular causation. In the meat processing/packing subsector, industrialized livestock production systems have spread across the world to boost productivity (Crespi and MacDonald 2022). The systems work well if the upstream production is well coordinated. Today, the PRC, India, and Southeast Asia are major producers and exporters of beef, pork, poultry, and milk, thanks to this technology and vertical coordination.

Table 9.3 shows the names of the three large food manufacturers in selected countries. Tamil Nadu Civil Supplies in India is a state-owned enterprise. Both Indofood and Indofood CBP are parts of the Salim Group, the largest conglomerate in Indonesia. CP Food in Thailand is one of the world largest producers of shrimp, feed, poultry, and pork and a part of the Charoen Pokphand Group. CP Viet Nam is also a part of the CP Group, produces shrimp in Viet Nam, and recently launched the largest poultry factory in Asia. Cargil Viet Nam is a subsidiary of a US-based global food company. Thus, food manufacturers have grown rapidly, receiving investments from the public sector, domestic conglomerates, and foreign firms.

9.2.4 Upstream Coordination and Private Standards

Both modern food retailers and manufacturers coordinate upstream production to secure stable and efficient procurement of farm products. Upstream coordination has assumed greater importance as consumers get interested more in the quality and safety of food (Otsuka, Nakano, and Takahashi 2016). The production of a high-valued, high-quality product may require farmers to work longer hours, spend more to obtain seeds and other inputs, or adopt a new practice. In rural economies, however, farmers would be prevented from meeting these challenges by rampant market failures, such as unfavorable access to credit market and the absence of market for knowledge. Modern food retailers and manufacturers' vertical coordination addresses this problem by using contract as explained in Section 9.4.

**Table 9.3: Three Largest Food Manufacturers,
Selected Countries, 2010, 2015, and 2020**

		2010	2015	2020
India	No. 1	Tamil Nadu Civil Supplies Corporation	Gujarat Cooperation Milk Marketing Federation Limited	Gujarat Cooperative Milk Marketing Federation Limited
	No. 2	Allanasons Private Limited	KPM Agro Food Products Private Limited	Parle Products Private Limited
	No. 3	Balrampur Chini Mills Limited	Madhya Pradesh State Civil Supplies Corporation Limited	ADM Agro Industries Kota & Akola Private Limited
Indonesia	No. 1	PT indofood Sukses Makmur Tbk	PT indofood Sukses Makmur Tbk	PT indofood Sukses Makmur Tbk
	No. 2	PT Indofood CBP Sukses Makmur Tbk	PT Indofood CBP Sukses Makmur Tbk	PT Indofood CBP Sukses Makmur Tbk
	No. 3	PT Charoen Pokhand Indonesia Tbk	PT Charoen Pokhand Indonesia Tbk	PT Charoen Pokhand Indonesia Tbk
Malaysia	No. 1	Sime Darby Plantation Berhad	Sime Darby Plantation Berhad	Sime Darby Plantation Berhad
	No. 2	Kulim (Malaysia) Bhd	Tradewinds (M) Bhd	Bintulu Edible Oils Sdn Bhd
	No. 3	Tradewinds (M) Bhd	Johor Corporation	Nestle (Malaysia) Berhad
Philippines	No. 1	JG Summit Holdings Inc.	JG Summit Holdings Inc.	San Miguel Food and Beverage, Inc.
	No. 2	Nestle Philippines Inc.	Central Azucarera Don Pedro, Inc.	JG Summit Holdings Inc.
	No. 3	San Miguel Food and Beverage, Inc.	Universal Robina Corporation	Nestle Philippines Inc.
Thailand	No. 1	Charoen Pokphand Foods PCL	Charoen Pokphand Foods PCL	Charoen Pokphand Foods PCL
	No. 2	Thai Union Group PCL	CPF (Thailand) PCL	Berli Jucker PCL
	No. 3	Berli Jucker PCL	Thai Union Group PCL	CPF (Thailand) PCL
Viet Nam	No. 1	Masan Consumer Corporation	CP Vietnam Corporation	CP Vietnam Corporation
	No. 2	Cong Ty Co Phan Tap Doan Thuy San Minh Phu	Vietnamese - French Cattle Feed Joint Stock Company	Masan Consumer Corporation
	No. 3	Vietnam Vegetable Oils Industry Corporation - Joint Stock Company	Masan Consumer Corporation	Cargill Vietnam Company Limited

Source: Orbis database.

In recent years, an increasing number of consumers are interested in social justice and environmental sustainability as well as food safety and quality. In response to such consumers' interests, modern food manufacturers set private standards that farmers in their supply chains must comply with. Private standards can be about, for example, toilet and hand wash facilities and a limit to pesticide residue.

They may create an impression that products satisfy quality, social, and environmental concerns. Similarly, modern food retailers set private standards. According to Lee, Gereffi, and Beauvais (2012), retailers tend to set private standards for the purpose of securing consumer confidence in all products they sell and hence consumer confidence in one-stop shopping, whereas manufacturers are interested in impressing consumers about unique characteristics of particular products. Those firms exporting food products tend to adopt Global Good Agricultural Practices, an international private standard set by several European retailers.

9.3 Impacts of the Modern Agri-Food Supply Chain on Consumers

We will review the literature here to learn what the modern agri-food supply chain has brought to consumers in emerging and developing Asia. We then attempt to predict what the impacts on consumers in the future, while taking into account the recent experiences of consumers in developed economies and the recent development of online retailing.

9.3.1 Effects on Variety, Quality, and Price

In developing countries, when supermarkets were in their infancy, they would deal in only processed or semi-processed food products and procure them from wholesalers on the spot market. But their shelves would gradually become rich in variety, especially with increasing share of fresh produce procured directly from farmers, which would strengthen the attractiveness of supermarkets as providers of the convenience of a one-stop shop (Reardon, Timmer, and Minten 2012; Bronnenberg and Ellickson 2015). In Viet Nam, a late-late comer, fresh produce and poultry appeared on supermarket shelves relatively soon after supermarkets began operation (Moustier et al. 2010).

Many studies conducted in developing and emerging Asia find significant quality differentials between supermarkets and traditional retailers (e.g., Megenthaler, Weinberger, and Qaim 2009; Barrett et

al. 2022). This is not surprising given the upstream coordination by supermarkets that set private standards in response to the heightened interest of consumers in food safety and quality.

Prices of foodstuffs charged by supermarkets tend to be lower than those by traditional retailers, according to many studies. Minten, Reardon, and Sutradhar (2010), for example, find that the prices of rice, wheat flour, and edible oil at supermarkets were significantly lower than those at small shops in New Delhi. This is not surprising, either, given the economies of scale which the modern retailing technology exhibits. Moreover, this technology is developed for the purpose of reducing cost at every stage of distribution and retailing (Bronnenberg and Ellickson 2015), and supermarkets coordinate upstream production so as to increase efficiency in production, secure stable supply of inputs, and make scale economies work in full swing.

9.3.2 Cross-Category Effect

Recent studies have added another explanation why supermarkets tend to charge lower prices than traditional retailers. It is a demand-side explanation, whereas the economies of scale and efficiency-improving upstream coordination are supply-side explanation. Some theorists developed this explanation based on a casual observation that some consumers prefer one-stop shopping to visiting multiple shops, each focusing on a particular category of products. Consider a supermarket that has reduced the price of a product. The reduction in the price of one product would increase not only the number of consumers visiting the supermarket and sales volume and possible sales revenue from the product, but also increase the sales revenue from some other categories of products because of preference for one-stop shopping. This last effect could be called cross-category effect. The stronger the magnitude of this effect, the more the supermarket would be motivated to reduce prices of products and keep them low.

Thomassen et al. (2017) used detailed consumer data from the United Kingdom to test this hypothesis and measure the magnitude of the cross-category effect. They obtained robust evidence that the cross-category effect is strong. Since the cross-category effect is not included in the standard models of imperfect competition, the empirical finding that the effect is strong can have a profound implication for competition policy debates. The finding warrants a further compilation of empirical research in other regions including developing and emerging Asia.

9.3.3 Concentration and Price: United States and European Experiences

Many studies provide suggestive evidence that the growth of the modern agri-food supply chain has contributed to welfare gains in favor of Asian consumers. Since the growth is associated with increasing consolidation of the industry, there are concerns about abuse of market power by supermarkets in the future. Thus, we are interested in the recent experiences of developed economies, which are ahead in the transition to modern retailing (Bronnenberg and Ellickson 2015).

In the United States, the largest four supermarkets/hypermarkets in 1990 (Walmart, Kroger, Alberston, and Target) had a total market share (i.e., nationwide CR4) of 13% in that year and it rose to 34% by 2019 (Crespi and MacDonald 2022).³ Nonetheless, there is no evidence that these supermarkets raised prices. On the contrary, a new entry of a Walmart hypermarket in a local market for grocery, average prices in the market would go down since Walmart's prices are 15% to 25% lower than other grocery stores' prices (Hausman and Leibtag 2007; Arcidiacono et al. 2020).

Supermarkets set prices beyond marginal costs, which is needed to cover the fixed cost associated with distribution centers and other facilities. To achieve prices above marginal costs, they strategically differentiate their brands from others' brands. Each of them selects store location, store size, product assortment, sources of supply, the way of coordinating upstream production, quality of services, price ranges, and so on consistently as different aspects of the unique differentiation strategy (Arcidiacono et al. 2020). Walmart's low-price strategy, for example, is consistent with aspects other than prices. Thus, Walmart stores tend to be located where many consumers are cost sensitive (Arcidiacono et al. 2020). If a supermarket raises prices by exercising its market power, all the other aspects of its differentiation strategy must be adjusted, which could be considerably difficult or costly.

Thus, the exercise of market power could result in a considerable reduction in profitability. From their surveys of the empirical literature, Swinnen and Vandeplas (2015), Sheldon (2017), Sexton and Xia (2018), and Deconinck (2021) find no evidence that increasing concentration in food retail hurt consumers in developed countries. Note, however, that the lack of evidence does not mean that market consolidation is never

³ CR4 is one of the most frequently used indicators of market concentration. Because of sheer limitation of data availability, we find it practically impossible to present CR4 for food retailing or manufacturing sectors in emerging market and developing economies in Asia.

accompanied by increased prices. Indeed, a case study in France reports that a significant rise in prices followed a merger of supermarkets (Allain et al. 2017).

9.3.4 Is Online Retailing a Game Changer?

In the early 2010s, online retailing accounted for only small fractions of sales in food retail markets in the world, but its growth was rapid (Bronnenberg and Ellickson 2015). After the outbreak of the novel coronavirus disease (COVID-19) pandemic, its growth accelerated. As seen in Table 9.2, an online store is one of the largest chains selling food in India. The establishment of a new online retailing requires relatively small initial investments. Hence there could be a swarm of new entrants, which would reduce market concentration in the food retail market.

However, the reduction in market concentration is likely to be temporary. The reason is that economies of scale would work more strongly in online retailing. First, online retailers integrate distribution like supermarkets, which will generate scale economies. Second, online retailers can provide a variety of products and hence the convenience of one-stop shopping, probably even more than supermarkets. Third, supermarkets use their physical stores to connect consumers and their distribution systems, whereas connecting points for online retailers are consumers' smartphones and personal computers, which could be not just multiple but infinite.

In the future, we will see several or many mergers between supermarkets and online retailing businesses or supermarkets' branching out into online retailing, or both. Both will result from scale economies and strengthen scale economies further, thereby fueling the existing trend of consolidation and concentration in food retailing markets. Thus, online retailing does not seem to be a game changer.

9.3.5 Rule-of-Thumb and Uniform Pricing

Recent empirical studies report intriguing findings that firms do not respond to major changes in market structure. Among them is the finding that supermarkets do not change prices in response to the new entry of a Walmart Supercenter in their neighborhood even though the Walmart Supercenter reduces their sales revenues (Arcidiacono et al. 2020). Detailed data analysis has revealed that a low-price incumbent, the rival of the newly entered Walmart Supercenter, in the neighborhood would lose about 16% of sales. Nonetheless, the incumbent does not adjust their prices to this major change in market structure. Although there may be some possible explanations, Arcidiacono et al. (2020) argue that "this

nonresponse is most consistent with widespread use of simple, ‘rule-of-thumb’ cost-plus pricing strategies, a form of managerial inattention.”

Another set of intriguing studies finds that prices do not vary across stores within the same retail chains over a wide geographical area, despite wide variations in cost, local demand, and competitors’ prices (DellaVigna and Gentzkow 2019; Adams and Williams 2019). Such uniform or zone pricing is also found in Argentina (Daruich and Kozlowski 2019). The studies suggest managerial inattention or inertia is a plausible explanation for such a departure from optimizing behavior.

These findings warrant considerably further compilation of studies in different regions including developing and emerging Asia. The lack of local market-level optimization is not included in the standard model of firm behaviors. To the extent of its prevalence, it can have profound implications for competition policy debates.

9.4 Impacts on Rural Development

In both food retailing and manufacturing industries, modern technologies exhibit economies of scale. The progress of the Internet of Things (IoT) and the Fourth Industrial Revolution (4IR) are likely to strengthen scale economies in these industries. To leverage scale economies, it is critically important for both retailers and manufacturers to keep a steady inflow of farm products as inputs in a manner that is aligned with consumers’ interest in food safety and quality and environmental sustainability. This section discusses what impacts their solutions to this challenge has had on farmers and rural inclusive development.

9.4.1 Vertical Coordination with Contract

Consider a retailer or manufacturer that wants farmers to grow a high-valued, high-quality specialty crop. Farmers would think in advance what would take place after they harvest the crop. They would fear that the buyer will offer a very low price, taking advantage of their difficulty in finding other buyers. Because of the fear of exploitation, farmers would forgo the transaction with the buyer. Even if the crop was sellable to other buyers, a mutually beneficial transaction would not necessarily be accomplished. If, for example, the production of the crop required investment in land, equipment, or the adoption of a new practice, there would emerge the questions of who finances the investment and whether repayment is assured, and the transaction might be forgone.

To address such predicaments, various arrangements between farmers and their potential buyers have been developed in rural

economies of different countries either spontaneously or as a public policy or regulation. Crespi and MacDonald (2022) classify such arrangements into four types: (1) vertical integration; (2) vertical coordination using contract; (3) cooperatives among farmers, which would strengthen their bargaining power; and (4) government regulations of pricing and trade flows. The most common among them is (2), which we will discuss in the Asian context.

Under this type of arrangement, which is generally called contract farming (CF), farmers and buyers make advance agreements on volume, quality, time of delivery, use of inputs, and price or pricing formula (Otsuka, Nakano, and Takahashi 2016). There are different types of contracts: a fixed-price contract in which the buyer offers farmers a guaranteed price for their production; a production-management contract in which the buyer sends extension service agents to farmers to provide the latter with training and technical assistance; an input-supply contract in which the buyer provides input loans and deduct the cost at harvest. In rural economies in developing countries, imperfect enforcement of contracts is rife, but farmers tend to expect that a large established company is unlikely to break a contract.

CF became a common arrangement as consumers became more interested in quality, safety, and environmental health (e.g., Otsuka, Nakano, and Takahashi 2016; Barrett et al. 2022). According to a case study in India, CF with provision of finance and extension services played important roles in addressing farmers' reluctance to adopt organic agriculture due to lower yields and higher production costs and increasing the production of organic Basmati rice (Mishra et al. 2018).

With a fixed-price contract, farmers and the buyer can develop a trust relationship, which can last in the long run and help them solve some market failure problems, such as lack of access to credit and lack of market for knowledge (e.g., Kuijpers and Swinnen 2016; Sexton and Xia 2018). Thus, CF can improve farm production efficiency, thereby increasing output and quality and hence total income. Then the question arises as to whether the income gain is almost monopolized by the buyer, or whether a significant share of the gain is passed through to farmers. This is an empirical question. Many studies, including randomized controlled trials (e.g., Arouna, Michler, and Lokossou 2021), have been conducted to answer this question.

9.4.2 Impacts of Vertical Coordination on Farmers and Rural Development in Asia

Comprehensive reviews of this literature conclude that there is strong evidence that CF increases both the prices that farmers under CF receive and their incomes (Otsuka, Nakano, and Takahashi 2016; Barrett

et al. 2022). Some of these studies confirm the positive causal effect of CF on farmers. The effect on income seems stronger in cases of high-valued products. A study in Pakistan, for example, finds that while CF for a specialty crop increased the income of farmers significantly, CF for a common staple crop widely available in the market did not (Khan, Nakano, and Kurosaki 2019).

Note, however, that CF is not a panacea. First, some market failure problems are too tough for CF. For example, shrimp farmers and shrimp processors do not use CF because they cannot handle the risk of a shrimp epidemic (Joffre, Poortvliet, and Klerkx 2018). They instead sell shrimps on spot-wholesale markets. This is not because shrimp farming is unprofitable. On the contrary, it is highly profitable and growing exponentially (Rashid and Zhang 2019). The problem is that it remains highly risky because of disease and the lack of vaccine. Shrimp processors do not want to buy infected shrimps at any price, let alone the fixed price set in advance by a contract. Shrimp growers must kill and bury infected shrimps. There has not yet been developed a CF that insures the epidemic risk.

Second, CF helps farmers, but it is not necessarily inclusive. While farmers under CF become better off, their neighbors may not have a contract with any buyers. Farmers under CF do not significantly increase the employment of agricultural workers. Moreover, Barrett et al. (2021) argue, based on the results of several empirical studies, that as quality concerns among consumers increase private standards and quality assurance, exporters and other buyers tend to shift away from vertical coordination using contracts with small farmers to vertical integration using plantations.

Third, not all farmers under CF are happy with this arrangement. Ruml and Qaim (2020) reports the results of their case study in Ghana. While smallholder farmers under a resource-providing CF have higher yields and incomes, many of them regret their decision to participate in the contract scheme mainly because of opportunistic behaviors of their buyers, such as inadequacy of the output weighing procedure. This finding is not unplausible because the theory does not exclude the possibility that buyers behave opportunistically. If they do not break the contract, buyers may engage in unfair trading practices.

To sum up, CF is a common arrangement for upstream coordination by modern food retailers and manufacturers across the world. CF tends to improve production efficiency and help secure stable supply of farm product inputs to food manufacturers and retailers, which increases the utilization rate of production and distribution capacities and hence cost efficiencies. The benefit of resultant efficiency gain is not monopolized by these buyers. It is partly passed through to farmers, but seldom to other groups in the rural economy.

9.4.3 Meat Processing and Packing Firms in the United States

The rapid growth of modern agri-food supply chains has contributed more positively than negatively to welfare gains in developing and emerging Asia. The situation, however, may stay the same in the future. Will buyers exercise their market power which their further consolidation will strengthen? To answer this question, we turn now to the experiences of the United States (US) and Europe.

In the US economy, market concentration rates are high in agri-food processing and packing industries and especially livestock markets, especially when the geographical scope of relevant market is defined narrowly (Crespi and MacDonald 2022). The Biden administration's Executive Order on promoting competition in the US economy directed the Department of Agriculture to consider "providing clear rules that identify recurrent practices in the livestock, meat, and poultry industries that are unfair, unjustly discriminatory, or deceptive and therefore violate the Packers and Stockyards Act" (Executive Order 14036 of July 9, 2021, Sec. 5).

There are two reasons for the high concentration in these industries (Crespi and MacDonald 2022; Graubner and Sexton 2022). First, transportation costs are high, and especially so in transporting live animals. Second, buyers are sparsely located. Farmers are likely to sell their products to the nearest buyer even if the price paid by the nearest buyer is somewhat lower than other buyers' prices. In such circumstances, buyers may be interested in exercise their monopsonic or oligopsonic power to lower buying prices.

Nonetheless, all reviewers of the literature on agri-food supply chain consolidation conclude that there is no evidence for abuse of market power by food manufacturers, including those in the highly consolidated livestock, meat, and poultry industries (Wohlgemant 2013; Sheldon 2017; Sexton and Xia 2018; Crespi and MacDonald 2022). Why does concentration not affect prices adversely?

A plausible factor is the symbiotic, long-term relationship between buyer and farmers (Sexton 2013). In these industries, CF is effective for achieving cost efficiency and hence prevalent. Since buyers have highly mechanized factories, they want to stabilize the flow of input supply at a high level to keep the utilization rate of the facilities high. For this purpose, they would like to keep reliable farmers as suppliers and would not like to destroy the cost-effective, symbiotic relationship with such suppliers by lowering buying prices.

Another plausible explanation is that the competition among buyers centers around the joint decision making on pricing and location,

not pricing alone. In other words, rivals can relocate. Suppose that a monopsonist in a local market lowered its buying price. This might cause the relocation of the monopsonist in an adjacent local market to somewhere between its original site and the site of the monopolist that lowered its buying price, in order to poach some suppliers from the latter.

Since oligopsonic competition in the price-location dimensions has been difficult to formulate, researchers had not explored the implication of possible relocation of buyers for market power. Recently, however, Graubner and Sexton (2022) formulated such a model and pointed out that the price-location strategic interaction among buyers could make markets more competitive than the conventional concentration indexes, such as CR4 and the Hirschman-Herfindahl Index suggest. The hypothesis is worth extensive, rigorous empirical tests.

9.4.4 Asymmetric Price Transmission and Unfair Trading Practices Regulation in Europe

In the 1990s and 2000s, EU countries replaced support for farmers through minimum prices and import tariffs by direct income supports. As a result, while farmers continued to receive from the government about the same amount of support on average, they were exposed to the fluctuation of global market prices of agricultural and food products. In 2007 and 2008, global prices were especially volatile. After this world food price crisis, EU farmers began complaining about asymmetric price transmission and demanding protection from downward price fluctuations.

Price transmission means the extent to which changes in the price that farmers receive are passed through to consumer price and vice versa (Deconinck 2021). Farmers complained that price transmission was asymmetric in a way against them because it seemed to them that while farm price rose less during upward swings but declined more during downward swings than consumer price. Farmer groups in Europe suspected the asymmetry was related to the abuse of market power by food retailers and manufacturers (Swinnen, Olper, and Vandevelde 2021).

Theoretically, the level of symmetry in price transmission cannot tell anything about whether market power is abused because price transmission can be asymmetric even without market power and perfectly symmetric even under monopsony (Lloyd 2017; Deconinck 2021). Empirically, evidence is mixed according to a review of studies (McCorriston 2015). Nevertheless, the political pressure from farmers continued to grow and led to the 2019 EU Directive on UTP regulation.

The regulation classifies 10 unfair trading practices into “black” and 6 into “gray” practices.⁴ Among them are late payment, short-notice cancellation, unilateral contract change, misuse of trade secrets, and so on. Interestingly, none is directly related to pricing, the original focus of farmers’ complaints. Even in Europe, where a new regulation explicitly targeted agri-food supply chains, there is no clear evidence of buyers’ abuse of market power despite their increasing concentration (Deconinck 2021).

9.5 Conclusions

This chapter has reviewed the recent studies of agri-food supply chains to understand why market concentration has increased globally and how increased concentration has affected and will affect consumers and farmers in developing and emerging Asia. Market concentration has increased since agri-food supply chains began using modern technologies and contracts with farmers, both of which have improved production efficiency, reduced transaction costs, and leveraged economies of scale. The use of contracts in upstream production has also improved food safety and quality.

The benefits of reduced costs and improved food quality and safety have been at least partially passed through to consumers and farmers in both developing and developed economies. While the abuse of market power by food retailers and manufacturers has not been a major policy issue in developing and emerging Asia, it recently became a controversial topic in Europe and the United States. According to a myriad of empirical studies, however, there is no evidence that concentration in retailing, manufacturing, or procurement of farm products has adversely affected consumer or farmer prices.

No consensus has been formed as to why concentration has not adversely affected pricing. As Sexton and Xia (2018) among others suggest, however, the reason is probably related to the fact that agri-food supply chains’ cost efficiencies, long-term relationship with farmers, and successful branding or product differentiation are intricately intertwined with pricing. They would not raise their selling prices or reduce their buying prices if doing so could lead to the deterioration of these factors contributing to profits. To earn huge profits, it suffices for them to make and sell huge quantities (or alternatively to leverage a

⁴ For the detail of EU regulation on UTPs, see the EU website: https://agriculture.ec.europa.eu/common-agricultural-policy/agri-food-supply-chain/unfair-trading-practices_en

luxury brand power, if any). The use of online retailing, IoT, and 4IR may further strengthen scale economies in favor of these business models.

The absence of adverse or abusive pricing, however, does not mean that increased concentration is posing no threat to consumers or farmers. Agri-food supply chains may adopt unfair, unjustly discriminatory, and deceptive practices. It makes some sense that the Biden administration's executive order on promoting competition and the EU regulation on UTP focus on such practices, even though there is no evidence of abuse of market power with respect to pricing.

In addition, economic wealth in developing and emerging Asia has concentrated in the hands of the extremely rich, such as owner families of conglomerates. The consolidation of agri-food supply chains is far from unrelated to the wealth concentration in the region since some of them built their fortunes in this industry. (The Appendix provide some information on agri-food businesses within the largest conglomerates in selected Asian countries.) There are growing concerns about wealth inequality and the "bigness" of giant firms (e.g., Lamoreaux 2015; Wu 2018; Clapp 2021; Chancel et al. 2022). The future development of agri-food supply chains deserves careful observation by the governments and civil societies.

In a related vein, competition policy authorities should fully use the recent findings from empirical studies of agri-food market structures. As mentioned in the previous sections, recent findings include uniform or zone pricing by retail chains, incumbent stores' nonresponse to new entry of retail stores into local market, cross-category effects arising from one-stop shopping, strategic pricing-locational interaction, and long-term relationship between farmers and their buyers under contract farming. Also a considerable compilation of studies is needed to understand the distribution of gains from the spread of online retailing and the progress of IoT and 4IR among consumers, farmers, and agri-food supply chain firms.

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Appendix

The origins of some of today's largest conglomerates in Asia are related to agri-food supply chains including seed or fertilizer stores (See Table A9.1). It is well-known that CP Group started as a seed store, that Vingroup started as an instant noodle manufacturer, and that Ayala Group started as a distillery. Even among those conglomerates that were initially unrelated with agri-food supply chains, many entered the sector by today. Thus, the sector has been contributing to the formation of big conglomerates in the region and hence the concentration of wealth and economic power.

Table A9.1 lists three well-known conglomerates in each of the six countries: India, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam. The table indicates, among other items, what the main business of each conglomerate is and whether each has a bank as its relatively important business. In the construction of this table, we relied on business journals and the web pages of companies.

The table highlights banking as well as agri-food business because related lending, i.e., a bank's lending to firms controlled by the bank's owners, can be a manifestation of looting (La Porta, Lopez-de-Salinas, and Zamarripa 2003).

Table A9.1: Examples of Top Conglomerates in South Asia and Southeast Asia

Name of Group	Country	Year Started	Business Origin	Business Fields in 2020	Estimated Assets in 2020 (\$ billion)	Number of People in Group in 2020
Reliance Industries Limited	India	1966	Textiles	Oil & gas, retail, telecommunications, petrochemicals, media & entertainment	183.7	243,000
Tata Group	India	1868	Textiles	Automotive, steel, retail, telecommunications, hospitality, food and beverages, and more	165	720,000
Adani Group	India	1988	Commodities trading	Power generation, renewable energy, ports, logistics, mining, and more	106.5	106,000
PT Jardine Matheson	Indonesia	1832	Trading	Automotive, financial services, mining, property, agribusiness, information technology	22.3	320,000

continued on next page

Table A9.1 *continued*

Name of Group	Country	Year Started	Business Origin	Business Fields in 2020	Estimated Assets in 2020 (\$ billion)	Number of People in Group in 2020
PT Astra International	Indonesia	1957	Trading	Automotive, financial services, heavy equipment and mining, agribusiness, infrastructure and logistics, information technology	21.1	222,139
PT Salim Group	Indonesia	1940	Trading	Food and beverages, retail, telecommunications, plantations, property	16.3	230,000
Genting Group	Malaysia	1965	Resort and casino	Leisure & hospitality, plantation, power, property, oil & gas, e-commerce	18.6	56,000
Hong Leong Group	Malaysia	1963	Trading	Financial services, manufacturing, hospitality, property	16.3	45,000
IOI Group	Malaysia	1969	Palm oil	Palm oil, property, resource-based manufacturing, oleochemicals, specialty fats, logistics and others	9.7	30,000
SM Investments Corporation	Philippines	1958	Shoe store	Retail (department stores, supermarkets, hypermarkets, and convenience stores), banking, property development	22.0	114,000
Ayala Corporation	Philippines	1834	Distillery	Real estate development, banking, telecommunications, water infrastructure, renewable energy, healthcare	9.4	45,000
JG Summit Holdings	Philippines	1957	Corn starch production	Banking, property development, telecommunications, air transportation, petrochemicals, food manufacturing	5.5	33,000
Charoen Pokphand Group	Thailand	1921	Seeds and agricultural supplies	Agribusiness, telecommunications, retail, real estate, energy, and more	60.0	500,000
Central Group	Thailand	1947	Retail	Retail, real estate, hospitality, food and beverage, and more	16.8	100,000
Thai Beverage	Thailand	2003	Distillery	Beverage, food, packaging	15.9	43,000
Vingroup	Viet Nam	1993	Real estate	Real estate, retail, hospitality, healthcare, education, agriculture, automotive, electronics, construction	16.5	74,000
Viettel Group	Viet Nam	1989	Telecommunications	Telecommunications, information technology, defense, electronics, high-tech agriculture, cybersecurity, artificial intelligence, robotics	9.8	300,000
Masan Group	Viet Nam	1996	Food processing	Consumer goods, mining, agriculture, financial services	9.6	180,000

Source: Articles from various business journals and newspapers.

10

Competition Issues in the Financial Sector in Asia

Peter Morgan

10.1 Introduction

We examine competition issues related to the financial sector in Asia. This subject is unusually complicated because of the special role of the financial sector in the economy. The financial sector is viewed as strategic, given its critical role in intermediating the supply of funds to the rest of the economy to support economic activity, investment, and growth. A number of Asian economies have state-owned financial institutions that have significant market shares and major policy mandates. At the same time, it is prone to boom-bust cycles that can pose significant potential threats to both financial and economic stability. The financial sector is also viewed as a vehicle for promoting financial inclusion, i.e., providing access to financial goods and services to previously underserved groups. Finally, recent developments in the area of financial technology (fintech), ranging from the development of cryptoassets to e-money, peer-to-peer (P2P) lending and crowdfunding, have raised new uncertainties about their impacts on the structure and competitiveness of the financial sector and their implications for regulatory policy and monetary policy effectiveness. So-called “big tech” firms have also entered the financial markets from other sectors, increasing competition with traditional players. Balancing the trade-offs between competition, financial innovation, and financial stability has become a continuing challenge for regulators in the face of rapid evolution of the sector.

Moreover, the empirical relationships among competition and other policy objectives such as growth, financial stability, and financial inclusion remain unclear. The amount of research on these topics for Asian markets remains limited. Identifying relevant markets and ways to measure competition also present many issues.

This multiplicity of objectives and potential threats, together with the uncertainty about key relationships, has led to the financial sector being more tightly regulated than most sectors (except for natural monopolies like utilities or telecommunications). Moreover, typically multiple regulators have oversight of the financial sector with potentially conflicting objectives. Also, most countries in the region tightly regulate foreign entry into financial markets. As a result, Claessens (2009) describes regulation of the sector as “complicated,” and competition policy does not necessarily receive the highest priority among these objectives. Therefore it is critical to gain insight about how competition interacts with other policy objectives and identify the contributions that competition policy can make to the overall objectives of sustainable and inclusive economic and financial development.

We focus on the following three questions:

- Who determines competition policy in the financial sector—financial regulators or the competition authority?
- What challenges does the emergence of financial technology (fintech) pose for competition policy in the financial sector?
- How can increased financial integration in ASEAN contribute to increasing competition and promoting other objectives (financial stability, financial inclusion)?

Section 10.2 provides a review of the literature on a number of related topics. Section 10.3 addresses the issue of the locus of competition policy for the financial sector. Section 10.4 examines the implications of fintech for the financial sector. Section 10.5 analyzes issues related to the promotion of foreign entry in the financial sector. Section 10.6 concludes with findings and recommendations.

We focus primarily on the banking sector in member countries of the Association of Southeast Asian Nations (ASEAN), with particular emphasis on the ASEAN-5 countries—Indonesia, Malaysia, the Philippines, Singapore, and Thailand. However, we believe that the lessons drawn here have wider implications both for other financial sectors and Asian countries.

10.2 Literature Review

10.2.1 Financial Sector or Financial Markets?

The first question that needs to be answered is whether competition policy should focus on financial markets or financial sector firms. According to Investopedia, “[t]he financial sector is a section of the economy made up of firms and institutions that provide financial services to commercial

and retail customers. This sector comprises a broad range of industries including banks, investment companies, insurance companies, and real estate firms" (Investopedia 2021). The financial sector includes financial institutions operating in many specialized markets, and the relationship between the size of a financial firm, which may operate in a variety of financial sectors, and the competitiveness of individual financial market sectors is not clear.

Views differ on whether the overall size of a financial firm has an impact on competition, or whether the focus should only be on individual markets. Both the United States (US) and the European Union (EU) have seen rising aggregate concentration ratios of financial institutions (measured as the ratio of the share of the five largest depositary institutions in total deposits) following the 2008–2009 global financial crisis, but the implications of this for individual markets are unclear (Vives 2011). Vives notes that aggregate concentration ratios may not be a good proxy for competition, as the key issue is the degree of competition in relevant loan and deposit markets. On the other hand, aggregate size may well convey some degree of market power. Foer and Resnikoff (2014) argue that US regulators should have paid more attention to competition policy in their response to the 2008–2009 banking crisis and too readily allowed increased concentration in the banking sector as a response. This would imply that overall competition ratios matter, although they do not provide any specific empirical evidence for this.

More specifically, Investopedia defines a bank as "...a financial institution that is licensed to accept checking and savings deposits and make loans" (Investopedia 2023). The key point is that it requires a license from the regulator in order to be able to carry out those activities. The deposit-taking aspect is more unique to banks, as more different kinds of financial institutions can make loans than take deposits. However, as will be seen below, some nonbank institutions can offer products similar to bank deposits, although not necessarily subject to the same protections such as deposit insurance.

As will be discussed below, the development of financial technology in recent years has brought many nonfinancial institutions into the financial sector. Therefore, it seems appropriate to focus on financial markets rather than on financial institutions as the locus of competition policy, while not losing sight of the market power that very large financial institutions may acquire.

The financial sector can pose many difficulties in defining the relevant market for competition policy purposes. For example, in the payments services market, the relevant product market is not clear. Means of payment include credit cards, debit cards and charge (or stored value) cards, e-wallets, and even cryptoassets. Although they differ in

terms of underlying technology, pricing schemes and related services, they are similar in their function of substituting for cash. The entry of nonfinancial institutions such as “big techs” providing (near) banking and other financial services has also tended to blur the boundary between banks and nonbank institutions and increase regulatory difficulties (Claessens 2009).

10.2.2 Who Is in Charge of Competition Policy?

There is very little literature on competition policy for the financial sector in Asia—mostly old, relating to the introduction of competition laws following the Asian financial crisis of 1997–1998 (e.g., BIS 2001, Lee 2003, and Yoko-Arai and Kawana 2007). Yoko-Arai and Kawana (2007) argue that certain traits of the banking sector do not allow competition policy to be rigorously applied to it. While the financial sector itself is not considered to be a public good it has often been excluded from the strict application of the competition law regime. Although the failure of an individual bank is not regarded to be particularly different from a corporate failure, the possibility that it may lead to a general systemic failure in the financial system is often cited as the reason why banks are treated differently. Another reason for special treatment of banks is their asset-liability mismatch. Banks’ assets are illiquid, as loans cannot be easily recalled since they are subject to contracts and difficult to re-sell due to their uncertain value (Yoko-Arai and Kawana 2007).

In practice, competition in the financial sector has been limited by entry and merger regulations. The number of banks operating in a particular region has been limited or controlled in many countries through branching regulations. The aim has been to limit the number of banks competing in a relevant market, and to maintain a margin of profitability to discourage excessive risk taking (Yoko-Arai and Kawana 2007).

In Japan, the banking law does not prevent new entrants. However, the policy aimed to keep existing banks on an equal footing in terms of branching and product approval, and competition was kept under control. Regulators can restrict the number and location of branches in order to control competition (Yoko-Arai and Kawana 2007).

Bank mergers in Japan are typically subject to a dual approval process, with both the bank regulator and competition authority involved. The primary rationale is to review the bank license when conditions have altered, taking into consideration financial stability implications (Yoko-Arai and Kawana 2007).

Many Asian economies have state-owned banks and in some cases the state banks hold a large market share. Countries such as the

People's Republic of China (PRC), India, Indonesia, and Viet Nam use state banks to promote social policies to develop the rural areas or other objectives (Yoko-Arai and Kawana 2007). These institutions are typically outside of the purview of competition regulators.

The amount of discretion possessed by the financial regulator determines the scope of competition policy for the sector. If the regulator has a high level of discretion, this could limit the scope of the market in determining resource allocation and hence also limit the range of competition policy that could be implemented. Many developing countries continue to rely somewhat on discretion in the execution of government policy, and this is often the source of authority for ministries (Yoko-Arai and Kawana 2007).

Consumer protection in financial services is of special concern to regulators, due to the information asymmetry of their services. Consumers may suffer severe damages if their deposits or investments are lost as a result of a failure of a financial institution (Yoko-Arai and Kawana 2007).

Michael, Williams, and Munisamy (2014) conclude that the Malaysia Competition Commission (MCC) probably will have insufficient resources to investigate and punish anticompetitive behavior in Malaysia's banking industry, and the relatively small size of the financial penalties means that banks still have strong incentives to engage in anticompetitive behavior and to pay any low fine that might be levied. However, the conditions leading to that assessment have changed since then. The MCC has increased its staff and resources, and also concluded a memorandum of understanding with Bank Negara Malaysia (the central bank) regarding oversight of the financial sector. The memorandum of understanding explicitly notes that the principles of competition and the implications for financial stability will be taken into account in deciding on the appropriate course of action in a specific situation (Bank Negara Malaysia 2014). Also, it is expected that reputational concerns would outweigh the effect of the financial penalties, which are relatively standard.

The process by which foreign financial institutions enter new financial markets is largely affected by the host country's schedule of commitments in relation to the General Agreement on Trade in Services. Paragraph 2(a) of the Annex on Financial Services (World Trade Law 2024) in effect allows members to apply regulatory measures that do not comply with their specific commitments, i.e., prudential concerns can trump competition policy considerations. However, the definition of what constitutes "prudential" has not yet been agreed upon by members (Yoko-Arai and Kawana 2007).

Governments initially allow only certain segments of the domestic financial market to be opened to foreign banks. Also, normally there are

restrictions on the venues and number of branches permitted. The legal entities by which foreign banks are permitted to establish a commercial presence also can impose restrictions on their activities (Yoko-Arai and Kawana 2007).

10.2.3 Competition, Efficiency, and Economic Growth

Bank efficiency has both microeconomic and macroeconomic aspects. Microeconomic efficiency refers to the relation of inputs and outputs, while macroeconomic efficiency refers to the sound function of the intermediation process of the banking sector that supports financial development, financial stability, and stable economic growth.

There is plenty of evidence that increasing competition in the financial sector by measures such as reducing barriers to entry and exit, liberalizing product regulations, easing restrictive market definitions, and reducing intra-sectoral restrictions has promoted financial sector development and increased efficiency, including greater product differentiation and reduced costs of intermediation (Claessens 2009).

In a theoretical model, Besanko and Thakor (1992), analyze the implications of relaxing entry barriers for allocational efficiency and find that loan rates fall and deposit interest rates rise, even when allowing for differentiated competition. Also, they show that the resulting lower costs of financial intermediation and capital costs for nonfinancial firms lead to higher economic growth rates.

Evidence of the positive effects of competition on growth is most clearly found in cases when liberalization reforms introduced greater competition. A substantial literature on the impacts of the abolition of restrictions on intra- and inter-state banking in the US shows large positive effects on US growth (Strahan 2003). The introduction of the Single Banking Directives and other measures aimed at creating a more integrated and competitive financial market in the European Union were found to have similar effects there (Barros et al. 2005), and similar results have been found in a number of emerging markets (BIS 2006).

Foreign bank entry can be an important factor in promoting competition that promotes the development and efficiency of the host banking system (Chopra 2007). Claessens and Laeven (2004) found that banking systems with greater foreign bank entry and fewer entry and activity restrictions tend to be more competitive. Levine (1996) also found that foreign bank entry stimulated improvements in the quality of local regulation and supervision. Beck, Demirguc-Kunt, and Soledad Martinez Peria (2008) found that access barriers are higher in countries where restrictions on bank activities and entry are stricter and banks are mainly government owned, while increased foreign bank participation is correlated with lower barriers.

10.2.4 Competition and Financial Stability

There are two opposing views about the relationship between competition and financial stability, the “competition-fragility” view and the “competition-stability” view. Theoretical and empirical research and, most importantly, the actual conduct of prudential policy toward banks, have long recognized the potential effect of excessive competition on financial stability. In particular, in the presence of regulatory failures and weaknesses in private market discipline, increased competition could lead to excessive risk-taking, as was amply evidenced in the subprime crisis in the United States, which ultimately triggered the global great recession (Dell’Ariccia, Laeven, and Igan 2008). Based on a study of 79 economies, Beck, Demirguc-Kunt, and Levine (2003) found that financial crises are less likely in economies with more concentrated banking systems. Some academics and policymakers have emphasized the importance of franchise value for banks in preserving incentives for prudent behavior. As a result, banking regulators have tended to restrict entry and exit in the banking sector through licensing and other regulations.

However, a number of authors have found that there may not be a tradeoff between stability and increased competition, e.g., Allen and Gale (2004) and Boyd and De Nicolò (2005). Jeon and Lim (2013) found that the type of bank matters in the Republic of Korea. They found a nonlinear relationship between competition and stability for commercial banks which reflects a trade-off between the interest-rate effect and the risk-shifting effect, but that competition has a positive effect on the stability of mutual banks. Liu, Molyneux, and Nguyen (2012) studied how competition affected commercial bank risk-taking behavior in Indonesia, Malaysia, the Philippines, and Viet Nam during the period between 1998 and 2008. They found that banks operate under monopolistic competition in those countries, and that higher competition does not tend to increase bank risk-taking behavior, while regulatory restrictions positively influence bank risk-taking behavior. In a study of commercial banks in ASEAN countries, Noman, Gee, and Isa (2017) found that greater competition together with lessened market power leads banks to hold more capital and take less credit risk, which in turn enhances their financial stability.

In a study of macroeconomic data from 48 emerging economies from 1999 to 2018, Khan (2022) found an inverted-U-shaped relationship between bank competition and macroeconomic stability. A higher level of bank competition was found to reduce output growth volatility, fluctuations in private credit, and the probability of bank default. However, if bank competition increases beyond the optimal level it may foster economic and financial instability.

Khan, Ahmad, and Gee (2016a) analyzed the effect of banking sector competition on monetary policy transmission through the bank-lending channel. Using two structural (CR5 and HHI) and two nonstructural (Lerner Index and Boone Indicator) indicators of competition, they found that a lower level of competition in the banking sector weakens monetary policy transmission and hence could promote macroeconomic instability.

Allen and Gale (2004) argue that the complicated cause-and-effect relationships between regulation, competition, and financial stability call for sound policies that take account of all factors that work on both theoretical and empirical levels. An appropriate regulatory regime is a key requirement for limiting excessive risk taking.

10.2.5 Competition and Financial Inclusion

It has also been shown that the degree of competition in the financial sector can affect (negatively or positively) the access of small and medium-sized enterprises and households to financial services, which could have an effect on overall economic growth.

The theoretical literature has inconclusive results on whether technological innovations that reduce production or distribution costs of financial service providers lead to greater or better access to finance (Dell'Arccia and Marquez 2004; Marquez 2002). The implications for competition are further complicated by the existence of network effects in financial services production, distribution, and consumption, such as credit bureaus, the use of ATMs and liquidity in stock exchanges (Claessens 2009).

Increased competition can have negative effects on financial inclusion, as it can reduce the incentives of banks to invest in acquiring information and thereby limit their lending to borrowers with greater information asymmetry (Claessens 2009). Some studies have found evidence for the US, the EU, and some emerging markets that consolidation, including increased foreign bank entry, has led to a greater distance between lenders and borrowers, resulting in less lending to small and medium-sized enterprises (Berger et al. 2005; Karceski, Ongena, and Smith 2005; Degryse, Masschelein, and Mitchell 2005). Beck and Soledad Martinez Peria (2007) found different effects of foreign bank entry for different classes of borrowers in Mexico.

10.3 Who Is in Charge of Competition Policy?

A review of cases investigated by Asian competition regulators shows scant involvement in the financial sector. The few cases that were found were mainly in the insurance sector. Some cases were related to market abuse, not market structure, e.g., cartel arrangements to control input costs or marketing of specific products. For example, in 2020 the Malaysia Competition Commission found that 23 insurance companies had restricted competition by participating in an agreement that aimed to restrict the market of parts trade and labor charges for the Persatuan Insurans Am Malaysia Approved Repairers Scheme related to automobile repair schemes (MCC 2020). Other cases were related to mergers, e.g., the proposed acquisition by AIA Philippines Life and General Insurance Company of shares in MediCard Philippines Inc. (PCC 2023).

Therefore, competition policy in the financial sector seems mainly to be a byproduct of financial regulatory decisions, the most important of which include the licensing of new entrants and discriminatory treatment of foreign banks, such as restrictions on their activities in the domestic market, especially the retail market.

Decisions on how to handle exits from the financial sector due to insolvency during a financial crisis may or may not involve the competition authorities, depending on the institutional arrangement. Vives (2011) and Foer and Resnikoff (2014) point out that during the global financial crisis of 2008–2009, US financial regulators had no requirement to be concerned about the increased concentration in the banking sector resulting from mergers of failed institutions with other banks. On the other hand, in the EU, the competition authority has control over state aid to financial institutions, and thus has a legal responsibility to make sure that competition policy is enforced during situations of bank resolution. It seems likely that no Asian economies delegate a similar role for the competition authority in the case of a financial crisis, but it is well worth considering.

10.4 Implications of Financial Technology for Competition in the Financial Sector

10.4.1 Overview

Financial technology (fintech) is a promising tool to promote financial inclusion, that is, to broaden the access of excluded households and small firms to financial products and services. Fintech uses software,

applications, and digital platforms to deliver financial services to consumers and businesses through digital devices such as smartphones. Financial inclusion in turn can help promote more inclusive growth by providing the previously unbanked with access to mechanisms for savings, investment, smoothing consumption, and insurance (Morgan and Huang 2021).

The Financial Stability Board defines fintech as “technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services.” These functions may be viewed as efforts to reduce financial frictions, such as information asymmetries, incomplete markets, negative externalities, misaligned incentives, network effects and behavioral distortions (FSB 2017).

The Financial Stability Board classifies fintech activities into five major categories of financial services:

- Digital payments, clearing, and settlement: Electronic money (e-money), mobile phone wallets, digital currencies (including cryptoassets [both unlinked and stablecoins] and central bank digital currencies [CBDCs]), remittance services, value transfer networks, digital exchange platforms, etc.
- Deposits, lending, and capital raising (alternative finance): Crowdfunding, P2P lending, online balance sheet lending, invoice and supply chain finance, etc.
- Insurance: Insuretech, i.e., “insurance technology,” the use of innovative digital technology to reduce costs of insurance companies.
- Investment management: Internet banking, online brokers, robo-advisors, cryptoasset trading, personal financial management, mobile trading, cryptoassets.
- Market support: portal and data aggregators, ecosystems, data applications, distributed ledger technology (DLT), security, cloud computing, Internet of Things/mobile technology, artificial intelligence (AI), and machine learning (FSB 2017).

We focus on the first, second, and fourth categories—payments, deposits, and investment—as they pose the most challenges to the traditional banking sector in the areas of competition, financial stability, and monetary policy effectiveness.

According to the Bank for International Settlements (BIS 2018a) a digital currency is an asset that only exists electronically and can be used as a currency (means of payment, store of value, unit of account) although it is not legal tender. Digital currencies sometimes use DLT

systems to record and verify transactions made using the digital currency. These include private currencies and digital versions of national bank currencies. Digital currencies that use cryptographic techniques to verify transactions are called “cryptocurrencies” or “cryptoassets”.¹ Digital currencies issued as liabilities of central banks are called CBDCs and are legal tender.

A key challenge for regulating fintech is the potential threats it poses to competition, financial stability, and monetary policy effectiveness. Fintech’s promise for financial inclusion can only be realized if the accompanying risks are managed to maintain trust in the system and avoid a build-up of risks that could lead to financial instability. The development of the fintech sector will affect bank operations, and potentially, their financial stability through multiple channels, including payments, deposits, and credit. Although fintech companies often compete with banks and other traditional financial institutions, collaboration with them based on complementarities of comparative advantages is also widespread. Both trends are likely to accelerate following the novel coronavirus disease (COVID-19) pandemic.

The entry of nonfinancial big tech companies into the financial services sector has implications for regulation, including for competition policy, financial stability, and consumer protection. The growing use by big tech and other companies of exploding amounts of individuals’ personal data creates important questions about consumer protection and privacy (Beck 2020; Carstens 2021). Big tech refers to large globally active technology firms with a relative advantage in digital technology, such as Apple, Facebook, Google, Ant Financial, and Tencent. Big tech firms typically provide internet-based services (search engines, social networks, e-commerce, etc.) and/or information technology platforms or supply infrastructure services such as data storage and processing capabilities which other companies can use to provide products or services (BCBS 2018). However, regulation of the big tech firms is often different from that of financial institutions, which can lead to an unlevel playing field.

Big tech firms are entering financial services at a rapid pace. Starting with payments, big tech companies such as Alipay and WeChat Pay have expanded into other services including lending, insurance, and savings and investment products, either on their own or with financial institution partners. Compared with the incumbents, big tech firms have

¹ The terms cryptocurrencies and cryptoassets are used interchangeably by institutions such as the Financial Stability Board and the Bank for International Settlements. However, Group of Twenty (G20) documents refer to them as cryptoassets, so we adopt that terminology here.

the advantages of big data analysis, large networks, and economies of scale and scope, which might lead to greater concentration (Frost et al. 2019). Big banks are beginning to feel these competitive pressures and are responding in different ways, such as buying up small fintech companies or investing heavily in fintech.

Both fintech and big tech companies often rely on algorithms, AI, and machine learning to make decisions about credit and other transactions. The use of such algorithms can increase transparency, but it could also foster collusion. Algorithms can also have hidden biases resulting from the data used to create them, which creates issues for consumer protection as well.

The intersection between data privacy protection and competition law has received increasing attention in recent years. Douglas (2021) provides an overview of the issues. In particular, data portability is seen as a way to promote competition by reducing barriers to switching between different services, while firms with market power may abuse their access to personal data. Also, firms may present privacy options to consumers in ways that may be complex or misleading.

The main theory linking data privacy to competition policy is the view that data privacy can be seen as a parameter of a product or service quality affected by the degree of competition, which is referred to as the “privacy-as-quality” (Douglas 2021). For example, if a proposed merger is expected to reduce the degree of privacy protection offered to consumers, this should be considered in making the overall decision of whether or not to approve the merger. However, the theory is still at a very early stage, and issues such as measuring the degree of privacy protection and the relevant market are not yet clear.

Closely related to privacy protection is the issue of open banking, which is becoming a widespread topic. Palmieri and Nazeraj (2021) define open banking as “...the ability of banking customers to allow third-party providers to access their bank account data for several purposes.” The basic idea is that giving fintech companies and other providers access to bank account competition will increase competition. However, they argue that a positive effect on competition may not occur if open banking gives big tech companies an unfair advantage at the expense of incumbent banks.

Credit and Deposits

The development of P2P lending could undermine the stability of banks, by reducing both deposits and loans. Greater competition from fintech lending platforms could reduce the profitability of traditional banks. The “unbundling” of bank business lines as banks respond to competitive pressures by outsourcing certain activities to reduce costs could shrink

banks' revenue bases, making them more subject to losses and reducing their cushion of retained earnings as a source of internal capital. For instance, purely digital banks such as Webank are directly competing for customers from traditional banks and even attracting new ones with their technological advantages and low-cost services.

The P2P lending business model carries inherent risks for financial stability (Nemoto, Storey, and Huang 2019). There are problematic incentives for platforms to originate loans without holding the risk of these loans, which could lead to excessive lending. For example, P2P platforms usually receive revenue as a function of the loan volume generated, which could incentivize them to maximize loan origination at the expense of credit standards. In several countries, including the PRC, P2P platforms have committed fraudulent behavior and run Ponzi-like schemes. In response, the PRC's regulators have largely shut down the sector.

The Bank for International Settlements Committee on the Global Financial System and the Financial Stability Board (BIS and FSB 2017) have concluded that, so far, fintech-related credit is still small enough not to pose a systemic risk. This reflects the small size of transactions, which are used mainly for working capital rather than investment, and perhaps basic limitations of the model, such as the lack of collateral or collection mechanism in case of default. This conclusion is supported by the data in Table 10.1, which shows that the share of P2P lending in total lending in Asian countries is still very small, less than 0.1% of GDP in most cases. (The share in the PRC fell further more recently due to tighter regulation of fintech platforms.) The share of crowdfunding in equity finance is even lower. Nonetheless, even if such lending is small from the viewpoint of financial stability, such lending may still pose risks of overborrowing by unsophisticated consumers. However, this would be more of an issue for the consumer protection authority rather than the competition authority.

Nonetheless, this conclusion could change if fintech services grow further. Particularly, the recent entry of big tech firms, which have a competitive advantage due to the massive amounts of data on consumer spending behavior they possess, presents new and difficult regulatory trade-offs between financial stability, competition, and data protection (BIS 2019; Amstad 2019).

The development of CBDCs could also reduce the demand for bank deposits, potentially undermining the stability of banks. The rapid pace of change in the fintech space makes it particularly difficult for authorities to assess and respond to risks (e.g., credit and liquidity) in the financial system. To be sure, the development of alternative finance may well imply a need for longer-term restructuring of the traditional

Table 10.1: Comparison of Alternative Finance with Conventional Loans

Economy	Loans, % of GDP, 2019				
	(1) Total conventional (2)+(3)+(4)	(2) Commercial banks	(3) Credit unions and credit cooperatives	(4) Microfinance institutions	(5) Alternative finance
	(2)+(3)+(4)				
Brunei Darussalam	29.1	29.1	–	–	0.0
Cambodia	117.3	90.6	–	26.7	0.0
PRC	111.4	108.4	3.0	–	0.6
Indonesia	35.5	35.5	–	–	0.1
Japan	133.4	101.5	31.9	–	0.0
Republic of Korea	117.1	88.7	28.4	–	0.1
Lao PDR	46.0	45.3	0.1	0.6	0.0
Malaysia	109.4	109.4	–	–	0.0
Myanmar	24.3	22.8	–	1.5	0.0
Philippines	34.0	34.0	0.0	–	0.0
Singapore	136.4	136.4	–	–	0.1
Thailand	83.3	70.8	12.5	–	0.0
Viet Nam	134.9	133.0	2.0	–	0.0

‘–’ = not available, GDP = gross domestic product, PRC = People’s Republic of China, Lao PDR = Lao People’s Democratic Republic.

Sources: IMF Financial Access Survey database (accessed 23 January 2022), IMF World Financial Outlook database (accessed 27 January 2022), Cambridge Centre for Alternative Finance Global Alternative Finance Benchmarks database (accessed 2 February 2022), author’s estimates.

banking sector, with weaker banks dropping out and others accelerating their technological development (Morgan and Huang 2021).

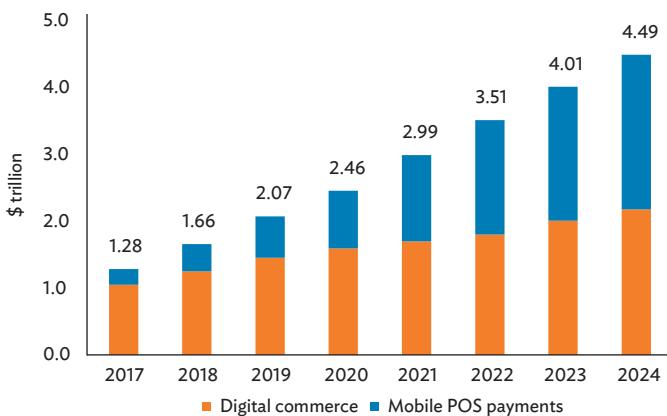
Payments

Digital payments comprise three major subcategories: mobile point-of-sale payments, digital commerce, and mobile money (a payment system that does not require bank accounts and instead relies on agent-banking outlets). Cryptoassets can also be used for payments.

Digital payments in the first two categories in Asia have grown rapidly over the past decade. Figure 10.1 shows the recent trend of total digital payments and their projection through 2024. Total transaction value in digital payments is projected to reach \$3,500 billion in 2022.

Total transaction value is expected to grow 16.3% annually and thus to reach \$4,490 billion by 2024. Mobile point-of-sale payments are projected to grow 27.5% and digital commerce 8.8% in the same period. Transaction value is highest in the PRC (\$1,920 billion, or 78% of the total) (Statista 2020).

Figure 10.1: Growth of Digital Payments Transaction Value in Asia (\$ trillion)



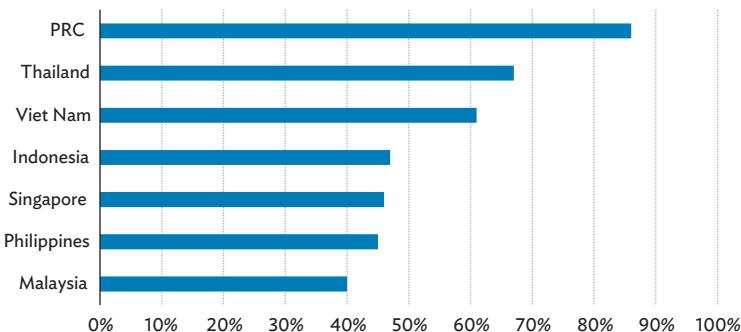
POS = point of sale.

Notes: Asia includes Bahrain, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, People's Republic of China, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kazakhstan, Republic of Korea, Kuwait, Kyrgyz Republic, Lao People's Democratic Republic, Lebanon, Malaysia, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Tajikistan, Thailand, Timor-Leste, Turkmenistan, United Arab Emirates, Uzbekistan, and Viet Nam.

Source: Statista (2020).

Figure 10.2 shows the share of mobile transactions in payments in stores in some ASEAN+3 countries. The PRC has by far the largest share at 86%, followed by Thailand and Viet Nam. Indonesia, Malaysia, Singapore, and the Philippines all have shares in the 40% range.

**Figure 10.2: Share of Consumers Using Mobile Payments, 2019
(% share)**



PRC = People's Republic of China.

Source: PWC (2019).

If innovative payment and settlement services develop into systemically important financial market infrastructures, their losses could impair the supply of important services and become an obstacle to recovery or orderly resolution. Some of these important services may be provided by a parent company in other business lines, such as big tech companies, whose other operational priorities might conflict with the offering of financial services, and could be outside the normal financial regulatory scope (FSB 2017).

Perhaps the biggest potential concern regarding payment systems for financial stability is the development of unregulated payment systems, including private digital currencies such as Bitcoin. Systems that rely on decentralized settlement are inherently difficult to regulate, because there is no barrier to entry, they are borderless, and there are no “institutions” that could be subject to regulation. Such systems are not amenable to consumer protection measures either, as there is essentially no recourse if problems with transactions occur. Widespread use of digital currencies (either private cryptoassets or CBDCs) might reduce demand for cash and related traditional payment infrastructure, which could damage the ability of the payment infrastructure to provide efficient and reliable services. Digital currencies and digital wallets could displace traditional bank-based payment systems, while payment aggregators could become the main channel for accessing banks and applying for new bank accounts and loans, thereby becoming systemically important (FSB 2017).

However, the size of cryptoassets is very small, and they face various barriers to widespread use as stores of value or means of exchange, especially their high price volatility. As of 12 November 2022, there were about 21,700 cryptoassets with a total market capitalization of around \$848 billion (Coinmarketcap 2022). This compares, for example, with the current value of the US dollar monetary base of about \$5.4 trillion. Stablecoins could potentially mount a more sustained challenge to legacy payment systems, and this trend needs to be monitored closely by the Group of Seven and Group of Twenty authorities. However, private stablecoins may face significant difficulties in maintaining their advertised pegs to fiat currencies or other commodities.

The implications of DLT for wholesale and retail payments need to be carefully studied, as DLT solutions are still at an early stage of development, and more time is needed to evaluate their effectiveness. DLT solutions entail a number of new risks. In post-trade clearing and settlement, settlement finality is a legally well-defined moment, normally underpinned by a statutory, regulatory, or contractual framework related to a given financial transaction. Conversely, in a DLT solution based on majority votes, multiple parties have permission to update a shared ledger. These parties must agree on the particular state of the ledger by consensus, meaning that the finality of settlement using this model may only be probabilistic (FSB 2017).

Cyberattacks increasingly threaten the entire financial system, and fintech could raise this risk. The BIS cites cyber attacks in the financial as a threat to financial stability, making cyber risk a key concern for policymakers (Doerr et al. 2022). The susceptibility of financial activity to cyberattacks is likely to increase as systems of different institutions become increasingly connected, if one of them proves to be a weak link (FSB 2017).

10.4.2 Monetary Policy Effectiveness

Widespread use of cryptoassets might also diminish a central bank's control over monetary policy and inhibit the effectiveness of lender-of-last-resort interventions, with negative implications for financial stability. The development of cryptoassets could lead to destabilizing fund flows outside of the control of traditional instruments of central banks and a loss of information about the actual amount of liquidity in the system, thereby potentially weakening the transmission mechanism and the effectiveness of monetary policy.

If the transaction volume of a global stablecoin increases dramatically, it is not clear that the issuer would be able to continue to supply it without disrupting payments and creating substantial volatility in the stablecoin value. In an economy with an unstable, unreliable

government, the availability of a global stablecoin might increase the risk of capital flight. Therefore, a shift in holdings from a domestic fiat currency to a stablecoin may not only reduce the effectiveness of monetary policy but could also lead to significant depreciation of a vulnerable currency (Shirai 2020).

The introduction of CBDCs potentially presents the greatest challenges for implementing monetary policy. The features of a CBDC would largely determine its potential attractiveness to investors and hence the potential demand for it. A CBDC that pays interest and is readily transferable could prove attractive to institutional financial market participants and become a substitute for money market instruments such as government bills, reverse repos, central bank bills, and foreign exchange swaps. It could also be a liquid and credit-risk-free asset facilitating final settlement. A CBDC of a major currency usable by nonresidents could substitute for internationally used banknotes, bank deposits, and international reserve assets, and thereby become an important component of international capital flows (CPMI–MC 2018).

On the negative side, during financial stress, domestic investors may consider a CBDC to be more attractive than private bank deposits, leading to a possible outflow of deposits from the banking system, with potential negative implications for banking system stability. Also, central banks may be cautious for fear they would suffer reputational losses if their implementation of retail CBDC were not to succeed (Shirai 2020).

10.4.3 Regulatory Approaches and Issues

Regulatory frameworks for fintech must address a complex intersection of issues. First, they need to balance the positive aspects of financial innovation against the needs for financial stability, maintenance of a level playing field for competitors, consumer protection, cyber security, data protection, and anti-money-laundering and/or countering the finance of terrorism efforts. Second, they must take into account the increasing role of big tech firms and telecommunication companies not normally within the financial regulatory perimeter. The development of alternative lending platforms and digital currencies, either private or the central bank, has potentially negative implications for the stability of the banking sector. Regulators must also work hard to upgrade their expertise and stay on top of rapidly evolving technologies and markets.

The Bali Fintech Agenda, launched by the International Monetary Fund (IMF) and the World Bank in October 2018, is perhaps the most comprehensive attempt in one framework to address issues related to fintech and the financial sector (IMF 2018). Table 10.2 shows its main elements, which illustrates the complex nature of the problem.

**Table 10.2: Bali Fintech Agenda Elements:
Balancing Opportunities and Risks**

No.	Elements
1	Embrace the opportunities of fintech
2	Enable new technologies to enhance financial service provision
3	Reinforce competition and commitment to open, free, and contestable markets
4	Foster fintech to promote financial inclusion and develop financial markets
5	Monitor developments closely to deepen understanding of evolving financial systems
6	Adapt regulatory framework and supervisory practices for orderly development and stability of the financial system
7	Safeguard the integrity of financial systems
8	Modernize legal frameworks to provide an enabling legal landscape
9	Ensure the stability of monetary and financial systems
10	Develop robust financial and data infrastructure to sustain fintech benefits
11	Enhance collective surveillance and assessment of the financial sector

Source: IMF (2018).

Items 1–3 cover competition issues, item 4 deals with financial inclusion, while items 5–11 address financial stability issues.

As big tech firms increasingly enter financial markets as direct competitors of traditional financial institutions, financial authorities face new challenges on both a national and international level. A key question related to fintech and big tech companies is whether one should regulate only financial activities or the whole entities. The activities of big tech firms are closely integrated and data from one operation is used in others as well. An example is Alibaba's ANT and Alipay. Activity-based regulation may not be sufficient to create a level playing field between banks and big tech firms, because the latter are not subject to entity-based prudential regulation (Carstens 2021). Telecommunications firms are involved in the provision of mobile money, but also lie outside the normal regulatory perimeter.

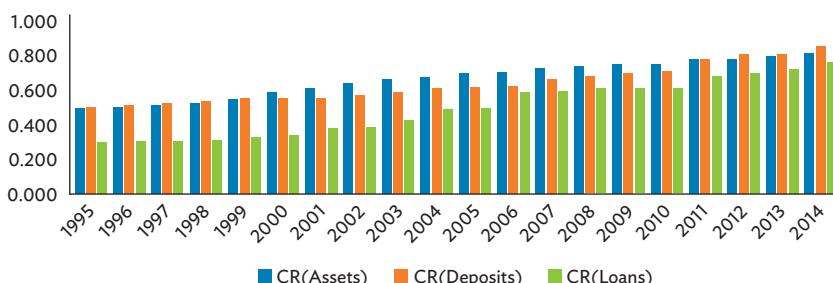
Money laundering stands out as a key risk to market integrity stemming from fintech. The recommendations by the independent intergovernmental body, the Financial Action Task Force, are regarded as the standard for global anti-money-laundering and/or countering the finance of terrorism activities (Amstad 2019).

10.5 Competition Policy and Foreign Entry in ASEAN

As noted in Section 10.2, empirical studies have generally found that entry of foreign banks into markets has positive effects on efficiency and financial development, although the implications for financial inclusion are less clear. However, with a few exceptions, foreign banks tend to play a limited role in most ASEAN economies. In particular, entry of ASEAN member country banks into other ASEAN markets has been limited.

Most studies using a variety of methodologies find that the banking sector in ASEAN countries is somewhat concentrated. Astuti and Saputra (2019) used Stochastic Frontier Analysis and the Adjusted Lerner Index methodologies to estimate the efficiency and competitiveness of banks in the ASEAN-5 countries—Indonesia, Malaysia, Philippines, Singapore, and Thailand. They found that, on average, the efficiency and the competition level of banks in those countries is relatively high. They concluded that competition in the ASEAN-5 banking sector can be characterized as monopolistic where banks compete by having diversified products or segments. Khan, Ahmad, and Gee (2016b) analyzed the effect of market structure on growth in 10 Asian emerging economies and found that financially dependent industries grow more when banking sectors have greater competition. Ventouri (2018) found that banks in ASEAN countries operate under monopolistic competition, although there is still a high level of heterogeneity among the ASEAN countries' banking markets and banking integration remains a challenging objective for the region. Khan et al. (2017) find that various concentration ratios have increased steadily in recent years, hitting around 60%–80% by 2014 (Figure 10.3).

Figure 10.3: Bank Concentration Ratios in ASEAN-5 Countries



CR = 5-bank concentration ratio.

Source: Khan et al. (2017).

Regional financial integration in ASEAN+3 has proceeded cautiously, due to differences in economic and financial systems, levels of economic and financial development, concerns about the negative impacts of volatile capital flows, and the desire of countries to maintain sovereignty. Even within ASEAN, the principle of voluntary cooperation has been maintained. Liberalization of loan and equity flows has taken place substantially, but allowing direct investment in the financial sector, such as establishment of branches of one country's bank in another, has proceeded more slowly.

Endorsed by the ASEAN Central Bank Governors in 2014, the ASEAN Banking Integration Framework (ABIF) is the template for integrating finance sectors in the ASEAN-5 countries. The framework, part of the commitment under the ASEAN Framework Agreement on Services, allows designation of Qualified ASEAN Banks (QABs) to banking institutions that meet the criteria subject to assessment and bilateral agreement. The designation will give the banks greater access to the other ASEAN economies (ASEAN 2015). Specifically, under the ABIF, any QAB can be reclassified as a local bank across the 10 ASEAN economies, allowing them to operate and compete more effectively with international counterparts.

However, the overall pace of designating QABs in the region has been very slow despite the willingness expressed by the national authorities. So far only two Malaysian banks—CIMB and Maybank—were granted the qualification to operate in Indonesia (ASEAN 2021a). These qualified banks need to mutually comply with both international standards and those prescribed by specific ASEAN country authorities.

One question is whether the common challenges posed by fintech can provide a lever to promote further cooperation in financial stability, financial integration, cooperation in cross-border payments and settlement, and harmonization of regulations and fintech practices, as well as mutual learning from each other's fintech experiences.

The ASEAN authorities have backed a study on the changing financial landscape in the region brought about by digitalization in preparation for the review of the ABIF Guidelines (ASEAN 2021b). The initiative is relevant and timely as ASEAN has made some progress in cross-border investment in digital banking. In December 2020, the Monetary Authority of Singapore awarded digital banking licenses to four entities, including a consortium of Singapore Telecommunications Ltd (Singtel) and Grab Holding Inc (Grab), a consortium of Greenland Financial Holdings Group Co. Ltd and Linklogis Hong Kong Ltd, Ant Financial, and Beijing Co-operative Equity Investment Fund Management Co. Ltd. Among these, the first two attained digital full bank licenses, while the latter two PRC-based companies obtained digital wholesale bank licenses. The Philippines has likewise awarded its

first digital bank license to Neobank Tonik in March 2021 (Tonik 2021). This could provide a boost to encouraging cross-border investment by more traditional banks as well.

A final issue is the implications of an exit policy for competition. For example, banks in some countries may have more generous access to local financial safety nets than do banks from other countries. Even within a single country, state-owned banks may be able to attract deposits at lower interest rates because they are effectively covered more generously by the safety net. Such issues can arise both *ex ante* and *ex post*, for example when weak banks receive liquidity and/or solvency support (Claessens 2009).

10.6 Conclusions and Recommendations

Competition policy for the financial sector presents difficulties because of a number of factors. First, the financial sector is viewed as strategic for the economy, given its critical role in intermediating the supply of funds to the rest of the economy to support economic activity, investment, development and growth. As a result, it is a target for many government policies, including the prominent role of state-owned banks in some countries. At the same time, it is prone to boom-bust cycles that can pose significant potential threats to both financial and economic stability. The financial sector is also viewed as a vehicle for promoting financial inclusion, i.e., providing access to financial goods and services to previously underserved groups. Recent developments in the area of fintech, ranging from the development of digital currencies to P2P lending and crowdfunding, have raised new uncertainties about their impacts on the structure and competitiveness of the financial sector and their implications for regulatory policy and monetary policy effectiveness. Finally, the relationships between competition, financial stability, and financial inclusion remain uncertain. Balancing the trade-offs between financial innovation, financial stability, financial inclusion, and consumer protection is a continuing challenge for regulators in the face of rapid evolution of the sector. Competition policy in many cases has *de facto* become the province primarily of financial regulators rather than competition regulators, which has often led to competition considerations having lower priority than other regulatory concerns.

In order to address this situation, both the approaches and the institutional arrangements of competition policy need to be considered afresh. There are three possible and largely complementary approaches to implementing competition policy. The first is to ensure that entry and exit rules allow for contestable markets for financial institutions and products. The second is to level the playing field across financial service

providers and financial products in order to promote intra-sectoral competition. The third is to ensure that the institutional structure (payments system, credit bureaus, etc.) is contestable.

In many cases the institutional arrangements for competition policy may need to be adjusted as well. Competition policy should be separated more clearly from prudential oversight. Some countries have taken competition policy away from the mandate of the central bank or relevant supervisory authority, but in many countries the responsibility for competition policy still lies with the prudential authority, which creates conflict of interests (Carletti and Hartmann 2002). This points to a need for more clearly defining the role of the competition authority in regulating the financial sector.

10.6.1 Findings

This study has identified three major findings. First, aside from traditional cases of market abuse, competition policy in the financial sector seems to be mainly an unintended side effect of financial regulatory decisions regarding entry to and exit from the sector, which typically are driven primarily by concerns about financial stability and potential negative impacts on domestic financial institutions. This is the case both in normal times and in periods of financial crisis.

Second, the introduction of fintech services is promoting competition, efficiency, and product diversity in the financial sector, but also creates new risks and uncertainties. The major concerns regarding entry of fintech services to the financial sector are:

- (i) the impacts on the traditional banking sector regarding the demand for deposits, loans, and other financial products are unclear, and could undermine the profitability and stability of the sector;
- (ii) providers of fintech services which compete with more traditional financial services may not be regulated in a consistent way, leading to a non-level playing field and potential distortions;
- (iii) big tech companies may enjoy an unfair competitive advantage due to their voluminous data on customers and use of technologies such as artificial intelligence and machine learning;
- (iv) digital currencies, especially private stablecoins or CBDCs, could undermine the demand for traditional fiat currencies, thereby weakening the effectiveness of monetary policy and possibly facilitating volatile capital flows; and

- (v) fintech products and services may entail increased risks for consumers through cyber risk, fraud, identity theft, over-borrowing, and insufficient digital financial knowledge.

So far, however, market segments such as cryptoassets, P2P lending, and crowdfunding appear to be too small to pose systemic risks, but this could change in the future.

Third, the banking sector in most ASEAN countries has relatively high concentration ratios and other evidence of monopolistic competition. Foreign bank entry can promote increased efficiency and development of the financial sector, but such entry appears to be excessively restricted because of concerns about competitive threats to domestic market players.

10.6.2 Recommendations

Locus of competition policy

Countries should take steps to clarify the respective roles of financial regulators and competition regulators regarding the financial sector. It would be desirable to bring together competition policy functions that may be dispersed among various agencies within a country (e.g., separate for banking and nonbank financial institutions, or with prudential regulators, or among both specialized and general competition policy agencies). In particular, inputs from the competition regulator should be considered in the cases of both applications for licenses for market entry and exit from the market due to an institution becoming insolvent. The role of the competition authority in a financial crisis needs to be specified, especially in the case of resolution of failed institutions. The example of the European Union, where the competition authority has control over state aid to financial institutions, should be instructive. An explicit memorandum of understanding between the competition authority and the financial regulator(s) setting out mutual responsibilities and roles would be helpful.

The increasing digitalization of financial services implies that new market entrants may affect the competitive environment. For example, the competitive structure in telecommunications or big tech markets may affect the market for electronic finance, as in the case of mobile payments. Also, this points to a much greater need for international cooperation among various national agencies in the implementation of competition policy, including coordination for cases of failed institutions.

Fintech

The first requirement for both financial and competition regulators is to improve their capacity to follow and understand developments in the fintech sector and their potential implications for competition, financial stability, financial inclusion, and consumer protection.

To the extent possible, fintech services should be regulated in the same way that the same kinds of services delivered in a more traditional way are regulated. Given the borderless nature of some fintech services, it would be beneficial to harmonize the regulation of such services across countries as well. However, it should be recognized that this may raise difficult issues in the case of big tech firms that capitalize on their large datasets of consumer behavior and use this information in different business areas.

“Permissionless” systems such as cryptoassets using distributed ledger technology pose particular problems for regulation as they have no central governing body and are intrinsically borderless, and hence are difficult to regulate. International coordination of regulation in this area is a high priority.

New fintech services should be tested first in regulatory sandbox arrangements, and assessed in terms of their implications for competition as well as financial stability and consumer protection.

Assuring contestability of markets is another requirement to promote competition. For example, the infrastructure required for the production and distribution of financial services, including network-related services (e.g., payments and checking, credit bureaus, and other networks), should be accessible to all parties desiring them, be fairly and uniformly priced, and be efficiently provided (Claessens 2009). Making retail payment systems openly accessible (“open banking”) is an important example of this. Competition policies for networks in other industries may provide useful examples. Nonetheless, care should be taken that the introduction of open banking does not overly benefit big tech companies at the expense of incumbent banks. The use of algorithms needs to be monitored to avoid biases and opportunities for collusion.

Foreign bank entry

Regulatory restrictions on foreign bank entry generally appear to be too strict. These licensing regulations should be reviewed from the perspective of competition policy as well as financial regulatory requirements.

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11

Micro, Small, and Medium-Sized Enterprises, Digital Platforms, and Competition Policy in Asia

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11.1 Introduction

We start this chapter by describing the overall micro, small, and medium-sized enterprise (MSME) landscape in Asia. MSMEs have been the main driving forces of Asia's phenomenal growth in the past decades. Tables 11.1 and 11.2 show the significance of MSMEs in selected economies in Asia. In terms of their number, MSMEs dominate all types, accounting for 90% or more of all enterprises in each of these economies. Around 50%–70% of the total national labor force has been absorbed by MSMEs. During 2007–2021, the gross domestic product (GDP) contribution of MSMEs had been as high as 59% (Table 11.3). More importantly, MSMEs' shares in both total employees and GDP are expanding moderately. A limited but sizable number of MSMEs engage in international trade—for example, MSMEs brought about 30% of the total export value in Asia (ADB 2014). This indicates that MSMEs have also been part of the global value chain (GVC), which is one of the main drivers of the contemporary Asian economy.

Table 11.1: MSMEs to Total Number of Enterprises (%)

	2010	2015	2021
Southeast Asia			
Brunei Darussalam	97.5	96.6	97.3 ^{*2019}
Cambodia	99.8 ^{*2011}	99.8 ^{*2014}	...
Indonesia	99.99	99.99	99.99 ^{*2019}
Lao People's Democratic Republic	...	99.8 ^{*2013}	99.8 ^{*2020}
Malaysia	98.5	98.5	97.4
Myanmar*	90.3	87.1	89.9 ^{*2019}
Philippines	99.6	99.5	99.6
Singapore	...	99.4	99.6
Thailand*	99.6	99.7	99.8
Viet Nam	97.5	98.0	97.4 ^{*2019}
South Asia			
Bangladesh	99.97 ^{*2013}	...	...
India	...	...	99.9 ^{*2016}
Pakistan	...	...	98.6 ^{*2020}
Sri Lanka*	99.8 ^{*2013}	94.9	93.9 ^{*2018}

MSME = micro, small, and medium-sized enterprise.

Notes: *End-of-year data except fiscal year data (ended 31 March in Myanmar). For Thailand, 2021 data were sourced from 2022 Business and Industrial Census. For Sri Lanka, data for 2015 onward refer only to the sum of manufacturing, trade, and services (Annual Survey of Industries, Annual Survey of Trade, and Annual Survey of Services).

Sources: Asian Development Bank (2021a), and ADB Asia SME Monitor 2022 database (accessed 8 August 2024).

Table 11.2: MSME Employment Share to Total National Labor Force (%)

	2006	2010	2015	2021
Southeast Asia				
Brunei Darussalam	...	59.4	55.1	55.7 ^{*2019}
Cambodia	...	72 ^{*2011}	71.8 ^{*2014}	96.9 ^{*2019}
Indonesia	...	97.3	96.7	96.9 ^{*2019}
Lao People's Democratic Republic	87.4	...	82.9 ^{*2013}	82.4 ^{*2018}
Malaysia*	56.9	57.1	46.6	48.0 ^{*2020}
Myanmar	...	...	...	...
Philippines	66.8	62.3	61.6	64.7
Singapore	...	...	73.5	70.9
Thailand*	76.0 ^{*2007}	77.9	80.4	76.9
Viet Nam	39.2 ^{*2007}	45.1	44.2	37.5 ^{*2019}
South Asia				
Bangladesh	...	...	85.9 ^{*2013}	...
Nepal*	...	...	...	73.5 ^{*2020}
Pakistan*	...	...	72.6	72 ^{*2018}
Sri Lanka*	...	...	41.6	32.4 ^{*2018}

MSME = micro, small, and medium-sized enterprise.

Notes: *End-of-year data except fiscal year data (ended 15 July in Nepal and 30 June in Pakistan). For Malaysia, data in 2015-2019 were revised based on a methodology change. Revised data include the government, informal sector excluding agriculture, unregistered businesses in agriculture, and outsourcing activities in computing the overall employment which signified as denominator. For Nepal, data were extracted from the Industrial Statistics 2019-2020, and small and medium-sized enterprises only). For Thailand, 2021 data were sourced from 2022 Business and Industrial Census. For Sri Lanka, data for 2015 onwards refer only to the sum of manufacturing, trade, and services (Annual Survey of Industries, Annual Survey of Trade, and Annual Survey of Services).

Sources: Asian Development Bank (2021a), and ADB Asia SME Monitor 2022 database (accessed 8 August 2024).

Table 11.3: MSME Contribution to GDP (%)

Country	2006	2010	2015	2021
Southeast Asia				
Brunei Darussalam	...	17.3	20.3	26.7 ^{*2019}
Cambodia
Indonesia	...	56.2	61.4	60.5 ^{*2019}
Lao People's Democratic Republic
Malaysia	30.4	32.8	37.0	38.2 ^{*2020}
Myanmar
Philippines	35.7	...	...	...
Singapore	47.5	43.9
Thailand	41.4 ^{*2007}	39.4	41.0	34.2 ^{*2020}
Viet Nam
South Asia				
Bangladesh*	17.8	16.4 ^{*2020}
India*	...	36.1	29.3	30.3 ^{*2019}
Nepal	22.0 ^{*2019}
Pakistan	...	40.0 ^{*2011}	...	...
Sri Lanka

GDP = gross domestic product; MSME = micro, small, and medium-sized enterprise.

Notes: *End-of-year data except fiscal year data (ended 30 June in Bangladesh and 31 March in India). For Malaysia, real GDP data. For Singapore, nominal value added of MSMEs. For Bangladesh, contribution of cottage and small enterprises to manufacturing gross value added. For Nepal, data are from the 2019 NRB Report. For Thailand, 2021 data were sourced from 2022 Business and Industrial Census. For Sri Lanka, data refer only to the sum of manufacturing, trade, and services (Annual Survey of Industries, Annual Survey of Trade, and Annual Survey of Services).

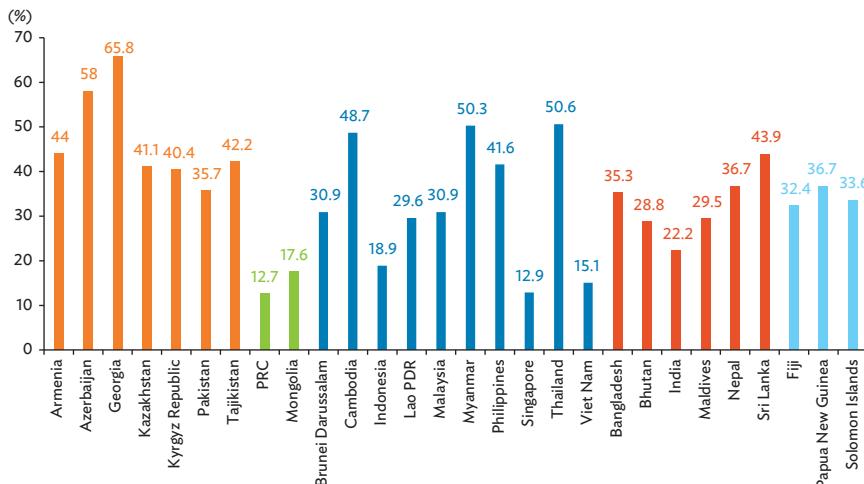
Sources: Asian Development Bank (2021a), and ADB Asia SME Monitor 2022 database (accessed 8 August 2024).

In Asia, most MSMEs are operating in traditional wholesale and retail trade as well as other service industries, operating primarily in rural areas. This means that the sustained growth of MSMEs will play a critical role in achieving inclusive growth, continuous poverty reduction, and narrowing regional disparities in developing Asia by providing employment and business opportunities for the young, the unemployed or underemployed individuals, the informal workforce, women, and other vulnerable people. Hence, it would be imperative for the private sector and governments to engage in market-oriented structural reforms as well as further investments in physical infrastructure and human capital so that MSMEs' dynamisms in enhancing productivity and growth of MSMEs are maintained.

11.1.1 Challenges and Constraints of MSMEs

MSMEs, and particularly MSMEs in the informal sector, constitute a significant part of the economies across Asia and the Pacific (Figure 11.1).

Figure 11.1: Size of Shadow Economies in ADB Developing Member Economies (% of country's GDP, average in 1999–2007)

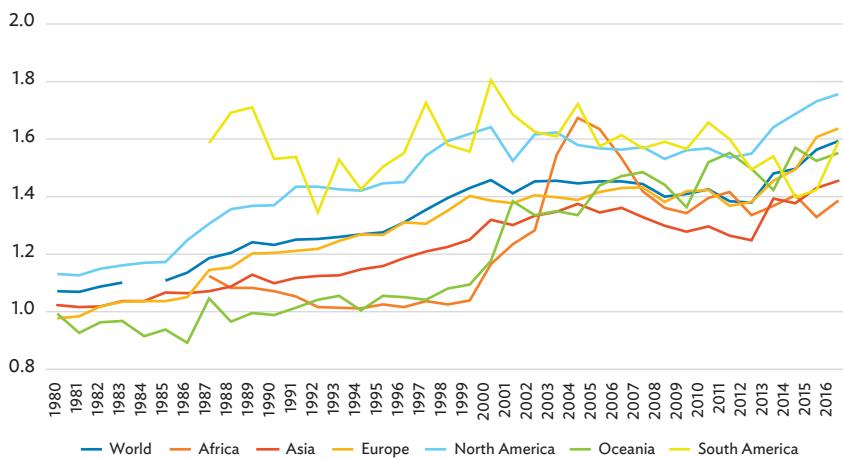


GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Source: Shinozaki (2022).

MSMEs in Asia and elsewhere have been facing a variety of challenges and constraints to thrive. We list five of them here. First, they lack resources such as credit and insurance, advanced technologies, skilled labor, and human capital for innovation. Second, limited supply chains and other networks plague MSMEs with inadequate information, know-how, experience, and access to markets, especially global ones. Third, MSMEs are usually not nested into an ecosystem for innovative and growth-oriented start-ups, which, in turn, leads to a lack of economies of scale and generates overall inefficiency. Fourth, for MSMEs, there has been a deficiency in well-organized government support, particularly for proper access to basic infrastructure such as electricity, transportation, and the internet, as well as other information and communication technologies. Finally, but more importantly, the lack of a regulatory framework to secure fair competition has been a major binding constraint for MSMEs because the increased competition and concentration from large domestic and multinational enterprises are undermining MSMEs' forward-looking investments in innovating new ideas, processes, and products as well as other research and development activities.

Related to the last challenge, according to the global database compiled by De Loecker and Eeckhout (2021), there has been an increasing trend of market power in the last few decades which can be seen from the ratio of price to (marginal) production cost, i.e., the price markup (Figure 11.2). They find that the aggregate global markup has increased from close to 1.15 percentage points in 1980 to around 1.6 percentage points in 2016, particularly in developed economies. Asia also follows the overall trend of concentration of economic activity toward large enterprises, which is often called the "superstar" phenomenon. The critical question is whether this concentration trend is good or bad (Covarrubias, Gutiérrez, and Philippon 2019) particularly for MSMEs where "Good Concentration" refers to trends that can be explained by good sources of concentration such as increases in the elasticity of substitution or technological change leading to increasing returns to scale and "Bad Concentration" may reflect bad sources of concentration such as rising barriers to competition that would affect MSMEs disproportionately.

Figure 11.2: Evolution of Markups in the World

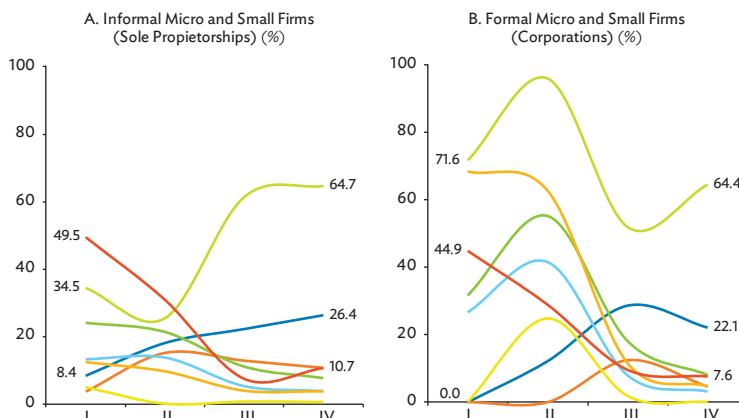
Source: De Loecker and Eeckhout (2021) (accessed 8 August 2024).

11.1.2 Digitalization, COVID-19, and Competition

Shinozaki (2022) shows that the above-mentioned five challenges have sharpened during the novel coronavirus disease (COVID-19) pandemic, and while digitalization has accelerated, not all enterprises in the shadow economy have benefited from the additional access and opportunities digitalization has provided during the pandemic (Figure 11.3). Using unique data from Indonesia to investigate whether and how digitalization and GVC participation of MSMEs help them weather the adverse shocks arising from the pandemic and the resulting lockdown, Oikawa et al. (2024) find that first, in the early phases of the pandemic, the digital transformation had yet to be established stably among MSMEs, and second, the MSMEs participating in the GVC have shown business resilience against the pandemic with increased sales and maintained employment even in the early phases. The latter finding indicates that the GVC network can provide a valuable opportunity for MSMEs to diversify from the pandemic shocks. Digitalization at an unprecedented speed characterizes the economies of Asia and around the world. The way we interact, communicate, and transact goods and services has been dramatically changed by digital platforms. The speed of digitalization has been the fastest in Asia out of all regions in

the world with its digital platform revenue growth reaching over 16% in 2018–2019 (ADB 2021b). While the penetration pace of digitalization among MSMEs in Asia has been moderate, overall e-commerce expanded rapidly in the 2010s.

Figure 11.3: Business Environment during the Pandemic



I = March–April 2020; II = August–September 2020; III = March–April 2021; IV = May 2021.

Note: There are a total of 528 valid samples in Indonesia for March–April 2020, 129 for August–September 2020, 2,515 for March–April 2021, and 2,207 for May 2021.

Source: Shinozaki (2022).

The outbreak of the COVID-19 pandemic in early 2020 fueled already growing global trade tensions and economic uncertainty in Asia, leading to a sharp deterioration of MSMEs' performance in the region (Shinozaki 2021). At the same time, however, Asia's rapid shift into digital economies for MSMEs has been facilitated further by the COVID-19 lockdowns. Indeed, to encourage the digitalization of MSMEs, several countries in the region have launched assistance programs such as Indonesia's E-Smart IKM program, Malaysia's Accelerating SME eCommerce Adoption program, DigitalJobsPH program of the Philippines, and Singapore's SMEs Go Digital program. While the pandemic and resulting lockdowns had disrupted MSMEs' business operations and consumer activities, particularly in the service

industries where new online businesses have proliferated, the lockdowns might have accelerated transactions on digital platforms, generating substantial economic benefits for MSMEs. It is an empirical question whether and how these two opposing effects have emerged before and after the outbreak of the pandemic. This is also a critical question because, in many ways, MSMEs hold the key to economic recovery in developing Asia.

The COVID-19-accelerated digitalization of recent years has also been changing Asia's competition landscape dramatically. Fast forward to today, COVID-19 has accelerated the widening of the scope of platforms and digital ecosystems and the extent to which they are impacting markets. It has also sped up the digital revolution already taking place, with firms upgrading their digital know-how and joining platforms in order to thrive in an increasingly connected and globalized world. However, as we will see later in the chapter, while all these changes are ushering in opportunities and benefits to consumers, firms, and the economy as a whole, digital platforms also have some characteristics that yield too much market power and bring challenges to other stakeholders, especially MSMEs, which are an important pillar of many Asian economies. Hence, the contribution of this chapter is to highlight the policy implications of the competition issues salient in digital platforms and markets in Asia, and to provide some policy guidance to overcome them, for countries to fully reap the benefits from the ongoing digital revolution in the region. Appropriate competition policies, which entail an in-depth understanding of the nature of digital platforms, will generate social benefits and foster further innovation and sustainable development in the region.

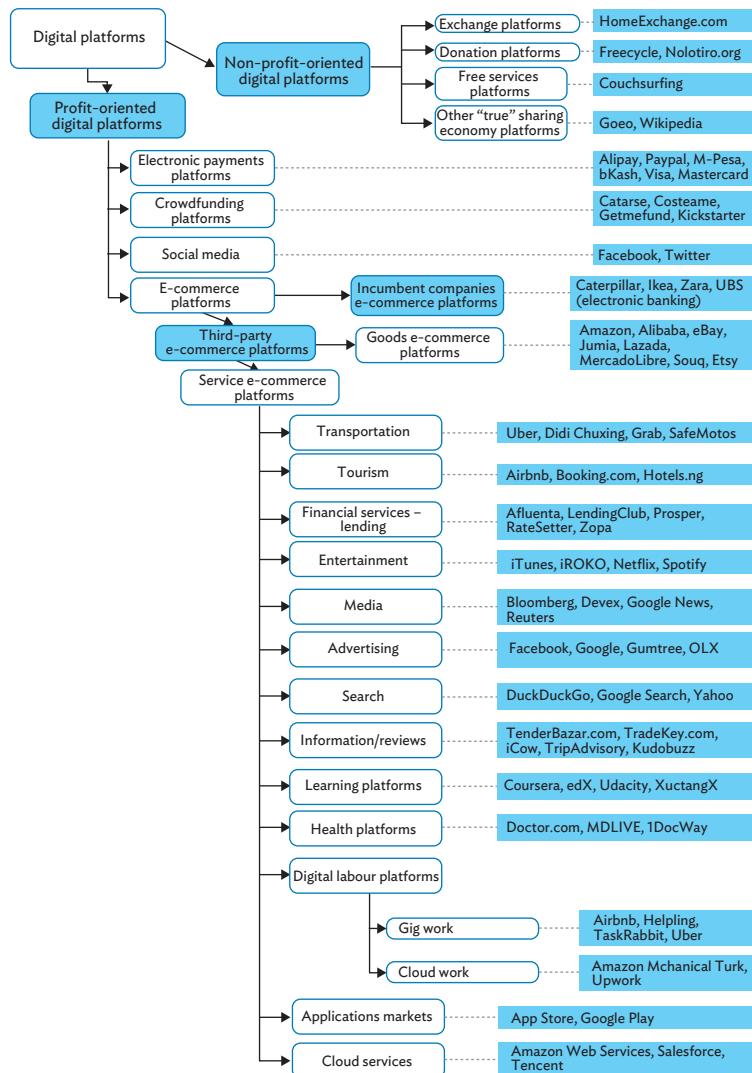
In this chapter, we discuss the links between competition, innovation, and digitalization, and economic performance in general and in Asia, showing how market structure and conduct characterize outcomes in the region. Recognizing the role of MSMEs in economies, it will in particular zoom in on the digitalization of MSMEs in Asia. Next, it will introduce how the different characteristics of digital platforms (e.g., two-sided markets, network externality, and zero and/or negative pricing) and market environments (i.e., type of platform competition) characterize market outcomes. The chapter will then discuss the government's role in evaluating competition performance by considering these special characteristics of platforms. A discussion of pertinent competition issues, current challenges, and the policy implications from these discussions will end the chapter, noting that competition authorities should not regulate platforms' activities based on the traditional policy tools for offline and for one-sided markets.

11.2 Platforms and Economics of Platforms

11.2.1 Definition of Digital Platforms

Digital platforms are internet-based, multisided markets that connect user groups. According to the United Nations Conference on Trade and Development (UNCTAD 2018), digital platforms are categorized into several kinds of platforms, but there seems to be no universal agreement on how exactly to draw a border between them. UNCTAD, in describing the new landscape of digital platforms, classifies digital platforms as either profit-oriented (e.g., Uber) or nonprofit-oriented platforms (the size of which is marginal compared to profit-oriented). In contrast, Belleflamme and Peitz (2021) argue that some platforms start without any monetarization tools, and switch to for-profit platforms after they obtain a sufficient number of users, so there is no clear differentiation between profit-oriented and nonprofit-oriented platforms. The main focus of this chapter will be profit-oriented platforms. Because several platforms have multiple purposes and face many markets, they can be in various places (as shown in Figure 11.4), since the variety and width of platforms are in some ranges.

Figure 11.4: Digital Platform Typology by UNCTAD



UNCTAD = United Nations Conference on Trade and Development.

Source: United Nations Conference on Trade and Development (2018).

11.2.2 Platform Key Characteristics

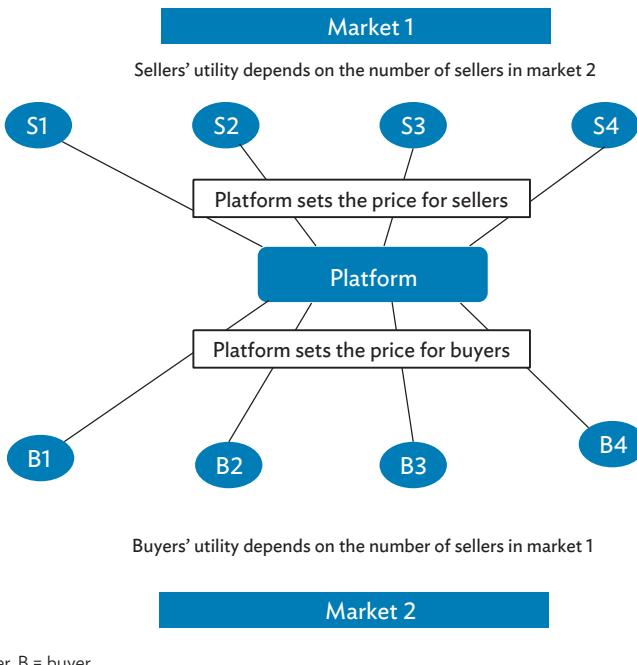
The network effect is a fundamental characteristic of platforms and important to understand why platforms tend to be large. Network effects are defined as the impacts that one more user of a product or service, or an additional participant to some interaction, has on the value that other users or participants attach to this product, service, or interaction (Belleflamme and Peitz, 2021). Social networking service platforms such as Instagram and Facebook provide a good example of the network effect; the value of services increases as more people use their services.

Another feature of platforms is that they provide multi-sided markets that connect user groups. Multi-sided markets are characterized by network externalities; the benefits of the members on one side (such as levels of utility and profit) depend on the number of participants on the other side. For example, the number of consumers using a credit card directly affects the profits of the firms on the other side of the market that accept the credit card. Although interdependency between markets exists in credit card payment, agents on each side do not internalize the effect of participation on the other side of the market. With network effects and network externalities, platforms create more values for users by getting larger in multi-sided markets.

Next, we investigate the effect of network externalities on the pricing behavior of platforms. In the conventional one-sided market, the price is determined by demand, marginal cost, and market power. The price is equal to or larger than the marginal cost depending on how strong the market power is, and it never goes below zero. However, with the existence of network externalities in a two-sided market, the price of the one side can be zero, or sometimes even become negative. This is because platforms do not only consider the direct effect of price on the demand in Market 1, but also the effect on participation in Market 2. Figure 11.5 illustrates the network externality in a platform and its pricing behavior.

For a better understanding of how the price could become negative under network externalities, let us consider the model of platform competition in Armstrong (2006). In this model, the platform has two sides (A and B) of consumers in which their utility depends on the price of their own side and the number of participants on the other side. In the equilibrium, the price on side A depends not only on the marginal cost and the market power as in the conventional one-sided market but also on how much benefits the platform can extract by attracting more participants to side B. In other words, if platforms raise the price in side A, it reduces the number of participants in group A, but such reduction in side A affects the attractiveness of the platform for

Figure 11.5: Illustration of a Platform Facing Two Distinct Markets



side B, and also reduces the participants in side B. The price on side A is lower compared to the case without the effect of participants on the other side. The effect on the other side directly results from the network externality. If the network externalities are high enough, that is, the participation from a group is highly attractive to the other side, benefits from lowering prices exceed those from increasing prices. As a result, setting a negative price to maximize their profit on one side may be optimal. An example of zero pricing in platforms is Google search services. Google offers search services to users at zero price, and they charge fees to advertisers. This is an optimal business strategy to provide search services to users at zero price, because if more people use their search services, the value of advertising their search service becomes higher. Likewise, Yelp, Facebook, and YouTube do not charge users on one side of the markets.

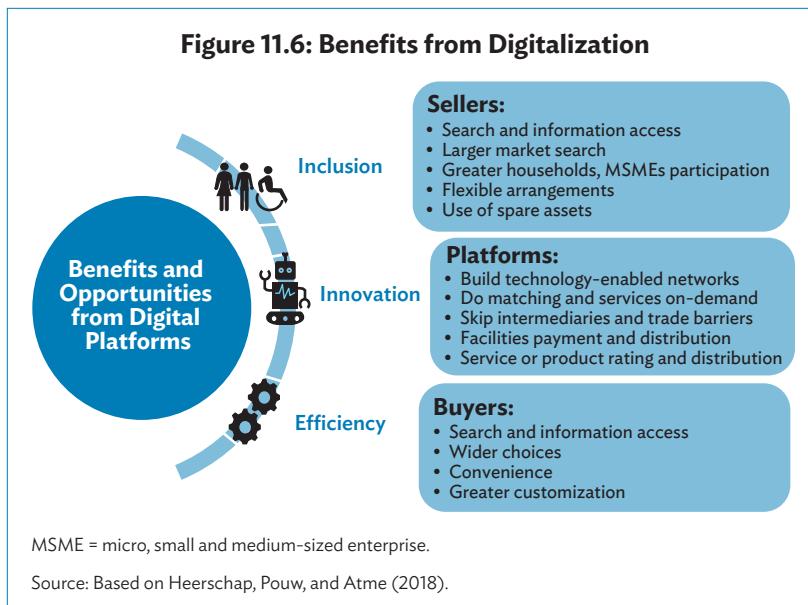
With the multi-sidedness of markets and zero pricing strategy, digital platforms could have strong network effects and enjoy significant economies of scale and scope. Another issue with platforms is the accumulation of data on consumer behaviors. Data accumulation in platforms would increase social welfare through improving the quality of matching of sellers and consumers by learning consumer behavior using a tremendous amount of data. De Cornière and De Nijs (2016) argue that learning consumers' tastes through platforms improves consumer-advertiser matching qualities. However, there also exists a view on the downside of data accumulation in platforms. Having more users generates more data that helps improve the recommendation algorithm for platforms. In other words, its mechanism is a vicious circle; platforms that successfully obtain a large number of users have more data, and their attraction to users becomes higher. These characteristics together result in digital platform companies with significant market power and the ability to dictate the rules of the game in the market ecosystems where they operate. Significant economies of scope as well as the nature of data accumulation in platforms raise a concern for competition policy as firms in dominant positions may engage in anti-competitive behavior that stifles innovation, and reduces consumer welfare and overall economic growth (Libre et al. 2021). We discuss more details on how competition issues arise with digital platforms in Section 11.3.

To illustrate the benefits and cost of utilizing digital platforms for MSMEs in Asia, a study by the Japan Fair Trade Commission (2019) is insightful to the views of sellers regarding platforms for e-commerce and mobile apps. In the study, the sellers claim that they have to accept unreasonable terms or changes determined by platforms to maintain businesses due to high dependency on sales to a specific platform. Unnegotiable acts of platforms toward sellers include an increase in transaction fees, enforcement of using platforms' payment settlement services, the most favored nation clause that forbids sellers from offering cheaper prices or better conditions on their own website, and manipulation of searching algorithm that shows products that are favorable to the platform in the top. These platforms' actions potentially harm the businesses of sellers, but they do not leave the platform, because the benefits that sellers gain from platforms are substantially large. For example, a platform's website creates opportunities that consumers see the products of sellers; otherwise, consumers never realize it. Moreover, big e-commerce or app store platform operators' websites provide easier experiences for consumers to make transactions with superior payment systems and user interface.

While antitrust concerns exist, digital platforms are expected to spread benefits to economic agents in three interrelated ways

(Figure 11.6). The first is through inclusion (search and information). E-commerce platforms, for example, have enabled small producers or distributors to find and connect with consumers in real time, and to sell in both domestic and international markets. This has contributed to providing goods and services on demand, raising the quality of goods and services, as well as reducing prices. The second is through efficiency (automation and coordination). The digital platforms augment the production or sales factor, and as a result, the cost of performing certain functions decreases with an improvement of efficiency by allowing companies to allocate resources better. Enterprises, industries, households, as well as the public sector, can thus experience higher efficiency. The third is through innovation (scale economies and platforms). Digital platforms enhance innovation by creating technology-enabled marketplaces that can bundle the ordering of goods and services with their payment, as well as transportation and delivery. Furthermore, digital platforms provide marketplaces where buyers and sellers instantly match without high trade boundaries and complex intermediaries. They have also allowed companies to take advantage of economies of scale through digital platforms and other online services that compete with traditional business models, such as Airbnb (lodging), Amazon and Alibaba (retail), Facebook (media), and Uber, Grab, and GoJek (transport), within the region. Through technology mediation, buyers and sellers also provide and receive feedback which helps the market expand and improve services. (Park, Villafuerte, and Yap 2021). For the purposes of the discussion in this chapter, we note that MSMEs can be viewed as complementors (sellers, developers, content providers) in the literature of platform economics. This definitional caveat will allow us to discuss the effects of platforms on MSMEs by emphasizing their effects on complementors in the remainder of the chapter.

A positive perspective on digital platforms is also introduced in the study by Goldfarb and Tucker (2019). The study conducts a comprehensive survey of how digitalization affects economies by lowering various kinds of costs. They present five channels: (i) lower search cost: the digital environment makes the cost of finding a particular type of information smaller including information on price, vacancy, and other economically important variables; (ii) lower replication cost: digital goods can be replicated with almost zero additional cost, though law enforcement should be accompanied to reduce negative aspects of non-excludability; (iii) lower transportation cost: information is delivered to distant places with almost zero cost and reduces the geographic constraints of economic activities; (iv) lower tracking cost: the lower cost with connecting agents that possibly enables firms to deliver information more efficiently; and (v) lower verification cost: the lower cost to check individual reputations.



Additionally, the positive effects of e-commerce through (i) lowering the search cost are reported by Couture et al. (2021), who analyze the effect of expanding e-commerce in the PRC on the welfare of households that use randomized controlled trial and microdata. They conduct experiments in eight counties in Anhui, Henan, and Guizhou provinces. They show that e-commerce opens access to rural households by removing a logistical barrier. Welfare gains of households from e-commerce mainly come from rural households, who are relatively young and rich. This result indicates that e-commerce enables MSMEs to access new customers that had been impossible to reach.

Regarding how platforms can increase matching efficiency, de Cornière and de Nijs (2016) propose an auction model of an online advertising market in which advertisers compete. Consumers are heterogeneous in terms of their willingness to pay. In their model, platforms gather information correlated with consumers' willingness to pay. Platforms cannot interpret the collected information on the willingness to pay, but advertisers can. Platforms choose either "disclosure" or "privacy". If platforms choose to disclose, they send information about consumers to advertisers. Digital platforms such as Tencent and Alibaba tend to accumulate data about their consumers, and hence, the platforms' decision to protect privacy or to disclose information is aligned with their practices. They show that the quality

of matching between consumers and advertisers increases when the platform chooses disclosure. This increase means that MSMEs would benefit from advertising technology that targets better-matched consumers on platforms. In practice, broad matching¹ improves the matching quality of consumers' interests with sellers not only in exact keywords matched with searched terms but also in related terms with searched terms. Broad matching allows sellers to reach broader consumers than exact matching. Under a better matching mechanism, sellers are facing consumers that have a higher willingness to pay. Although consumers pay higher prices in this mechanism, social welfare would increase.

11.2.3 Digital Platform Landscape in Asia

The digital landscape has been rapidly changing around the world. In 2022, among the eight largest companies in the world, five are platform companies—Apple, Microsoft, Alphabet, Amazon, and Meta Platform. According to Statista, business-to-consumer revenues from combined digital markets (e-commerce, e-services, apps [including transport]), digital media, advertising, and digital health, doubled to more than \$5.5 trillion in 2022, from about \$2.4 trillion in 2017 and about \$3.4 trillion in 2019 (Table 11.4). The pandemic is likely to enhance digital activities rapidly, and contributes to a sharp growth of the digital sector. E-commerce accounted for roughly two-thirds of these revenues in 2022, of which, about \$1.8 trillion were earned in Asia.

Although Asia has a significant share of e-commerce sales in 2022, a large gap in sales exists across countries in Asia. Heterogeneities in digital platform penetration across regions and countries are partially due to different maturity levels of preconditions for digitalization. There are four fundamental conditions that digital platforms can contribute to inclusive development for MSMEs (ADB 2021b). First, there is a need for “effective access” to information and communication technology (ICT) infrastructure by making ICT affordable with proper digital literacy for “adoption.” Second, digital financial inclusion is indispensable for making financial settlements of e-commerce feasible, reliable, and stable. Third, logistics and delivery infrastructure are indispensable to complete e-commerce transactions (although transactions for some services such as music, movies, and other entertainment services can be fully online). Fourth, a viable “ecosystem” is fundamentally based on

¹ Google. Broad Match: Definition. <https://support.google.com/google-ads/answer/2407779?hl=en>

Table 11.4: Digital Markets Revenues—World, 2017–2025
(\$ billion)

	2017	2018	2019	2020	2021	2022	2023	2024	2025
App	150.9	194.9	245.6	323.1	425.1	475.9	543.6	604.6	659.0
Digital Advertising	241.5	303.0	363.8	430.9	565.4	611.1	676.0	736.2	794.4
Digital Health	42.1	59.8	78.5	109.7	133.2	145.4	169.8	190.8	212.7
Digital Media	253.9	293.4	344.0	415.2	504.8	541.1	621.1	692.2	746.8
E-commerce	1,527.0	1,875.2	2,166.6	2,825.4	3,513.5	3,508.8	4,103.1	4,736.5	5,504.8
E-services	150.1	169.9	196.8	192.5	237.9	295.3	347.7	383.9	416.2
Total	2,365.5	2,896.33	3,395.3	7	5,380.0	5,577.6	6,461.2	7,344.1	8,333.9

Note: Digital market revenues exclude data for online food delivery, smart homes, and fintech.

Source: Statista database (accessed 28 May 2023).

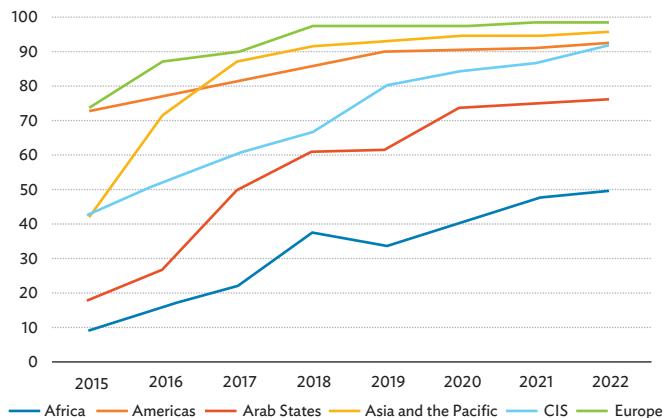
laws, rules, and regulations for data privacy and cybersecurity. Platforms and online service providers in Asia have been increasingly creating ecosystems that provide business development services, access to non-collateralized finance, “one-window” marketing, and supply-chain and linguistics support through their dashboards for the entrepreneurs on their platforms. GoJek Indonesia’s GoBiz platform for GoFood (cooked food delivery) merchants is one such example. Through a more structured registration system, the GoBiz platform was able to onboard merchants, provide customized support according to their respective business and financing needs, and slowly usher enterprises out of informality to a more formal setup through the use of app-native e-wallets and payment systems. Similarly, Plentina in the Philippines has been helping build a financial and credit history database for individuals who had not used any formal sector financial services in the past given the relatively smaller size of their income-expenditure profiles, lack of collateral, and access, among other reasons.²

Both ICT infrastructure and technological adoption by people are essential for the development of platforms. Figure 11.7 shows the recent development in the share of the population covered by at least an long-term evolution (LTE)/Worldwide Interoperability for Microwave

² Plentina is a Silicon Valley based fintech start-up that is leveraging “buy now, pay later” systems with partner retailers in the Philippines to build a credit history database for people who have no prior financial history, and thus had been edged out of formal financial sector services.

Access (WiMAX) mobile network by region. Asia saw dramatic improvement of internet access, and now, over 90% of the population enjoy highspeed internet coverage, which is about the same as Europe and even higher than the Americas. The figure shows that the maturity of the infrastructure is no longer an issue for the development of platforms in Asia. However, a caveat in the interpretation of this graph is that “Asia and the Pacific” includes developed Asia. Developing Asia might face insufficient ICT infrastructure despite this graph.

Figure 11.7: Population Coverage by at Least an LTE/WiMAX Mobile Network (%)



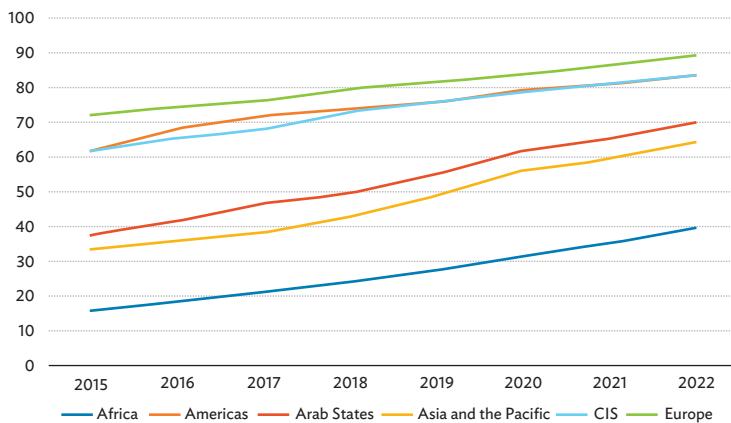
CIS = Commonwealth of Independent States, LTE = long-term evolution, WiMAX = Worldwide Interoperability for Microwave Access.

Note: Regions are based on the International Telecommunication Union regions.

Source: International Telecommunication Union (accessed 20 March 2023).

A different picture emerges when we consider the internet penetration rate (Figure 11.8). Less than 70% use the internet, although the share of users has doubled since 2015. Compared to Europe and the Americas, the internet penetration rate is relatively low in Asia that indicates the technological maturity of people is an issue for platform development in this region.

Figure 11.8: Share of Individuals Using the Internet (%)



CIS = Commonwealth of Independent States, LTE = long-term evolution

Note: Regions are based on the International Telecommunication Union regions.

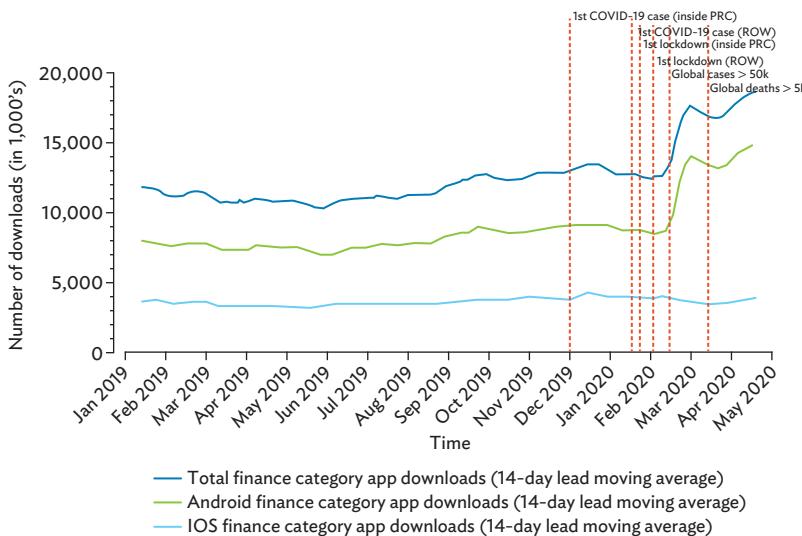
Source: International Telecommunication Union (accessed 20 March 2023).

Asia was behind in digital infrastructure and people's adoption of digital technologies in 2019, but COVID-19 has accelerated digitalization in Asian economies. According to data from Statista, the value of e-commerce activities in the Asia and Pacific region is projected to increase from \$1.4 billion in 2019 to more than \$2 trillion in 2022 and to \$2.6 trillion in 2025. Meanwhile, the value of e-services activities is projected to double from \$154 billion in 2019 to about \$294 billion in 2022, and to \$364 billion in 2025.

Fu and Mishra (2020) analyze the effect of the COVID-19 pandemic and related lockdowns on financial technology (fintech) adoption among 74 economies, including economies that are members of the Asian Development Bank (Hong Kong, China; Japan; Kazakhstan; Malaysia; Pakistan; Philippines; Singapore; Thailand; and Viet Nam). Figure 11.9 shows that the number of downloads of fintech apps drastically increased during the pandemic. Fu and Mishra (2020) estimate the effect using panel data and conclude that the spread of COVID-19 and related lockdowns increased the rate of daily downloads by 24% to 32%. Therefore, during the COVID-19 pandemic, the degree of digital adoption has increased throughout the economy. Such increases in

consumers' technological adoption could contribute to successive online transactions after the pandemic. An increase in the number of online users has a persistent effect on social online activities because using the internet incurs upfront fixed costs such as learning and purchasing a device. In developing Asia, the relatively high fixed cost of using the internet is plausibly part of the reason why it does not spread quickly. Due to the new social environment due to COVID-19, people have been better off using the internet even when paying an initial fixed cost. The continued use of the internet does not incur such upfront fixed costs, so we expect that if the pandemic created more internet users, then online activities would expand post-pandemic.

Figure 11.9: Impact of COVID-19 on Adoption of Financial Technology Mobile Apps

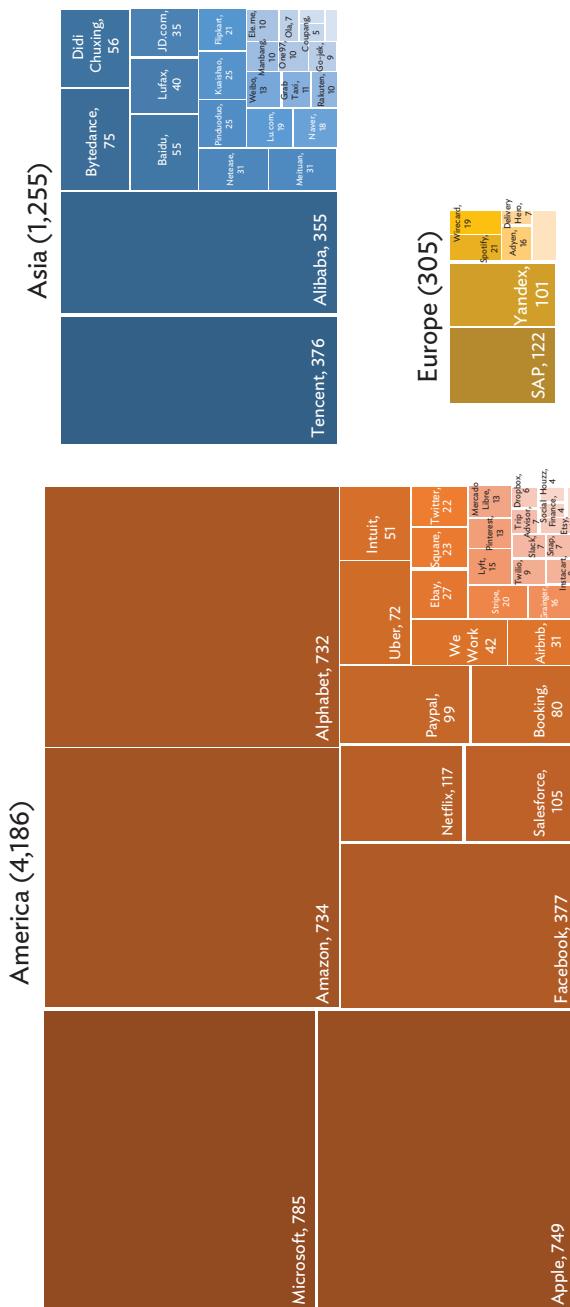


PRC = People's Republic of China, ROW = rest of the world.

Source: Fu and Mishra (2020).

So far, regional differences in digitalization and catchup by Asia after the COVID-19 pandemic have been discussed. Next, we take a close look at digitalization and the roles of digital platforms by economy. Regarding the regional distribution and sizes of platforms in the world,

Figure 11.10: Geographical Concentration of Digital Firms, 2018
(market capitalization in \$)



Source: UNCTAD (2019).

Figure 11.10 provides a clear comparison and shows that geographical concentration is one feature of the platform business. Wealth creation in the digital economy is highly concentrated in two countries, the United States (US) and the PRC. The US and the PRC account for 75% of all patents related to blockchain technologies, 50% of global spending on the Internet of Things (IoT), more than 75% of the cloud computing market and as much as 90% of the market capitalization value of the world's 70 largest digital platform companies (UNCTAD 2019).

Figure 11.11 illustrates digital penetration and network readiness by economy in Asia. In this figure, the PRC exhibits the highest score on the digital platform penetration (DPP) index at 2.5847, while Turkmenistan has the lowest score of 0.1565. Network readiness has several elements: technology (which captures access, content, and future technologies); people (which captures the e-readiness and aptitude of individuals, businesses, and governments); governance (which captures trust, regulation, and inclusion); and impact (which captures economic value, quality of life, and contribution to sustainable development goals). The greener box indicates lower network readiness, and the bluer box indicates higher readiness. The economies with higher DPP indexes exhibit higher network readiness in all four elements, while the countries with lower DPP indexes have lower network readiness. This figure illustrates that network readiness is highly correlated with digital penetration, and implies that building network readiness is an important step to unlock the benefits of digital platforms.

In summary, developing Asia can potentially “digitally leapfrog” if governments can guide the system swiftly toward the right direction. An improvement in digital infrastructure and people’s digital adoption after the pandemic is a good signal for a rapid expansion of digital platforms. Furthermore, a growth in the number of users in the following apps illustrates the promising path to digital leapfrogging; GoJek in Indonesia, Grab in Indonesia, the Philippines, and other Southeast Asian countries; and G-Cash in the Philippines. For example, the mobile wallet company G-Cash in the Philippines increased the number of registered users from 20 million in 2019 to 33 million (average) in 2020 and then to 46 million in June 2021.³

³ See <https://www.statista.com/statistics/1249816/philippines-gcash-registered-users/> and <https://www.prnewswire.com/news-releases/gcash-cements-fintech-leadership-and-innovation-thrust-in-the-philippines-301364888.html> for details (accessed 12 October 2021).

Figure 11.11: 2020 Digital Platform Penetration Index and Network Readiness Subindexes

2020 Digital Platform Penetration Index and Network Readiness Subindexes

Economy	DPP Index	Network Readiness Main Subindexes				Economy	DPP Index	Network Readiness Main Subindexes			
		Technology	People	Governance	Impact			Technology	People	Governance	Impact
PRC	2.5847					Fiji	0.4579	n.d.			
Korea, Rep. of	2.5283					Cambodia	0.4416				
Australia	2.1010					Tajikistan	0.4155				
Hong Kong, China	2.0323					Bangladesh	0.3928				
New Zealand	1.8795					Myanmar	0.3909	n.d.			
Japan	1.7794					Bhutan	0.3119	n.d.			
Singapore	1.7644					Mongolia	0.2824				
Malaysia	1.1008					Lao PDR	0.2523				
India	1.0220					Timor-Leste	0.2486	n.d.			
Viet Nam	0.9429					Papua New Guinea	0.2111	n.d.			
Indonesia	0.9190					Turkmenistan	0.1565	n.d.			
Brunei Darussalam	0.8322	n.d.									
Philippines	0.8221										
Armenia	0.8077										
Pakistan	0.7960										
Kazakhstan	0.7929										
Thailand	0.7902										
Azerbaijan	0.7833										
Sri Lanka	0.6501										
Georgia	0.5751										
Kyrgyz Republic	0.5018										
Uzbekistan	0.4840	n.d.									
Nepal	0.4619										

DPP = digital platform index, Lao PDR = Lao People's Democratic Republic, n.d. = no available data, PRC = People's Republic of China.

Sources: ADB estimates and Dutta and Lanvin (2020).

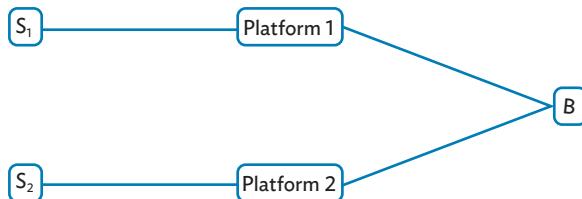
Notes:

- (i) Maximum and minimum values are set at 0 and 100. Following the scale in Dutta and Lanvin (2020), low to high value spectrum.
- (ii) The Technology subindex captures access, content, and future technologies.
- (iii) The People subindex captures the readiness and aptitude of individuals, businesses, and governments.
- (iv) The Governance subindex captures trust, regulation, and inclusion.
- (v) The Impact subindex captures economic value, quality of life, and contribution to sustainable development goals.
- (vi) The specific indicators used and the methodology are laid out in Appendices 1 to 3 of Dutta and Lanvin (2020), https://networkreadinessindex.org/wp-content/uploads/2020/11/NRI-2020-V8_26-11-2020.pdf

11.2.4 Competition Environment of Platforms

For the competition environment of platforms, single-homing or multi-homing of consumers and sellers is one important factor. To illustrate situations when a problem arises from unbalanced market power between platforms and MSMEs, we introduce the framework by Rochet and Tirole (2003) in which they define the terminology of “single-homing” and “multi-homing” to indicate the competition environment of platforms. If an agent uses only one platform, it is single-homing. If an agent uses several platforms, it is multi-homing. Whether each side of the market is single-homing or multi-homing changes the market outcomes and the effects on the platforms’ behavior (Figure 11.12).

Armstrong (2006) presents the concept of a “competitive bottleneck” that has single-homing for one side and multi-homing for the other. The newspaper industry is one example of such a structure. Many consumers subscribe only to one newspaper, but firms may post their advertisements in multiple newspapers. In the newspaper industry, the consumer side is single homing, and the firm side is multi-homing. He theoretically shows that in the competitive bottleneck, platforms maximize the joint surplus of itself and the single-homing agent, and the interest of the multi-homing agent is ignored in any equilibrium.

Figure 11.12: Multi-homing Platform: Competitive Bottleneck

Note: The left side is single-homing since each agent only has access to one platform, and the right side is multi-homing since the agent B has access to both platforms 1 and 2.

Source: Rochet and Tirole (2006).

However, the surplus from exploiting market power as a monopolist does not necessarily become a benefit for platforms. If platforms face competition on the single-homing side, they transfer revenues from the multi-homing side to the single-homing side so that they can better compete on the side of single homing. In such a case, single-homing consumers enjoy benefits at the expense of the multi-homing side.

Related to imposing multi-homing on platforms, Belleflamme and Peitz (2019) consider the impact of multi-homing on prices, profits, and surpluses of platforms on each side of the market. They show that both platforms and consumers in two-sided markets can be better off by imposing multi-homing on one side. They conclude that authorities are not able to determine whether the competitive bottleneck leads to a higher or lower surplus on either side as long as one side is multi-homed.

Bakos and Halaburda (2020) argue that joining multiple platforms has become more common with technological progress, and markets on both sides of the platforms are multi-homing in many cases. They show that the strategic interdependency between the two sides of the platform vanishes with multi-homing on both sides. This disappearance means that platforms never set prices below the marginal cost when both sides are multi-homing. For cases where consumers are single-homing and MSMEs are multi-homing, platforms exert monopoly power over MSMEs. If technological advancement enhances the multi-homing of consumers, MSMEs will benefit from no-subsidization of consumers by platforms at MSMEs' expense.

Recent studies of Adachi, Sato, and Tremblay (2023) and Teh et al. (2023) find that when consumers are multi-homing, sellers have bargaining power over platforms because they can switch platforms when platforms increase transaction fees over sellers.

In summary, the competition environment of platforms largely depends on the single-homing or multi-homing of users and sellers. To evaluate welfare gains or losses to users, sellers, and platforms, for transactions, understanding single- or multi-homing is crucial, but it is not enough to determine welfare changes to each agent.

A study by the European Commission in 2021 reveals the facts on single-homing and multi-homing of consumers and sellers in platforms by the survey (EC 2021). According to their results, smaller firms are more likely to use multiple platforms than larger firms in all sectors; selling goods, selling services, listing accommodation, and distributing apps and other software. About 37%–64% of small businesses (one to nine employees) use more than one platform. The lowest percentage of multi-homing sectors is distributing apps or other software. For the consumer side, the same study shows percentages of consumers on multi-homing for food delivery services by economy. In the Republic of Korea, more than 70% of consumers only use one food delivery platform. Their numbers show variations of prevalence in multi-homing by sector, and it is less common to use multiple platforms in some sectors for both consumers and sellers.

11.3 Platforms and Firms: Competition Issues

As a few big platforms have become predominant in most economies in Asia, there is growing attention to the concentration of platforms and their potentially anticompetitive conducts. We have reviewed the unique characteristics regarding platforms that result from the network externalities in the previous section. Due to such unique characteristics of platforms, platform activities that potentially entail negative effects on market competition should be approached differently from the existing framework. In this section, we highlight three competition issues in platforms to consider the effect that platforms have on the development of MSMEs: concentration, exclusionary conducts, and mergers.

11.3.1 Concentration

One of the concerns regarding platforms is their concentration. In Asia, as well as other parts of the world, a few big tech companies have become predominant, such as Alibaba, Tencent, and Grab as shown in Figure 11.10. If the market is concentrated, the dominant firms may achieve strong market power and absorb potential profits from MSMEs that participate in the platform. Factors such as strong network effects, data accumulation and portability, large returns to scale, and switching costs may work in favor of the platforms, and platforms may be able to achieve high market share and induce concentration based on these factors.

Existing research has examined the advantages of incumbent platforms and mechanisms that create advantages. One mechanism that provides advantages to incumbents is the network effects. For example, Dubé, Hitsch, and Chintagunta (2010) show that the indirect network effect increases market concentration by more than 24 percentage points by calibrating a model using datasets from the gaming industry. This implies that large incumbent advantage exists for platforms with network effects.

In addition to the network externalities, digital platforms can accumulate a vast amount of customer data from their services that enhance their competitive advantage. Hagi and Wright (2020) shows that such data accumulation enables platforms to improve the quality of their services and to increase the willingness-to-pay of the consumers. As a result, consumers use their services more and platforms collect more data, hence, incumbent firms who have a data advantage are likely to win the competition with this self-reinforcing mechanism. However, they also discuss that entrant firms can seize the market by dynamic pricing if they have a steeper learning curve than incumbent firms. Another mechanism through which incumbent platforms can have an advantage in gathering consumer data relates to how consumers think about their privacy protection. Ichihashi (2020) discusses that consumers prefer the incumbent platform because it already has their data, and this preference has a negative effect on competition between platforms as it gives an advantage to the incumbent platforms.

Data portability is another factor affecting the data accumulation and the concentration of platforms. Data portability allows consumers to bring their own data to different platforms. This policy is intended to lower the switching cost between platforms by making it easier for consumers to switch across different service providers. Lam and Liu (2020) discuss that increasing data portability encourages consumers to provide more data to a platform while the policy makes it easier for consumers to switch to another platform. They argue that when big data service is valuable enough, the effect of making consumers switch across platforms would be dominated by the effect of providing more data. Thus, the incumbent firm has an advantage against potential entrants encouraging concentration.

Depending on the types of platforms, consumers can use multiple platforms (multi-homing) or they can use only one platform (single-homing). Compared to the standard one-sided market setting where the price becomes lower when the competition is more intense, single-homing in a two-sided market may result in the opposite behavior: the price becomes higher when the competition is more intense. This is due to the existence of externalities in two-sided platforms, and the policy

implication is that policymakers should be careful in understanding how the conduct relates to the market structure.

In addition to how different factors affect the behavior of platforms and consumers, sellers' choices among platforms can affect the concentration of platforms. If the competition among sellers is high, sellers would choose a different platform to escape the competition, and the market gets segmented. As a result, the seller side becomes single-homing. Karle, Peitz, and Reisinger (2020) discusses how such segmentation of platforms may not be socially optimal. The segmentation reduces consumers' choices, but platforms can gain their profit by charging higher rent and extracting more from sellers. From the viewpoint of MSMEs that are typically sellers, they would be charged higher rent when the sellers' market is highly competitive.

This subsection has three main implications. First, platforms are likely to achieve high market share and induce concentration via the multiple channels such as the network effect and data accumulation. We discuss that the relationship between concentration and price or welfare is complicated in a two-sided market. Concentration can be socially optimal in a two-sided market, and the degree of concentration is linked to the competitiveness across firms on one side of the market. In terms of competitiveness among platforms, under some conditions, the relationship between price and competition can be reversed; the price may increase as competition becomes greater. Therefore, it is not a simple task to determine the effect on MSMEs who are sellers when the concentration of a platform increases. The authority should take a careful look at the multiple aspects of market competition, such as competition among firms who are the participants in platforms and competitions across platforms. Also, the competition environment and market structure, such as single- or multi-homing, should be taken into account to evaluate market outcomes.

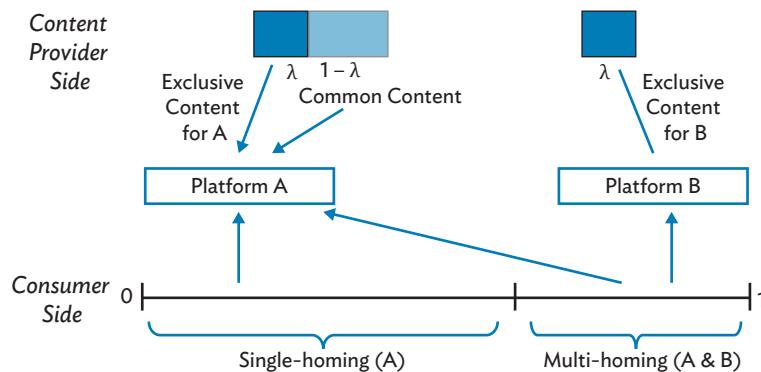
11.3.2 Exclusion and Vertical Restraints by Platforms

In the traditional antitrust literature, a concern exists that incumbent firms use their market power and foreclose the potential competitors in various ways. For instance, foreclosure by bundling (Nalebuff 2004), foreclosure by product variety (Klemperer and Padilla 1997), and foreclosure by killer acquisition (Cunningham, Ederer, and Ma 2021) are some of the ways they can foreclose. The risks that the platforms may foreclose their competitors could negatively affect a stable recovery path for MSMEs and the local economy through platform business. However, as Evans and Schmalensee (2014) point out, it is not clear whether the foreclosure argument in existing research is applicable to the case of

a two-sided market. They argue that the result of the basic one-sided model cannot be simply applied to the case of a two-sided market. There are relatively few articles incorporating two-sidedness in the analysis of exclusionary conduct, and the results appear to be sensitive to the assumptions of the model.

Tying is one context where outcomes between one-sided and two-sided markets differ. Extant studies under a one-sided market, such as Whinston (1990), show that tying by incumbent firms works as a tool of foreclosure and has a negative effect on competition. However, in two-sided markets, platforms are constrained by nonnegative pricing on one side, hence, tying can be used as subsidies that relax that constraint. In such a setting, Amelio and Jullien (2012) discuss that tying is not only profitable for platforms, but also beneficial to consumers' welfare. When agents can engage in multi-homing on both sides and the rival platform has exclusive content, Choi (2010) discusses that tying induces more consumers to multi-home as shown in Figure 11.13, and the total surplus increases. In addition, tying reduces the total surplus if consumers are not allowed to multi-home. These studies indicate that the effect of exclusionary conduct on the social surplus is obscure in a two-sided market and heavily depends on the condition of market structure and competition environment.

Figure 11.13: Two-sided Market Equilibrium with Tying



Source: Choi (2010).

Platforms and sellers may sign exclusive contracts. Typically, MSMEs are sellers participating on the platform, so this topic is directly related to enhancing the development of MSMEs on platforms. Armstrong and Wright (2007) discuss that sellers' (MSMEs) benefit from network externalities is fully extracted when consumers are single-homing and sellers are multi-homing. By contrast, if platforms can offer exclusive contracts to sellers (MSMEs) while consumers are single-homed, then the result is reversed and consumers' benefit from network externalities is fully extracted. The exclusive contracts seem disadvantageous to sellers at a glance, but in a two-sided market, the economic outcome without the exclusive contract could be worse for the sellers (MSMEs).

Similar to exclusion, the effects of vertical constraints involving platforms may be significantly different from those of the one-sided markets. One type of vertical constraints between firms and platforms is the platform most-favored-nation or platform most-favored-customer (PMFC) clause. Once this contract is agreed to, the platform participants cannot sell their products or services at a lower price through other platforms.

Boik and Corts (2016) argue that the PMFC increases the fees the platform charges and the price that the sellers charge, but the effect on entry is ambiguous. In the basic framework, the PMFC clause of incumbent platforms discourages entries of other platforms; but if the potential entrant has a relatively similar business model to the incumbent, the PMFC has a positive effect on entry.

The effects of the PMFC also depend on the relative competitiveness between platform competition and seller competition affects platform's behavior. When platform competition is relatively greater than seller competition, Maruyama and Zennyo (2020) discuss that the PMFC increases investments by platforms, seller profits, consumer surplus, and social welfare. By contrast, when the competition among sellers is greater, it has negative effects on all these aspects.

These two studies indicate that the effects of the PMFC clause depend on a number of aspects of the market structure and competition environment, and it is not straightforward to consider the effects on stakeholders of a two-sided market that includes MSMEs.

Another vertical issue that may arise for MSMEs on platforms would be that MSMEs are selling not only on platforms but they can also sell directly to consumers without using platforms. Platforms lower the search cost for sellers (MSMEs) but charge a transaction fee. If MSMEs sell their product at a lower price in direct selling without paying transaction fees to platforms, consumers might use platforms to search for goods, but they will purchase the product directly from the firms at a lower price. To prevent such "showrooming," platforms

impose a price parity clause (PPC), which requires participating firms not to set a lower price in direct selling than the price on platforms for the same products. A PPC has been widely used by platforms. Amazon has imposed “Amazon’s General Pricing Rule”, and online booking platforms such as Booking.com and Expedia have also imposed a PPC.

There are two kinds of PPC: wide and narrow. A wide-PPC requires the price on platforms to be no higher than any other channels, including direct selling and rival platforms. A narrow-PPC only requires the price on platforms to be no higher than direct selling. Wang and Wright (2020) discuss that both wide- and narrow-PPCs distort competition between the platform and firms because both PPCs prevent firms from setting a lower price even if the platform imposes extremely high fees. A wide-PPC also distorts competition across platforms since it eliminates incentives for platforms to lower fees. Their result implies that a wide-PPC is anticompetitive, and a narrow-PPC is justified only when the platform cannot survive without it.

11.3.3 Mergers between Platforms

Subsection 11.3.1 showed that platforms can induce higher market concentration. This suggests that an assessment of the outcomes of platform mergers needs to be conducted with additional care and attention to protect consumers and sellers (MSMEs). However, a two-sided market makes it difficult to simply apply traditional assessment tools to evaluate platform mergers and their consequences.

In many economies, competition authorities investigate cases before they approve or block mergers to preserve a competitive environment. For the horizontal merger, one way to evaluate the effects of a merger is to define the relevant markets by using a small but significant and non-transitory increase in price (SSNIP) test and calculate a Herfindahl-Hirschman index to determine the degree of concentration in the relevant market. An alternative way to identify the incentive of merging firms to increase prices is to use the upward price pressure (UPP) developed by Farrell and Shapiro (2010), and the gross upward price pressure index. The advantage of these criteria is that one does not have to decide which is the relevant market. Unfortunately, the UPP and gross upward price pressure do not work in the context of a two-sided market because of the existence of network externalities. Affeldt et al. (2013) develop UPP measures for a two-sided market. Although it overcomes the shortage of the original measure, they argue that it is often too costly to collect enough information to calculate the UPP in a two-sided market because it requires information on how participants react to the change in participation on the other side.

A few studies quantitatively examine the effect of mergers by incorporating the two-sidedness of the market. Jeziorski (2014) examines mergers in the US radio industry for the period from 1996 to 2006, which has the property of two-sidedness (listener and advertiser), by using a structural model. He decomposes the effect of the merger into two parts: product variety and market power. These effects are quantified in terms of the welfare of both the listener and the advertiser. The study finds that the merger created extra product varieties which increased the listener's welfare by 0.3%. However, due to the decrease in competition, the advertiser's welfare decreased by 17%. Also, the subsequent adjustment of lowering the ad quality decreased the listener's welfare by 0.1% and the advertiser's welfare by 5%. Overall, the merger increased the listener's welfare by 0.2% and decreased the advertiser's welfare by 21%. However, this result is specific to the market and the implication cannot be simply extended to other mergers in a two-sided market.

Sato (2021) suggests the guidelines that can be applied to review the mergers in a two-sided market. He developed a model of a multiproduct-firm oligopoly with network externalities to analyze the impact of mergers with network effects. His model predicts that consumers get benefits from the merger through an expanded network but also have costs from the increased market power of the merging platform. With network externalities, the impact of the merger depends on the size of the merging parties relative to the industry. From the analysis of the merger in a two-sided market, he shows that an increase in the number of firms on one side amplifies the incentive to subsidize consumers on the other side, and the benefit to consumers depends on the premerger share of the other side. His model's contribution is that premerger prices and market shares of the merging parties can predict the post-merger surplus of consumers. He also argues that a gain in consumers' benefits from network expansion is justified for small mergers, but negative effects from an increase in market power would surpass the benefits for large mergers.

Table 11.5: Summary of Studies

Platform Concentration	
Indirect network effects	<p>Dubé, Hitsch, and Chintagunta (2010)</p> <ul style="list-style-type: none"> Calibrate dynamic models with indirect network effects to measure the expansion of a firm's share dominance given network externality. Data: Monthly average prices and sales of game consoles in US retailers from September 1995 to September 2002 obtained from NPD Techworld's point of sales database. Finding: Indirect network increases concentration by 24 percentage points or more.
Data accumulation	<p>Hagiu and Wright (2020)</p> <ul style="list-style-type: none"> Theoretically develop dynamic models of platforms with data-enabled learning which affects the quality of services. Finding: Competitive equilibrium is socially optimal even with data-enabled learning unless dynamic network effect leads to a consumer coordination problem and consumer beliefs favor one of the firms. <p>Ichihashi (2020)</p> <ul style="list-style-type: none"> Theoretically show negative effects of data on market outcomes by advantaging incumbent platforms. Finding: Firms set high privacy policy as a starting point and loosen it because consumers' marginal cost to provide data decreases as they use the platform. As a result, consumers are locked into the incumbent platform that they provided data to in the first place.
Data portability	<p>Lam and Liu (2020)</p> <ul style="list-style-type: none"> Theoretically show effects of data portability legislation on platform competition. Finding: Under current framework of data portability legislation, which allows data provided by consumers to be portable across platforms but does not include data analyzed by firms, legislation discourages switching of consumers across platforms.
Platform competition and social welfare	<p>Tan and Zhou (2020)</p> <ul style="list-style-type: none"> Theoretically demonstrate effects of platform competition on price charged to participants in multisided markets with network effects. Finding: An increase in platform competition could heighten prices charged to consumers when the marginal elasticity of subsidization is smaller than the marginal elasticity of markup. <p>Karle, Peitz, and Reisinger (2020)</p> <ul style="list-style-type: none"> Theoretically develop the model that seller competition endogenously determines platform competition and platform fees. Finding: Higher competition in sellers' market leads to less concentration in platforms and higher platform fees that result in a negative correlation between platforms' concentration and platform fees.

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Table 11.5 *continued*

Exclusionary conducts	
Tying	<p>Choi (2010)</p> <ul style="list-style-type: none"> Theoretically investigate effects of tying on social welfare in two-sided markets with externalities. Finding: If consumers can multi-home across platforms, tying would increase social welfare by enhancing sellers' welfare. <p>Amelio and Jullien (2012)</p> <ul style="list-style-type: none"> Theoretically show that effects of tying with non-negative price constraint in two-sided markets. Finding: Tying is profitable for both platforms and consumers in a monopoly setting.
Exclusive contracts	<p>Armstrong and Wright (2007)</p> <ul style="list-style-type: none"> Theoretically show that a competitive bottleneck endogenously arises in equilibria where sellers are multi-homing and buyers are single-homing in platforms. Finding: All surplus for sellers is extracted and transferred to buyers in baseline setting. Exclusive contracts between platforms and firms alternate results: all surplus is taken by sellers with no surplus left for buyers. <p>Boik and Corts (2016)</p> <ul style="list-style-type: none"> Theoretically develop models to examine the effects of the platform-most-favored-customer (PMFC) clause on platform fees, prices charged by sellers, and entry of platforms. Finding: PMFC increases fees charged by platforms and the prices charged by sellers, but effect on entry is ambiguous. <p>Maruyama and Zennyo (2020)</p> <ul style="list-style-type: none"> Theoretically develop models to examine effect of PMFC on platforms' incentive for demand-enhancing investment by using a bilateral duopoly model. Finding: When competition between platforms (intraduopoly competition) is greater than the competition between sellers (interbrand competition), industry-wide PMFC diminishes platform investment. This result depends on the relative competition degree in platforms and sellers. <p>Wang and Wright (2020)</p> <ul style="list-style-type: none"> Theoretically demonstrate negative effects of price parity clause (PPC) on consumers' surplus. Finding: Wide-PPC always worse-off consumers. Narrow PPC could be beneficial to consumers if PPC is needed for a viability of the platform.

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Table 11.5 *continued*

Mergers	
Structural estimation	<p>Jeziorski (2014)</p> <ul style="list-style-type: none"> Empirically estimate effect of mergers on the welfare of participants in two-sided markets using US radio mergers during 1996 to 2006. Data: BIA Kelsey & SQAD Media Market Guide 1996–2006 Finding: Listeners' welfare increased by 0.2% and advertisers' welfare decreased by 21 % through US radio merger waves.
Theoretical model	<p>Sato (2021)</p> <ul style="list-style-type: none"> Theoretically examine effect of mergers on consumers' welfare with network effects in two-sided markets using a model of multiproduct-firm oligopoly with network externalities. Finding: Positive or negative effect of the merger on consumer welfare depends on the size of merging parties relative to the industry. If merging parties are dominant in the industry, the negative effect from market power surpasses the positive effect from network expansion.

Source: Authors.

11.4 Conclusion and Policy Implications

In this chapter we have reviewed the overall MSME landscape in Asia, including the challenges and constraints faced by enterprises in physical (offline) and online markets. We have then examined platform characteristics and particular externalities that are triggered by these characteristics and how they impact merchants and other platform users. Next, we explored the unique circumstances and externalities that arise due to these special characteristics of platforms and how enterprises on platforms fare as a result.

Our findings suggest that the special features of platforms and the two-sided market structure they foster, require a bespoke policy approach from competition authorities and policymakers. Conventional measures may not be adequate in estimating incentives of platforms that earn profits on two or more sides of the market, which make a compelling case for going beyond existing policies designed for physical/offline one-sided markets. Since single-homing or multi-homing on each side of the market largely determines the anticompetitive effects of exclusionary conducts, examining the switching costs across platforms would be an important exercise as well, and would benefit from further investigation and more empirical evidence.

During our analyses, we have noted another feature of online platforms that warrants further attention, i.e., that platforms create marketplaces that go beyond any one economy and its markets. They facilitate financial intermediation, and movement of goods and services across multiple jurisdictions, economies, and even regions. This virtual global market and the platforms that govern them help broaden the reach of MSMEs and make more competitively priced and diverse products available to consumers.

Platforms also thrive in a regulatory vacuum. A vacuum can have multiple implications, including (i) through base erosion and profit-shifting practices that have direct implications for tax revenue and public financial space available for growth and economic development; and (ii) for protection of consumer rights, data privacy, and security. Chapter 13 of this volume discusses some instances where platforms may contribute to inclusion and distributive justice in online markets with evidence from a recent study conducted among online food delivery merchants in Indonesia (Elhan-Kayalar, Sawada, and Rodgers 2022). It also shows without some form of intentional design and oversight, information frictions and cannibalization tendencies among online merchants may emerge, with detrimental economic and social effects. However, further research is warranted to assess what the optimal scope, structure and agents of oversight in online markets could be, or whether the most efficient way forward would be through the current self-monitoring structure and market mechanisms. Matsuyama (1996) points out that the prevalence of coordination failures in markets does not necessarily justify policy activism and a greater role for the government, in reference to conventional (i.e., offline) markets. He meticulously argues that there are multiple equilibria in the market with coordination failures, but the government is less knowledgeable about optimal equilibrium and has a limited role in promoting coordination. Matsuyama (1996) also notes there is room to explore centralized coordination within independent enterprises with examples from Toyota Motors and other developers that have successfully capitalized complementarities within and across organizations within the same industry. Various approaches have been and continue to be tested in markets that exist in both offline and online platforms or only online, including government-led oversight with direct access to business intelligence of platforms, and oversight through self-regulatory organizations staffed and run by industry representatives, such as the Thai Bond Market Association. Oversight in online markets, whether it should exist and led by a government agency or a self-regulatory body from within the industry, falls outside the scope of this chapter. But the authors note that it warrants further investigation, as a deeper understanding of online market structures can help inform future development policies.

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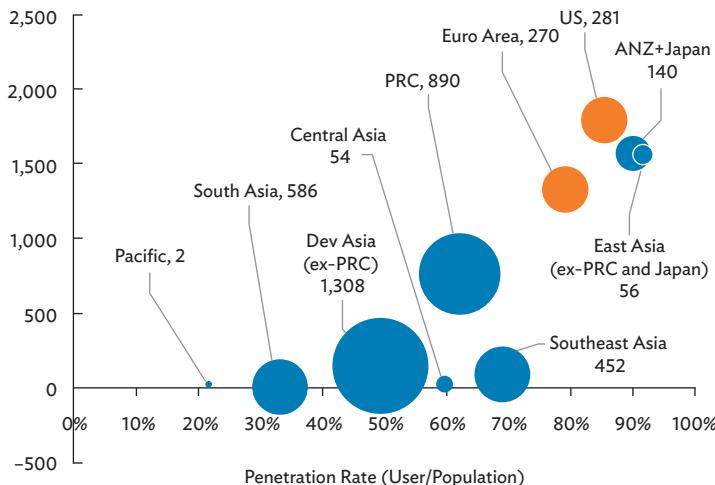
E-Commerce, the COVID-19 Pandemic, and Industry Dynamics in a Two-Sided Market: The Case of a Digital Food Delivery Platform in the People's Republic of China

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12.1 Introduction

The global economy in the last decade has been characterized by unprecedented digitalization. Digital platforms are transforming the way we interact, communicate, and transact goods and services. The digitalization speed has been particularly salient in Asia with its digital platform revenue growth reaching over 16% in 2018–2019 (ADB 2021a). Within the region, the People's Republic of China (PRC) is the frontrunner that has the biggest market for digital platforms, accounting for about \$1.2 trillion in revenue or 68.2% of Asia's total in 2019. Yet, in terms of penetration rate and per capita spending, the PRC and other developing Asian economies were still lagging behind the developed economies just before the pandemic (Figure 12.1). Since per capita spending is still low and the number of platform users is fast growing, expansion opportunities are immense in the region. In the policy arena, the outline of the 14th Five-Year Plan of the National Economic and Social Development of the People's Republic of China and the Vision 2035 includes a section on digital economy as a separate article and proposes among the main objectives: to increase the value-added of

**Figure 12.1: Digital Market Users, 2019
(million)**



ANZ+JPN = Australia, New Zealand, and Japan; Dev Asia = development Asia; PRC = People's Republic of China; US = United States.

Notes: Dev Asia includes Central Asia, East Asia ex-Japan, South Asia, Southeast Asia, and the Pacific. Central Asia includes Armenia, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. East Asia includes the PRC; Hong Kong, China; Japan; the Republic of Korea; and Mongolia. South Asia includes Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka. Southeast Asia includes Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam. Pacific includes Fiji, Papua New Guinea, and Timor-Leste. Euro area includes Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Users refer to the Adtech-exposed internet users.

Source: Figure 8.6 of ADB (2021a).

core industries of the digital economy to 10% of gross domestic product (GDP) by 2025.

Then, the outbreak of the novel coronavirus disease (COVID-19) pandemic in early 2020 started impacting the economy and society in the PRC and other Asian economies. In the PRC, the initial incident was a number of unexplained pneumonia cases that had already been identified in some hospitals in the city of Wuhan in Hubei Province at the end of 2019 (Table 12.1). Subsequently, within a short time, the virus spread to the whole city, all over the province of Hubei, and also the entire country. On 23 January 2020, the PRC took a key step to stop the further spread of the virus by shutting down the passages out of

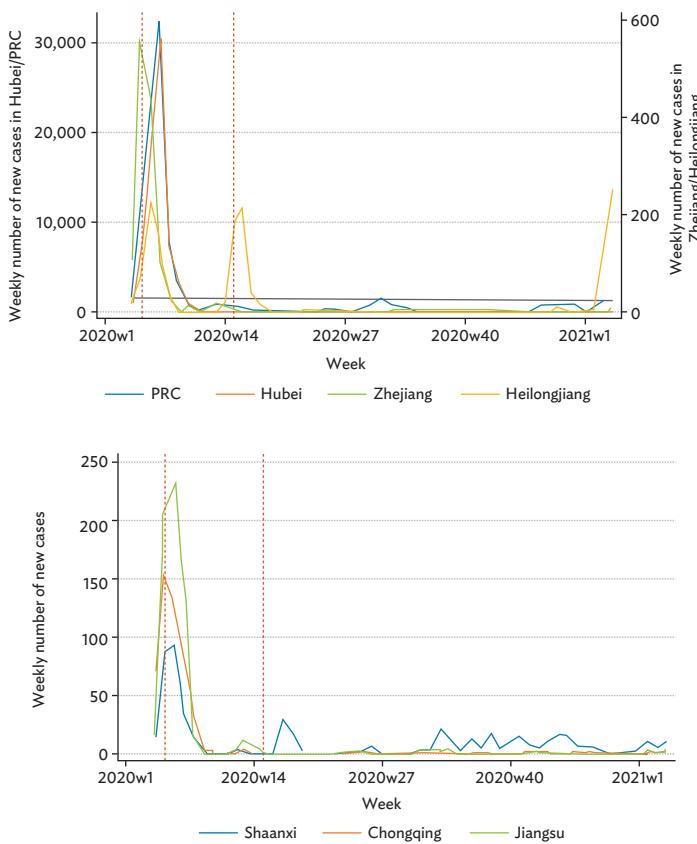
Wuhan, followed by seven cities in Hubei. In mid-March, the number of new cases per day was kept within single digits, and the nationwide epidemic prevention and control measures achieved significant success (Figure 12.2). On 8 April 2020, Wuhan lifted the lockdown, which had lasted for 76 days. On 16 July 2020, new cases were reported in Urumqi, Xinjiang Province, and the province went into complete lockdown subsequently. The National Health Commission of the People's Republic of China announced that the COVID-19 vaccine was free for all citizens on 31 December 2020. A total of 300 million doses of the COVID-19 vaccine had been administered nationwide by 1 May 2021. As of 31 August 2021, more than 60% of the PRC's population had full vaccine protection (ADB 2021b).

Table 12.1: Evolution of COVID-19 in the People's Republic of China

Stage	Date	Event
Stage I		Swift response to the public health emergency (27 December 2019–19 January 2020)
Stage II		Initial progress in containing the virus (20 January–20 February 2020)
Stage III		Newly confirmed domestic cases in the PRC drop to single digits (21 February–7 March 2020)
	Complete shutdown	Wuhan, Ezhou, Jingmen, Huangshi, Shiyan, Suizhou, Xiaogan, Yichang (24 January–8 April 2020)
	Partial shutdown	Fuzhou in Fujian (4–10 February 2020); Hangzhou in Zhejiang (4–26 February 2020); Ningbo in Zhejiang (4–20 February 2020); Zhengzhou in Henan (4–23 February 2020); Zhumadian in Heilongjiang (4–23 February 2020); Harbin in Heilongjiang (10 February–16 March 2020)
	Checkpoint and quarantine zone	20 provinces or municipalities in the PRC
	8 April 2020	Wuhan lifted the lockdown that lasted for 76 days
Stage IV		Wuhan and Hubei – An initial victory in a critical battle (18 March–28 April 2020)
Stage V		Ongoing prevention and control (Since 29 April 2020)
	16 July 2020	New cases were reported in Urumqi, Xinjiang Province; Xinjiang Province went into complete lockdown.
	1 September 2020	Xinjiang Province lifted the lockdown.
	30 December 2020	The PRC's first COVID-19 vaccine was launched.
	1 May 2021	A total of 300 million doses of COVID-19 vaccine had been administered nationwide.

Source: The State Council Information Office of the People's Republic of China (2020), Fighting COVID-19: China in Action. http://english.www.gov.cn/news/topnews/202006/07/content_WS5edc559ac6d066592a449030.html

Figure 12.2: Weekly Number of New COVID-19 Cases by Province



PRC = People's Republic of China.

Note: The two red vertical lines represent the first day of the Wuhan shutdown on 23 January 2020, and the Wuhan reopening on 8 April 2020. The daily number of new cases at the province level is obtained from the National Health Commission, Hubei Provincial Health Commission, and Shaanxi Provincial Health Commission, while the daily stringency levels of government containment policies by city are compiled separately. Stringency levels are classified as complete lockdown, partial lockdown, and no lockdown. We aggregate the number of new cases at the province-week level and stringency policies at the city-week level.

Source: Data are from the National Health Commission of the PRC. Figures are drawn by the authors.

The PRC government quickly responded through stringent policies to prevent rapid spread, including complete lockdown policies, as well as partial lockdown policies, and various checkpoints in the PRC in 2020 (Fang, Wang, and Yang 2020). The containment policies were effective, as shown by Fang, Wang, and Yang (2020) and Qiu, Chen, and Shi (2020), finding that these containment policies in late January in the PRC significantly reduced the transmission rate and spread of COVID-19. However, these containment policies left severe adverse effects on micro, small, and medium-sized enterprises (MSMEs), especially in the restaurant and retail industry in those cities that experienced complete lockdowns, such as Wuhan. However, the containment policies also facilitated the digitization of MSMEs in the PRC. Digital channels, which could provide continuous and flexible services to customers, became more important than ever when physical contacts were strongly discouraged. Many stores were forced to close their offline dine-in services due to the stay-at-home orders and opened their online stores for the first time. The online takeaway industry in the PRC was growing rapidly, with the market size growing to CNY664.62 billion (\$104.6 billion), representing an annual growth rate of 15%, and reaching 16.83% of the overall restaurant industry in 2020, compared to 12.38% in 2009.¹

Yet, the impact of the COVID-19 pandemic on merchants on digital platforms is still under-investigated. Moreover, to the best of our knowledge, no study so far has employed comprehensive high-frequency merchant-level administrative data to quantify the longer-term impact of containment policies. To bridge this important gap in the existing literature, we study how online merchants responded to the pandemic, and different containment policies during and post-lockdown, using large-scale administrative data from Alibaba Group which is the largest e-commerce platform in the PRC. We construct a merchant-week panel data drawn from Alibaba Group's digital food delivery app, Ele.me (literally means “hungry yet?” in Chinese) in seven cities in the PRC. Ele.me is the second-largest digital food delivery platform, with a market share of 26.9% in the first quarter of 2020 (footnote 1). A store page on Ele.me provides takeaway menus and feedback on takeaway experiences. There are three groups of agents on the digital food delivery platform: merchants, users/consumers, and delivery riders. Many merchants are restaurants, while some are supermarkets or non-food grocery suppliers, etc. Typically, many of

¹ <https://www.huaon.com/channel/trend/757700.html>

the merchants are MSMEs, and some are franchised chain stores.² Delivery riders can be either work full-time or part-time. With our unique data, we address a set of critical questions in this chapter: Whether and how the pandemic and lockdown facilitated entries into digital platforms? Could rapid entries lead to cannibalization or positive spillover effects on the different and the same sides of the two-sided market? We also obtain shop information, such as whether a shop is also listed on Koubei. Koubei literally means “word-of-mouth” in Chinese and is another Alibaba local life app.

To preview our descriptive analysis, a few preliminary observations emerge. First, from our data, covering 2 years before and after the outbreak of the pandemic from the beginning of 2019 through to 2021 in seven cities, we see heterogeneous effects of digitalization depending on the timing. While the speed of digitalization before the pandemic was rather modest in all of these seven cities, after the immediate disruption caused by the pandemic, we observed a sharp and full recovery to the level of the pre-pandemic period for all cities within 1 year. The pandemic and the resulting lockdown seem to accelerate digitalization.

Second, we observe the positive cross-side network effects (CNEs)³ and substantial benefits of digitalization conditional on merchants' ability to continue business on the platform. Cross-side network effects are defined as the benefits and/or costs that agents obtain from the presence of other agents on the other side of a multi-sided market while same-side network effects (SNEs) are defined as the benefits and/or costs that agents obtain from the presence of other agents on the same side. Our data support the positive CNEs among merchants, users and delivery riders, and active users in the multi-sided digital market. In contrast, there could be overall negative SNEs on the business side when negative cannibalization effects or market-stealing effects due to fierce competition among merchants dominate positive spillover effects or market expansion effects.

Third, these patterns of entry and recovery as well as the CNEs and SNEs are likely to be salient among chain stores, multi-app stores (i.e., stores listed on Koubei), and shops offering groceries or uncooked food.

While we confirm that the lockdown disrupted the entry to the platform economy negatively, chain stores, multi-app stores, and those offering groceries or uncooked food, were more resilient to the lockdown.

² Chain stores are the stores under the same management and selling the same merchandise.

³ A cross-side network effect is also called a cross-group external effect.

The rest of this chapter is organized as follows. Section 12.2 summarizes the existing literature, which is followed by a description of the data in Section 12.3. Section 12.4 presents empirical facts based on descriptive statistics and formulates the hypotheses. In the final section, we postulate concluding remarks.

12.2 Literature Review

There are three strands of existing literature related to our discussion in this chapter. First, our study relates to the study on the impact of the COVID-19 pandemic on MSMEs and consumers, especially online merchants and consumers' online purchasing behavior. Many studies on the economic impact of COVID-19 on MSMEs have been based on survey data (Alekseev et al. 2022; Bartik et al. 2020; Bloom et al. 2023; de Vaan et al. 2021; Fairlie 2020; Chen et al. 2022; Cong, Yang, and Zhang 2024; Dai et al. 2021; Guo et al. 2022; Kong et al. 2021) or transaction data from financial accounts (Alcedo et al. 2022; Kim, Parker, and Schoar 2020). These studies examine topics such as revenue and costs of small businesses, business expectations, layoffs, closures, entry, number of firms, digitalization, financial crunch, and firms' total product factor productivity. Using a survey of small businesses, Bartik et al. (2020) show that 43% of the surveyed businesses have temporarily closed due to COVID-19, and many businesses have reduced their employee count, anticipating additional financial fragility. Some researchers (e.g., Sheth 2020) predict that the pandemic may accelerate the digitization of the marketplace and individuals may maintain their modified behaviors even after the pandemic ends. Researchers studying the restaurant industry, which was more negatively affected than many other industries, have to infer restaurant visits or the number of orders or staffing from cellphone geo-location data, webpage views, and reservations (Wang et al. 2022; Glaeser et al. 2021; Banerjee, Nayak, and Zhao 2021; Yang, Liu, and Chen 2020). The impact of the COVID-19 pandemic on MSMEs varies with firm locations and firm characteristics, such as the GDP in an area, whether a restaurant is a chain restaurant, located in city centers, or located in states with different political preferences (Li et al. 2021; Wang et al. 2022; Glaeser et al. 2021).

The impact of COVID-19 on online purchasing behavior, food purchases, and restaurants has been investigated by Raj, Sundararajan, and You (2021); Guthrie, Fosso-Wamba, and Arnaud (2021); Sheth (2020); Alexander and Karger (2021); Roggeveen and Sethuraman (2020); Nguyen, Le, and Ha (2020); Chang and Meyerhoefer (2021); and Ellison et al. (2020). Raj, Sundararajan, and You (2021) employ the actual counts of orders obtained from the Uber Eats food delivery platform, an

online platform, for five major cities in the United States, showing that during the onset of the COVID-19 pandemic, restaurants that remained open for delivery experienced significant and economically meaningful increases in the number of orders.

On the consumer side, some researchers study how the pandemic and the stay-at-home orders affect overall consumption behavior. There has been a set of studies looking into individuals' behavior on overall consumption reduction (Cox et al. 2020; Andersen et al. 2020; Carvalho et al. 2020; Chen, Qien, and Wen 2021; Coibion, Gorodnichenko, and Weber 2020). The pandemic also changed consumption composition (Baker et al. 2020; Karger and Rajan, 2020). Baker et al. (2020) find that initially, household consumption spending increased sharply, particularly in retail, credit card spending, and food items, followed by a sharp decrease in overall spending. Alexander and Karger (2021) found that stay-at-home orders caused large reductions in spending in sectors associated with mobility: restaurants and retail stores.

Detailed administrative data of MSMEs are seldom adopted in the above studies, because they are usually reported at a low frequency (for example, quarterly) in a survey (Cong, Yang, and Zhang 2024; Kong et al. 2021). Our detailed administrative data on gross merchandise value (GMV), subsidies, and SKUs at the shop-week level, which are rarely accessible to researchers, thus provide a unique opportunity to examine the issues of COVID-19, digitalization, and MSME performance and strategies, and furthermore can shed light on the impact of the COVID-19 pandemic on price discounts and product variety.

Second, we also investigate the specific issues related to two-sided markets (Rochet and Tirole 2006; Armstrong 2006; Armstrong and Wright 2007; Rysman 2009; Belleflamme and Peitz 2019). Network externalities are fundamental assumptions of multi-sided markets, and are classified into CNEs and SNEs. CNEs can be observed in traditional shopping centers or bazaars. CNEs are usually positive (Rochet and Tirole 2003). For example, Ele.me can get more merchants (consumers) on board, and more consumers (merchants) would like to come to Ele.me. In turn, more consumers on the platform would induce more merchants to be active to meet the demand. Delivery riders also gain from increased transactions between merchants and users. The signs of SNEs depend on whether the positive spillover or market expansion effects overcome the negative cannibalization and/or market-stealing effects. Ele.me is an appropriate context for the study not only on CNEs but also on SNEs because Ele.me hosts a large number of shops, providing some possibilities for both positive and negative SNEs. For example, shops are classified by main product categories, and tasks for coupons are also based on product categories. It is likely that the signs

of SNEs would vary by a merchant's main product category and whether two merchants are in the same main product category.

There are also many empirical papers on estimating CNEs and SNEs in various industries such as ATMs, telecommunications, microcomputers, CD players, DVD standards, mobile phones, home video games, electronic payments, VCRs, yellow pages, video games, etc. (Majumdar and Venkataraman 1998; Gandal, Greenstein, and Salant 1999; Gandal, Kende, and Rob 2000; Goolsbee and Klenow 2002; Dranove and Gandal 2003; Kim and Kwon 2003; Shankar and Bayus 2003; Gowrisankaran and Stavins 2004; Park 2004; Rysman 2004; Clements and Ohashi 2005; Doganoglu and Grzybowski 2007; Birke and Swann 2007; Corts and Lederman 2007; Lee 2013; Haviv, Huang, and Li 2020). However, there are only a few studies on the CNEs and SNEs of online platforms. Using data from the Spotify music streaming platform, Raj (2022) finds that peer expansion (or SNEs) depends on whether the peer is popular or not. Focusing on Alibaba group's Taobao, Chu and Manchanda (2016) detect a significantly large and positive CNE on both buyer and seller sides, a small positive SNE on buyer growth, and no SNE on seller growth.

There are three types of agents on Ele.me (merchants, users, and delivery riders) rather than two types, and delivery riders are usually ignored in most studies on online platforms. We try to describe the CNEs among these three types of agents on Ele.me and identify the important role of delivery riders in the digital food delivery platform. Chu and Manchanda (2016) only examine the CNEs between sellers and buyers. Han et al. (2022) find that logistics capacity can explain the changes in e-commerce during and after the outbreak of the COVID-19 pandemic in the PRC, and therefore logistics capacity is a key operational driver for e-commerce operation. For digital food delivery, no transactions could be completed without delivery riders, and the number of delivery riders inevitably determines the logistics capacity of a platform. Therefore, we cannot ignore delivery riders when trying to capture the CNEs on Ele.me.

Third, our results enrich the literature on MSMEs' business strategies: chain store and multi-app store. Our data include shop characteristics, such as whether a shop is part of a chain, a chain store ID to identify if two shops belong to the same chain brand, and whether a shop is listed on Koubei, which is also an indicator for a multi-app store and digitalization experience. Multi-app differs from multi-homing in that the listings of a shop on multiple applications are complements rather than substitutes. A shop page on Koubei shows shop information, online-to-offline coupons and feedback on offline dine-in experiences of the shop. If a shop is listed on both Ele.me and Koubei, then there is a

link on the shop page on Koubei which directs consumers from Koubei to the corresponding shop page on Ele.me. A multi-app store, which can be found by consumers on at least two applications, can usually obtain more orders and feedback than a shop listed on Ele.me only. We find that the entrants, the overall operation performance, and the operation performance of individual shops during and after the lockdown varied with product category or shop type. There was an increase in shares of entrants that are chain stores and being listed on Koubei, which were likely to be shops that previously focused on offline dine-in services but were forced to seek online channels for the stay-at-home order. Our empirical findings also show that during and post-lockdown periods, chain stores, especially those with a large network, or multi-app stores could recover more quickly than their counterparts. Our work adds to the literature that seeks to understand how the COVID-19 pandemic affected heterogeneous merchants, especially restaurants (Glaeser et al. 2021; Wang et al. 2022).

12.3 Ele.me Data

Our primary data source is Alibaba Group's Ele.me. Consumers can review menus and order food or other products for delivery or takeout from participating restaurants or stores using the Ele.me application, or a portal in Alipay or Ele.me's web browser. Ele.me charges a commission on the orders placed on the platform from restaurants or stores, and pays delivery fees to delivery riders. Ele.me was founded in Shanghai in 2008 and was acquired by the Alibaba Group and Ant Financial Services in April 2018. Ele.me was combined with Koubei as a local life service company in October 2018. Koubei is an app that provides users with information and reviews on local lifestyle services. Koubei was founded by Alibaba and Ant Financial Services in 2015 and was officially included in Alibaba's new retailing system in January 2018. A user can get access to Ele.me and Koubei by the first and second portals in Alipay by default setting, respectively. The main competitor of Ele.me and Koubei in the PRC is Meituan, an app focusing on local lifestyle services. In the second quarter of 2020, the nationwide market shares of Meituan and Ele.me were 68.2% and 25.4%, respectively.

Ele.me is a typical online platform. There are three groups of agents: merchants, users, and delivery riders. Most merchants are restaurants, although some are supermarkets or non-food grocery suppliers. A consumer can pick up their phone and order a meal on Ele.me app. Then, about 30 to 60 minutes later, the consumer will receive the takeout food delivered by a delivery rider. This means that for the digital economy to flourish, it is imperative to achieve users' minimum capacity, information

and communication technology infrastructure, means of financial settlements, and robust logistics infrastructure and services, including the availability of delivery riders. Also, to maximize benefits arising from unprecedented opportunities for micro-businesses in the digital platform, an enabling market ecosystem that encourages fair competition and eases entry barriers is imperative (ADB 2021a).

There are different groups of data from Ele.me: overall operation data at the district-week level; individual operation data at the merchant-week level such as number of shop orders, GMV, and subsidies; and data on shop characteristics at shop-week level such as shop rating scores, whether a shop is a chain store; and data on agents at the district-week level including number of users and number of delivery riders.

We further augment the Ele.me data with public information on the number of weekly confirmed COVID-19 cases,⁴ and the start and end dates of policies for each city at different stringency levels taken from Du et. al. (2022). We obtain the daily number of new cases at a province-day level from the National Health Commission and aggregate the number of new cases to a province-week level. There are three stringency levels: complete lockdown, partial lockdown, and checkpoints. Under complete lockdowns, residents were prohibited from leaving the city and could only leave their homes for essential activities during limited periods. Both public and private transportation were forbidden. Partial lockdowns were less stringent, and residents could leave the city. Although public transportation was shut down, private modes were permitted. At the least stringent level, movement restrictions, such as checkpoints, were limited to localized pockets of disease outbreaks. At the start of the pandemic outbreak or the early Wuhan lockdown period, even people in cities without a containment policy were strongly encouraged to obey the stay-at-home order, and usually all delivered packages were left at the entrance to a community, just like cities with containment policies.

We focus on seven cities: Wuhan and Yichang in Hubei Province, Hangzhou in Zhejiang Province, Harbin in Heilongjiang Province, Suzhou in Jiangsu Province, Xi'an in Shaanxi Province, and Chongqing. The seven cities were selected for the following reasons. First, containment policies varied across the seven cities in time periods and stringency levels. Both Wuhan and Yichang were under complete lockdown policies from 24 January 2020 to 7 April 2020. Hangzhou experienced a partial lockdown policy from 4–27 February 2020, and Harbin from 4 February 2020 to 16 March 2020. Suzhou had checkpoints from 31 January 2020

⁴ Data sources: National Health Commission of the PRC. http://www.nhc.gov.cn/xcs/yqtb/list_gzbd.shtml/

to 23 March 2020, Chongqing had checkpoints from 6–19 February 2020, while Xi'an never experienced any containment policies. Second, all cities except Yichang are provincial capitals or municipalities;⁵ Yichang is a small city. The six large cities are economically comparable in terms of population and GDP. The gross regional products of Wuhan, Yichang, Hangzhou, Harbin, Suzhou, Xi'an and Chongqing in 2021 were \$275 billion, \$77.8 billion, \$281 billion, \$83 billion, \$352 billion, \$166 billion, and \$432 billion (or CNY1.772 trillion, CNY0.502 trillion, CNY1.811 trillion, CNY0.535 trillion, CNY2.272 trillion, CNY1.069 trillion, and CNY2.789 trillion), respectively. Third, these provinces or municipalities do not share borders with each other, so the potential spillover effect is weak. The cities under (i) complete lockdown policies (i.e., Wuhan, Yichang), (ii) partial lockdown policies (i.e., Hangzhou and Harbin), or (iii) checkpoints (i.e., Suzhou, Chongqing) are considered as the “treatment” group, and the remaining one city (i.e., Xi'an) is considered as the “control” group. We exploit the exogenous variations created by the unexpected pandemic to quantify the arguably causal impact of the pandemic.

The geographical size of a market is defined as a district in a city, as most orders are within a district. Consumers usually place orders from shops within 3 kilometers of their place. Only very few shops provide city-wide delivery service, but these orders take a much longer time, charge much higher delivery fees, and are often rejected by shops when they are busy.

We employ the 104-week-long dataset from Ele.me from the fifth week of 2019 to the fourth week of 2021. Shops with at least one order in the whole sample period are randomly selected. The time-invariant shop characteristics include shop creation date, whether a shop is listed on Koubei, which indicates the relative significance of the shop's offline presence, and its city and district locations. Time-varying data include shop operation number of orders, GMV, discounts on order price provided to customers, number of SKUs, a shop's rating score given by customers (0–5), category of goods sold, whether a shop is a chain store, and a unique chain brand identification number, from which we further compute the number of stores under the same management in a district as the network size of a chain brand.

The shops are classified into 204 “narrow” categories by Ele.me. We group these categories into four mutually exclusive and exhaustive “broad” categories as shown in Table 12.2. The largest category in terms

⁵ Wuhan, Hangzhou, Harbin, Chongqing, and Xi'an are provincial capitals. Chongqing is one of the four municipalities under the direct administration of the PRC government.

of net GMV (GMV minus discounts) is Chinese takeout food. The order of shares of main categories from large to small is cooked food, uncooked food, non-food grocery stores, and others. An “effective” shop each week is defined as a shop with a positive number of orders in a week.

Table 12.2: Product Category

Broad Product Category	Narrow Product Category
Cooked food	Sichuan and Hunan cuisine, barbecue, etc.
Uncooked food	Supermarkets, fruit stores, convenience stores, community fresh food stores, etc.
Non-food grocery stores	Pharmacies, flower stores, etc.
Others	Milk, tea, juice, cake, etc.

Note: The narrow product category is defined by Ele.me.

Source: Ele.me.

12.4 Empirical Observations

In this section, we describe how shops in different categories responded to the lockdown. Figure 12.2 displays the weekly number of new COVID-19 cases by province. The first spike and the majority of confirmed new cases appeared through January and February 2020. The second spike in Heilongjiang occurred in late April. Based on the timing of the lockdown in Wuhan, we define the pre-pandemic period (from 2019 week 5 to 2020 week 4), the lockdown period (from 2020 week 5 to 2020 week 14) and the post-lockdown period (from 2020 week 16 to 2021 week 4). The partial lockdown in Hangzhou from 2020 week 7 to 2020 week 9 and partial lockdown in Harbin from 2020 week 7 to 2020 week 12 are included in the Wuhan lockdown period. We use two red vertical lines to mark the first day of the Wuhan shutdown on 23 January 2020 and the Wuhan reopening on 8 April 2020 in Figures 12.2 to 12.5.

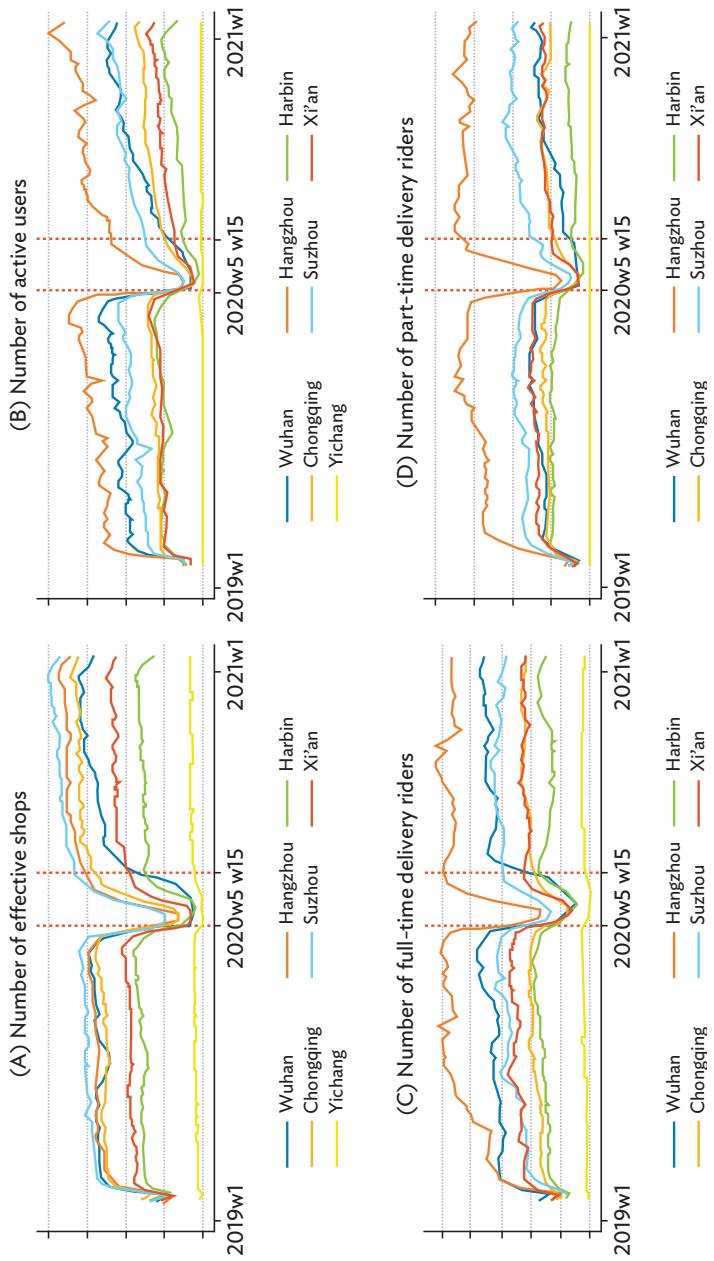
12.4.1 Number of Agents

In this section, we explore the raw data to show the changes in digitalization, overall operation performance and how different merchants responded to the lockdown. An “effective” shop each week is defined as a shop with a positive number of orders in a week. In

Figure 12.3 (A), we observe that the weekly number of effective shops grew slowly in the pre-pandemic period, indicating that the speed of digitalization before the pandemic was rather modest in all of these seven cities. Then, the number plummeted at the beginning of the lockdown period in all cities, especially in Wuhan, and recovered from the end of the lockdown period, confirming the pandemic's overall disruption effect on e-commerce. Wuhan, which experienced the longest complete lockdown, did not fully recover until the end of 2020. Hangzhou, which experienced a short partial lockdown, recovered immediately after the lifting of its own partial lockdown policy, and continued to grow rapidly. Chongqing and Xi'an exhibited a similar pattern to Hangzhou. Suzhou did not reach the same level as the pre-pandemic period even in early 2021. As described above, we further define the post-lockdown period into two stages: post-lockdown 1 (from 2020 week 15 to 2020 week 39), when we observe a sharp recovery, and post-lockdown 2 (from 2020 week 40 to 2021 week 4) when the number of effective shops almost fully recovered to a more or less stable level of the pre-pandemic period for all cities. We regard the impact of the pandemic in post-lockdown period 1 and post-lockdown period 2 as the short- and medium-term impacts, respectively. Cities experienced complete lockdown as Wuhan could not recover till post-lockdown period 2, while most cities that experienced partial lockdown or no containment policy recovered immediately after the lifting of their own containment policy and continued to grow. It is likely that a containment policy accelerated the digitalization when the containment policy is partial lockdown and short.

Similarly, as can be seen from Figures 12.3 (B), (C) and (D), when the number of new cases jumped, the number of active users and delivery riders muted at the beginning of the lockdown period in all cities, especially in Wuhan. While the number of active users in Wuhan did not recover to the pre-lockdown level until the end of 2020, the number of active users kept growing in most other cities. On the contrary, the number of full-time delivery riders shown in Figure 12.3 (C) almost fully recovered immediately after the Wuhan reopening and maintained at a certain level except for Harbin, which was likely due to the second wave of the outbreak of the pandemic in Heilongjiang (Figure 12.2). The number of part-time delivery riders recovered gradually after the Wuhan reopening and continued growing as the number of effective shops or the number of active users increased. This is probably because Alibaba adopted several policies to attract part-time delivery riders after the pandemic, and those who lost their previous jobs started working as part-time delivery riders while looking for a permanent job.

Figure 12.3: Weekly Number of Effective Shops, Active Users, and Delivery Riders by City



w = week.

Note: The two red vertical lines represent the first day of the Wuhan shutdown on 23 January 2020, and the Wuhan reopening on 8 April 2020.

Source: Data are from Alibaba Group. Figures are drawn by the authors.

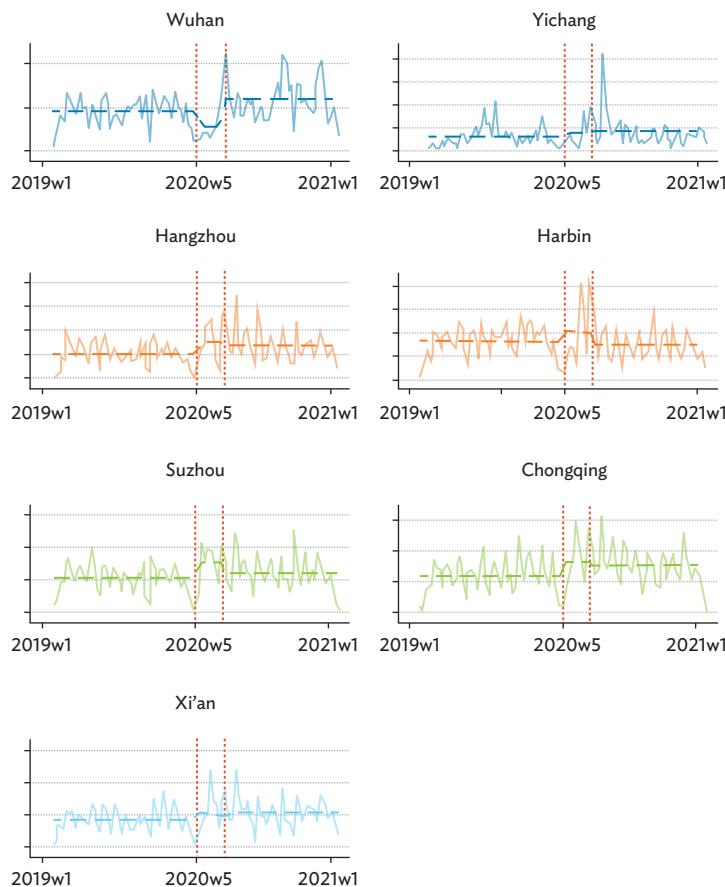
12.4.2 Entrants

To highlight merchant entry patterns before and after the outbreak of the pandemic, we compare Wuhan and Yichang under a complete lockdown policy, Hangzhou and Harbin under a partial lockdown policy, Suzhou and Chongqing under checkpoint policy as “treatment,” and Xi’an without a lockdown as “control” groups so that we exploit the variations created by the unexpected pandemic to quantify the arguably causal impact of the pandemic. As shown in Figure 12.4, the average number of entrants in cities with checkpoints or no containment policies, including Suzhou, Chongqing, and Xi’an, during the lockdown period was higher than that in the pre- and post-lockdown periods. Although there was no lockdown in the three cities during the lockdown of Wuhan, the government strongly encouraged people to stay at home and reduce dining out activities, which forced some offline shops to enter online markets. Indeed, in Suzhou, Chongqing, and Xi’an, the average number of entrants during the lockdown period of Wuhan was higher than the period before and after the lockdown, suggesting net positive impacts of digitalization in terms of coping strategies of businesses in cities with less restricted containment policy (checkpoints or no containment policy).

In Wuhan, however, the immediate impact was overall negative—the average number of entrants during the lockdown dropped slightly because some entrants had to postpone their entry plans from the lockdown period to post-lockdown period 1 due to the direct restrictions and interruption on businesses. Then, the number of new entrants during the post-lockdown period 1 became higher during the lockdown period than that in the pre-lockdown period. Then, its number of entrants fell gradually in post-lockdown period 2. In both cities, we see an acceleration of digitalization in period 1, i.e., the initial recovery phase, which tapered in period 2.

As shown in Zhou et al. (2024), the lockdown period witnessed more and higher shares of entrants that were listed on *Koubei* (or multi-app stores) than in chain stores. On the supply side, shops listed on *Koubei*, most of which relied heavily on offline service before the pandemic and were better known to consumers due to their listing on *Koubei*, as you can see their high share before the pandemic. These merchants temporarily closed their brick-and-mortar stores due to stay-at-home orders and mandatory non-essential business closures, and shifted towards multi-channel retailing, leading to a jump in their entry share during the lockdown. Furthermore, shops listed on *Koubei* are those that have some digitalization experience, and it is easier for them to join Ele.me. On the demand side, more consumers cooked at home

Figure 12.4: Comparison of the (Average) Number of Entrants Before, During, and After the Lockdown of Wuhan



w = week.

Note: The first two red vertical lines represent the first day of the Wuhan shutdown on 23 January 2020, and the Wuhan reopening on 8 April 2020.

Source: Data are from Alibaba Group. Figures are drawn by the authors.

and purchased uncooked food online, and even those consumers who purchased online less often would adapt to the online channel (Hwang, Nageswaran, and Cho 2020). The share of cooked food and uncooked food declined and increased, respectively, during the lockdown.

12.4.3 Operation Performance

Consistent with previous research on aggregate consumption movements during the pandemic (Alexander and Karger 2021; Baker et al. 2020; Coibion, Gorodnichenko, and Weber 2020; Ellison et al. 2021; Raj, Sundararajan, and You 2021; Chen, Qian and Wen 2021; Bartik et al. 2020; Chang and Meyerhoefer 2020; Han et al. 2022), Zhou et al. (2024) show that the total number of orders and net GMV dropped dramatically during lockdown periods and spring festival with a sharp increase in average GMV per order, indicating consolidation of orders during lockdown periods. Orders and GMV gradually recovered to the pre-pandemic level in Wuhan, which was subject to complete lockdown, while they surpassed pre-pandemic levels in cities without less stringent or no containment policies. Since the initial drop was less salient in Xi'an than in other cities, the pandemic and the resulting lockdown seem to create larger positive “net” benefits from digitalization in Xi'an.

During the Wuhan lockdown, the overall operation performance, especially net GMV, of uncooked food and nonfood grocery behaved quite differently from that of cooked food: the total weekly net GMV of cooked food plummeted while the total weekly net GMV of uncooked food jumped up. In post-lockdown periods, both the number of orders and net GMV of uncooked food and nonfood grocery kept growing and exceeded pre-pandemic levels. While we do not show the detailed charts here, at the start of the lockdown, the weekly average number of shop orders and the weekly average ratio of subsidy to net GMV for cooked food dipped, while, for uncooked food, these variables increased. The latter is consistent with Raj, Sundararajan, and You (2021) documented that those restaurants remaining open during the lockdown experienced an increase in counts of orders. These patterns suggest enhanced positive CNEs, particularly for merchants selling uncooked food.

12.4.4 Network Effect

One basic assumption in a multi-sided market is positive CNE. A platform with a larger number of users usually generates a higher utility for merchants and more orders for delivery riders. A platform with a larger number of merchants provides more product variety to users and more orders to delivery riders. A platform with a larger number of delivery riders means shorter delivery time and greater delivery capacity, which benefit both merchants and users. Figure 12.3 also shows the co-movements of agents, i.e., shops, users, and delivery riders, on the Ele.me platform.

A shop could have positive spillover effects on the other shops. It is costly for consumers to open an account on a digital platform. Consumers with an Ele.me membership, which could be obtained by paying a membership fee, are usually offered four coupons each month and can accumulate at least 100 points from every purchase. Approximately 500 points can be redeemed for a coupon, worth CNY5 to CNY8 in the next purchase. The coupon redemption strategy effectively lowers the cost of marginal consumption and induces consumers to form consumption habits on one platform. If a typical consumer plans to purchase the membership of one platform, then they would prefer the platform with a large number of shops in the category that they purchase most often, which causes the positive spillover effect or market-expansion effect. The negative cannibalization or market-stealing effect is also strong between shops offering products in the same category. The overall SNE between shops, i.e., the positive spillover effects minus the negative cannibalization effects, would depend on whether these shops are in the same category.

While the initial drop in the number of orders and net GMV during the lockdown can be attributed, at least partly, to a shortage of delivery riders (Figure 12.3), the pattern would reflect positive CNEs among merchants, users, and delivery riders. According to Zhou et al. (2024), during the Wuhan lockdown period, the number of orders and net GMV were muted, especially for Hangzhou and Wuhan, which can be explained by a sharp decrease in the number of orders. This indicates a strong net effect in a multi-sided market: The merchants on the platform obtain net “negative” benefits from the “absence” of users on the other side, a pattern fueled by the lack of sufficient delivery riders. This would be the other side of the coin where the merchants gain net positive benefits from the presence of users on the platform in the two-sided market.

At the same time, as we have seen in Figure 12.3, only a selective set of merchants can operate during the lockdown with a sharp increase in average GMV per order (Zhou et al. 2024). The magnitude of the jump was particularly large in Wuhan and Yichang, both of which were under complete lockdown policies from 24 January to 7 April 2020. This may be seen as salient positive CNEs in these two cities during the lockdown, suggesting the existence of substantial benefits of digitalization conditional on merchants’ ability to continue business on the platform.

During the phases of the post-lockdown periods 1 and 2, the recovery of a number of users and delivery riders shown in Figures 12.3 (B), (C) and (D) after the outbreak coincides with an increased number of merchants in Figure 12.3 (A). These observations also indicate strong cross-network effects among merchants, delivery riders, and active users in the

two-sided digital market. Additional merchants increase variety, which in turn increases the number of consumers.

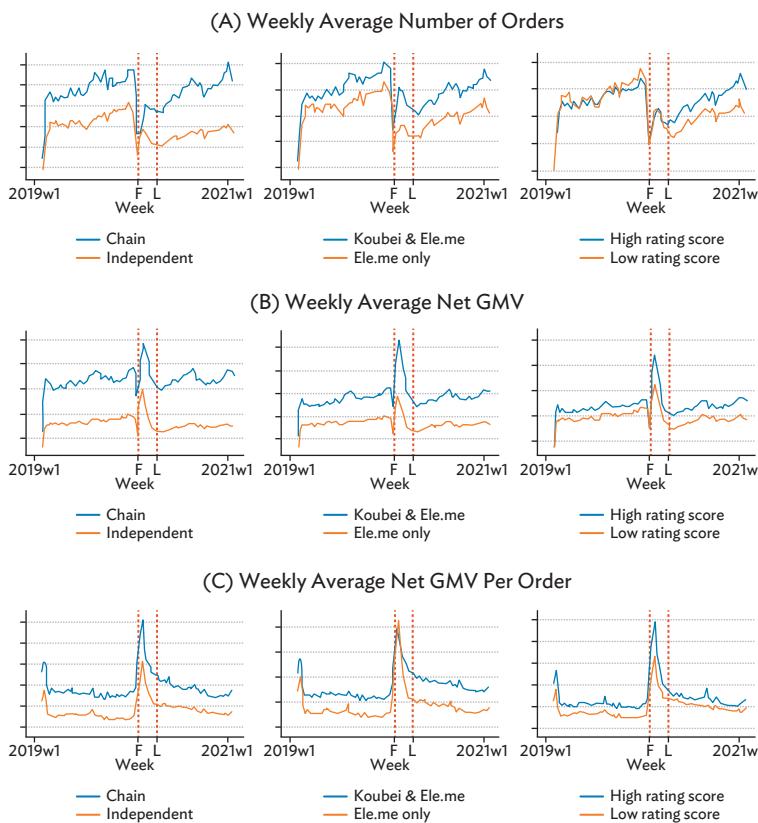
Yet, according to Zhou et al. (2024), overall benefits captured by net GMV seem to be modest, indicating the overall negative SNEs, net GMV tapered and GMV per order dropped during the post-lockdown period 1 and the post-lockdown period 2 when the number of effective shops almost recovered, and a larger number of merchants started entering. These may indicate that the excess benefits for each individual merchant on the platform disappeared during these post-lockdown periods. This observation may be seen as overall negative SNEs because the benefits that merchants obtain from the presence of other merchants on the same side are negative. In other words, there could be negative cannibalization effects: Additional merchants increase competition, leading to lower profitability because the costs exceed the benefits in that agents obtain from the presence of other agents on the same side of a two-sided platform.

12.4.5 Business Strategies: Chain Store and Multi-App Store

These patterns of entry and recovery as well as the CNEs and SNEs are likely to be salient among chain stores, multi-app stores, and shops offering groceries or uncooked food, as shown in Zhou et al. (2024). First, shares of entrants that are these stores became particularly high during the lockdown period and net GMV as well as net GMV per order jumped during the initial lockdown. Second, the net GMV of cooked food plummeted during the lockdown, especially in Wuhan, and gradually recovered later. Yet, there seems to be a permanent impact because they could not reach a level as high as the pre-lockdown period. In contrast, net GMV of uncooked food spiked during the lockdown period, gradually fell down, but still maintained at a level higher than the pre-lockdown period.

According to these observations, we can hypothesize that chain stores or multi-app stores could recover more quickly than their counterparts after the lockdown period; and that people form the habit of purchasing uncooked food or groceries online after the lockdown period.

The weekly number of orders for chain stores increased faster than those for non-chain stores, indicating that the expansion of the market share of chain stores was facilitated by the lockdown. At the same time, the average net GMV per order has been much higher for chain stores than that for non-chain stores (Zhou et al. 2024). These observations are consistent with strong positive CNEs especially among stores connected through chain networks.

Figure 12.5: Weekly Average Shop Performance by Store Type

GMV = gross merchandise value, w = week.

Note: The two red vertical lines represent the first day of the Wuhan shutdown on 23 January 2020, and the Wuhan reopening on 8 April 2020.

Source: Data are from Alibaba Group. Figures are drawn by the authors.

Our companion papers formally test these hypotheses associated with CNEs and SNEs in the short and long run using a version of the difference-in-differences framework and exploiting variations in lockdown policies. First, Zhou et al. (2024) employ the same dataset to uncover merchants' heterogeneous responses to the COVID-19 pandemic during and after different containment policies in the PRC. During a lockdown, while shops that remained open offered fewer

price discounts and a narrower variety of products, consumers tended to consolidate orders. A complete lockdown left longer-term scarring on online merchants, especially those in the cooked food industry. In contrast, chain stores, especially those with a large chain network or multi-app stores exhibited stronger resilience than their counterparts during and post-lockdown. Thus, both specialization (at the outlet level) and breadth (at the network level) emerge as key factors that enable merchants to successfully overcome grim economic circumstances.

Second, Zhou, Sawada, and Tan (2024) exploit the geospatial and categorical granularity of the data set to develop instrumental-variable estimates to show that CNEs are likely to be positive among three different groups of agents on a multi-sided market: merchants, users, and delivery riders. Furthermore, we identify SNEs on the merchant side, which is the difference between positive spillover/market-expansion effects and negative cannibalization market-stealing effects, are likely to be negative. The magnitudes of SNEs vary by a merchant's main product category and whether two merchants are in the same main product category.

12.5 Conclusion

Our granular data from Ele.me, covering 2 years before and after the outbreak of the pandemic from the beginning of 2019 through 2021, show heterogeneous industry dynamics on the pandemic and digitalization. While the speed of digitalization before the pandemic was rather modest in these seven cities, after the immediate disruption caused by the pandemic, we observed a sharp and full recovery to the level of the pre-pandemic period within a year after the pandemic. This “reversion to the trend” implies that the pandemic only delayed the adoption of digital platforms.

The pandemic and the resulting lockdowns seemed to incentivize merchants to enter the platform and accelerate digitalization. While our data does not allow us to distinguish between the increase in the extensive and intensive margins in the number of users, throughout different phases of recovery, data support the existence of the positive cross-side network effects and substantial benefits of digitalization among merchants, users, and delivery riders in the multi-sided digital market. At the same time, negative cannibalization/market-stealing effects among merchants caused by fierce competition seem to dominate positive spillover/market-expansion effects, which lead to the overall negative SNEs. We also observe that these patterns of entry and recovery as well as CNEs and SNEs are likely to be salient among chain stores, multi-app stores, and shops offering groceries or uncooked food.

These observations imply that chain stores and multi-platform go-live helped hungry merchants effectively improve their business performance and contributed to the post-epidemic recovery; the digital take-out platform helped stores with mainly offline business expand their online business during the epidemic; and consumers maintained their habit of buying raw food/non-food groceries on the online platform to some extent during the epidemic recovery period.

This chapter contributes to both the literature and the policies. First, our study yields some clear results and implications for policymakers and merchants: a modest containment policy (partial lockdown or checkpoints) may accelerate the digitalization of MSMEs, but the damage of a complete lockdown policy is long lasting; the online cooked food industry has been very slow to recover after the lifting of restrictions. Both these findings suggest longer-term scarring on the services sector from the pandemic. This finding has implications for more recent lockdowns in the PRC.

Second, on the consumption side, our data show that consumers tended to consolidate their orders significantly during a lockdown; therefore, net GMV, which is the difference between total GMV and subsidies, is a better measure of operation performance than the number of orders.

Also, chain stores or multi-app stores (i.e., listed on Koubei) were more likely to enter Alibaba's food delivery platform during the lockdown period. Chain stores, especially those with a large network, and multi-app stores could recover more quickly than their counterparts in the lockdown and post-lockdown recovery periods. This highlights that better access to the digital platform could help online merchants, especially MSMEs, survive in a world with lockdown risks.

People get used to platform transactions and continue to purchase nonfood groceries and uncooked food from the platform in the post-lockdown period. The SNEs are found to be generally negative but indefinite when it comes to merchants' main product categories. In contrast, the CNEs are mostly positive. In future studies, it would also be important to investigate how competition from in-person dining or grocery shopping has changed once restrictions soften.

Third, we also find that the total number of delivery riders seems to be negatively correlated with the overall performance of the platform. The labor supply of delivery riders could be countercyclical, because it would be difficult to hire or expand the number of delivery riders when economic conditions are good. Since a platform can absorb a large number of workers, it would be an important element of the economic contribution of platforms. Further analysis of delivery riders from different angles such as wages and monetary incentives will provide important insights into regulation policies.

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13

The Dynamics of E-Commerce and Its Role During the COVID-19 Pandemic

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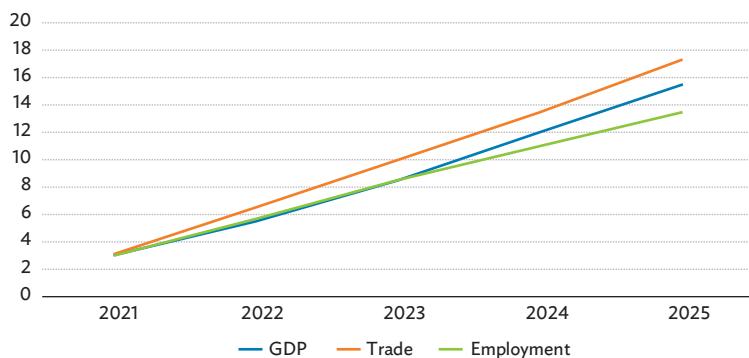
13.1 Introduction

Micro, small, and medium-sized enterprises (MSMEs) are recognized as crucial drivers of economic development, particularly in low- and middle-income countries. In Indonesia, the vast majority of enterprises are MSMEs, contributing approximately 60.5% to the country's aggregated gross domestic product (GDP). They play a major role by employing 96.9% of Indonesia's total workforce in 2019 (Ministry of Cooperatives and SMEs 2019).

The emergence of digital platforms has brought about unprecedented changes to people's daily lives, employment, businesses, and markets, thereby unlocking opportunities for MSMEs. While the speed of digitalization among MSMEs in Indonesia and other Asian countries has been relatively moderate, the adoption of e-commerce and other digital transactions of goods and services has the potential to enable MSMEs to expand their market reach and foster their growth. Indeed, according to the Asian Development Bank's (ADB) Global Trade Analysis Project model (ADB 2021), the digitalization of the economy could yield substantial benefits for Indonesia in the next 5 years. These benefits include an economic dividend of more than \$130 billion per year and the creation of 16 million new jobs annually from the increased use of digital technologies (Figure 13.1). Moreover, MSMEs stand to gain from positive spillovers from the countrywide digitalization efforts.

On the other hand, it is important to note that digital platforms are characterized by significant scale economies and strong cross-network externalities in two-sided markets. This might have contributed to

**Figure 13.1: Impact of Digitalization on Indonesia's Economy
(Gains as Proportion of 2020 Baseline, %)**



GDP = gross domestic product.

Sources: ADB (2021), Narayanan and Villafuerte (2020).

an increased market concentration toward large enterprises. Hence, fostering robust competition policies for digital platforms is important to establish a market ecosystem that encourages fair competition and maximizes the potential benefits that they can bring, especially for MSMEs.

The novel coronavirus disease (COVID-19) pandemic presented numerous challenges for MSMEs, as they struggled to sustain their operations amid temporary business shutdowns, supply chain disruptions, sharp declines in sales and revenue, and liquidity shortages during lockdown periods. In such times of crises, digital platforms have played a particularly vital role in building MSMEs' resilience and ensuring their sustainability. These platforms have not only provided avenues for MSMEs to generate income and create jobs but have also acted as a form of social protection for vulnerable workers and sectors.

While digital platforms offer numerous potential benefits, an early evaluation of the pandemic indicates that although the pandemic crisis prompted MSMEs to embrace digital solutions, stable digital transformation has yet to be established among them (Shinozaki 2021). The combination of compressed demand and ongoing supply disruptions has continued to impact MSMEs' revenue and financial conditions throughout the initial year of the pandemic. Moreover, digital platforms have competing and counteracting effects on MSMEs.

For instance, a tradeoff of benefits arises when MSME entrants join digital platforms. On one hand, increased participation can improve product variety and promote MSME inclusion, alleviating loss of income and jobs during a crisis, which can be seen as an “equity” perspective. However, it can also result in cannibalization and congestion, leading to decreased profits due to an excessive number of entrants, which can be viewed from an “efficiency” perspective. As a result, the rapid penetration of digital platforms induced by the pandemic may yield mixed outcomes for MSMEs. This could highlight social issues related to economic inequality and broad distributive justice.

In this chapter, we analyze the dynamics of e-commerce during the COVID-19 pandemic using unique merchant-level administrative data obtained from GoFood, Indonesia’s largest online food delivery platform. The primary focus of this chapter is to contribute to the understanding of platform efficiency from two perspectives: static efficiency and dynamic efficiency. Static efficiency investigates whether the entry of new merchants into the platform is efficient or not, while dynamic efficiency explores how the presence of too many merchants on a platform can impact the discovery of successful merchants in the long run.

The COVID-19 pandemic provides an excellent opportunity to study these efficiency contributions and their implications from both equity and efficiency standpoints. The exceptional circumstances created by the pandemic serve as a natural setting for us to examine the interplay between static and dynamic efficiency, as well as the tradeoff between equity and efficiency. Through our analysis, we aim to shed light on the significance of establishing an appropriate mix of competition policies that can optimize both equity and efficiency (both static and dynamic) when merchants join and operate on digital platforms.

13.2 Static vs. Dynamic Efficiency Point of View— Theory and Literature Review

In this section, we provide a theoretical foundation for our study by examining the welfare implications of firm entry and product diversity, which have been long-standing questions in economics. In their seminal work, Dixit and Stiglitz (1977) identified three key tradeoffs to consider: distributive justice, external effects, and scale economies. The subsequent industrial organization literature has primarily focused on the scale economies aspect of this discussion. When entering a market or introducing new products incurs fixed set-up costs, the social planner faces tradeoffs between quantity versus diversity. In such cases, the socially optimal outcome often differs from the market equilibrium.

This understanding was further developed in an influential paper by Mankiw and Whinston (1986). They explicitly consider the post-entry game format of competitors and introduce the concept of a “business stealing” effect, where potential entrants do not internalize the output reduction by the incumbent firms when making their entry decisions. Mankiw and Whinston demonstrate, in a homogeneous product market, that the equilibrium number of firms can exceed the socially optimal number due to the “business stealing effect.” However, this “over-entry” result is sensitive to the degree of product differentiation. In markets with differentiated products, the product diversification effect may outweigh the business stealing effect, leading to insufficient entry compared to the social optimum. Therefore, determining whether the entry is excessive or insufficient depends on the specific market environment and necessitates empirical analysis.

One of the most influential empirical studies on measuring the social inefficiency of entry was conducted by Berry and Waldfogel (1999). They studied cross-sectional data on advertising prices in the radio industry, the number of stations, and radio listening using a three-stage procedure. First, they assumed symmetric firms and estimated an empirical relationship between the number of active firms in the market and the revenue earned per firm. A negative slope on this relationship is indicative that the business stealing effect dominates, while a positive slope would suggest a market expansion or product diversification effect. Second, the authors used firm entry decisions to infer the fixed costs by comparing the per-firm profits at the observed number of firms with the predicted per-firm profits if an additional firm were to enter the market. This difference provided a lower bound on the magnitude of the fixed entry costs. Finally, based on the fixed cost estimates, Berry and Waldfogel (1999) simulated the counterfactual number of firms that would maximize the social surplus for each market. Their findings revealed severe excessive entry in the commercial radio market due to strong cannibalization effects, as their estimated demand results indicated a high substitutability between commercial radio stations.

In the online setting, Kawaguchi, Shum, and Uetake (2021) applied a similar empirical framework proposed by Berry and Waldfogel (1999) to examine merchant-level administrative data from GoFood, Indonesia’s largest online food delivery platform. As we will explore in detail later, their analysis demonstrates a negative causal relationship between the number of firms in a local market and firm-level revenues. This finding suggests the presence of strong cannibalization effects arising from the entry of new firms in the platform economy, similar to what Berry and Waldfogel found for the radio market in the United States.

While the earlier literature has primarily focused on the tradeoff between scale economies and product diversity in the traditional “brick-and-mortar” markets, online e-commerce markets exhibit unique characteristics where external effects come into play.

The first type of external effect is the existence of two-sided network externalities. Jullien, Pavan, and Rysman (2021) provide an excellent survey of the literature on two-sided markets and network effects, which is relevant to the online platform marketplace. If consumers value the platform more when there are more varieties offered on it, the entry of a new firm into the platform could complement the incumbents by strengthening the network externality and attracting more consumers. However, it is important to note that the standard business stealing effect still exists. Positive network effects may dominate when the platform is small, but as the platform matures, the business stealing effect tends to dominate, leaving limited room for new consumers.

A second type of externality affecting e-commerce platforms arises on the cost side. Specifically, food delivery and online retailers draw their delivery drivers from the same pool, and the entry of new firms can intensify competition for delivery drivers, leading to higher wages and increased business costs for all firms. Platforms attempt to mitigate these “last mile” cost spillovers by creating dedicated driver fleets and optimizing dispatch through routing software. However, these efforts have had mixed success as drivers often prefer to work with multiple platforms (“multi-home”) to maximize their income sources.

Complicating matters further is the fact that many delivery drivers view their delivery work as a supplementary source of income. During times of economic downturns, they may increase their delivery efforts to supplement their primary income, even when customer demand for food delivery or online retail is relatively low. This countercyclical labor supply, where drivers are more willing to work during negative macroeconomic shocks, creates a potential mismatch between labor supply and labor demand, which is a distinct characteristic of the delivery sector in e-commerce and warrants further investigation.

A growing and largely recent empirical literature aims to detect and quantify these network effects in various contexts. Lee (2013) conducted a pioneering study that examined the complementarity between video games on the same console within a dynamic framework. In the online market context, Reshef (2020) investigated the net effect of new entrants on the performance of incumbent firms and explored which types of incumbents benefited from entry. Using proprietary data from the Yelp Transactions Platform, the study found that the entry of new firms, on average, increased incumbent firms’ weekly revenue by 4.5%. However, the impact varied depending on the quality of the incumbent

firms. High-quality incumbents experienced a 9.8% increase in weekly revenue, while low-quality firms faced a decline of up to 9.2%. Similarly, Raj (2021) utilized innovative data from the Spotify music platform to examine the effect of peer expansion on provider performance. The study employed a temporary increase in artist popularity resulting from the sudden death of an artist as a demand shock. The findings showed that when a highly similar peer released an album, it led to an increase in the sales of unique listeners and streaming popularity on Spotify, indicating that demand spillovers outweighed substitution in this context. However, the results varied depending on the type of peer whose album was released. The release of an album by a popular peer had a positive effect on the performance of local artists, whereas the release of an album by a niche peer had a negative impact on provider performance.

These studies, along with others in the empirical literature, contribute to our understanding of network effects and their implications in different markets and industries. By examining the dynamics of complementarity, demand spillovers, and the varying effects on different types of firms, these studies shed light on the complex nature of network effects and their role in shaping market outcomes.

The two-sided network externality literature focused on the market expansion effect originating from the indirect network effect. The inclusion of search and information frictions in the analysis of online market platforms adds another important dimension to the understanding of external effects, leading to the concept of market congestion externality. Limited consumer time and attention to search and evaluate all the products can result in congestion and misallocation of purchases across products when new firms enter the market platform.

Ershov (2022) conducted a study using a quasi-random experiment in the Android app store and provided evidence of the market congestion externality. The author observed that after a redesign of the game categories in the store, the number of apps per category decreased. Consequently, compared to the control categories (non-game categories), game downloads increased, indicating the presence of congestion externalities.

Ershov (2022) studied a static model in which the congestion externality partially offsets the product diversity effect; in contrast, Bai et al. (2021) focused on the dynamic implications of market congestion externality. They highlighted two novel dynamic channels through which market congestion can hamper market efficiency. First, most online platforms design their search algorithms to disproportionately benefit sellers with large historical cumulative sales. As a result, it takes a long time for new firms to stand out from established

incumbents. Second, if there is information asymmetry regarding each firm's fundamental quality (e.g., Board and Meyer-ter-Vehn [2020]), market congestion can exacerbate the slow resolution of information frictions and further hinder allocative efficiency. Bai et al. (2021) conducted a randomized experiment that provided new exporters with exogenous demand and information shocks, demonstrating the limited effectiveness of existing platform mechanisms to help small sellers overcome congestion frictions. The authors then presented theoretical and quantitative analyses showing that a large number of market participants undermines the functioning of existing online mechanisms and hampers the discovery of high-quality firms.

Finally, online platforms have the potential to alleviate entry barriers for MSMEs and provide opportunities for subsistence and opportunity-seeking entrepreneurs in developing economies. By enabling MSMEs to conduct business online, these platforms offer global reach and expand market access for financially constrained firms. (ADB 2021). Distributive justice is obviously important with these policy goals in the background.

The literature provides evidence supporting the “insurance” effect of entry into digital platforms for small businesses. Raj, Sundarajan, and You (2021) conducted a study on the impact of COVID-19 on small restaurants and their utilization of the Uber Eats platform for food delivery and take-out services. The authors found that small restaurants were able to partially offset revenue losses from closing their dine-in channels by leveraging the online on-demand channel. Moreover, restaurants that remained open for delivery experienced significant increases in sales. This indicates that online platforms can serve as a means for MSMEs to adapt to challenging circumstances and sustain their businesses during crises.

These findings highlight the potential of online platforms to provide MSMEs with alternative revenue streams and mitigate the adverse effects of disruptions such as the COVID-19 pandemic. By embracing digital platforms, small businesses can diversify their risk, enhance their resilience, and improve their overall market prospects.

13.3 Context Provided by the COVID-19 Pandemic as a Natural Setting to Explore Static vs. Dynamic Efficiency and Contributions of Platforms to MSMEs

The COVID-19 pandemic presents a valuable case study for the framework outlined in Section 13.2, as it provides a natural setting for the exploration of how entry, at least partly induced by policy changes of the digital platforms, impacts the efficiency of these platforms, as well as its implication from a distributional justice standpoint. In addition, the pandemic was an exogenous shock that disrupted business models dependent on physical supply and logistic chains, facilitating the rapid digitalization of transactions even for MSMEs. Mobility restrictions were also imposed in many countries, including in Indonesia, to contain the pandemic. Hence, after business disruptions at the beginning of the first lockdown, there was a spike in the number of businesses joining digital platforms, as well as rising demand for e-commerce and online services.

To investigate these points on distributive justice and efficiency further, we have focused on MSMEs on the GoJek's GoFood platform. As a brief contextual background, MSMEs provide jobs, generate income, and drive overall economic growth in Indonesia. The onset of the COVID-19 pandemic and subsequent restrictions on social movement threatened the viability of many Indonesian MSMEs, which experienced temporary shutdowns, cash shortages (Sonobe et al. 2021), and falling revenue (LPEM FEB Universitas Indonesia and UNDP 2020).

MSMEs employed a variety of strategies to survive the pandemic, including shifting from physical to digital sales by marketing and selling their products through online platforms. The use of online platforms in regular business operations can strengthen MSMEs by (i) increasing the efficiency of sales and marketing operations, (ii) channeling new suppliers to business owners, (iii) offering financing options with low-interest rate loans, and (iv) providing business development training.

Digitalization also requires technological adaptability and agility, or it risks leaving some behind, particularly merchants who are less educated and whose businesses are not located in metropolitan areas with large markets. This is why, prior to the onset of the pandemic, MSMEs' digitalization was already on Indonesia's development agenda to achieve social inclusion.

Established in 2010 as a courier and ride-hailing service, by 2015 GoJek had expanded its service offerings to include an easy-to-use mobile application with a dashboard providing merchants with online

marketing, sales, and payment support. By 2021, GoJek accounted for 43% of the \$4.6 billion food delivery market in Indonesia (Momentum Works 2022). GoFood allows merchants to prepare home-cooked foods and have them delivered through the app's ride-hailing service. This was critical to the continued operations of MSMEs that otherwise would have been completely cut off from customers during strict pandemic lockdowns.

ADB and GoJek undertook a joint study in 2021 and 2022 to examine the COVID-19 pandemic's impact in Indonesia on MSMEs in the food and beverage sector that sell and market their products on GoJek's food delivery service app, GoFood. The latter allows merchants to prepare home-cooked foods and have them delivered through the app's ride-hailing service. By 2021, GoFood accounted for about 3.9% of GDP in 2021 current prices (Momentum Works 2022). As with similar platforms, GoFood provided employment opportunities for many who might not have otherwise entered the labor market.¹

Our analyses in this chapter draw on the joint ADB–GoJek study, and use two key data sources: (i) weekly administrative and transactions data on all GoFood merchants (288,296) in Indonesia active on the platform as of February 2021; and (ii) new primary data generated through an online survey followed by a telephone survey conducted among GoFood merchants in two of the seven regions served by GoJek. The survey has been conducted primarily to obtain two key information sets, i.e., the size of the GoFood enterprise and the gender of the enterprise owner, and it facilitated comparative analyses MSMEs and enterprises owned by men and women. The first dataset tracks new entrants and dropouts for a period spanning pre-COVID-19 to post-onset of COVID-19. The administrative dataset from the GoJek platform covers the period from 7 January 2019 to 28 February 2021, aggregated on a weekly basis per merchant. The data include detailed individual-level information on merchant revenues as measured by gross merchandise value (GMV) generated from online GoFood transactions and consumer expenditures as well as geospatial identifiers, but they are not gender-disaggregated and enterprise size is not indicated.

¹ In addition to providing an online platform to connect merchants with customers and match suppliers with MSMEs, GoJek also supports pandemic-afflicted businesses with technical solutions ranging from GoBiz—an all-in-one business solution that provides MSMEs with mobile connectivity, digital payments (GoPay), and other financial services such as zero-collateral working capital loans—to nontechnical support such as special promotions and COVID-19 safety guidelines.

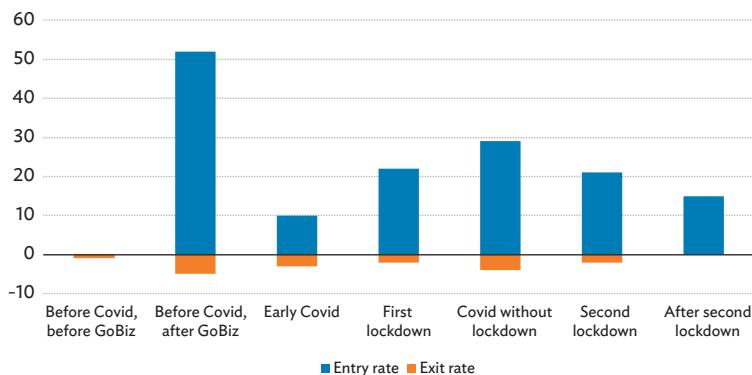
The second dataset includes primary data from surveys conducted among a random sample of 50,000 GoFood merchants in Jabodetabek, the larger Jakarta area comprising the capital city of Jakarta and Bogor, Depok, Tangerang, and Bekasi, and merchants in EJBN, a group of administrative regions and cities in East Java, Bali, and East and West Nusa Tenggara. This sampling covers the regions that generated the highest (Jabodetabek) and lowest (EJBN) revenue as tracked through GMV in GoFood transactions during the study period. This dataset introduces gender-disaggregated data on enterprise owners and enterprise size as measured by the number of employees. Following the precedent set by Indonesia's Central Bureau of Statistics, enterprises with up to four employees are micro-sized, five to 19 employees are small, and 20–99 employees are medium-sized. Samples are drawn through a random selection from the two regions, reflecting the relative levels of all GoFood merchants operating in these two regions.²

We observed GoFood merchants' transactions and revenues, as tracked through GMV, over a period of 112 weeks from before the start of the pandemic (January 2019) until the end of its first year (February 2021). Figure 13.2 reports entry and exit rates by period for all GoFood merchants in Indonesia, to help demonstrate increased competition and potential crowding out among merchants. This figure points to an extremely high entry rate of new merchants after GoJek introduced its GoBiz platform, an ecosystem of business support services for GoJek's MSME partners. This surge was followed by a continued influx of new entrants throughout the pandemic period, especially after the first lockdown ended.

Next, we examined MSMEs' performance and survival rates during the pandemic, by the gender of enterprise owners. Figure 13.3 depicts the performance of women- and men-owned digitally operated, i.e., operating their core businesses online or both online and offline, MSMEs during, before, and after the pandemic across Indonesia. The MSMEs owned by men performed slightly better than those owned by women. About 55% of them suffered a drop in demand from March to April 2021, while the figure is 63% for men-owned non-digital MSMEs and 58% for women-owned digitally operated MSMEs. Further, about 28.5% of men-owned digital MSMEs performed better than before the

² The relative distribution of GoFood merchants operating in Jabodetabek and EJBN was 65% and 35%, respectively, when this study was conducted. This ratio was maintained in the online survey results. The distribution of phone survey respondents was almost the same, at 64% for Jabodetabek and 36% for EJBN.

Figure 13.2: Market Competition Among GoFood Merchants, Entry and Exit Rates, by Period Studied



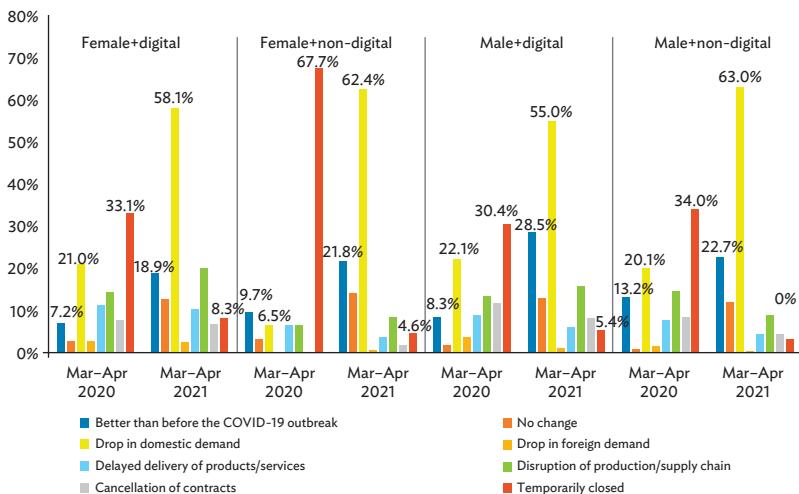
Note: Timing structure of analysis is as follows: (1) before COVID-19, before GoBiz (from 7 January 2019 to 30 June 2019); (2) before COVID, after GoBiz (from 1 July 2019 to 1 March 2020); (3) early COVID (from 2 March 2020 to 5 April 2020); (4) first lockdown (from 6 April 2020 to 5 July 2020); (5) COVID without lockdown (from 6 July 2020 to 4 October 2020); (6) second lockdown (from 5 October 2020 to 6 December 2020); (7) after second lockdown (from 7 December 2020 to 28 February 2021).

Sources: GoJek administrative data and authors' calculations.

COVID-19 outbreak, while only 18.9% of women-owned digital MSMEs experienced an improvement. Digital transformation of MSMEs has yet to be established stably among MSMEs at the beginning. Digitalized MSMEs could improve their performance at the later stage of the pandemic (Oikawa et al. 2023). We will look at this gender dimension more closely and among GoFood merchants in the next section.

Panel A of Figure 13.4 presents the distribution of merchants' GMV (in logarithm form), differentiated across the number of their employees as well as across different time periods. Across all time periods, it is more common for larger-sized merchants (those with 20 or more employees) to have higher GMV than smaller-sized enterprises persistently. The COVID-19 pandemic and associated mobility restriction measures do not appear to have had a significant impact on distribution (although Figure 13.3 indicates that a higher proportion of woman-owned non-digital firms closed temporarily).

Figure 13.3: Digitally Operated MSMEs by Gender Ownership, 2020–2021



MSME = micro, small, and medium-sized enterprise.

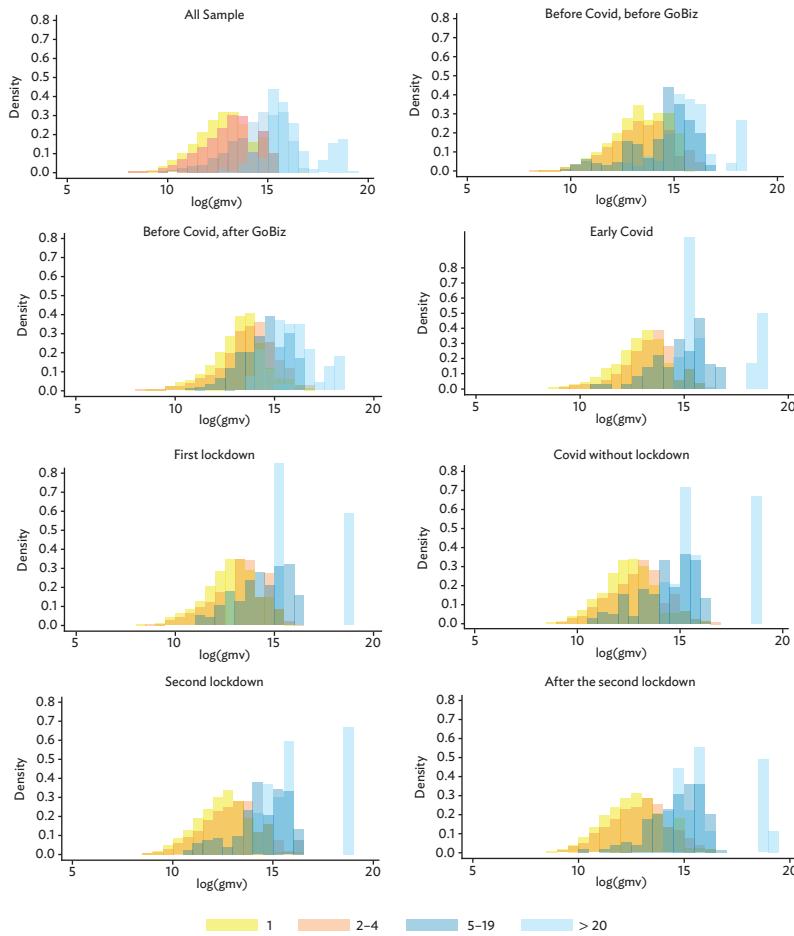
Note: In this countrywide context, we then look at how GoFood merchants have fared compared to the average digitally operated MSME in Indonesia, and whether the size of the enterprise (by employee number) and the gender of the owner made a difference in GoFood MSMEs' performance and survival rates.

Source: ADB (2022).

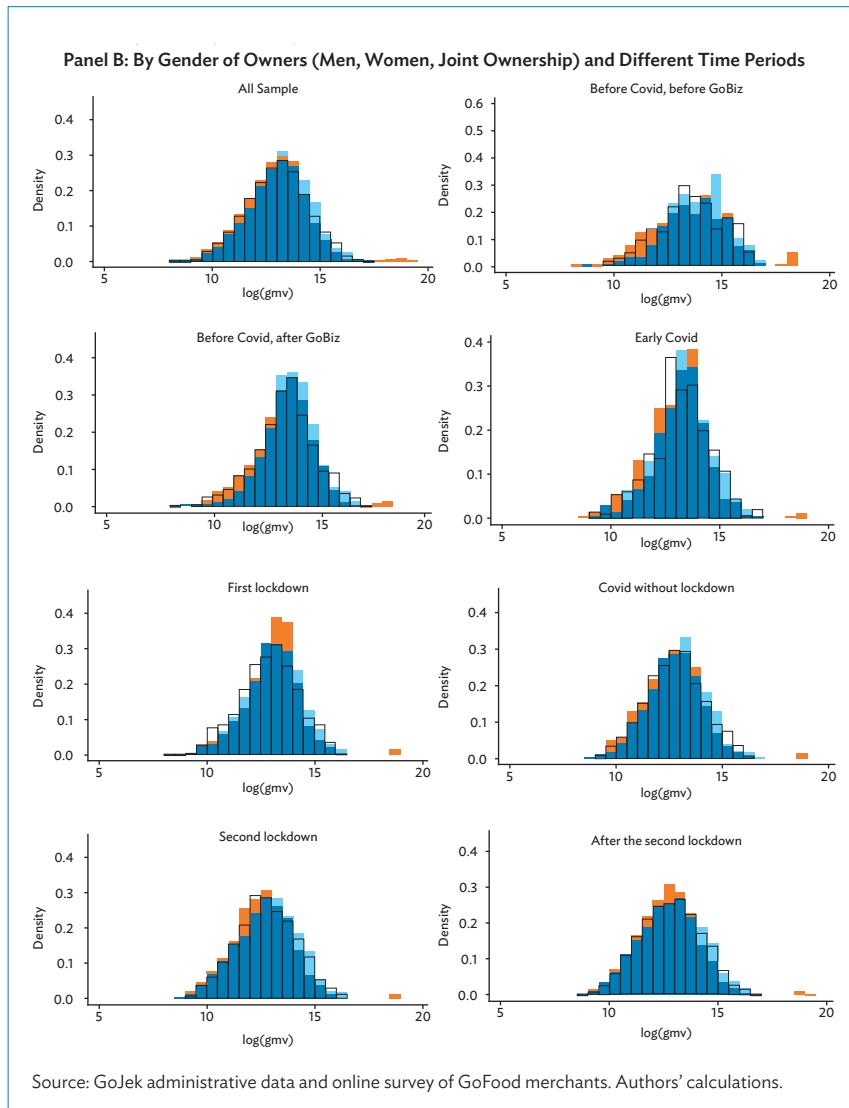
Figure 13.4 Panel B depicts the gender dimension of GMV variations across the seven subperiods for GoFood merchants. While there do not appear to be significant density differences based on the gender of the GoFood merchant/GoFood enterprise owner, women-owned enterprises seem to have done slightly better in the later stages of the pandemic.

Figure 13.4: Gross Merchandise Value Distribution

Panel A: By Employee Size and Different Time Periods



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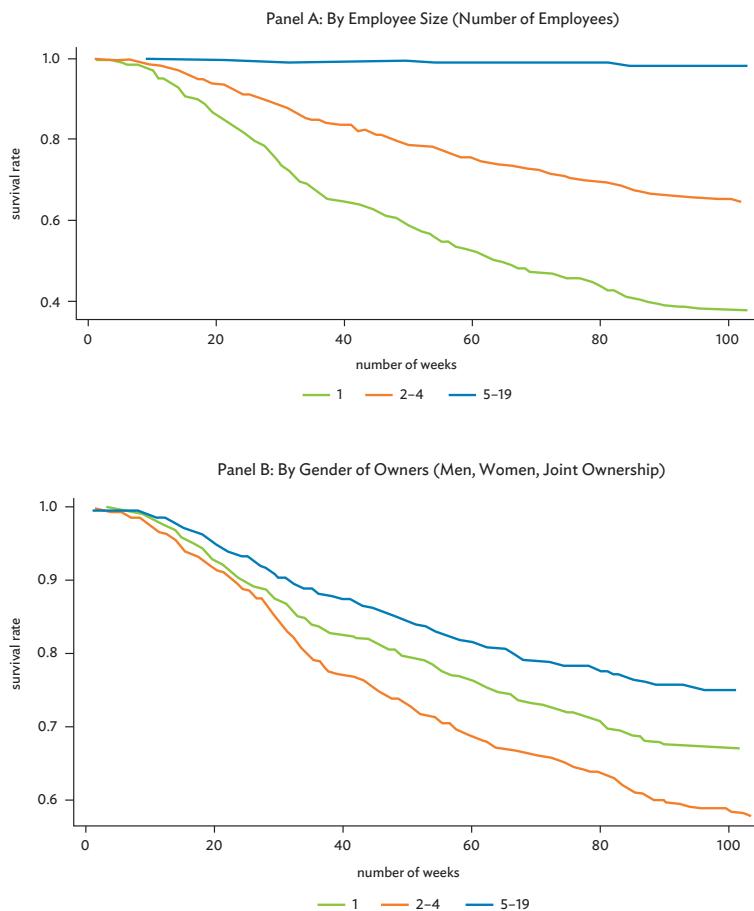
Figure 13.4 *continued*

As noted in Figure 13.2, the economic and health shocks of the pandemic, along with the containment measures that included strict lockdowns and closure of places (physical or offline) of business led to a surge in new enterprise entrants into the GoFood platform, much like other online marketplaces. As the pandemic continued, the number of entrepreneurs by necessity (those who did not have any other employment options and may or may not have had prior experience and expertise in the cooked food business) started to increase among the GoFood merchants. Among these enterprises, product substitutability was relatively high, adding to survival pressures.

Figure 13.5 depicts the survival rates of MSMEs on the GoFood platform by the size of the enterprise and the gender of the owner of the enterprise over the 112-week period between the beginning of January 2019 and end of February 2021. Survival rates among self-employed and micro enterprises declined sharply as the pandemic continued, while medium-sized enterprises were more resilient (Figure 13.5A). When we grouped the enterprises by gender of the owner, we found that jointly-owned enterprises by men and women had higher survival rates, followed by women-owned businesses, while men-owned enterprises showed the lowest survival rates (Figure 13.5B). Indeed, survival rates for enterprises owned by men were consistently lower than those enterprises owned by women or jointly-owned by men and women; and they seemed to have exited the market faster and at higher rates compared to the women-owned and jointly-owned enterprises. We will examine gender-disaggregated business performance further in the next section of this chapter.

The survey's findings supported much of the literature on the adverse economic impacts of the COVID-19 pandemic, particularly for micro-sized and self-employed MSMEs (see, for example, Shinozaki and Rao 2020; Oikawa et al. 2023). Those enterprises with low cash reserves were in the greatest peril of not surviving the economic crisis. Furthermore, women-owned MSMEs faced a unique "triple burden"—of entrepreneurship, economic shock, and domestic responsibilities—that complicated their efforts to maintain a viable business amid a generational economic downturn. Digitalization helped many of the most vulnerable MSMEs endure the economic crisis through the use of the GoFood app and other similar online platforms. For more than 40% of survey respondents, GoFood not only helped their MSME survive the pandemic, but it actually facilitated increased growth in the face of adversity by channeling new customers directly to them via the platform.

Figure 13.5: Survival Rates of Enterprises on GoFood Platform by Week



Source: GoJek administrative data and online survey of GoFood merchants. Authors' calculations.

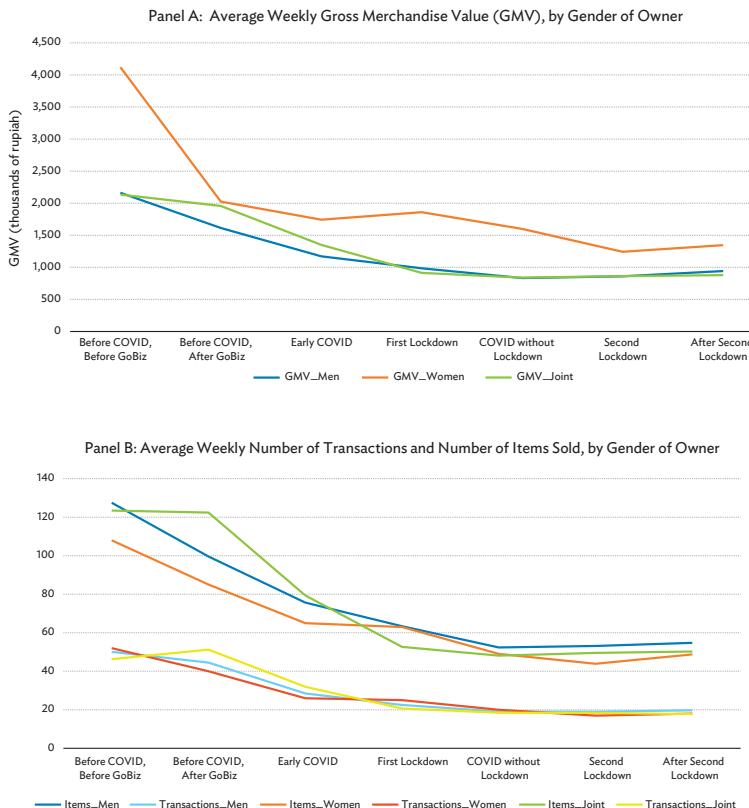
13.3.1 Distributive Justice?

The trend of continued entry of merchants shown in Figure 13.2 reflects an important “inclusive” nature of the platform that helped MSMEs onboard the platform by supplying business support services such as marketing, supply chain connection, and access to financial services without collateral requirements. The platform seems to function as an instrument to achieve distributive justice, at least partly, by providing a new form of social safety net, in the form of market access, client interface, and financing channels through their online applications, for vulnerable MSMEs.³

However, benefits from partnering with online platforms might not have been distributed equally among all market participants. To investigate these different dimensions, we illustrate gender-disaggregated business performance on the platform before and after the outbreak of the pandemic following Elhan-Kayalar, Sawada, and Rodgers (2022). Throughout the pandemic, women-owned MSMEs generally performed better in terms of gross income, than their men counterparts, highlighting a critical inclusive nature of the platform. However, they were also hit the hardest during the shock. One possible reason for this is because women-owned MSMEs tended to be smaller in size with limited market presence and sold lower valued products or sold their products at a lower price than men-owned MSMEs during the pandemic, as indicated by a lower average GMV per item for women-owned MSMEs than men-owned MSMEs. It may suggest that women-owned MSMEs sold products that had many substitutes; therefore, they could not charge too high prices. In addition, women owners of MSMEs were also burdened by domestic and care work, such as household chores, elderly care and childcare, in addition to managing their businesses. This phenomenon created a triple burden for women who own businesses, and which was aggravated during the economic shock (Figure 13.6).

³ The key role played by GoJek in helping MSMEs maintain sufficient revenue during the pandemic through increased online sales is clearly visible in many survey responses. As noted by one survey respondent: “I decided to sell my products online to expand my business. Orders from GoJek were pretty slow during the pandemic. But GoJek still helps to make my business survived.” (Phone survey participant, male, 32 years old, EJBN, 1–4 employees, high school graduate or higher). Some survey respondents said that GoJek even helped facilitate the growth of their business during the pandemic by bringing in enough new online customers to account for decreased in-person sales: “GoFood helped to make my business survive and expand. (During the pandemic) people stayed at home, shopped from home, so GoFood was helpful. Particularly, during the pandemic when no one was coming to my store.” (Phone survey participant, female, 43 years old, Jabodetabek, zero employees, high school graduate or higher).

Figure 13.6: Weekly GoFood Administrative Data for Revenue and Transactions



GMV = gross merchandise value.

Note: The upper cluster of lines depicts the average weekly number of items sold by gender of owner, and the lower cluster depicts the average weekly number of transactions by gender of owner.

Source: GoJek administrative data and online survey of GoFood merchants. Authors' calculations.

To cope with the pandemic, most MSMEs utilized their personal savings and business income to finance their business instead of taking loans from financial institutions or even from their informal network, such as friends or family members. The pandemic's uncertainty and the risk of not being able to repay the loans could be the reason behind it, even though merchants needed funds for working capital and operating expenses the most during the shock.

The use of digitalization could also exacerbate inequality. Merchants with low education and skills and living in areas of low-invested digital infrastructure might be left behind compared to those with better education and located in the more-developed areas.

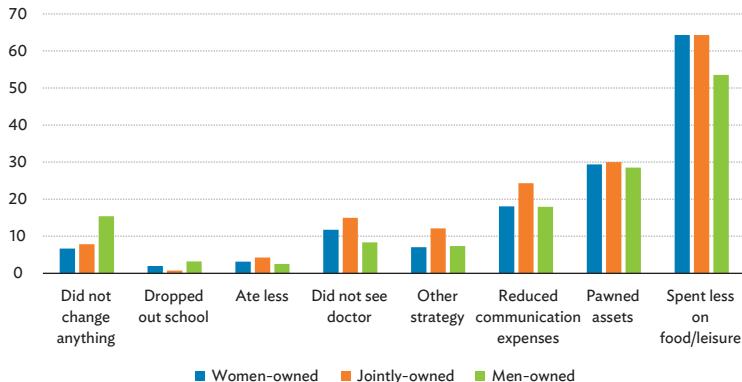
The survey results highlighted the variations, and even inequality, in the distribution and uptake of government assistance programs during the pandemic, with targeted beneficiaries being excluded from support programs due to clerical, data, or system errors. The findings of Elhan-Kayalar, Sawada, and Rodgers (2022) indicate that jointly-owned MSMEs, MSMEs located in the less developed parts of Indonesia (East Java, Bali, and East and West Nusa Tenggara) in comparison to central Java, where the capital Jakarta leads in online market size and e-commerce volumes in the country, and MSMEs with employees compared to owner-owned and operated microenterprises are among the groups who were less likely to benefit from government assistance programs during the pandemic (Figure 13.7).

The phone survey conducted among GoFood merchants provided additional insights. For the government, specific observations point to the importance of (i) expanding access to government assistance to more MSME merchants, (ii) providing financial training to enhance digital literacy in the MSME sector and raise merchants' awareness of financing options, and (iii) promoting products sold by MSMEs with free advertising on government-sponsored media. Based on merchant feedback, online platforms can consider ways to (i) develop an improved user experience for MSME merchants, (ii) enable merchants to better market their products online by providing training or developing learning modules, (iii) expand access to credit to more MSMEs and establish a profit-sharing scheme for those unwilling to take out a loan, and (iv) directly address merchant concerns related to high commission fees, promotional schemes that burden merchants with discounted sale prices, the lack of delivery drivers, and reimbursement issues.

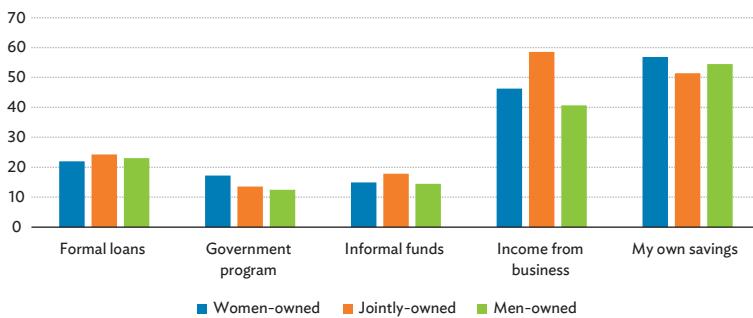
Based on the findings from this study, support is needed from both online platform providers and the government to improve the performance of MSMEs. The utilization of digital technology can help alleviate women-owned MSMEs' burdens during the pandemic. For example, online platforms may provide a more user-friendly interface and experience for merchants. Online platforms can also provide a feature allowing merchants to create a product catalog automatically. This kind of feature will be beneficial for merchants to manage their stores and reduce their burden, especially for merchants from more vulnerable groups with limited business support networks, such as women merchants. Online platforms can provide merchants with

Figure 13.7: Crisis Mitigation Strategies Among GoFood Merchants, March 2020–March 2021 (%)

Panel A: Household Strategies (% of merchants indicating any of these strategies)



Panel B: Business Owner Sources of Financing (% of merchants indicating any of these sources)



Source: Online survey of GoFood merchants. Authors' calculations.

a feature to help MSMEs make an appealing and more engaging product advertisement to better market their products. In addition, online platforms can also provide credit with a profit-sharing scheme, which can reduce the risk of default for MSMEs. Such a setup can also accommodate merchants who avoid taking a loan through the conventional system.

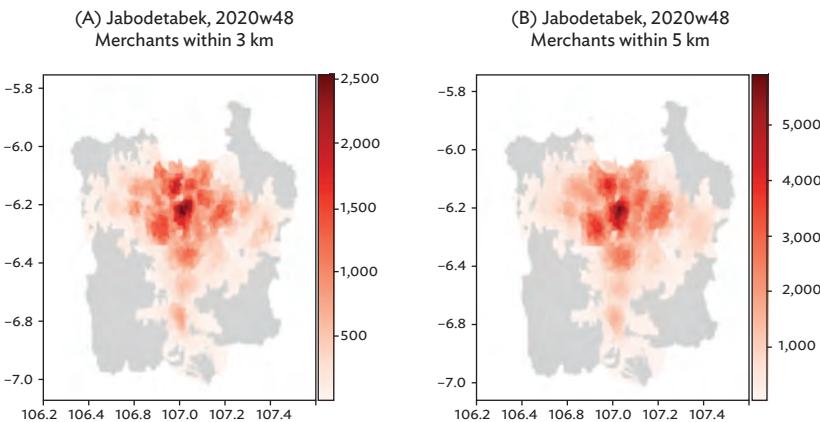
13.3.2 Market Cannibalization?

As seen in Figure 13.2, there was a very high entry rate of new merchants after GoJek introduced its GoBiz platform for MSME partners. This could have been helpful in directing the platform toward more inclusion, particularly for MSMEs. Yet, given the rising demand, the massive entry of new merchants joining digital platforms that occurred during the pandemic also raises the question of whether the entry of these firms is efficient or not.

Kawaguchi, Shum, and Uetake (2021) used GoFood merchant data in a novel way to examine if the onboarding of new merchants onto a food delivery platform during the COVID-19 pandemic resulted in mostly business stealing or positive network externalities on existing merchants. Specifically, they consider two types of “optimal” platform size, one from the platform’s perspective and the other from the social planner or government’s perspective. From the platform’s perspective, it will care about total profits, resulting from the entrant’s profits, net of lost profits at rivals due to cannibalization, and extra profits at rivals due to network or market expansion effects. From the social planner’s perspective, it considers overall social welfare, i.e., consumer welfare as well as the total profits which increase as there are more entries and varieties. Then, an additional firm should enter when the total profits generated by this firm in the market exceed the fixed costs. Due to the externalities that each firm does not internalize in a free-entry market, the number of entrants in a Nash equilibrium may differ from the optimal number of firms.

To estimate the optimal level of entry, Kawaguchi, Shum, and Uetake (2021) use a framework pioneered by Berry and Waldfogel (1999) that aimed at estimating a model of the US’ radio market and calculate the socially optimal number of firms. Berry and Waldfogel (1999) find that a free-entry market leads to excess entry due to a strong cannibalization effect. Kawaguchi, Shum, and Uetake (2021) use the method proposed by Berry and Waldfogel (1999) and apply it to the merchant-level administrative data on transactions, profit, and other performance measures, which we directly obtained from Gojek. They utilized nationwide data at the merchant and week level and measured the number of merchants’ rivals for each merchant, by counting the number of merchants within a 3-kilometer (km) and 5-km radius (Figure 13.8).

Figure 13.8: Distribution of the Number of Rival Merchants in 3 and 5 Kilometer Radius, Jakarta

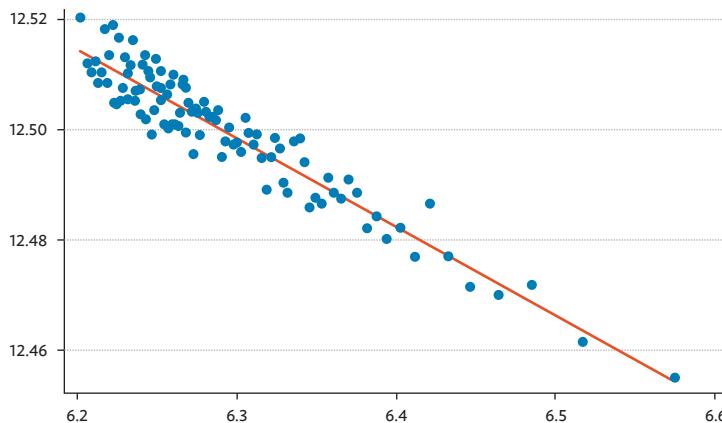


Source: Kawaguchi, Shum, and Uetake (2021).

If the business stealing effect dominates, an increase in the number of neighboring merchants participating in the Gojek platform would decrease the GMV of the incumbent merchant. However, rival merchants are more likely to participate when and where the demand for the Gojek platform is locally increasing during the pandemic lockdown. Therefore, the correlation between the growth of the target merchant's GMV and the number of neighboring merchants can be positive due to this confounding factor.

To identify the business stealing (or positive network externality) effects, Kawaguchi, Shum, and Betake use an instrumental variable: a variable that is correlated with rivals' participation in a target merchant's neighborhood but uncorrelated with the merchant's GMV growth. They assume that a merchant competes with rivals in a 3-km radius. They used the number of rival merchants in a 3–5 km radius as an instrument. A merchant may decide participation inspired by their neighborhood's participation. A distance over 3 km will be enough to separate the markets for the target merchant and merchants in a 3–5 km radius. The results showed a negative correlation between the GMV and predicted rivals' participation, implying that cannibalization effects exist (Figure 13.9).

Figure 13.9: Binned Scatter Plot Between the Firm Sales and the Predicted Number of Neighboring Rivals



Note: The authors first took a logarithm of the gross merchandise value, $\ln(\text{GMV}_{it})$; the number of rivals in a neighborhood, $\ln(N_{it})$; and the number of rivals within 3-5 km radius of a target merchant, $\ln(N_{35it})$. They then regressed on merchant, week, and city-week fixed effects. Then, they regressed the residuals of $\ln(N_{it})$ on the residuals of $\ln(N_{35it})$ and obtained the predicted residualized value of $\ln(N_{it})$. The figure shows the binned scatter plot between the residuals of $\ln(\text{GMV}_{it})$ on the vertical axis and the predicted residuals of $\ln(N_{it})$ on the horizontal axis.

Source: Kawaguchi, Shum, and Uetake (2021).

The massive entry of new merchants also gives us the opportunity to investigate the market congestion externality and its allocative efficiency implications. Preliminary data analysis by Bai and Xu (2021) find that the new entrants during COVID lockdowns have much weaker initial performance compared with the pre-COVID entrants. The number of transactions and the total value of transactions of the former are just one-third of the incumbents at a comparable age. Furthermore, the pre-COVID-19 incumbents experienced slower life-cycle growth after the massive entry during the COVID lockdown. This is indicative evidence that the massive entry triggered by the pandemic might have severely congested consumer search and slowed down market share allocation towards them.

Finally, the MSME performance during the COVID-19 pandemic can also offer a natural setting for the exploration of the efficiency vs. distributive justice impacts of digital platforms on MSMEs. During the pandemic, online platforms offered an alternative means for gainful employment, created jobs, and supported business continuity for

MSMEs. Elhan-Kayalar, Sawada, and Rodgers 2022 show, in particular, how the “subscription of MSMEs to online platforms increased to generate and sustain their revenues” using Gojek/GoFood data in Indonesia. “Further, low to no entry barriers, low operations costs, autonomy, and flexible location and work hours built into some online business lines created fertile ground for new entrepreneurs to onboard during the pandemic.”

13.4 Conclusion and Policy Implications

In this chapter, we have discussed various features of e-commerce and online platforms, and the role they can play in determining merchant resilience, efficiency, and distributive justice in online market settings. Starting from the literature on welfare implications of firm entry and product diversity, we found that the rapid acceleration of digital transformation during the COVID-19 pandemic provided unique opportunities to further shed light on three building blocks of the welfare discussion of new firm creation and variety provision: distributive justice, external effects, and scale economies.

We used administrative and primary survey data from GoFood merchants on Indonesia’s GoJek online platform to further explore positive and negative externalities generated by and in online platforms. Our analyses yielded three key findings. First, online platforms such as GoJek provided a new form of social safety net, in the form of market access and client interface through their online applications, for vulnerable micro and small businesses. They have provided MSMEs with business support services (for marketing, sales, supply chain support, and access to finance without collateral requirements) and helped them onboard the platform, i.e., by providing them with an alternative venue to earn their livelihoods, as traditional, physical markets closed, and supply chains were severely impeded. However, benefits from partnering with online platforms were not distributed equally among all market participants. For instance, women-owned businesses were more resilient, i.e., they retained their presence on the platform and continued to draw revenue, albeit at lower levels, throughout the pandemic compared to jointly-owned or men-owned businesses. But the overall size of women-owned businesses (by number of employees) shrank after the onset of the pandemic.

Second, platform algorithms continued to define service areas and the discoverability of merchants within a given geographic location. As the pandemic soared, employment opportunities in physical markets waned and more micro and small enterprises onboarded the platform. Competition stiffened in the GoFood merchant market as new

merchants continued to join the platform throughout the pandemic, with service areas of both incumbents and entrants shrinking over time. Using geocoded delivery data for all transactions undertaken through the GoFood platform, we found that as new merchants joined GoFood the number of each merchant's competitors within a 3–5 km radius increased; the areas that GoFood merchants served became smaller compared with their assigned service areas; and at the same time, the average weekly gross merchandise value, number of transactions, and number of items sold per merchant declined. Market congestion externalities and cannibalization tendencies were observed among incumbent and new-entrant merchants. These developments have important implications for the future business performance of MSMEs as more merchants continue to join the platform and receive allocated standard service areas. While it is beyond the scope of this chapter, additional research on this topic would facilitate a better understanding of intra-platform competition dynamics and their implications for the online marketplace, the platforms that facilitate e-commerce and the merchants who earn their livelihoods with the help of these platforms.

Third, women- and men-owned businesses opted for different crisis-mitigation and coping strategies. Women merchants tended to rely on government support services and such strategies as using their own savings, liquidating personal assets, or cutting back on their expenditures for personal necessities; while men-owned and jointly-owned enterprises borrowed from formal and informal sources and liquidated business assets to weather the economic shock triggered by the pandemic and associated containment measures. This meant microenterprises (often owned by women merchants) with limited support networks and business assets were harder hit during the pandemic.

This finding suggests there may be a unique opportunity for the government and financial institutions to improve beneficiary targeting by addressing gaps in program awareness and beneficiary skepticism. The latter seemed to have deterred women-owned businesses from availing formal financing instruments, jointly-owned and men-owned businesses from government programs; and addressing these concerns in future programs may help enhance their intended impact.

Fourth, we found that data protection, consumer and enterprise protection, and regulation of platform-native financial instruments (e.g., online payment schemes, application-specific e-wallets) warrant closer attention. While these fall outside the scope of this chapter, a deeper understanding of them may facilitate better-informed policy decisions and regulatory frameworks going forward.

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Appendix

Data Characteristics

In this chapter, we examine the impact of online platforms on merchants that use them during the COVID-19 pandemic, using data from Indonesia GoJek platforms' GoFood merchants.

Our analysis is based on two data sources (i) weekly administrative and transactions data on all GoFood merchants (288,296) in Indonesia active on the platform as of February 2021, and (ii) new primary data generated through an online survey followed by a telephone survey conducted among GoFood merchants in two of the seven regions served by GoJek in Indonesia. The first dataset tracks new entrants and dropouts for a period spanning pre-COVID-19 to post onset of COVID-19. The administrative dataset from the GoJek platform covers 7 January 2019 to 28 February 2021, aggregated on a weekly basis per merchant. The data include detailed individual-level information on merchant revenues (as measured by gross merchandise value generated from online GoFood transactions), transactions, and consumer expenditures as well as geospatial identifiers, but they are not gender disaggregated and enterprise size is not included.

The second dataset includes primary data from surveys conducted among a random sample of 50,000 GoFood merchants in Jabodetabek (the larger Jakarta area comprising the capital city of Jakarta, Bogor, Depok, Tangerang, and Bekasi), and merchants in EJBN (a group of administrative regions and cities in East Java, Bali, and East and West Nusa Tenggara). This sampling covers the regions that generated the highest (Jabodetabek) and lowest (EJBN) revenue as tracked through gross merchandise value (GMV) in GoFood transactions during the study period. This dataset introduces gender-disaggregated data on enterprise owners and enterprise size as measured by the number of employees. Following the precedent set by Indonesia's Central Bureau of Statistics, enterprises with up to 4 employees are micro-sized, 5–19 employees are small, and 20–99 employees are medium-sized.

Samples are drawn through a random selection from the two regions, reflecting the relative levels of all GoFood merchants operating in these two regions, so 65% of the surveyed merchants are from Jabodetabek and 35% are from EJBN. Online and phone surveys were conducted between 8 November 2021 and 25 March 2022, conducted with a subset of online survey participants who consented to share additional information. The phone interviews were instrumental in third-party verification of online survey responses and in providing

qualitative data on GoFood merchants. The online and phone surveys allowed us to expand merchant and enterprise-level information to include the gender and education level of each GoFood merchant that participated in the surveys, and the size of their enterprises. The main merchant and enterprise characteristics examined in this chapter are described in Table A13.1.

Table A13.1: Characteristics of MSMEs that Participated in the Online and Phone Surveys

Variable	Category	Online survey respondents (n = 869)		Phone survey respondents (n = 275)	
		n	%	n	%
Gender of owner	Female	270	31.1	63	22.9
	Male	336	38.7	122	44.4
	Joint	144	16.6	90	32.7
	No response	119	13.7	258	93.8
Respondent's role in business	Owner	841	96.8	13	4.7
	Manager	25	2.9	4	1.5
	Other staff	3	0.3	78	28.4
Business size as of end-February 2021	0 employee (owner operated)	446	51.3	177	64.4
	1–4 employees	339	39.0	14	5.1
	5–19 employees	18	2.1	1	0.4
	>19 employees	3	0.3	5	1.8
	No response	63	7.2	176	64
Business location	Jabodetabek	562	64.7	99	36
	EJBN	307	35.3	233	84.7
Respondents' education attainment	High school graduates or higher	629	72.4	36	13.1
	Lower than high school diploma	121	13.9	6	2.2
	No response	119	13.7	63	22.9
Number of employees variable (in categories)	Number of employees in 2021	594	1.6 (0.61)	275	1.6 (0.58)
	Number of employees in 2020	594	1.6 (0.62)	275	1.6 (0.58)
	Number of employees in 2019	594	1.9 (1.12)	275	1.9 (1.11)

n = number; Jabodetabek = Jakarta, Bogor, Depok, Tangerang, and Bekasi; EJBN = East Java, Bali, and East and West Nusa Tenggara; MSME = micro, small, and medium-sized enterprise.

Note: Numbers in parentheses show standard deviation. The categories for the number of employees are: 1 = “I work by myself, no other employees,” 2 = “1–4 employees,” 3 = “5–19 employees,” and 4 = “more than 19 employees.”

Source: Online survey data and GoJek’s administrative database.

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