

COMPETITION LAW AND POLICY

Concepts and Practice

India, with the United States, the United Kingdom
and the European Union

VOLUME I

THE ECONOMICS OF COMPETITION

Chapters 1 to 12

Niten Chandra

Shalini Chandra

C O M P E T I T I O N L A W A N D P O L I C Y

**VOLUME I: THE ECONOMICS OF
COMPETITION**

*Concepts and Practice — India, with the United States, the United Kingdom and
the European Union*

Chapters 1 to 12

Niten Chandra and Shalini Chandra

Competition Law and Policy

Concepts and Practice — India, with the United States, the United Kingdom and the European Union

Volume I: The Economics of Competition (Chapters 1 to 12)

Volume II: The Law of Competition (Chapters 13 to 26)

© Niten Chandra and Shalini Chandra, 2026

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior written permission of the authors and the publisher, except as permitted by law.



Making Knowledge Universal

Published by **Bono Juris**

NOIDA, Uttar Pradesh 201301, India

www.bonojuris.com · welcome@bonojuris.com

Not legal advice. This book is written for study and reference. It is not legal advice, and it creates no relationship between the authors and any reader. No one should act, or refrain from acting, on anything in it without advice on the facts of their own case. Care has been taken to state the law and the record accurately, but the authors accept no liability for any loss arising from reliance on the book.

The authors' views. The views expressed are the authors' own. They are not the views of the Government of India or of any Ministry or Department, of the Competition Commission of India, or of any court, Tribunal or other body with which either author is or has been associated. Matters pending before the Commission, Tribunals or courts are described from the public record, and no view is expressed on their outcome.

Official texts. Indian statutes, matter published in the Official Gazette, official reports and judgments are reproduced as permitted by section 52(1)(q) of the Copyright Act, 1957. United Kingdom legislation contains public sector information licensed under the Open Government Licence v3.0. European Union texts are from EUR-Lex, © European Union. United States statutes and the documents of federal agencies are works of the United States Government. Figures and tables are the authors' own unless a source is stated beneath them.

*To our parents,
and to the consumers and businesses
who seek justice*

VOLUME I

CONTENTS

The Economics of Competition (Chapters 1 to 12)

Title	Page
<i>Preface</i>	vii
<i>About the Authors</i>	xi
<i>How to Use This Book</i>	xiii
<i>Schema of Competition Law and Economics</i>	xxi
Chapter 1 Markets, Firms and Welfare	1
Chapter 2 Market Power, Monopoly and Market Definition	51
Chapter 3 Market Structures and Concentration in India	101
Chapter 4 Oligopoly, Collusion and Cartels	145
Chapter 5 Vertical Relations and Foreclosure	185
Chapter 6 Exclusionary Conduct	231
Chapter 7 Merger Economics	271
Chapter 8 Platforms, Data and Innovation	329
Chapter 9 Quantitative Evidence	373
Chapter 10 Competition, Productivity and Growth	415
Chapter 11 Macroeconomics of Competition	453
Chapter 12 Competition and the Constitution	497
<i>Table of Cases</i>	571
<i>Table of Statutes, Instruments and Official Documents</i>	585
<i>Lists of Figures, Tables, Boxes and Memory Aids</i>	593
<i>Abbreviations</i>	609
<i>Select Bibliography</i>	613
<i>Index</i>	639

COMPETITION LAW AND POLICY

PREFACE

*Concepts and Practice — India, with the United States, the United Kingdom and
the European Union*

Every day, in markets across India, someone decides what a bag of cement will cost, which bidder will win a public tender, whether two firms will merge, or on what terms a platform will let a seller reach its customers. Most of these decisions are made by firms acting on their own, and the price, the contract or the terms that result are the work of competition. Some are made by firms acting together, or by one firm with power enough to set the terms for everyone else. Competition law is the body of rules that tells the difference, and competition economics is the discipline that measures it.

This book joins the two. Volume I, *The Economics of Competition*, sets out in twelve chapters how markets work and fail: market power and its measurement, oligopoly and cartels, vertical relations, exclusionary conduct, mergers, platforms and data, the quantitative evidence on which cases turn, and the links from competition to productivity, to growth and to the economy as a whole. Volume II, *The Law of Competition*, sets out in fourteen chapters the law that applies that economics: its concepts and evolution and the Indian institutions; agreements, abuse of dominance and combinations; investigation and procedure, penalties, appeals and private enforcement; the State as market actor; the interfaces with sector regulators, consumer protection and intellectual property; digital markets; cross-border enforcement; and practice, including the Commission's advocacy and its studies of markets. The chapters are numbered continuously across the two volumes, so that a reference to a chapter holds

wherever it is read. Economics comes first because the law cannot be understood, or argued well, without it. A reader who wants the law first can begin with Volume II and follow its references back; How to Use This Book sets out that path and two others.

The argument that runs through both volumes is simple to state. The Constitution protects the Rule of Law and the fundamental rights of Articles 14, 19 and 21, the golden triangle, as part of its basic structure. Those guarantees need economic conditions if they are to be enjoyed in markets: economic opportunity allocated by rules and not by favour; entry open to all who can compete; the necessities of life and the means of livelihood at prices people can pay; and the material resources of the community distributed, as Article 39(b) directs, so as best to subserve the common good. Competition is a means to those conditions. Equality of status and of opportunity, which the Preamble promises, binds private economic power as well as the State: the Supreme Court, reading Articles 14, 15, 16 and 38 together, has held that the private sector which offers facilities to the public may not conduct its affairs so as to promote existing discriminations and disadvantages (Box 12.5A). Competition law is the means by which that equality is secured in markets. Where competition is absent, as it largely was in India before 1991, inefficiency and the economic misery that follows erode those conditions, and the purpose of Article 39(b) is weakened. The policy of 1991, by which India restored competition as a choice of policy and not as a constitutional command, is the exemplar. Chapter 12 develops the argument and Chapters 10 and 11 supply its economic evidence. The empirical work on competition and democracy has measured democracy by its institutions rather than by the rights of citizens, and no study has yet tested competition against those rights in India; this book addresses that gap from the side of law, and §12.9A explains why the connection between competition and democracy is established in law and cannot be settled by econometric indices. In Volume I, Constitutional Lens boxes carry it into the economics of competitive prices, market power, concentration, cartels, vertical relations, exclusion, mergers, platforms, evidence, growth and the macroeconomy; in Volume II, every chapter carries one that applies it to the law of that chapter, and the last chapter closes the book by returning to it.

We came to the subject from two sides. One of us, Niten Chandra, trained first as an economist, at St. Stephen's College and the Delhi School of Economics, and later took a doctorate in economics on government budget outlays and their macroeconomic effects, and a degree in law. He served in the Indian Administrative Service for thirty-five years, from 1990 to 2025; as Law Secretary to the Government of India from 2022 to 2024 he advised on the legislation of those years, the Competition (Amendment) Act, 2023 among it. The other, Shalini Chandra, has practised for twenty years before the Supreme Court and the High Courts, as an Advocate-on-Record since 2013, in a practice that includes public contracts and arbitration, and as a mediator trained and certified by the Mediation and Conciliation Project Committee of the Supreme Court. We have written the book together, and each chapter, in the economics and in the law alike, carries both vantage points: the economist's and administrator's view of how markets and policy work, and the advocate's view of how the law is argued and decided.

The method is comparative and practical. Each topic is taken first in India and then in the United States, the United Kingdom and the European Union, each stated from its own statutes, guidelines and cases, and each chapter closes with a Four-Jurisdiction Matrix and Points to Ponder drawn from the comparison. Indian competition law has a policy charter of its own in the Report of the High Level Committee on Competition Policy and Law of 2000, chaired by S.V.S. Raghavan (the Raghavan Committee Report), and the book reads the Competition Act, 2002 against it. Boxes headed *The Law* and *Sister Statutes and Authorities* reproduce the provisions that matter from the official texts; *Case Note*, *On the Ground*, *From the Bar* and *A Practitioner's Checklist* work through the questions as they arise before the Commission, the Appellate Tribunal and the courts; and an *Economist's Note* in each law chapter sets out the economics on which the law turns. Every causal or empirical claim carries a grade of the strength of the evidence behind it, from strong to theoretical, because a practitioner needs to know not only what economics says but how sure it is.

The book is written for students of law and of economics, for practitioners and in-house counsel, for the officers of the Commission

and of the sector regulators, for judges, and for those who make economic policy. In both volumes the law is stated as at 15 October 2026. Where an appeal or other proceeding was pending on that date, the text states its position as at the latest official record and does not anticipate the outcome.

No book can take the place of the statute, the judgment and the data. Its purpose is to make them intelligible and usable together. If this book helps a student to see why competition matters, an advocate to frame a sharper argument, an officer to reach a sounder decision, or a policy-maker to see what is lost when competition is set aside, it will have served its purpose.

Niten Chandra Shalini Chandra

NOIDA, Uttar Pradesh 201301, India

October 2026

COMPETITION LAW AND POLICY

ABOUT THE AUTHORS

Concepts and Practice — India, with the United States, the United Kingdom and the European Union

Niten Chandra is a former civil servant (IAS, 1990–2025) who was Law Secretary to the Government of India from 2022 to 2024. He came to law through economics. He took a B.A. (Honours) in economics at St. Stephen's College, Delhi, and an M.A. at the Delhi School of Economics, with the gold medal; he later earned an LL.B. from Magadh University and a Ph.D. in Economics from Utkal University for a thesis on government budget outlays and outcomes and their macroeconomic effects.

From April 2020 to May 2022 he was Additional Secretary in charge of the Central Agency Section, through which the Union of India conducts its litigation in the Supreme Court. As Law Secretary he advised Ministries, Departments and Parliamentary Committees on contentious questions of law and on the interpretation of the Constitution and statutes, oversaw the conduct of more than fifty thousand cases for the Union in the Supreme Court and the High Courts, and from time to time held additional charge of the Legislative Department and the Department of Justice. He sat ex officio on the Law Commission of India, the India International Arbitration Centre and the Executive Committee of the Indian Law Institute, where he also lectured on law.

Among the statutes he helped to shape are the Competition (Amendment) Act, 2023, the Digital Personal Data Protection Act, 2023, the Telecommunications Act, 2023, the Mediation Act, 2023 and

the Bharatiya Nagarik Suraksha Sanhita, 2023, with its companion codes, and over one hundred other laws and rules. He was Secretary to the High Level Committee on Simultaneous Elections chaired by Shri Ram Nath Kovind, former President of India, whose report was presented to the President on 14 March 2024.

Shalini Chandra is an Advocate-on-Record of the Supreme Court of India, with twenty years at the Bar. Enrolled in 2006 and qualified as an Advocate-on-Record in 2013, she has conducted more than five hundred cases before the Supreme Court, the High Court of Delhi, the Orissa High Court and administrative Tribunals, in a practice that includes public contracts and arbitration, education regulation, environmental and mining law, and constitutional matters, and she has represented public bodies such as the Delhi Development Authority, the Municipal Corporation of Delhi, the National Highways Authority of India and the National Council for Teacher Education.

She is a mediator trained and certified by the Mediation and Conciliation Project Committee of the Supreme Court of India, has mediated at the Supreme Court Mediation Centre since 2023, and has sat as a sole arbitrator since 2014. From 2015 to 2019 she trained senior civil servants at the Gopabandhu Academy of Administration in Bhubaneswar. She studied English literature at Lady Shri Ram College and Miranda House in the University of Delhi and law at Magadh University, and she undertakes legal work pro bono.

Together the authors bring two vantage points to competition law and policy: the Government's law office, which drafts, advises on and defends the law that regulates markets, and the advocate and mediator who challenges decisions of the State and settles disputes with it. They are also the authors of *Administrative Law: Democracy · Governance · Development · Justice* (2026).

COMPETITION LAW AND POLICY

HOW TO USE THIS BOOK

Concepts and Practice – India, with the United States, the United Kingdom and the European Union

The plan of the book

The book is in two volumes and twenty-six chapters, numbered continuously from the first volume to the second. Volume I, *The Economics of Competition* (Chapters 1 to 12), explains how markets work and fail and what competition does for productivity, growth and the economy as a whole, and ends with the constitutional argument that joins the two volumes. Volume II, *The Law of Competition* (Chapters 13 to 26), sets out the law: its concepts and the Indian institutions, the prohibitions and the control of combinations, procedure, penalties and appeals, the State and the sector regulators, digital markets, cross-border enforcement, and practice. Because the numbering is continuous, a reference to "Chapter 18" or "§7.10" means the same thing in either volume. Table 1 lists the chapters.

Table 1: The twenty-six chapters, by volume

Volume	Chapter	Title
I	1	Markets, Firms and Welfare
I	2	Market Power, Monopoly and Market Definition
I	3	Market Structures and Concentration in India
I	4	Oligopoly, Collusion and Cartels
I	5	Vertical Relations and Foreclosure
I	6	Exclusionary Conduct
I	7	Merger Economics

Volume	Chapter	Title
I	8	Platforms, Data and Innovation
I	9	Quantitative Evidence
I	10	Competition, Productivity and Growth
I	11	Macroeconomics of Competition
I	12	Competition and the Constitution
II	13	Competition Law: Concepts, Objectives and Evolution
II	14	The Indian Framework and Its Institutions
II	15	Horizontal Agreements and Cartels
II	16	Vertical Agreements
II	17	Abuse of Dominance
II	18	Combinations and Merger Control
II	19	Investigation and Procedure before the Commission
II	20	Penalties, Leniency, Settlement and Commitment
II	21	Appeals, Judicial Review and Private Enforcement
II	22	Competition Law and the State
II	23	Interfaces: Sector Regulators, Consumer Protection and Intellectual Property
II	24	Digital Markets and Ex Ante Regulation
II	25	Cross-Border Enforcement and Cooperation
II	26	Competition Practice

Source: Authors' arrangement.

The Schema of Competition Law and Economics, placed before Chapter 1 in each volume, shows on one page how the parts fit together: the constitutional foundations at the top; the economics of markets and market power in Volume I; the three prohibitions and the control of combinations, with the institutions and procedure that apply them, in Volume II; the State, the regulators, digital markets and cooperation across borders; and, at the foot, the economic conditions that competition helps to secure and the dignity of the individual that those conditions serve.

The argument that runs through the book

One argument joins the economics and the law. The Constitution protects the Rule of Law and the golden triangle of Articles 14, 19 and 21, and directs the State, in Articles 38 and 39, towards economic

democracy. Competition is a means to the economic conditions on which those guarantees depend. Chapters 10 and 11 set out the evidence and grade it; Chapter 12 develops the argument; and a box headed *Constitutional Lens* carries it into every chapter of both volumes, each time with the same sentence of thesis: "Competition is a means: an instrument for realising the economic conditions on which the Rule of Law and the golden triangle of Articles 14, 19 and 21 depend, and for the economic democracy of the Directive Principles." The last section of the book, §26.14, returns to the argument without adding to it. The book states the argument as its authors' argument; where a court has held something, the text says so, and where it is the authors' reading, the text says that.

Inside each chapter

Each chapter is divided into numbered sections (§17.5 is section 5 of Chapter 17), and cross-references throughout the book use these numbers. A chapter opens with an illustration — in Volume I a decision, an order or a passage of the Raghavan Committee Report; in Volume II a worked example on stated, hypothetical facts — and a mind map of its ground. Within each topic the Indian rule comes first, followed by the United States, the United Kingdom and the European Union, each stated from its own statutes, guidelines and cases; comparison tables are placed where the comparison arises, not left to the end. Every chapter closes its body with a Four-Jurisdiction Matrix, which sets the four systems side by side on such matters as the substantive rule, the authority, procedure, penalties and remedies, digital markets, advocacy and the leading cases, and with Points to Ponder, which state facts drawn from the comparison.

Every chapter then closes with a *Pointwise Summary*, which states the chapter in numbered propositions, each keyed to the section in which the point is made. It is designed for revision and for a quick review of the law and the economics before a hearing or a filing; the section numbers lead back to the full treatment.

Boxes, figures, tables and memory aids

The book contains 185 figures, 157 tables, 269 boxes and 59 memory aids, each numbered by chapter and listed with page numbers after

the Table of Statutes. The boxes belong to eight families, and each family does one job:

Table 2: The eight families of boxes

Family	What it does
<i>The Law</i>	Reproduces the key provisions, from the official text of the jurisdiction concerned, with the date at which the text is stated and its source.
<i>Sister Statutes and Authorities</i>	Sets out the neighbouring law that a competition case meets: consumer protection, sector regulation, intellectual property, data protection, companies and insolvency, evidence, procurement, and state aid or subsidy control.
<i>Case Note</i>	Takes one decision through its facts, holdings and significance.
<i>Constitutional Lens</i>	Connects the chapter's law or economics to the Rule of Law, Articles 14, 19 and 21, Articles 38 and 39 or the basic structure, with authority, and carries the sentence of thesis.
<i>Economist's Note</i>	In each law chapter, states the economics on which the law turns, with the strength of the evidence.
<i>On the Ground</i>	Shows how a rule works in practice, often from the Commission's Annual Reports, orders and studies.
<i>A Practitioner's Checklist</i>	Lists, in order, what to check or do at a stage of a matter.
<i>From the Bar</i>	Works through a problem as counsel meets it: the argument, the record and the remedy.

Source: Authors' classification.

Besides the charts that present data, which name their source and its date, figures are of four kinds: the mind map that opens each chapter, timelines, process flows that trace a procedure step by step, and diagrams of relationships. Every table carries its number and title above it and its source below it. Memory aids compress lists that must be remembered, such as the elements of an offence, the steps of a procedure or the factors of an assessment.

Evidence and its strength

A practitioner needs to know not only what economics says but how sure it is. The economics chapters, and the Economist's Note in each law chapter, therefore grade each causal or empirical claim as strong, moderate, mixed, weak or theoretical, and say plainly where Indian data run against a channel that the textbooks expect. The grade attaches to the evidence, not to the importance of the point: a

theoretical claim may matter a great deal, and a strong one may matter little to the case in hand.

Conventions

Sources. Statutes, regulations, judgments, orders and reports are cited from their official texts: India Code and the Gazette of India, the websites of the Supreme Court, the High Courts, the National Company Law Appellate Tribunal and the Commission; and the official sources of the United States, the United Kingdom and the European Union. Where a passage could be read only in a copy published by another source, the citation says so in the words "as reproduced by", naming the source. Neutral citations of the Supreme Court of India (for example, 2025 INSC 668) are given where the judgment carries one. Quotations are exact; words omitted are marked by an ellipsis, and words added by square brackets. The composition of a Supreme Court of India bench is given as "a Supreme Court Bench of" the judges named.

Names. "The Act" is the Competition Act, 2002 as amended, and "the Commission" is the Competition Commission of India; "the Director General" is the Commission's Director General; "the Tribunal" or "the NCLAT" is the National Company Law Appellate Tribunal, which has heard competition appeals since 26 May 2017, and "COMPAT" is the Competition Appellate Tribunal that heard them before. The Report of the High Level Committee on Competition Policy and Law (May 2000) is cited as the Raghavan Committee Report. The four jurisdictions are always taken in the same order: India, the United States, the United Kingdom and the European Union.

Money and years. Indian amounts are in rupees: a lakh is one hundred thousand and a crore ten million. Indian financial years run from April to March and are written 2023-24. Figures from the Commission's Annual Reports are taken from the reports for 2014-15, 2022-23, 2023-24 and 2024-25.

Finding cases, statutes and subjects

The Table of Cases lists every decision cited, arranged by jurisdiction and alphabetically within each, with the sections in which it is cited, so that 4.7 means section 7 of Chapter 4, and the page on which it is cited

there. The Table of Statutes, Instruments and Official Documents lists the Constitution, statutes, regulations, rules, notifications and guidelines, and the instruments of the United States, the United Kingdom and the European Union, with the chapters in which they are cited and the provisions cited in each chapter. The list of Abbreviations explains the courts, authorities, law reports and statutes referred to by their initials. The Select Bibliography lists the books, articles and official reports drawn upon, grouped by kind, and marks the select readings recommended for each chapter. The chapters themselves carry no lists of cases, statutes or readings: these are gathered once, at the end of each volume. The Index lists subjects, institutions and doctrines; its references are to sections, with the page of this volume in brackets, so that 18.7 (p 245) means section 7 of Chapter 18, treated on page 245; the section numbers hold in every format of the text.

Three ways through the book

For a course in the economics of competition. Read Volume I in order. Chapters 1 to 3 set out welfare, market power and the structure of Indian markets; Chapters 4 to 8 the economics of each kind of conduct and of mergers and platforms; Chapter 9 the evidence on which cases turn; and Chapters 10 to 12 what competition does for productivity, growth and the economy, and why that matters to the Constitution.

For the law student and the practitioner. Begin with Chapters 13 and 14 on the concepts of the law and the Indian institutions. Then read each chapter of the law with the chapter of economics on which it rests, as Table 3 shows, and finish with Chapters 19 to 21 on procedure, penalties and appeals and with Chapter 26 on practice.

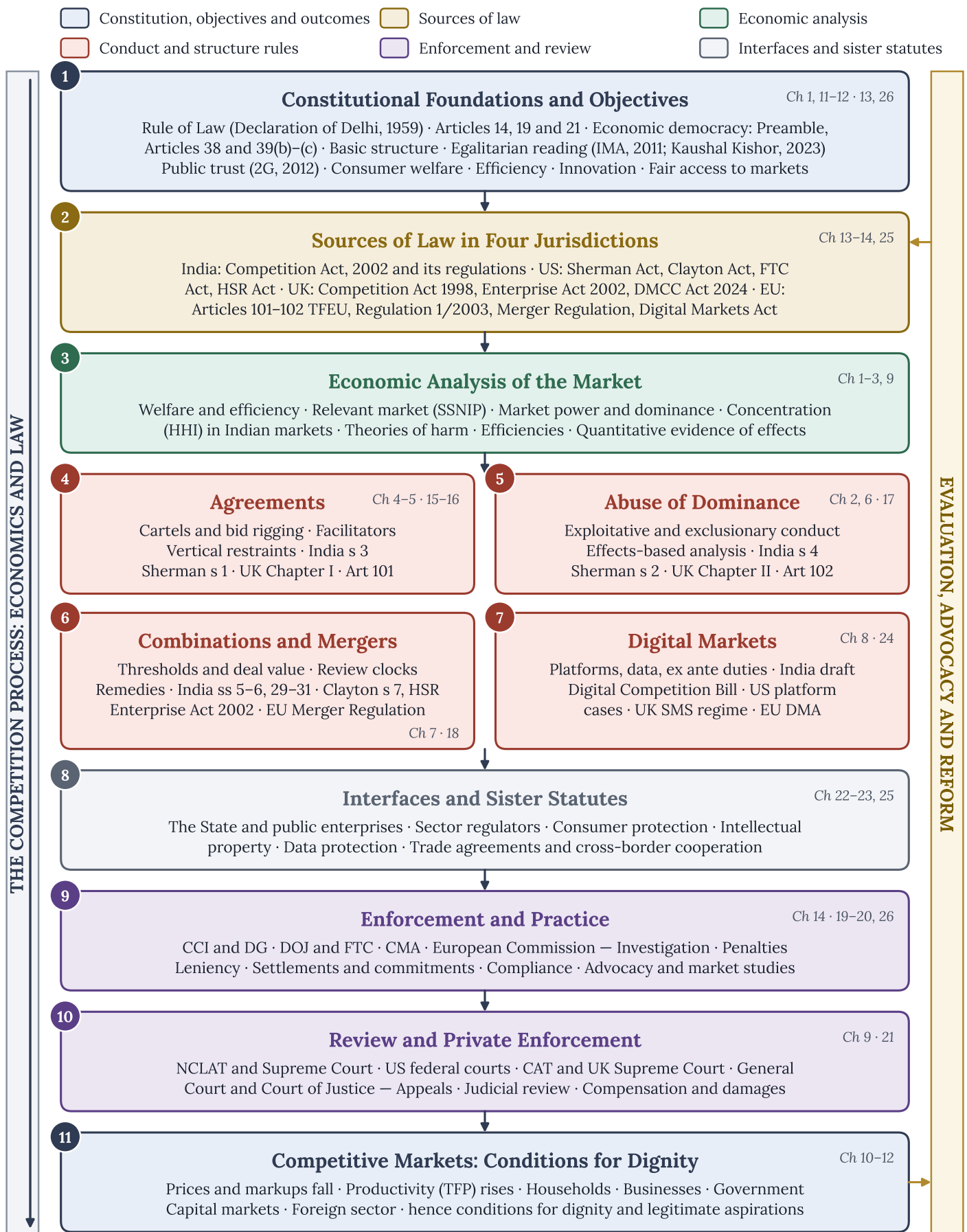
Table 3: Reading the law with its economics

Subject	Economics (Volume I)	Law (Volume II)
Horizontal agreements and cartels	4 Oligopoly, Collusion and Cartels	15 Horizontal Agreements and Cartels
Vertical agreements	5 Vertical Relations and Foreclosure	16 Vertical Agreements
Dominance and its abuse	2 Market Power, Monopoly and Market Definition; 6 Exclusionary Conduct	17 Abuse of Dominance

Subject	Economics (Volume I)	Law (Volume II)
Mergers	7 Merger Economics	18 Combinations and Merger Control
Digital markets	8 Platforms, Data and Innovation	24 Digital Markets and Ex Ante Regulation
Evidence, penalties and damages	9 Quantitative Evidence	19 Investigation and Procedure; 20 Penalties; 21 Appeals and Private Enforcement
The State, regulators and the economy	3 Market Structures and Concentration in India; 10 Competition, Productivity and Growth; 11 Macroeconomics of Competition	22 Competition Law and the State; 23 Interfaces; 26 Competition Practice (advocacy and market studies)
The constitutional argument	12 Competition and the Constitution	The Constitutional Lens box in every chapter; §26.14

Source: Authors' arrangement.

For the policy-maker and the general reader. Chapter 1 explains what competition is and why it matters; Chapter 3 describes concentration in Indian markets; Chapters 10 and 11 set out the evidence on productivity, growth and the economy; Chapter 12 states the constitutional argument; Chapter 22 examines the State as market actor and regulator; and §§26.2 and 26.3 describe the Commission's advocacy and what its studies of markets have found.



VOLUME I

THE ECONOMICS OF COMPETITION

Chapters 1 to 12

CHAPTER 1

MARKETS, FIRMS AND WELFARE

Volume I · The Economics of Competition

CHAPTER 1

MARKETS, FIRMS AND WELFARE

The competitive benchmark: how firms produce, what output costs, and why competition gives the most for the least

On 9 September 2010 the Supreme Court decided an appeal on a narrow point of procedure: whether the Competition Commission of India had to hear a company before directing its Director General to investigate it. Before answering, the Court stated what the law it was construing is for. "The main objective of competition law is to promote economic efficiency using competition as one of the means of assisting the creation of market responsive to consumer preferences." It went on: "The advantages of perfect competition are threefold: allocative efficiency, which ensures the effective allocation of resources, productive efficiency, which ensures that costs of production are kept at a minimum and dynamic efficiency, which promotes innovative practices."¹ The two sentences contain the economics on which the rest of this book rests. Figure 1.1 maps the chapter.

¹*Competition Commission of India v Steel Authority of India Ltd* (2010) 10 SCC 744 (decided 9 September 2010), per Swatanter Kumar J, at p 3 of the judgment text published by the Supreme Court. The holding that no notice or hearing is required before a direction to investigate under s 26(1) is at pp 18 and 28 of the same text (§12.11).



Figure 1.1: Markets, firms and welfare: a map of the chapter

Source: Authors' illustration.

The worked examples use one set of numbers, the Book Model, which later chapters also use (Box 1.2).

1.1 Why Economics Matters to Competition Law

(a) What the Statutes Say Competition Is For

Each of the four legal systems states, or has had stated for it, the purpose of protecting competition. India's statute states its purpose twice. The long title of the Competition Act, 2002 establishes a Commission "to prevent practices having adverse effect on competition, to promote and sustain competition in markets", and adds two further aims: "to protect the interests of consumers and to ensure freedom of trade carried on by other participants in markets, in India".² The whole is introduced by the words "keeping in view of the economic development of the country". Section 18, as substituted in 2023, repeats the four aims as the Commission's duty.³ The High Level Committee on Competition Policy and Law, whose report of May 2000

²Competition Act, 2002 (12 of 2003), long title.

³Competition Act, 2002, s 18 (as substituted by the Competition (Amendment) Act, 2023, with effect from 18 May 2023).

the Supreme Court has treated as the basis of the Act (§13.1), put the economic aim more sharply: "The objective of competition policy is to promote efficiency and maximize welfare."⁴

Sections 1 and 2 of the Sherman Act of 1890 (§1 in Box 1.1; §2 in Box 2.1) prohibit conduct without stating a purpose; the Supreme Court has supplied one. "The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade." The Act, the Court continued, rests on the premise that "the unrestrained interaction of competitive forces will yield the best allocation of our economic resources", together with the lowest prices, the highest quality and the greatest material progress.⁵ Twenty years later the Court said that the Act "reflects a legislative judgment that, ultimately, competition will produce not only lower prices but also better goods and services".⁶ In the United Kingdom, Parliament gave the Competition and Markets Authority this duty: "The CMA must seek to promote competition, both within and outside the United Kingdom, for the benefit of consumers."⁷ In the European Union, the Treaty commits the Union to "a highly competitive social market economy", and the Commission's guidelines on the exception in what is now Article 101(3) state that "The objective of Article 81 is to protect competition on the market as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources."⁸

Three objects recur in these texts. The first is the **efficient allocation of resources**: the Supreme Court of India, the Raghavan Committee, the United States Supreme Court and the European Commission all name it. The second is the **consumer**: India's long title, the CMA's duty and the Commission's guidelines name consumers expressly. The third is the **process** of rivalry itself, or the freedom to trade: "freedom of trade carried on by other participants" in India, "economic liberty" in *Northern Pacific*. Economics can measure the first two with the

⁴High Level Committee on Competition Policy and Law (Chairman: S.V.S. Raghavan), Report (May 2000), para 2.1.1. For "the blueprint for the Act": *Competition Commission of India v Schott Glass India Pvt Ltd*, 2025 INSC 668 (13 May 2025), para 61; see §13.4(d).

⁵*Northern Pacific Railway Co v United States*, 356 U.S. 1, 4 (1958). The sentence ends by adding the preservation of "our democratic political and social institutions".

⁶*National Society of Professional Engineers v United States*, 435 U.S. 679, 695 (1978).

⁷Enterprise and Regulatory Reform Act 2013 (UK), s 25(3).

⁸Treaty on European Union, art 3(3); Commission, *Guidelines on the application of Article 81(3) of the Treaty*, OJ C 101, 27.4.2004, p 97, para 13.

tools of this chapter. The third is a value about how markets work, and it reappears when the law asks whether conduct harms competitors or competition (§1.12 and Chapter 13). Box 1.1 sets out the texts.

Box 1.1: The Law — What Competition Law Is For: The Texts

India — Competition Act, 2002, long title

"An Act to provide, keeping in view of the economic development of the country, for the establishment of a Commission to prevent practices having adverse effect on competition, to promote and sustain competition in markets, to protect the interests of consumers and to ensure freedom of trade carried on by other participants in markets, in India, and for matters connected therewith or incidental thereto."

India — Competition Act, 2002, s 18 (as substituted in 2023)

"Subject to the provisions of this Act, it shall be the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade carried on by other participants, in markets in India ..."

United States — Sherman Act §1, 15 U.S.C. §1 (first sentence)

"Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal."

United Kingdom — Enterprise and Regulatory Reform Act 2013, s 25(3)

"The CMA must seek to promote competition, both within and outside the United Kingdom, for the benefit of consumers."

European Union — Treaty on European Union, art 3(3), first subparagraph (extract)

"It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress ..."

European Union — Protocol (No 27) on the internal market and competition (recital)

"CONSIDERING that the internal market as set out in Article 3 of the Treaty on European Union includes a system ensuring that competition is not distorted, ..."

As at 15 October 2026. Sources: India Code (Competition Act, 2002, consolidated) and the Competition (Amendment) Act, 2023; govinfo (United States Code, 15 U.S.C. §1); legislation.gov.uk; EUR-Lex (consolidated Treaties, OJ C 202, 7.6.2016).

(b) Surplus and the Welfare Standards

Economics measures the gains from a market by **surplus**. A buyer who would have paid ₹15 for a unit and pays ₹10 gains ₹5; the sum of such

gains over all buyers is **consumer surplus**, the area below the demand curve and above the price. A seller who would have supplied a unit for ₹7 and receives ₹10 gains ₹3; the sum over all units is **producer surplus**, the area above the supply curve and below the price. Their sum is **total surplus**. When a market reaches the output at which the demand price equals the marginal cost, no further trade can add to total surplus, and none has been left undone.

Table 1.1 compares competition and monopoly on the Book Model. Under competition the price equals the marginal cost of ₹10 and 10,000 units are sold. Buyers gain ₹50,000. A monopolist facing the same demand and costs sells 5,000 units at ₹15. Consumer surplus falls by ₹37,500. Of that, ₹25,000 becomes the monopolist's profit, a transfer from buyers to the seller. The remaining ₹12,500 goes to nobody: it is the value of the 5,000 units that buyers would have paid more than their cost to obtain and that are no longer produced. That is the **deadweight loss**. Chapter 2 develops the analysis of monopoly; the numbers here serve only to fix the welfare measures.

Table 1.1: Welfare under competition and monopoly on the Book Model (illustrative)

Measure	Competition	Monopoly	Change
Price (₹)	10	15	+5
Quantity (units)	10,000	5,000	-5,000
Consumer surplus (₹)	50,000	12,500	-37,500
Producer surplus: profit above total cost (₹)	0	25,000	+25,000
Total surplus (₹)	50,000	37,500	-12,500
of which deadweight loss (₹)	—	12,500	

Source: Authors' calculations on the Book Model (Box 1.2): demand $P = 20 - Q/1000$, constant marginal cost ₹10. Hypothetical figures.

The difference between the two columns is the difference between the two **welfare standards** that the law can adopt. A **consumer welfare standard** counts the fall in consumer surplus, ₹37,500, as the harm. A **total welfare standard** counts only the deadweight loss of ₹12,500, because it treats the ₹25,000 transfer as a gain to the seller that offsets the loss to the buyers. The total welfare standard rests on the compensation test of Kaldor and Hicks: a change is an improvement if those who gain could compensate those who lose and

still be better off, whether or not they do.⁹ The choice matters when conduct both raises price and lowers cost, as a merger may do (§7.3).

The texts lean in different directions. The Raghavan Committee defined welfare as total surplus: "the sum of consumers' surplus and producers' surplus and also includes any taxes collected by the Government".¹⁰ The Act names "the interests of consumers" as an aim of its own. In the United States the Supreme Court has said that "Congress designed the Sherman Act as a 'consumer welfare prescription'", quoting Robert Bork's *The Antitrust Paradox*.¹¹ The CMA's duty is to promote competition "for the benefit of consumers", and the European Commission speaks of "consumer welfare". In merger control the United States, the United Kingdom and the European Union admit efficiencies that benefit buyers or preserve competition in the relevant market; India's merger factors are worded more widely (§7.3(d)).

(c) Three Efficiencies

Each of the Supreme Court's three efficiencies has a definite meaning in economics. **Allocative efficiency** means that resources go to the goods buyers value most: each good is produced up to the point at which the value of the last unit to a buyer, measured by the price, equals the cost of producing it, its marginal cost. Monopoly fails this test because it stops where price exceeds marginal cost. **Productive efficiency** means that whatever is produced is produced at the lowest possible cost: each firm uses the cheapest combination of inputs, and the industry's output comes from plants operating at minimum average cost. Harvey Leibenstein called the failure to minimise cost within the firm, through slack, poor management or lack of effort, **X-inefficiency**, and concluded that the gains from greater X-efficiency are often significant, while those from better allocative efficiency are often trivial (§10.1(b)). His evidence was mainly case studies, and the conclusion is graded **weak** as evidence (§10.1).¹² **Dynamic efficiency**

⁹N. Kaldor, "Welfare Propositions of Economics and Interpersonal Comparisons of Utility" (1939) 49(195) *Economic Journal* 549; J.R. Hicks, "The Foundations of Welfare Economics" (1939) 49(196) *Economic Journal* 696.

¹⁰Raghavan Committee Report, above, para 2.1.1.

¹¹*Reiter v Sonotone Corp*, 442 U.S. 330, 343 (1979), citing R.H. Bork, *The Antitrust Paradox: A Policy at War with Itself* (Basic Books 1978) 66.

¹²H. Leibenstein, "Allocative Efficiency vs. 'X-Efficiency'" (1966) 56(3) *American Economic Review* 392, 413.

means that the economy improves its products and processes over time at the right pace.¹³

The first two are static: they compare outcomes with a given technology. The third concerns change, and the relation between competition and innovation is contested. Joseph Schumpeter wrote of "the perennial gale of creative destruction", and held that the competition that matters is that of new products and technologies, paid for by the prospect of temporary monopoly profit (**theoretical**; §8.7(c)).¹⁴ Kenneth Arrow showed, in a theoretical model, that a monopolist has less incentive to invent a cost-reducing process than an inventor who can license it to a competitive industry, because the monopolist already earns a profit on the old process; even under competition, the incentive falls short of the invention's value to society (**theoretical**).¹⁵ A study of a panel of British firms and industries found an inverted-U relationship: innovation rises with competition from low levels and falls at high levels.¹⁶ That finding rests on one country's data and is graded **moderate** (§8.7(d)). Taken together, theory and evidence on competition and innovation are **mixed**: competition spurs innovation up to a point, but not without limit. Section 8.7 and Chapter 10 examine them.

The static loss can be measured for India. Comparing the dispersion of the marginal products of capital and labour across Indian manufacturing plants with that in the United States, one study calculated that equalising marginal products to the degree observed in the United States would raise manufacturing total factor productivity by 40 to 60 per cent in India.¹⁷ The gap measures allocative inefficiency between plants: capital and labour remain in plants where they produce less than they would elsewhere. The finding comes from one

¹³For the three concepts see OECD, *Glossary of Industrial Organisation Economics and Competition Law* (compiled by R.S. Khemani and D.M. Shapiro), "Efficiency" (p 41) and "Competition" (p 23), where competition "includes the concept of 'dynamic efficiency' by which firms engage in innovation and foster technological change and progress".

¹⁴J.A. Schumpeter, *Capitalism, Socialism and Democracy* (Harper & Brothers 1942), chs VII–VIII; the phrase is in ch VII ("The Process of Creative Destruction").

¹⁵K.J. Arrow, "Economic Welfare and the Allocation of Resources for Invention", in *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press for the National Bureau of Economic Research 1962) 609, 619; see §8.7(b).

¹⁶P. Aghion, N. Bloom, R. Blundell, R. Griffith and P. Howitt, "Competition and Innovation: An Inverted-U Relationship" (2005) 120(2) *Quarterly Journal of Economics* 701.

¹⁷C.-T. Hsieh and P.J. Klenow, "Misallocation and Manufacturing TFP in China and India" (2009) 124(4) *Quarterly Journal of Economics* 1403.

study, and its size depends on the model, so it is graded **moderate** (§10.2). Chapter 10 examines its causes. Table 1.2 summarises the three efficiencies.

Table 1.2: Three efficiencies: what each means, how it is tested, and where the law uses it

Efficiency	Meaning	Test in the model	Where the law uses it
Allocative	Output of each good is carried to the point at which its value to buyers equals its cost	$P = MC$; no deadweight loss (Table 1.1)	Harm to consumers through higher prices or lower output: s 19(3)(d); s 4(2)(b) (limiting production); Sherman §2; TFEU art 102(b)
Productive	Output is produced at the lowest cost; no slack inside firms	$P = \text{minimum LAC}$; firms on the isoquant, not inside it	Efficiency claims: s 19(3)(e); s 20(4)(m)–(n); CA98 s 9(1)(a); TFEU art 101(3)
Dynamic	Products and processes improve at the right pace	Rate of innovation and productivity growth	s 19(3)(f) "technical, scientific and economic development"; s 20(4)(l) "innovation"; art 101(3) "technical or economic progress"

Source: Authors' compilation from Competition Act, 2002, ss 4, 19 and 20; Competition Act 1998 (UK), s 9; TFEU arts 101–102.

Memory Aid 1.1: the three efficiencies "PAD"

Productive (lowest cost) · **Allocative** ($P = MC$) · **Dynamic** (innovation): the three advantages of competition that the Supreme Court listed in *SAIL* (2010).

The chapter continues

*Chapter 1, Markets, Firms and Welfare,
continues in the complete volume.*

CHAPTER 2

MARKET POWER, MONOPOLY AND MARKET DEFINITION

Volume I · The Economics of Competition

CHAPTER 2

MARKET POWER, MONOPOLY AND MARKET DEFINITION

What market power is, what it costs, and how the law draws the boundaries of a market

On 20 October 2022 the Competition Commission of India found that Google had abused a dominant position in the Android ecosystem and imposed a penalty of ₹1,337.76 crore. Before it could ask what Google had done, the Commission had to answer a prior question: in which markets did Google compete, and was it dominant in them? It defined five relevant markets: the "Market for licensable OS for smart mobile devices in India", the "Market for app stores for Android smart mobile OS in India", the "Market for general web search services in India", the "Market for non-OS specific mobile web browsers in India" and the "Market for online video hosting platform (OVHP) in India".¹ Google appealed to the National Company Law Appellate Tribunal, whose judgment of 29 March 2023 sets out those five markets (Box 2.6).² The case shows the order in which competition law works. Power comes first, and power exists only in a market. Figure 2.1 maps the chapter.

¹*Umar Javeed v Google LLC* (CCI, Case No 39 of 2018, order of 20 October 2022), para 615; the penalty is at para 639.

²*Google LLC v Competition Commission of India* (NCLAT, Competition Appeal (AT) No 01 of 2023, 29 March 2023), para 3(xix).

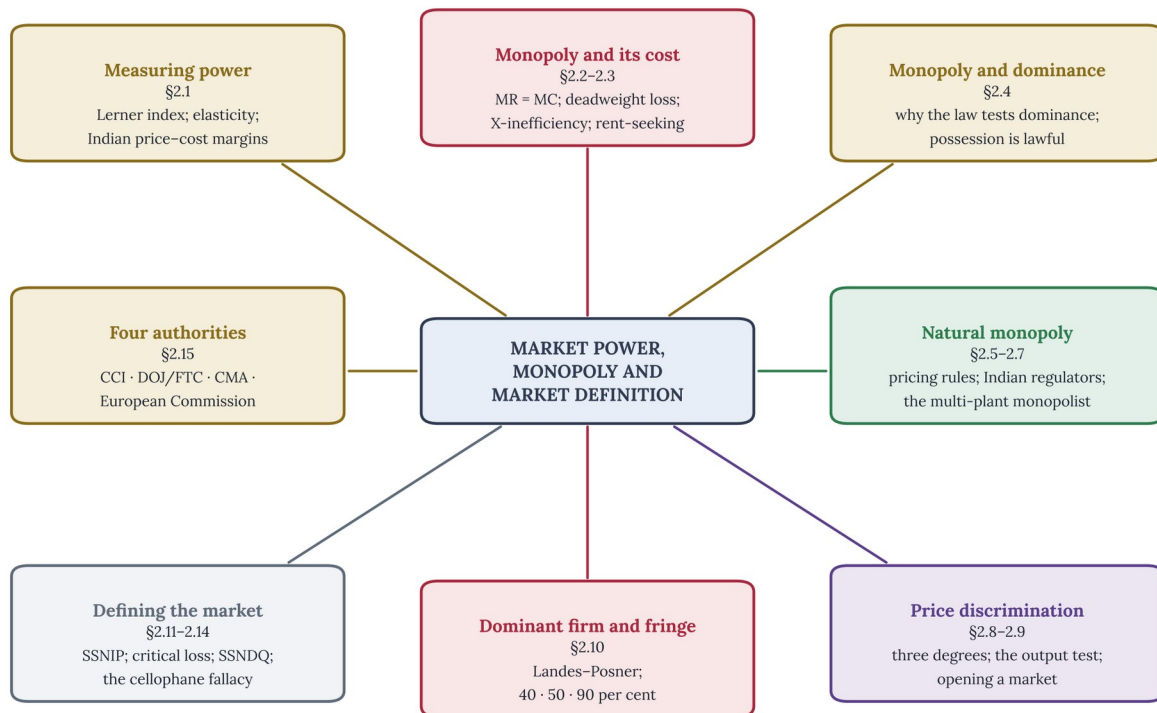


Figure 2.1: Market power, monopoly and market definition: a map of the chapter

Source: Authors' illustration.

The chapter uses the Book Model of Chapter 1 (Box 1.2). Market demand is $P = 20 - Q/1000$ and marginal cost, where it is constant, is ₹10. A monopolist facing that demand sells 5,000 units at ₹15; a competitive industry sells 10,000 at ₹10. The model's figures are illustrative. Where the chapter uses Indian data, orders or judgments, they are cited.

2.1 Market Power: the Lerner Index and the Inverse-elasticity Rule

(a) What Market Power Is

Market power is the ability of a firm to raise its price profitably above the competitive level, which is marginal cost, by restricting its output. A price-taker in a competitive market has none: if it charged more than the market price it would sell nothing (§1.7). A firm with power faces a downward-sloping demand curve: it loses some sales when it raises its price, but not all of them. The United States Supreme Court

put the idea in a sentence in 1956: "Monopoly power is the power to control prices or exclude competition."³

Abba Lerner proposed in 1934 that power be measured by how far price exceeds marginal cost, as a proportion of price: in the words of the United States Department of Justice, "its price minus its short-run marginal cost, all divided by its price".⁴ The **Lerner index** is

$$L = (P - MC)/P.$$

It is zero under perfect competition, where price equals marginal cost, and rises towards one as the gap widens. On the Book Model the monopolist charges ₹15 against a marginal cost of ₹10, so $L = 5/15 = 1/3$.

(b) The Inverse-elasticity Rule

A firm that maximises profit sets marginal revenue equal to marginal cost. Marginal revenue depends on how sensitive buyers are to price, measured by the **price elasticity of demand**, ϵ : the percentage change in the quantity demanded divided by the percentage change in price. Since $MR = P(1 - 1/|\epsilon|)$, setting $MR = MC$ gives the **inverse-elasticity rule**:

$$(P - MC)/P = 1/|\epsilon|.$$

The more elastic the demand the firm faces, the smaller its markup. On the Book Model demand is $P = 20 - Q/1000$; at the monopoly price of ₹15 and output of 5,000, the elasticity is $(1000 \times 15)/5,000 = 3$, and the Lerner index is $1/3$, as the rule predicts. A profit-maximising monopolist never operates where demand is inelastic ($|\epsilon| < 1$): there marginal revenue is negative, and the firm could raise revenue and cut cost at once by selling less. Table 2.1 shows the relation.

Table 2.1: The inverse-elasticity rule: markup and the elasticity a firm faces

Elasticity of demand facing the firm, $ \epsilon $	Lerner index, $(P - MC)/P$	Price when $MC = ₹10$ (₹)
1.5	0.67	30.00
2	0.50	20.00

³United States v E.I. du Pont de Nemours & Co, 351 U.S. 377, 391 (1956).

⁴A.P. Lerner, "The Concept of Monopoly and the Measurement of Monopoly Power" (1934) 1(3) *Review of Economic Studies* 157, 169; US Department of Justice, *Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act* (2008), ch 2.

Elasticity of demand facing the firm, $ \epsilon $	Lerner index, $(P - MC)/P$	Price when $MC = ₹10$ (₹)
3 (Book Model monopoly)	0.33	15.00
5	0.20	12.50
10	0.10	11.11
Infinite (perfect competition)	0	10.00

Source: Authors' calculations from $L = 1/|\epsilon|$ and $P = MC/(1 - 1/|\epsilon|)$. Hypothetical figures.

The rule concerns the elasticity of demand facing the firm, not the market. A firm with a small share faces very elastic demand even if the market's demand is inelastic, because its buyers can turn to rivals. William Landes and Richard Posner turned that point into a formula that links the firm's power to its market share, the market elasticity and the ability of rivals to expand (§2.10).

(c) Why the Index Is Hard to Measure

The Lerner index is easy to define and hard to measure. Marginal cost is rarely observed, and, as the Department of Justice observed in 2008, "Accounting figures seldom reflect the firm's true economic cost of producing its goods and services".⁵ In particular, a margin computed from accounts does not deduct the normal return on capital, which the economist counts as a cost (§1.7), so a high accounting margin may reflect a large capital stock rather than power. A positive Lerner index may also be the reward for fixed costs that must be recovered. In monopolistic competition, firms price above marginal cost and still earn only the normal return, because each must recover the fixed cost of its brand (Chapter 3). Where research is costly and uncertain, the margin on the products that succeed may pay for the research that failed (**theoretical**). The index is therefore evidence of power, not a measure of harm. Chapter 9 explains how economists estimate markups from production data.

(d) Worked Indian Example: Price-cost Margins after 1991

A study of 137 Indian industries measured their average price-cost margin at 14.5 per cent in 1981–91, 17.5 per cent in 1992–95 and 16.9 per cent in 1996–98.⁶ If those margins were Lerner indices, the inverse-

⁵US Department of Justice, *Competition and Monopoly*, above, ch 2.

⁶B. Goldar and S.C. Aggarwal, "Trade Liberalization and Price-Cost Margin in Indian Industries" (2005) 43(3) *The Developing Economies* 346, 360 (Table IV).

elasticity rule would imply that the average industry faced a demand elasticity of about 6.9 before the reforms and about 5.7 to 5.9 after them. The reading needs the cautions of §2.1(c): the margins include the return on capital, so they overstate the Lerner index, and the implied elasticities are lower bounds. The study's own finding goes further. Cutting tariffs and removing quantitative restrictions had "a significant pro-competitive effect on Indian industries, particularly concentrated" ones, yet "there was no fall in the PCM after 1991", because a fall in labour's share of income "neutralized to a large extent the pro-competitive effects" of the reforms.⁷ A later study of Indian manufacturers found that firms kept much of the fall in marginal costs as higher markups (§3.9(b)).⁸ The evidence that Indian margins did not fall after liberalisation is **moderate**: two studies, one of industries and one of manufacturing firms, point the same way.

2.2 Monopoly Equilibrium

(a) Output from Cost, Price from Demand

A monopolist is the only seller of a product with no close substitutes. Its demand curve is the market demand curve. It chooses the output at which **marginal revenue equals marginal cost**, and then charges the highest price buyers will pay for that output, read from the demand curve. Two consequences follow. First, price exceeds marginal cost, because marginal revenue is below price whenever demand slopes down. Second, a monopolist has no supply curve: the quantity it sells at a given price depends on the shape of demand as well as on cost, so there is no one-to-one relation between price and quantity supplied. And because it restricts output, a monopolist also hires less labour and capital than a competitive industry would (§1.4(b)).

Figure 2.2 places the Book Model's short-run plant (§1.7) in the hands of a monopolist. Facing strong demand, $P = 20 - 0.1q$, the monopolist produces 70 units, charges ₹12.98 and earns about ₹143 above all costs. It stops short of the plant's minimum average cost at 100 units: a monopolist need not produce at least cost, because it gains more by restricting output than it would save by expanding. Facing weak

⁷Goldar and Aggarwal, above, 346, 358 and 366.

⁸J. De Loecker, P.K. Goldberg, A.K. Khandelwal and N. Pavcnik, "Prices, Markups, and Trade Reform" (2016) 84(2) *Econometrica* 445.

demand, $P = 14 - 0.1q$, it produces 47 units at ₹9.33 and loses ₹211; but the price covers average variable cost, and the loss is smaller than the fixed cost of ₹400, so it keeps producing in the short run, exactly as a competitive firm would (§1.7(b)).

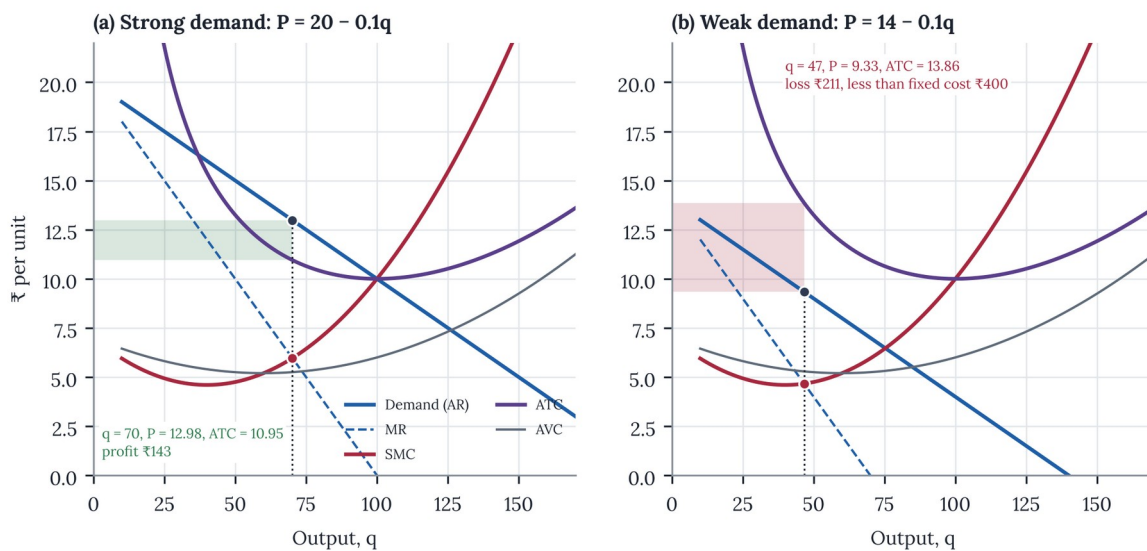


Figure 2.2: The monopolist in the short run: $MR = MC$ sets output, demand sets price

Source: Authors' illustration on the Book Model short-run plant ($SRTC = 400 + 7q - 0.06q^2 + 0.0005q^3$). Hypothetical figures.

Memory Aid 2.1: the Book Model monopoly "5,000-15- $\frac{1}{3}$ "

On the Book Model the monopolist sells **5,000** units at ₹ **15**; the elasticity of demand there is 3, so the Lerner index is $\frac{1}{3}$.

(b) Monopoly in the Long Run

A competitive industry's profits are competed away by entry (§1.8). A monopolist's profit persists only if entry is blocked, and the barriers of §1.9 are therefore the condition of lasting monopoly. Where entry is free, a high price is an invitation to rivals; where it is blocked by law, by scale or by an incumbent's conduct, the price can stay high (**theoretical**). That is why the law's tests of dominance look at entry barriers as well as market share: s 19(4) lists both (clauses (a) and (h)), and §2.10 shows why.

2.3 The Social Cost of Monopoly

(a) Deadweight Loss, Transfer and Rent-seeking

Figure 2.3 measures the cost of monopoly on the Book Model. Compared with competition, the price rises from ₹10 to ₹15 and output halves. Buyers lose ₹37,500 of surplus. Of that, ₹25,000 is a transfer to the monopolist, and ₹12,500 is a **deadweight loss**: the value of units that buyers would have paid more than their cost to obtain, and that are not produced. On the total-welfare standard (§1.1(b)) the deadweight loss, not the transfer, measures monopoly's cost to society, because the transfer is a gain to the owners of the firm.

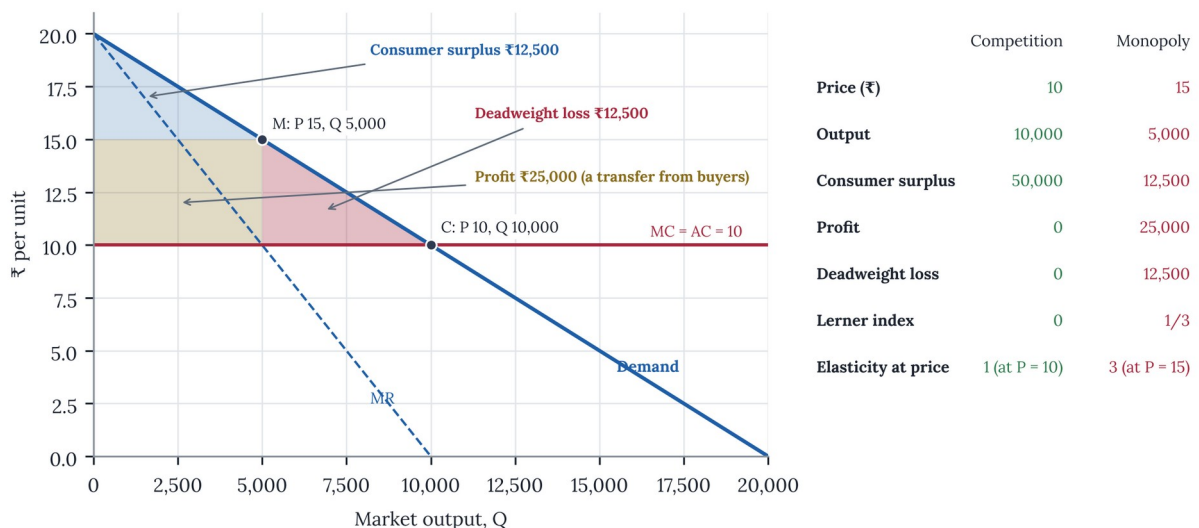


Figure 2.3: Monopoly and competition compared: what buyers lose and what society loses

Source: Authors' illustration on the Book Model: demand $P = 20 - Q/1000$; constant marginal and average cost ₹10. Hypothetical figures.

In 1954 Arnold Harberger published an estimate of the deadweight loss from monopoly in American manufacturing and put it at "no more than a thirteenth of a per cent" of the national income.⁹ If that were the whole cost, monopoly would hardly matter. Three arguments say it is not. Gordon Tullock argued in 1967 that the resources spent in competing to obtain a monopoly, or to resist one, are a social cost in addition to the deadweight triangle.¹⁰ Richard Posner modelled the case in which competition to obtain a monopoly dissipates the whole of the expected profit, and concluded that "public regulation is

⁹A.C. Harberger, "Monopoly and Resource Allocation" (1954) 44(2) *American Economic Review* (Papers and Proceedings) 77, 85–87, as quoted in Federal Reserve Bank of Minneapolis, Economic Policy Paper 12–5.

¹⁰G. Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft" (1967) 5(3) *Western Economic Journal* 224.

probably a larger source of social costs than private monopoly".¹¹ And Harvey Leibenstein's X-inefficiency (§1.1(c)) adds the cost of slack inside protected firms; as John Hicks put it, "The best of all monopoly profits is a quiet life."¹²

With these additions the estimates grow. Keith Cowling and Dennis Mueller, counting advertising and other outlays to secure power, put the social cost of monopoly power at between 4 and 13 per cent of gross corporate product in the United States and between 3.9 and 7.2 per cent in the United Kingdom.¹³ The gap reflects what is counted: on Harberger's method, Cowling and Mueller's own estimates for the United States range between 0.04 and 7 per cent of gross corporate product. The evidence on the size of monopoly's social cost is therefore **moderate**: the estimates run from under a tenth of a per cent to 13 per cent, depending on the method; every one of them is positive.

(b) Worked Indian Example: Krueger's Estimate of Rents in India, 1964

Anne Krueger's article of 1974 on rent-seeking took India as one of its cases. She estimated the rents created by government controls in India in 1964 at ₹14.6 billion: "The total value of rents of Rs. 14.6 billion contrasts with Indian national income of Rs. 201 billion in 1964." She concluded: "At 7.3 percent of national income, rents must be judged large relative to India's problems".¹⁴ Table 2.2 sets out her sources. Import licences account for most of the total, but not all of it: controlled commodities, credit rationing, railway allocations and public investment added the rest.

Table 2.2: Worked Indian example: Krueger's estimate of rents in India, 1964

Source of rent	₹ million	Per cent of national income
Imports (licences)	10,271	5.11

¹¹R.A. Posner, "The Social Costs of Monopoly and Regulation" (1975) 83(4) *Journal of Political Economy* 807.

¹²J.R. Hicks, "Annual Survey of Economic Theory: The Theory of Monopoly" (1935) 3(1) *Econometrica* 1, 8, as quoted in A.A. Alchian and R.A. Kessel, "Competition, Monopoly, and the Pursuit of Pecuniary Gain" in *Aspects of Labor Economics* (Princeton University Press for the NBER, 1962) 157, 157 fn 1.

¹³K. Cowling and D.C. Mueller, "The Social Costs of Monopoly Power" (1978) 88(352) *Economic Journal* 727, 740 and 743.

¹⁴A.O. Krueger, "The Political Economy of the Rent-Seeking Society" (1974) 64(3) *American Economic Review* 291, 294.

The chapter continues

*Chapter 2, Market Power, Monopoly and Market Definition,
continues in the complete volume.*

CHAPTER 3

MARKET STRUCTURES AND CONCENTRATION IN INDIA

Volume I · The Economics of Competition

CHAPTER 3

MARKET STRUCTURES AND CONCENTRATION IN INDIA

The structures between competition and monopoly, how concentration is measured, and what the Indian evidence shows

At the end of September 2011 the Telecom Regulatory Authority of India's figures listed fifteen groups of companies selling mobile telephone services in India, and in the Delhi circle alone nine of them had subscribers.¹ In March 2016 twelve operators still reported subscribers; the largest, Bharti Airtel, held 24.3 per cent of them. By March 2025 one company that had not appeared in the March 2016 figures, Reliance Jio, held 40.6 per cent; Airtel held 33.7 per cent; Vodafone Idea, formed by the merger of two of the 2016 operators, held 17.8 per cent; and the State-owned BSNL and MTNL held almost all the rest.² Measured by the Herfindahl–Hirschman Index, which §3.6 explains, the national market had become twice as concentrated: the index rose from 1,544 to 3,161. Yet the change followed entry as well as exit and merger: a single new firm took a quarter of the market within three years. Was the industry of 2025 less competitive than the industry of 2016?

¹Telecom Regulatory Authority of India, Press Release No 56/2011 (5 December 2011), "Highlights on Telecom Subscription Data as on 30th September, 2011", Annexure I.

²Telecom Regulatory Authority of India, Press Release No 34/2016 (25 May 2016), Annexure I (data as on 31 March 2016); Press Release No 35/2025 (7 May 2025) (data as on 31 March 2025; mobile subscribers, excluding fixed wireless access). Shares are the authors' calculation from the subscriber counts in each release.

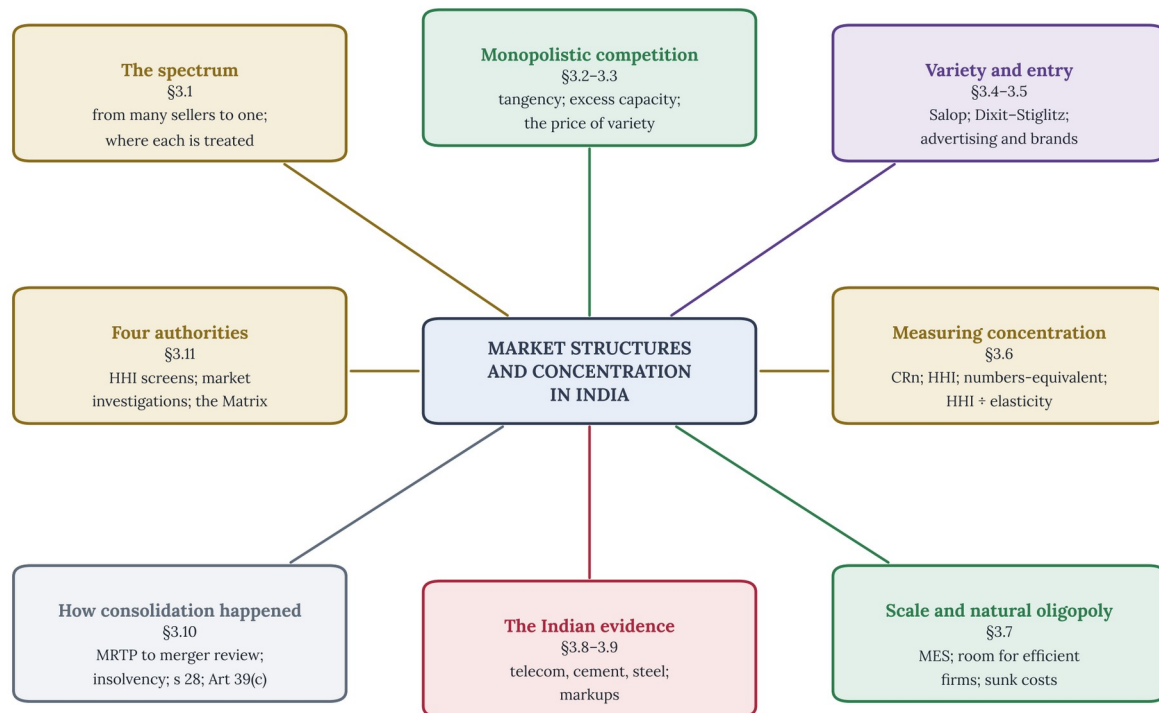


Figure 3.1: Market structures and concentration in India: a map of the chapter

Source: Authors' illustration.

The chapter uses the Book Model of Chapter 1 (Box 1.2): the long-run average cost of a plant is $AC = 10 + 0.0003(q - 100)^2$, so that the **minimum efficient scale** (MES) is 100 units and the lowest attainable average cost is ₹10; market demand is $P = 20 - Q/1000$. The model's figures are illustrative; every share and index computed from official data is shown with its source.

3.1 The Spectrum of Market Structures

(a) Four Questions that Classify a Market

This chapter classifies a market by four questions. How many sellers are there? Is the product identical across sellers or differentiated? Can new firms enter freely? And, as a consequence of the first three, how far can price exceed marginal cost? Figure 3.2 arranges the answers along a line on which market power rises from left to right, and records for each structure the outcome on the Book Model and the chapter in which it is treated.



Figure 3.2: The spectrum of market structures: sellers, product, entry and price

Source: Authors' illustration. Book Model outcomes from §§1.8, 2.2, 2.10, 3.2 and 3.6; hypothetical figures.

At the left is **perfect competition**: many sellers of an identical product, free entry, and a price equal to marginal cost and to minimum average cost in the long run. At the right is **monopoly**: one seller, blocked entry, and a price set where marginal revenue equals marginal cost. Between them lie three structures. In **monopolistic competition** each firm sells its own version of the product, so it faces a downward-sloping demand curve and prices above marginal cost; but entry is free, so profit is competed away. In **oligopoly** a few firms supply the market and each must take account of how the others will respond; their product may be nearly identical, as the Commission's Director General found cement to be (§3.8(b)), or differentiated. A **dominant firm with a competitive fringe** (§2.10) is the asymmetric case, in which one firm sets the price and many small firms take it. A **cartel** is not a separate structure but a form of conduct: oligopolists who agree to act as if they were a single monopolist. Chapter 4 examines it.

Memory Aid 3.1: the four structures "MMFO"

Many sellers, one identical product: perfect competition. Many sellers, differentiated products: monopolistic competition. Few sellers: oligopoly. One seller: monopoly.

(b) Structure, Conduct and Performance

The classification invites a theory: that the structure of a market determines how its firms behave, and their behaviour determines how well the market performs. This **structure-conduct-performance** framework is associated with the work of Edward Mason and Joe Bain.³ A later Federal Trade Commission study summarised Bain's finding for American manufacturing in 1936–1940: high values of the eight-firm concentration ratio "were systematically associated with above-average profit rates", with a break "at a critical value of about 70 percent output control" (**weak** by modern standards: a cross-section of the late 1930s).⁴ The framework has since been qualified in three ways. The causation can run the other way: a firm that is more efficient than its rivals grows, and the market becomes concentrated because it is efficient (§3.6(d)). Conduct can change structure: firms that spend on advertising or research can raise the cost of entry (§3.7(c)). And concentration across a whole industry may say little about competition in the narrower markets the law defines (§3.8(d)). A recent survey by three industrial economists puts the position bluntly: "the structure-conduct-performance approach has been discredited for a long time".⁵ Structure remains evidence. It is not a verdict, and the chapter returns to that distinction throughout.

³E.S. Mason, "Price and Production Policies of Large-Scale Enterprise" (1939) 29(1) *American Economic Review* 61; J.S. Bain, "Relation of Profit Rate to Industry Concentration: American Manufacturing, 1936–1940" (1951) 65(3) *Quarterly Journal of Economics* 293.

⁴Bain (1951), above; J.E. Kwoka, *The Effect of Market Shares and Share Distribution on Industry Performance*, Federal Trade Commission Bureau of Economics Working Paper No 2 (March 1977), 2.

⁵S. Berry, M. Gaynor and F. Scott Morton, "Do Increasing Markups Matter? Lessons from Empirical Industrial Organization", NBER Working Paper No 26007 (2019), 3; published (2019) 33(3) *Journal of Economic Perspectives* 44.

3.2 Monopolistic Competition: Profit in the Short Run, Tangency in the Long Run

(a) The Model

Edward Chamberlin and Joan Robinson, both in 1933, published theories of markets in which competition is imperfect; Chamberlin's is the theory of markets in which each firm has a little monopoly over its own product but faces close substitutes from many rivals.⁶ Restaurants on a street, garment brands, clinics, private schools and neighbourhood pharmacies illustrate the idea. Each seller's product differs, in location, quality, service or brand, so a small price rise loses some customers but not all. Each seller therefore faces a downward-sloping demand curve, which this chapter labels **d** to distinguish it from the market demand curve of Chapters 1 and 2. And because each firm is small, it ignores the reactions of its rivals; that is the difference from oligopoly.

The firm sets output where its own marginal revenue, **mr**, equals marginal cost, and charges the price its demand curve allows. In the short run that price can exceed average cost. Figure 3.3(a) gives a firm with the Book Model's cost curves the demand curve $d = 14 - 0.03q$. It produces about 80 units, where $mr = MC$, and charges ₹11.59, against an average cost of ₹10.11, earning a profit of about ₹118.

⁶E.H. Chamberlin, *The Theory of Monopolistic Competition* (Harvard University Press 1933); J. Robinson, *The Economics of Imperfect Competition* (Macmillan 1933).

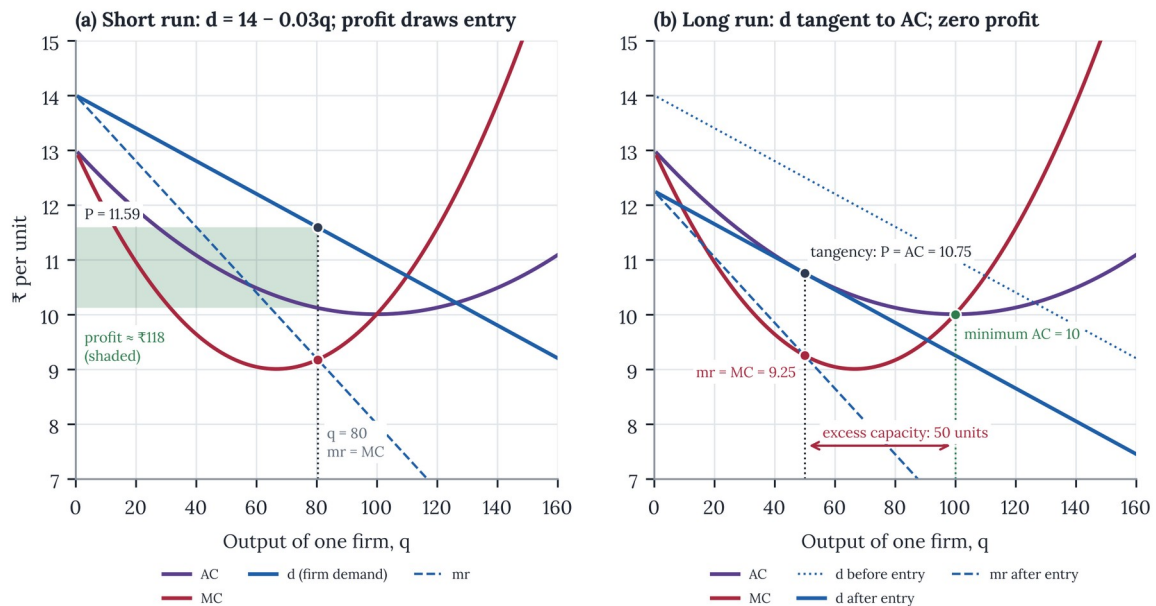


Figure 3.3: The monopolistically competitive firm: profit in the short run, tangency in the long run

Source: Authors' illustration. $AC = 10 + 0.0003(q - 100)^2$; $MC = 13 - 0.12q + 0.0009q^2$; firm demand slopes at -0.03 per unit. Hypothetical figures.

(b) Entry and the Tangency Solution

Profit attracts entrants, each with its own variant of the product. Each entrant takes some customers from every incumbent, so each incumbent's demand curve shifts to the left. Entry continues until profit is zero. Because the demand curve slopes downward, zero profit cannot occur at the bottom of the average-cost curve, where the cost curve is flat: it occurs where the demand curve just touches the average-cost curve on its falling part. This is the **tangency solution** of Chamberlin's theory (**theoretical**). In Figure 3.3(b) entry shifts the demand curve to $d = 12.25 - 0.03q$. It touches the cost curve at 50 units, where both price and average cost are ₹10.75 and both curves slope at -0.03 . There, marginal revenue and marginal cost are both ₹9.25. The firm earns no profit, yet it prices above marginal cost: its Lerner index is $(10.75 - 9.25)/10.75 = 0.14$.

The long-run result has three features that distinguish it from perfect competition. First, price exceeds marginal cost: each firm has some market power. Second, profit is zero: the market power earns nothing above the normal return, because entry has competed it away. Third, each firm produces less than its minimum efficient scale. The Book Model firm produces 50 units against an MES of 100; the difference, 50

units, is its **excess capacity**. The second feature is why a positive Lerner index does not by itself show a competition problem (§2.1(c)); the third is the subject of §3.3.

(c) What the Model Teaches the Law

The model applies wherever products are differentiated and entry is free. Two lessons follow for the law. The first is that a firm with a downward-sloping demand curve and a margin above marginal cost need not be dominant, or even profitable. A brand that commands loyalty from some buyers has a little monopoly, but if entry is free the little monopoly earns only the normal return. Dominance under s 4 requires more: a position of strength that enables the firm to "operate independently of competitive forces prevailing in the relevant market", or to affect its competitors, consumers or the market in its favour (s 4, Explanation (a); §2.4). The second lesson concerns market definition. In differentiated markets the products of different sellers are substitutes in different degrees. Whether a price rise by one seller would be profitable depends on how many of its customers would switch to each rival and how close those rivals are: the diversion analysis of §2.12(b) and §7.8. A market share, which treats every rival as equally close, can mislead in either direction.

3.3 Excess Capacity and the Welfare Comparison with Perfect Competition

(a) The Same Costs, Two Outcomes

Figure 3.4 sets the two long-run outcomes side by side on the same cost curves. The perfectly competitive firm produces 100 units at the minimum of average cost and sells at a price of ₹10, equal to marginal cost. The monopolistically competitive firm produces 50 units at an average cost of ₹10.75, and sells at a price of ₹10.75, above its marginal cost of ₹9.25. Both earn zero profit.

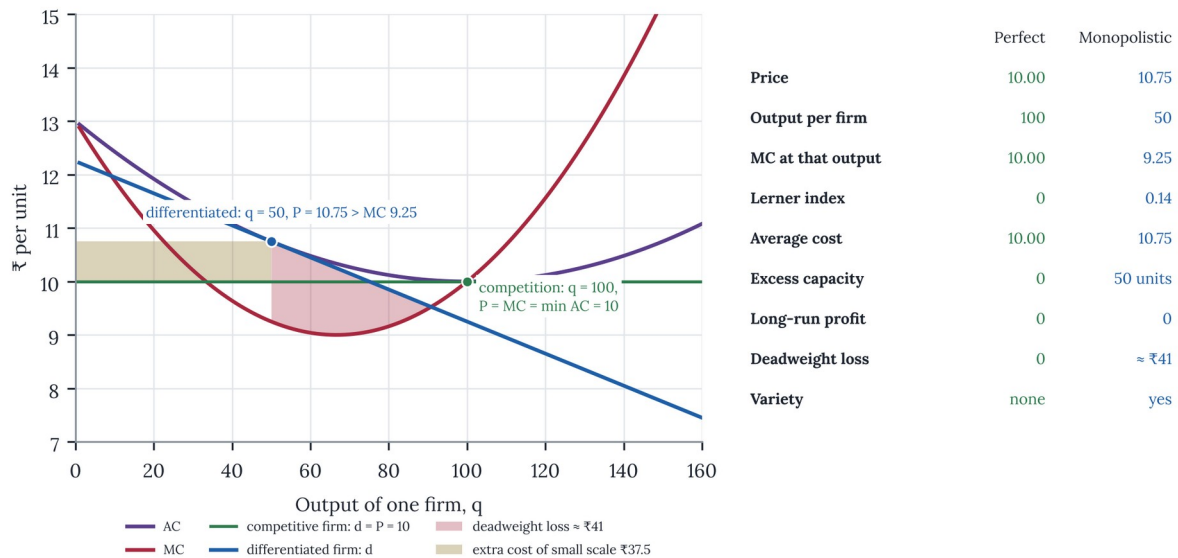


Figure 3.4: The long run on the same cost curves: perfect competition and monopolistic competition

Source: Authors' illustration on the Book Model cost curves. The deadweight loss is measured against the firm's own demand curve. Hypothetical figures.

Two costs appear. The first is a **deadweight loss** of about ₹41 for each firm: the value to buyers, net of cost, of the units between 50 and about 91 that the firm would sell if it priced at marginal cost. The second is the **cost of small scale**: each unit costs ₹0.75 more than it would at minimum efficient scale, an extra ₹37.50 for each firm's 50 units. Both costs arise from the same feature, the downward-sloping demand curve. Table 3.1 summarises the comparison.

Table 3.1: Perfect competition and monopolistic competition in the long run on the Book Model

Measure	Perfect competition	Monopolistic competition
Price (₹)	10.00	10.75
Output of each firm	100 (minimum efficient scale)	50
Marginal cost at that output (₹)	10.00	9.25
Lerner index	0	0.14
Average cost (₹)	10.00 (the minimum)	10.75
Excess capacity	None	50 units (half of MES)
Long-run profit	0	0
Deadweight loss for each firm (₹)	0	About 41

The chapter continues

*Chapter 3, Market Structures and Concentration in India,
continues in the complete volume.*

Read the complete volume

Competition Law and Policy – Volume I: The Economics of Competition

Ebook (PDF), ready to download straight after payment

Launch price ₹200 per volume until 19 February 2027 (MRP ₹2,000)

bonojuris.com

welcome@bonojuris.com

COMPETITION LAW AND POLICY

Volume I: The Economics of Competition

Every day, in markets across India, someone decides what an air ticket will cost, how many seats will fly a route, which bidder will win a public tender, whether two firms will merge, or on what terms a platform will let a seller reach its customers. When IndiGo cancelled flights on a large scale in early December 2025, the Competition Commission of India directed an investigation into whether the airline had imposed unfair conditions on passengers and limited the supply of air travel, and in 2026 it invited public comments on the commitments the airline offered (*Kartikeya Rawal v InterGlobe Aviation Ltd*, Case No 44 of 2025). Competition Law and Policy explains the economics and the law that govern such decisions, in India and, side by side, in the United States, the United Kingdom and the European Union.

Volume I, The Economics of Competition, sets out the tools on which the law turns: markets and welfare, market power and market definition, concentration, oligopoly and cartels, vertical relations, exclusion, mergers, platforms and quantitative evidence. Every empirical claim is graded by the strength of the evidence behind it. The volume traces how competition raises productivity and growth, and closes with the constitutional argument of the book: that competition is a means to the economic conditions on which the Rule of Law, the golden triangle of Articles 14, 19 and 21, and the economic democracy of the Directive Principles depend, with the reforms of 1991 as the exemplar.

Volume II, The Law of Competition, takes the Competition Act, 2002, as amended in 2023, through its concepts and institutions, agreements and cartels, abuse of dominance, combinations, investigation and procedure, penalties, leniency, settlement and commitment, appeals and private enforcement, the State as market actor, sector regulators and intellectual property, digital markets and cross-border enforcement, and closes with the practice of competition law.

Each chapter sets India beside the other three systems in a Four-Jurisdiction Matrix and carries a Constitutional Lens. Across the two volumes there are 185 figures, 157 tables, 269 boxes and 59 memory aids, and a one-page Schema of the subject. The book is written for students of law and economics, practitioners, officers of the Commission and the regulators, judges and those who make economic policy.

Niten Chandra, who retired from the Indian Administrative Service in 2025 after thirty-five years, was Law Secretary to the Government of India from 2022 to 2024. Before that he directed the Union's litigation in the Supreme Court as Additional Secretary in charge of the Central Agency Section. He sat ex officio on the Law Commission of India, the India International Arbitration Centre and the Executive Committee of the Indian Law Institute, and helped shape the Mediation Act, the Competition (Amendment) Act and the Digital Personal Data Protection Act, all of 2023, and over one hundred other laws and rules. Educated at St. Stephen's College and the Delhi School of Economics (gold medal), he holds an LL.B. and a Ph.D. in Economics.

Shalini Chandra is an Advocate-on-Record in the Supreme Court of India with twenty years at the Bar and more than five hundred cases before the Supreme Court, High Courts and Tribunals, many for public bodies such as the DDA, MCD, NHAI and NCTE. A mediator trained and certified by the Mediation and Conciliation Project Committee of the Supreme Court, she mediates at the Supreme Court Mediation Centre, sits as an arbitrator and undertakes legal work pro bono.

Bono Juris

www.bonojuris.com

MRP ₹2,000

Launch offer: ₹200 (90% off) at bonojuris.com