

The Evolution of Market Inefficiency: Integrating Neoclassical Market Failure Theory with Institutional and Heterodox Economic Perspectives

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ABSTRACT

This paper provides a comprehensive synthesis of market failure theory, delineating the systemic vectors through which unhindered private resource allocation diverges from Pareto-optimal baselines. We systematically categorize classical market clear clearing breakdowns into three core structural dimensions: imperfect competitive architectures (monopoly and market power), the biophysical and legal properties of traded assets (public goods, common-pool resources, and externalities), and transaction-level informational and cognitive frictions (asymmetric information and bounded rationality). Beyond standard neoclassical remediation's, this review integrates modern institutional and heterodox evolutions. We explicitly examine contemporary 2024–2026 paradigms, including the shift toward mission-oriented public value creation, complex systemic risk governance, and ecological cost-shifting frameworks. Finally, we account for the rising operational role of non-governmental organizational (NGO) networks as decentralized governance mechanisms when state capability faces structural limitations.

KEYWORDS

Market Failure, Pareto Efficiency, Externalities, Asymmetric Information, Bounded Rationality, Mission-Oriented Policy, Ecological Economics, Government Failure

I. INTRODUCTION

Within standard microeconomic theory, competitive markets are often conceptualized as decentralized coordination mechanisms capable of efficiently allocating scarce resources under a strict set of assumptions. The First Fundamental Theorem of Welfare Economics establishes that, under conditions including perfect competition, complete markets, full information, and the absence of external effects, competitive equilibria are Pareto efficient: no individual's welfare can be improved without reducing the welfare of another individual (Arrow and Debreu, 1954; Debreu, 1959). Under this idealized framework, prices function as information signals that coordinate decentralized decisions among independent economic agents.

Market failure refers not to the disappearance of markets but to situations in which market allocations systematically diverge from socially efficient outcomes because one or more

assumptions underlying competitive equilibrium are violated. These deviations may arise from externalities, public goods, imperfect competition, incomplete information, missing markets, or institutional constraints. In such cases, private marginal costs and benefits may diverge from marginal social costs and benefits, producing allocative inefficiency and potential welfare losses.

Although the formal economic treatment of market failure developed primarily within twentieth-century welfare economics, the broader intellectual concern that decentralized private action could produce socially undesirable outcomes has a much longer history. Utilitarian economists and philosophers, including Henry Sidgwick, examined the limits of individual self-interest as a mechanism for achieving collective welfare, anticipating later debates regarding the relationship between private incentives and social outcomes.

Within modern public economics, identifying a market failure provides a theoretical rationale for policy intervention. However, contemporary economic analysis rejects the assumption that government intervention automatically produces superior outcomes. Public institutions operate under their own informational, political, and administrative constraints, creating the possibility of government failure through inefficient regulation, bureaucratic limitations, regulatory capture, or rent-seeking behaviour. Consequently, policy evaluation increasingly focuses on comparative institutional analysis: whether markets, governments, or alternative governance arrangements provide the most effective mechanism for addressing specific coordination failures.

This perspective has expanded beyond a simple market-versus-state dichotomy. Institutional economists emphasize that economic performance depends on the interaction between markets, regulatory systems, legal frameworks, and collective organizations (North, 1990; Williamson, 1985). Where state capacity is limited or public provision is insufficient, civil society organizations and non-governmental actors may assume complementary roles in delivering collective goods and addressing development challenges. Modern economic analysis therefore treats resource allocation as a comparative assessment among imperfect institutional arrangements rather than a choice between a perfectly functioning market and a perfectly capable state.

II. STRUCTURAL IMPERFECTIONS: MARKET POWER AND IMPERFECT COMPETITION

The benchmark model of perfect competition assumes that firms and consumers are price takers, meaning that no individual participant possesses sufficient market influence to affect equilibrium prices. Under these conditions, prices reflect marginal costs and resources are allocated efficiently. However, when firms acquire the ability to influence prices through barriers to entry, strategic behaviour, or control over essential resources, market power emerges and competitive outcomes may become inefficient.

Imperfect competition encompasses a range of market structures, including monopoly, oligopoly, monopolistic competition, and monopsony. In a monopoly market, a single firm faces the entire market demand curve and maximizes profit where marginal revenue equals

marginal cost:

$$[MR=MC]$$

Because a monopolist faces a downward-sloping demand curve, marginal revenue is below price:

$$[MR<P]$$

Consequently, the profit-maximizing output level occurs where price exceeds marginal cost:

$$[P>MC]$$

This creates a divergence between the private equilibrium chosen by the monopolist and the socially efficient competitive outcome, where price equals marginal cost. The resulting reduction in output generates a deadweight loss by preventing mutually beneficial exchanges that would have occurred under competitive conditions.

The persistence of market power depends heavily on structural conditions that restrict competition. These may include legal barriers such as patents, economies of scale, control over strategic inputs, network effects, switching costs, or large fixed investments required for market entry. Contemporary industrial organization theory therefore treats market power not merely as a static deviation from competition but as a dynamic phenomenon shaped by innovation, regulation, institutional design, and firm strategy.

A particularly important case is the natural monopoly, where economies of scale make production by a single firm more cost-efficient than production by multiple competing firms. Natural monopolies typically arise in industries characterized by substantial fixed infrastructure costs and declining average costs over the relevant range of demand, such as electricity transmission, water distribution, or certain transportation networks. In these circumstances, unrestricted competition may generate inefficient duplication of infrastructure, creating a policy dilemma between maintaining productive efficiency and preventing excessive pricing power.

III. ASSET DIMENSIONS: BIOPHYSICAL AND LEGAL ATTRIBUTES OF GOODS

A central insight of welfare economics is that markets allocate resources effectively only when goods possess characteristics compatible with private exchange. Two fundamental characteristics determine whether markets can efficiently coordinate production and consumption: excludability and rivalry.

Excludability refers to the ability of owners or providers to prevent non-paying individuals from accessing a good, while rivalry refers to whether one person's consumption reduces the availability of that good for others. The interaction between these characteristics determines whether goods are efficiently supplied through private markets or require alternative institutional arrangements.

A. Non-Excludability, Public Goods, and Common-Pool Resources

Public goods are characterized by both non-excludability and non-rivalry. Because individuals cannot easily be prevented from benefiting once the good is provided, private suppliers often struggle to recover production costs. This creates incentives for individuals to understate their willingness to pay and free ride on contributions made by others. Examples include national defence, basic scientific research, and certain forms of environmental protection. Since private markets may provide insufficient quantities of such goods, governments or collective institutions often intervene through taxation, public provision, or alternative financing mechanisms.

A different institutional challenge arises with common-pool resources, which are rival but difficult to exclude users from accessing. Fisheries, groundwater systems, forests, and grazing lands often exhibit these characteristics. Without effective governance arrangements, individuals may overexploit shared resources because the private benefit of extraction exceeds the private cost, while the long-term social costs are distributed among all users.

This problem was famously described as the “tragedy of the commons,” although later institutional research demonstrated that commons do not inevitably collapse. Elinor Ostrom’s empirical studies showed that communities can develop effective governance systems based on monitoring, collective rules, and locally adapted institutions without relying exclusively on either privatization or centralized state control.

B. Externalities and the Climate Paradigm

Externalities occur when economic activities impose costs or generate benefits affecting third parties who are not directly involved in the transaction. Because these effects are not incorporated into market prices, private decision-makers may produce outcomes that diverge from socially efficient allocations.

Negative production externalities provide the classic example. A manufacturing firm may account for private costs such as wages, energy, and raw materials while failing to incorporate environmental damages imposed on surrounding communities. As a result, the firm's marginal private cost is below the marginal social cost, leading to excessive production relative to the socially optimal level.

Environmental economics has traditionally proposed corrective mechanisms such as pollution taxes, emissions trading systems, or regulatory standards to align private incentives with social costs. However, contemporary climate policy debates increasingly emphasize that climate change is not merely a pricing problem but also a challenge involving technological transformation, industrial strategy, institutional capacity, and distributional conflict.

Krebs (2023) argues that climate policy requires moving beyond a narrowly market-liberal framework focused primarily on price signals toward approaches that recognize the role of public investment, industrial coordination, and structural economic transformation.

Similarly, recent work in mission-oriented economics emphasizes that governments may play an active role in shaping markets rather than merely correcting isolated failures.

Traffic congestion represents another example of overlapping market failures. Roads may exhibit common-pool characteristics because access is difficult to restrict while additional users impose congestion costs on others. Individual drivers consider their own travel time and fuel costs but typically do not account for delays and environmental damages imposed on other road users. Policy responses such as congestion pricing, infrastructure investment, and public transportation provision seek to internalize these external costs and improve resource allocation.

IV. TRANSACTIONAL FRICTION: INFORMATIONAL AND COGNITIVE FAILURES

Traditional competitive models assume that market participants possess complete information and can process available information rationally. However, real-world markets frequently operate under conditions of uncertainty, incomplete knowledge, and unequal access to information. These limitations create transactional frictions that can prevent mutually beneficial exchanges and generate inefficient outcomes.

A. Informational Asymmetry and Contract Theory

Information asymmetry occurs when one participant in an exchange possesses information that is unavailable to another party. Such imbalances can distort market outcomes through two major mechanisms: adverse selection and moral hazard.

Adverse selection occurs before a contract is formed when hidden characteristics influence participation decisions. Akerlof's (1970) "market for lemons" model demonstrates how quality uncertainty in used-car markets can cause buyers to discount prices because they cannot distinguish between high-quality and low-quality products. Over time, sellers of higher-quality goods may exit the market, causing average quality to decline and potentially resulting in market collapse.

Moral hazard occurs after an agreement has been established when individuals alter their behaviour because they do not bear the full consequences of their actions. In insurance markets, for example, individuals with complete protection against losses may have weaker incentives to undertake preventative measures, increasing expected costs for insurers and other participants.

These problems form the foundation of modern contract theory and principal-agent analysis, which examine how institutions can design incentives under conditions of asymmetric information. The central challenge is creating mechanisms that align the interests of better-informed agents with those of principals who cannot directly observe all relevant actions.

B. Bounded Rationality and Behavioural Economics

The neoclassical model traditionally represents economic agents as rational optimizers who possess stable preferences, complete information, and the computational capacity required

to evaluate alternative choices. This abstraction, often associated with the concept of homo economics, provides analytical clarity but does not fully capture the cognitive constraints observed in real-world decision-making.

Herbert Simon challenged the assumption of unlimited rationality by introducing the concept of bounded rationality. Simon argued that individuals operate under conditions of incomplete information, limited computational ability, and time constraints, making comprehensive optimization impossible in many practical situations (Simon, 1955, 1957). Instead of maximizing outcomes through exhaustive calculation, individuals often engage in "satisficing"—selecting options that meet acceptable thresholds rather than identifying theoretically optimal solutions.

Behavioural economics extended this critique by demonstrating that systematic cognitive biases influence economic decisions. Research on heuristics and judgment showed that individuals rely on simplified mental strategies that can generate predictable deviations from standard rational-choice models. These findings do not imply that economic actors are irrational, but rather that rational decision-making occurs within psychological and institutional constraints that shape market outcomes.

C. Property Rights and the Coasean Counter-Argument

Ronald Coase challenged the assumption that externalities necessarily require direct government correction. In "The Problem of Social Cost," Coase argued that when property rights are clearly defined, transaction costs are negligible, and affected parties can bargain effectively, private negotiations may achieve efficient outcomes regardless of the initial allocation of rights.

The Coasean perspective reframes externalities as problems of institutional arrangements rather than inherent failures of markets. Pollution, resource conflicts, and other spillover effects emerge partly because property rights are incomplete or because bargaining is too costly. In real economies, however, transaction costs—including negotiation expenses, information costs, monitoring difficulties, legal enforcement problems, and coordination failures—often prevent private bargaining from producing efficient outcomes (Williamson, 1985; North, 1990).

Consequently, contemporary institutional economics does not treat Coase's argument as a rejection of government intervention but as a framework for evaluating when alternative governance mechanisms—including markets, regulation, and collective institutions—are most effective.

V. COMPARATIVE INSTITUTIONAL PARADIGMS

The meaning, causes, and appropriate responses to market failure remain contested across different economic traditions. Rather than representing a single theory, market failure functions as a conceptual framework interpreted differently depending on assumptions about information, institutions, human behaviour, and political processes.

A. *Neoclassical and New Keynesian Economics*

Within mainstream economics, market failure generally refers to situations where decentralized market outcomes fail to achieve socially efficient allocations because key assumptions of competitive equilibrium are violated. Common examples include externalities, public goods, asymmetric information, and market power.

Policy responses typically involve targeted interventions designed to correct specific distortions. These include Pigouvian taxation for externalities (Pigou, 1920), public provision of goods with significant non-excludability characteristics (Samuelson, 1954; Musgrave, 1959), and competition policies aimed at limiting excessive market power.

New Keynesian economics extends this framework by emphasizing nominal rigidities, imperfect competition, and information constraints that can prevent economies from rapidly adjusting toward efficient equilibria. These insights provide theoretical justification for stabilization policies and countercyclical government intervention under certain macroeconomic conditions.

B. *Public Choice and Chicago School Perspectives*

Public choice and Chicago School economists acknowledge that markets can generate inefficient outcomes but emphasize that government intervention may produce equally significant distortions. Public choice theory applies economic analysis to political institutions, arguing that politicians, regulators, and bureaucracies may pursue their own incentives rather than maximizing social welfare.

The concept of rent-seeking highlights how individuals and firms may use political influence to obtain economic advantages through regulation, subsidies, or exclusive privileges rather than productive activity (Krueger, 1974). Similarly, regulatory capture theory argues that agencies created to protect the public interest may become influenced by the industries they regulate.

From this perspective, policy analysis requires comparing the expected costs of market failure against the potential costs of government failure rather than assuming state intervention is automatically corrective.

C. *The Austrian School*

The Austrian tradition generally rejects the interpretation of markets as static allocation mechanisms measured against an external efficiency benchmark. Instead, Austrian economists emphasize markets as dynamic discovery processes through which entrepreneurs acquire and communicate dispersed knowledge that cannot be fully centralized.

From this perspective, many apparent market failures reflect temporary disequilibria or institutional barriers rather than fundamental failures of market coordination. Entrepreneurs, motivated by profit opportunities, are viewed as mechanisms through which information is discovered and resources are continuously reallocated.

However, critics argue that the Austrian approach may understate situations involving collective-action problems, systemic externalities, or power asymmetries where decentralized adjustment mechanisms may not adequately address social costs.

D. Marxian Economics

Marxian approaches interpret market inefficiencies within a broader analysis of capitalist production relations. Rather than treating inequality, instability, and exploitation as isolated market imperfections, Marxian economists argue that these outcomes emerge from structural features of capitalist accumulation, ownership relations, and class dynamics. From this perspective, conventional market failure theory is limited because it identifies deviations from efficient exchange while leaving underlying institutional structures largely unquestioned. Marxian critiques therefore focus on questions of power, distribution, labour relations, and the social organization of production rather than only allocative efficiency.

E. Ecological Economics

Ecological economics challenges the assumption that environmental problems can always be addressed through marginal price adjustments. It argues that economic activity operates within biophysical limits imposed by ecosystems and planetary boundaries. From this perspective, environmental degradation is not simply an accidental externality but may reflect structural dependence on transferring ecological costs onto communities, ecosystems, and future generations. Ecological economists therefore emphasize absolute limits on resource use, ecological accounting, and institutional mechanisms capable of maintaining long-term sustainability.

Climate change represents a particularly significant challenge because the atmosphere functions as a global common. Greenhouse gas emissions impose costs across national borders and generations, while future generations cannot participate directly in current market transactions. Carbon pricing, emissions trading systems, and regulatory approaches attempt to address this governance gap by creating mechanisms that incorporate environmental constraints into economic decision-making

VI. BEYOND MARKET-FIXING: MISSION-ORIENTED AND TRANSFORMATIVE POLICY

Recent innovation and development economics increasingly challenge the traditional view that government should intervene only after markets fail. Mission-oriented approaches argue that governments can actively shape technological trajectories and coordinate investment toward socially significant objectives, such as climate transitions, digital infrastructure, and public health innovation.

Rather than viewing the state solely as a regulator correcting isolated inefficiencies, this perspective emphasizes the state's entrepreneurial and coordinating capacity in creating markets and directing innovation ecosystems. The central argument is that some challenges are not merely failures within existing markets but failures to create the markets and institutions required for long-term societal goals.

A. *Complex System Dynamics and Networked Market Failures*

Contemporary research on financial and institutional systems increasingly emphasizes complexity, interconnectedness, and systemic vulnerability. Castellano (2024) argues that systemic financial risk cannot always be understood as an isolated market imperfection because vulnerabilities may emerge from the legal, institutional, and organizational structures that enable financial markets themselves. This perspective shifts analysis away from correcting individual transactions toward understanding adaptive governance, resilience, and system-wide risk management. Complex systems approach suggest that modern economies require institutions capable of monitoring interconnected risks rather than responding only after failures occur.

B. *Intergenerational Market Inability and Global Commons*

Ecological economics further challenges conventional efficiency frameworks by emphasizing that present-day market prices often fail to incorporate the interests of future generations. Because future individuals cannot participate directly in current markets, long-term ecological values and resource constraints may remain absent from price signals (Daly, 1996; Stern, 2007). Anthropogenic climate change represents a global commons problem in which greenhouse gas emissions create widespread costs beyond the immediate transaction between producers and consumers. The atmosphere functions as a shared environmental resource with historically weak property rights, allowing emissions costs to remain externalized.

Policy responses such as carbon taxes, emissions trading systems, and international climate agreements attempt to create institutional mechanisms for internalizing these costs. However, implementation challenges remain significant, particularly where governments face limited administrative capacity. In such contexts, non-governmental organizations and community-based networks may contribute to the provision and governance of collective goods.

VII. **POLICY RECOMMENDATIONS: TOWARD A COMPARATIVE INSTITUTIONAL APPROACH TO MARKET INEFFICIENCY**

The analysis of market inefficiency demonstrates that economic coordination problems rarely originate from a single source. Market failures, government failures, institutional weaknesses, information constraints, and ecological limits frequently interact to produce inefficient outcomes. Therefore, effective policy should move beyond the traditional binary choice between unrestricted markets and direct state intervention. Instead, policymakers should adopt a comparative institutional approach that evaluates which combination of markets, governments, communities, and regulatory frameworks can most effectively address specific coordination problems.

A. *Strengthening Institutional Capacity before Expanding Intervention*

A central policy implication is that effective intervention requires capable institutions. Government action does not automatically correct market failures; the success of regulation

depends on administrative competence, transparency, accountability, and the ability to adapt to changing economic conditions.

Policymakers should therefore prioritize investments in institutional capacity, including:

- improving regulatory expertise and technical capabilities;
- strengthening independent oversight institutions;
- reducing opportunities for regulatory capture and rent-seeking;
- Increasing transparency in public procurement and policy implementation.

Rather than measuring policy success only by the presence of intervention, evaluation should focus on whether institutions are capable of achieving intended social outcomes.

B. Designing Targeted Market-Correcting Mechanisms

Where market failures arise from identifiable distortions, policy interventions should aim to align private incentives with social costs while minimizing unnecessary market disruption. Pigouvian approaches remain relevant where external costs can be reasonably measured and incorporated into decision-making.

Recommended mechanisms include:

- carbon pricing systems to internalize greenhouse gas emissions;
- congestion pricing to reflect the social costs of transportation use;
- pollution taxes and environmental standards;
- Subsidies for activities generating positive externalities, such as basic research and public health innovation.

However, such instruments should be designed carefully because inaccurate pricing assumptions or weak enforcement may create new distortions rather than resolve existing ones.

C. Expanding Competition Policy and Regulating Excessive Market Power

Market concentration and excessive market power can undermine competitive allocation, reduce innovation incentives, and allow firms to extract economic rents. Modern competition policy should therefore move beyond traditional concerns about consumer prices and incorporate broader considerations, including innovation, market access, labour-market effects, and control over essential digital infrastructure.

Policy priorities should include:

- stronger enforcement against anti-competitive mergers;
- regulation of dominant digital platforms where network effects create persistent barriers to entry;
- protection of competitive access to essential infrastructure;
- Reduction of artificial barriers that prevent new firms from entering markets.

The objective should not be eliminating large firms but ensuring that market structures remain contestable and innovation-driven.

D. Developing Mission-Oriented Public Investment Strategies

Contemporary innovation economics suggests that some challenges cannot be addressed through corrective policies alone because markets may not independently generate investments with uncertain long-term social returns. In areas such as climate transition, artificial intelligence, biotechnology, and public infrastructure, governments may need to actively shape technological trajectories and coordinate investment ecosystems.

Policy recommendations include:

- establishing mission-oriented innovation programs;
- supporting research and development in socially valuable technologies;
- creating public-private partnerships with clear accountability mechanisms;
- Using public investment to catalyse emerging markets rather than simply subsidize existing industries.

This approach reframes the state as a market shaper and innovation partner rather than merely a regulator responding to failures after they occur.

E. Improving Information Infrastructure and Consumer Protection

Because information asymmetry remains a persistent source of market inefficiency, policymakers should strengthen institutions that improve transparency and reduce information gaps. Effective information systems can enhance competition by allowing consumers, investors, and firms to make better decisions.

Policy measures include:

- mandatory disclosure requirements;
- independent quality certification systems;
- financial literacy programs;
- stronger consumer protection institutions;
- Improved access to reliable market information.

In digital markets, this also requires addressing data asymmetries created by firms that possess extensive information about consumer behaviour while users have limited knowledge of how their data are collected and used.

F. Establishing Governance Frameworks for Global Commons

Climate change and biodiversity loss demonstrate the limitations of market mechanisms when resources are globally shared and affected parties are unable to negotiate directly. Global commons require governance systems capable of coordinating action across jurisdictions and generations.

Recommended policies include:

- international cooperation on emissions reduction;
- expansion of carbon pricing and emissions trading mechanisms;
- protection of biodiversity and ecosystem services;
- investment in climate adaptation infrastructure;
- Inclusion of future generations in policy evaluation frameworks.

These measures recognize that environmental sustainability requires institutional arrangements that extend beyond conventional market transactions.

G. Supporting Polycentric and Community-Based Governance

Evidence from institutional economics suggests that neither centralized government control nor complete market reliance is universally optimal. Many collective-action problems are better addressed through polycentric governance systems involving multiple levels of decision-making and participation.

Policy should therefore encourage:

- community-based resource management;
- collaboration between governments, civil society organizations, and private actors;
- participatory decision-making processes;
- Partnerships with non-governmental organizations where state capacity is limited.

Such approaches are particularly relevant in development contexts where local knowledge and community legitimacy are essential for effective implementation (Tshiyoyo, 2022).

H. Integrating Distributional and Ethical Considerations into Efficiency Analysis

Traditional welfare economics focuses primarily on efficiency, but contemporary policy analysis increasingly recognizes that allocation outcomes also involve questions of fairness, power, and intergenerational responsibility. A policy may improve aggregate efficiency while producing unacceptable distributional consequences.

Therefore, policymakers should incorporate:

- distributional impact assessments;
- labour-market transition support;
- social protection mechanisms;
- Consideration of future generations in long-term planning.

A comprehensive approach to market inefficiency requires recognizing that economic systems are not only mechanisms for allocating resources but also institutional arrangements that shape social relationships, opportunities, and ecological outcomes.

VIII. CONCLUSION

The policy response to market inefficiency should not be based on the assumption that either markets or governments are inherently superior. Both operate through imperfect institutions and are vulnerable to failure. The central challenge of contemporary economic governance is therefore institutional design: creating adaptive systems capable of combining competitive markets, effective regulation, public investment, and collective action.

The evolution from traditional market failure theory toward contemporary approaches of public value creation, systemic governance, and ecological sustainability suggests that the objective of policy is not simply to repair markets but to build institutions capable of producing efficient, resilient, and socially sustainable economic outcomes.

REFERENCES

- [1] Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488–500.
- [2] Arrow, K. J. (1963). Uncertainty and the welfare economics of medical care. *The American Economic Review*, 53(5), 941–973.
- [3] Arrow, K. J., & Debreu, G. (1954). Existence of an equilibrium for a competitive economy. *Econometrica: Journal of the Econometric Society*, 265–290.
- [4] Bain, J. S. (1956). *Barriers to New Competition*. Harvard University Press.
- [5] Bator, F. M. (1958). The anatomy of market failure. *The Quarterly Journal of Economics*, 72(3), 351–379.
- [6] Baumol, W. J., & Oates, W. E. (1988). *The Theory of Environmental Policy*. Cambridge University Press.
- [7] Baumol, W. J., Panzar, J. C., & Willig, R. D. (1982). *Contestable Markets and the Theory of Industry Structure*. Harcourt Brace Jovanovich.
- [8] Buchanan, J. M., & Tullock, G. (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. University of Michigan Press.
- [9] Carlton, D. W., & Perloff, J. M. (2005). *Modern Industrial Organization* (4th Ed.). Pearson.
- [10] Castellano, G. G., Selga, Ė. K., & Arner, D. W. (2023). The emergence of financial data governance and the challenge of financial data sovereignty. In A. Chander & H. Sun (Eds.), *Data sovereignty: From the digital Silk Road to the return of the state* (pp. 178– 210). Oxford University Press.
- [11] Daly, H. E. (1996). *Beyond Growth: The Economics of Sustainable Development*. Beacon Press.
- [12] Daly, H. E., & Farley, J. (2011). *Ecological Economics: Principles and Applications* (2nd Ed.). Island Press.
- [13] Debreu, G. (1959). *Theory of Value: An Axiomatic Analysis of Economic Equilibrium*. Yale University Press.
- [14] Georgescu-Roegen, N. (1971). *The Entropy Law and the Economic Process*. Harvard University Press.
- [15] Harberger, A. C. (1954). Monopoly and resource allocation. *The American Economic Review*, 44(2), 77–87.

- [16] Harvey, D. (2010). *The Enigma of Capital and the Crises of Capitalism*. Oxford University Press.
- [17] Hayek, F. A. (1945). The use of knowledge in society. *The American Economic Review*, 35(4), 519–530.
- [18] Holmström, B. (1979). Moral hazard and observability. *The Bell Journal of Economics*, 10(1), 74–91.
- [19] Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux.
- [20] Kahneman, D., Slovic, P., & Tversky, A. (Eds.). (1982). *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press.
- [21] Khan, L. M. (2017). Amazon's antitrust paradox. *The Yale Law Journal*, 126(3), 710–805.
- [22] Kirzner, I. M. (1973). *Competition and Entrepreneurship*. University of Chicago Press.
- [23] Krebs, T. (2023). *Modern Climate Policy: Moving beyond the market-liberal paradigm* (Working Paper No. 01/2023). Forum for a New Economy.
- [24] Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American Economic Review*, 64(3), 291–303.
- [25] Laffont, J. J., & Martimort, D. (2002). *The Theory of Incentives: The Principal-Agent Model*. Princeton University Press.
- [26] Mankiw, N. G., & Romer, D. (Eds.). (1991). *New Keynesian economics: Volume 2, Coordination failures and real rigidities*. MIT Press.
- [27] Marx, K. (1976). *Capital: A Critique of Political Economy* (Vol. 1) (B. Fowkes, Trans.). Penguin Books. (Original work published 1867).
- [28] Mazzucato, M. (2018). *The Value of Everything: Making and Taking in the Global Economy*. PublicAffairs.
- [29] Mazzucato, M. (2021). *Mission Economy: A Moon-shot Guide to Changing Capitalism*. Allen Lane.
- [30] Mazzucato, M., & Kattel, R. (2020). COVID-19 and public-sector capacity. *Oxford Review of Economic Policy*, 36(Supplement_1), S256–S269.
- [31] Musgrave, R. A. (1959). *The Theory of Public Finance*. McGraw-Hill.
- [32] Nordhaus, W. (2015). Climate clubs: Overcoming free-riding in international climate policy. *The American Economic Review*, 105(4), 1339–1370.
- [33] North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- [34] Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.
- [35] Pigou, A. C. (1920). *The Economics of Welfare*. Macmillan and Co.
- [36] Samuelson, P. A. (1954). The pure theory of public expenditure. *The Review of Economics and Statistics*, 36(4), 387–389.
- [37] Sidgwick, H. (1907). *The Methods of Ethics* (7th Ed.). Macmillan and Co.
- [38] Simon, H. A. (1955). A behavioural model of rational choice. *The Quarterly Journal of Economics*, 69(1), 99–118.
- [39] Simon, H. A. (1957). *Models of Man, Social and Rational: Mathematical Essays on Rational Human Behaviour in a Social Setting*. John Wiley & Sons.
- [40] Small, K. A., & Verhoef, E. T. (2007). *The Economics of Urban Transportation*. Routledge.
- [41] Stern, N. (2007). *The Economics of Climate Change: The Stern Review*. Cambridge University Press.

- [42] Stigler, G. J. (1971). The theory of economic regulation. *The Bell Journal of Economics and Management Science*, 2(1), 3–21.
- [43] Stiglitz, J. E. (2000). *Economics of the Public Sector* (3rd Ed.). W. W. Norton & Company.
- [44] Tirole, J. (1988). *The Theory of Industrial Organization*. MIT Press.
- [45] Tshiyoyo, M. (2022). The changing roles of non-governmental organizations in development in South Africa: Challenges and opportunities. In V. Bobek & T. Horvat (Eds.), *Global perspectives on non-governmental organizations*. IntechOpen. <https://doi.org/10.5772/intechopen.107015>
- [46] Vickrey, W. (1963). Pricing in urban and suburban transport. *The American Economic Review*, 53(2), 452–465.
- [47] Williamson, O. E. (1985). *The Economic Institutions of Capitalism*. Free Press.
- [48] Woodford, M. (2003). *Interest and Prices: Foundations of a Theory of Monetary Policy*. Princeton University Press.