The Complete Treatise on Austrian Economics: Principles, Methodology, and Applications

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Abstract

This treatise provides a comprehensive examination of Austrian Economics, a distinctive school of economic thought founded by Carl Menger in the late 19th century. We explore the methodological foundations of praxeology, the subjective theory of value, capital and interest theory, Austrian Business Cycle Theory, the economic calculation problem, and the role of entrepreneurship in market processes. The Austrian School's emphasis on methodological individualism, time preference, and spontaneous order offers profound insights into economic phenomena that continue to influence contemporary economic discourse. This work synthesizes the contributions of Menger, Böhm-Bawerk, Mises, Hayek, Rothbard, and Kirzner, presenting a unified framework for understanding market processes, monetary theory, and the limitations of central planning.

The treatise ends with "The End"

Contents

1 Introduction: The Austrian School and Its Historical Development

The Austrian School of Economics represents one of the most influential yet distinctive approaches to economic science. Founded by Carl Menger with his groundbreaking work *Principles of Economics* (1871), the Austrian School developed in conscious opposition to both classical economics and the emerging German Historical School. Unlike mainstream neoclassical economics, which emphasizes mathematical modeling and equilibrium analysis, Austrian economics focuses on human action, subjective value, time, and the dynamic processes of market coordination.

The Austrian tradition encompasses several generations of scholars. The first generation, led by Menger, established the subjective theory of value and marginal utility analysis. The second generation, including Eugen von Böhm-Bawerk and Friedrich von Wieser, developed sophisticated theories of capital, interest, and imputation. The third generation, dominated by Ludwig von Mises and Friedrich Hayek, extended Austrian insights to monetary theory, business cycles, and the economic calculation problem. Contemporary Austrian economists, including Murray Rothbard, Israel Kirzner, and Ludwig Lachmann, have further refined and applied these principles to diverse economic phenomena.

2 Methodological Foundations: Praxeology and Human Action

2.1 Praxeology as the Science of Human Action

Ludwig von Mises developed praxeology as the methodological foundation of Austrian economics. Praxeology is the deductive science of human action, based on the axiom that humans act purposefully to achieve subjectively valued ends using scarce means. From this fundamental axiom, Mises argued that all economic laws could be derived through logical deduction.

The action axiom states: *Humans employ means to achieve ends they value.* This seemingly simple proposition contains profound implications:

1. Action implies purpose and intentionality
2. Action implies subjective valuation and preference
3. Action implies scarcity (otherwise no need to economize)
4. Action implies causality (means must be believed to achieve ends)
5. Action implies time (action occurs through time)
6. Action implies uncertainty (the future is unknown)

From these implications, entire edifices of economic theory can be constructed without empirical testing, as the relationships are logically necessary given the action axiom.

2.2 Methodological Individualism

Austrian economics is grounded in methodological individualism: the principle that all economic phenomena must be explained in terms of the actions and interactions of individuals. Collectives such as "society," "the nation," or "the economy" do not act; only individuals act. This methodological stance contrasts sharply with holistic or collectivist approaches that treat aggregates as autonomous agents.

Methodological individualism does not deny that individuals are influenced by social institutions or that their actions have unintended consequences at the aggregate level. Rather, it insists that such institutions and consequences must ultimately be explained by tracing them back to individual choices and actions.

2.3 Verstehen and Subjectivism

Austrian economists emphasize *Verstehen* (interpretive understanding) as essential to economic analysis. Since economic phenomena arise from human action driven by subjective purposes and knowledge, the economist must seek to understand the meaning and logic of action from the actor's perspective. This contrasts with positivist approaches that treat economic behavior as mechanistic responses to stimuli.

Radical subjectivism, particularly emphasized by Ludwig Lachmann, extends this principle to recognize that not only preferences but also expectations, perceptions, and knowledge are subjective and heterogeneous across individuals. This heterogeneity drives market processes and entrepreneurial discovery.

3 The Subjective Theory of Value and Marginal Utility

3.1 The Marginal Revolution and Austrian Value Theory

Carl Menger's contribution to the Marginal Revolution of the 1870s was distinctive. While simultaneously with Jevons and Walras, Menger discovered the principle of marginal utility, his approach differed fundamentally. Menger emphasized the causal-genetic method, tracing economic phenomena to their origins in human needs and the properties of goods.

Value, according to Menger, is not intrinsic to goods but is imputed to them by human minds based on their ability to satisfy wants. The value of a good equals the importance of the least important want it satisfies (the marginal utility). This principle solved the diamond-water paradox that had plagued classical economics: water is abundant and satisfies less urgent wants at the margin, while diamonds are scarce and satisfy more urgent wants.

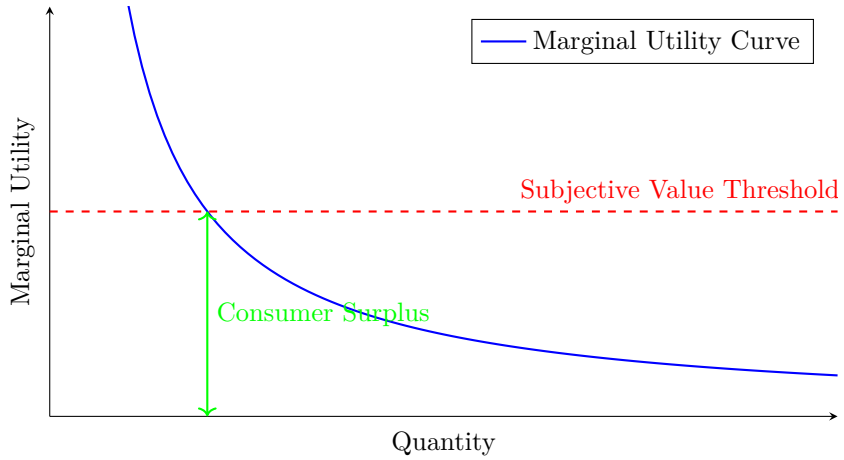


Figure 1: Declining Marginal Utility and Subjective Value

3.2 The Law of Diminishing Marginal Utility

The law of diminishing marginal utility states that as the quantity of a good consumed increases, the marginal utility derived from each additional unit decreases. This law follows logically from the principle that actors satisfy their most important wants first. The first unit of a good is applied to the most urgent use, the second to the next most urgent, and so on.

Formally, if $U(q)$ represents total utility from quantity q, then marginal utility $MU(q) = \frac{dU}{dq}$ and the law of diminishing marginal utility states:

$$\frac{d^2U}{dq^2} < 0 \tag{1}$$

This law provides the foundation for downward-sloping demand curves and explains why exchange occurs: individuals value the same good differently at the margin based on their stock and preferences.

3.3 Ordinal vs Cardinal Utility

Austrian economists maintain that utility is purely ordinal, not cardinal. Individuals can rank alternatives (preferring A to B to C) but cannot assign meaningful numerical magnitudes to utility. This rules out interpersonal utility comparisons and undermines utilitarian welfare economics. One cannot say that Jones's utility from a good is twice Smith's utility, nor can one sum utilities across persons to calculate social welfare.

4 Price Theory and Market Process

4.1 The Formation of Prices

Austrian price theory differs from neoclassical equilibrium analysis. Rather than focusing on equilibrium prices where supply equals demand, Austrians emphasize the market process through which prices emerge and adjust. Prices are not determined by abstract supply and demand curves but by the actual bids and offers of buyers and sellers in concrete market situations.

Böhm-Bawerk's theory of price formation distinguishes between:

- Unilateral competition (one seller, multiple buyers, or vice versa)
- Bilateral competition (multiple buyers and sellers)

In bilateral competition, the price will settle between the marginal buyer's maximum bid and the marginal seller's minimum ask, with the exact price determined by the relative bargaining skills and urgency of the parties.

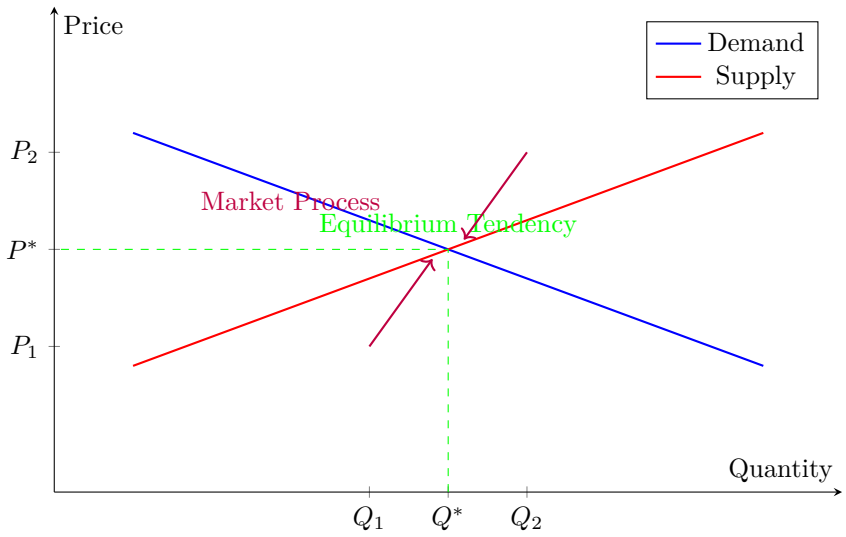


Figure 2: Market Process: Price Adjustment Toward Equilibrium

4.2 Entrepreneurship and Market Discovery

Israel Kirzner's theory of entrepreneurship is central to Austrian market process theory. The entrepreneur is alert to previously unnoticed profit opportunities arising from price discrepancies or misallocations of resources. Entrepreneurial discovery drives the market toward coordination, though perfect equilibrium is never achieved because conditions constantly change.

Entrepreneurial profit is not merely a return to risk-bearing or innovation (as in Schumpeter's theory) but a return to superior alertness and judgment. The entrepreneur notices that good X sells for \$10 in one market but can be sold for \$15 in another, or that factors of production can be recombined to produce more valuable output. By acting on this knowledge, the entrepreneur arbitrages away the discrepancy and earns profit.

4.3 Catallactics: The Theory of Exchange

Mises coined the term "catallactics" to describe the theory of market exchange. Catallactics studies how individuals voluntarily exchange goods and services to improve their subjective well-being. Every exchange represents double inequality of value: each party values what they receive more than what they give up. Otherwise, no exchange would occur.

This demonstrates that voluntary exchange is positive-sum, not zero-sum. Both parties gain (in their subjective valuation), though no value is created in the physical sense. The merchant who buys low and sells high does not exploit anyone but rather facilitates the movement of goods from lower-valued to higher-valued uses, earning profit for this service.

5 Capital, Interest, and Time Preference

5.1 Böhm-Bawerk's Theory of Capital and Interest

Eugen von Böhm-Bawerk's *Capital and Interest* (1884-1889) remains the most comprehensive Austrian treatment of capital theory. Böhm-Bawerk distinguished between original factors of production (land and labor) and produced means of production (capital goods). Capital goods are the intermediate products that extend and roundabout production processes, increasing productivity.

The essence of capital is time. Production takes time, and more productive processes typically require more time (greater "roundaboutness"). A farmer who takes time to construct an irrigation system rather than simply watering crops by hand has lengthened the production process but will achieve greater output per unit of labor.

5.2 Time Preference and the Pure Rate of Interest

Interest, according to Austrian theory, originates from time preference: the universal tendency to prefer present goods over future goods, all else being equal. A good available today is worth more than the same good available one year from now because:

1. Present goods can satisfy present wants; future goods cannot
2. Present goods can be transformed into capital to produce more goods in the future
3. The future is uncertain

The rate of time preference determines the pure rate of interest. If individuals have a time preference rate of 5% per annum, they will be indifferent between 100 units today and 105 units one year hence. The interest rate reflects this premium on present over future goods.

Let V_0 be present value and V_t be future value at time t. Then:

$$V_0 = \frac{V_t}{(1+\rho)^t} \tag{2}$$

where ρ is the pure rate of time preference.

5.3 The Structure of Production

Hayek's development of capital theory emphasized the temporal structure of production. Production is not instantaneous but occurs through stages, from raw materials to intermediate goods to final consumer goods. The capital structure can be visualized as the Hayekian Triangle:

The base of the triangle represents total consumption output, while the height represents the value added at earlier stages. The hypotenuse shows the cumulative value throughout the production structure. Interest rates affect the shape of this triangle: lower rates lengthen the structure (more roundabout production), while higher rates shorten it.

6 Austrian Business Cycle Theory

6.1 The Credit Expansion and Malinvestment

The Austrian Business Cycle Theory (ABCT), developed by Mises and elaborated by Hayek, explains recurring boom-bust cycles as consequences of credit expansion by the banking system. When banks expand credit beyond genuine saving, they artificially lower interest rates below the natural rate (determined by time preference).

Entrepreneurs, observing lower interest rates, undertake longer-term investment projects that appear profitable. Resources shift toward higher-order capital goods (those further from consumption). However, this expansion is not based on actual increased saving and deferred consumption by households. The artificially stimulated boom creates malinvestment: capital is allocated to projects that cannot be sustained once the credit expansion ends.

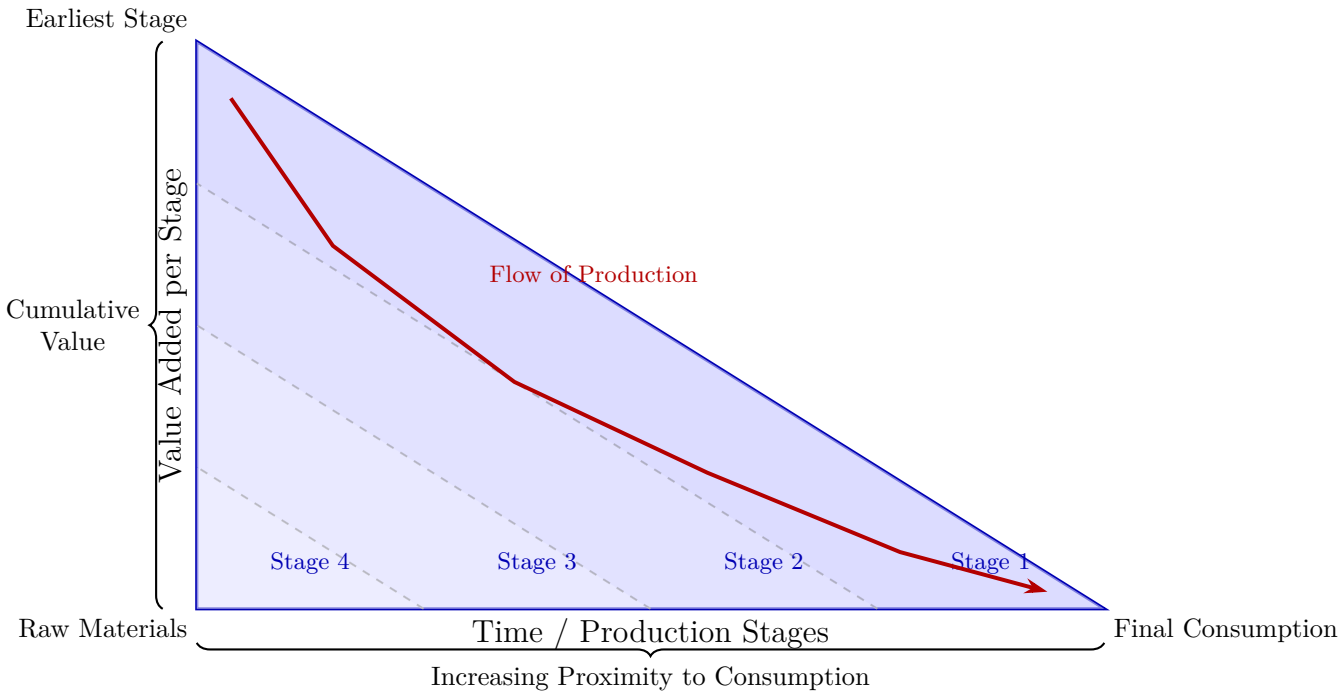


Figure 3: The Hayekian Triangle: Temporal Structure of Production.

The base represents final consumption output, the height represents stages of production extending backward in time, and the hypotenuse shows the cumulative value profile. Lower interest rates lengthen the production structure (increase the triangle's height relative to base), while higher rates shorten it.

6.2 The Inevitable Bust

The boom cannot continue indefinitely. As newly created money spreads through the economy, prices rise, real interest rates increase, and the banking system reaches its expansion limits. When credit expansion slows or reverses, interest rates rise, revealing the unsustainability of the malinvestments undertaken during the boom.

The bust is the necessary correction phase. Malinvestments must be liquidated, resources reallocated, and the capital structure adjusted to reflect actual time preferences and resource availability. Attempts to prevent this adjustment through continued inflation or bailouts merely prolong the agony and create greater distortions.

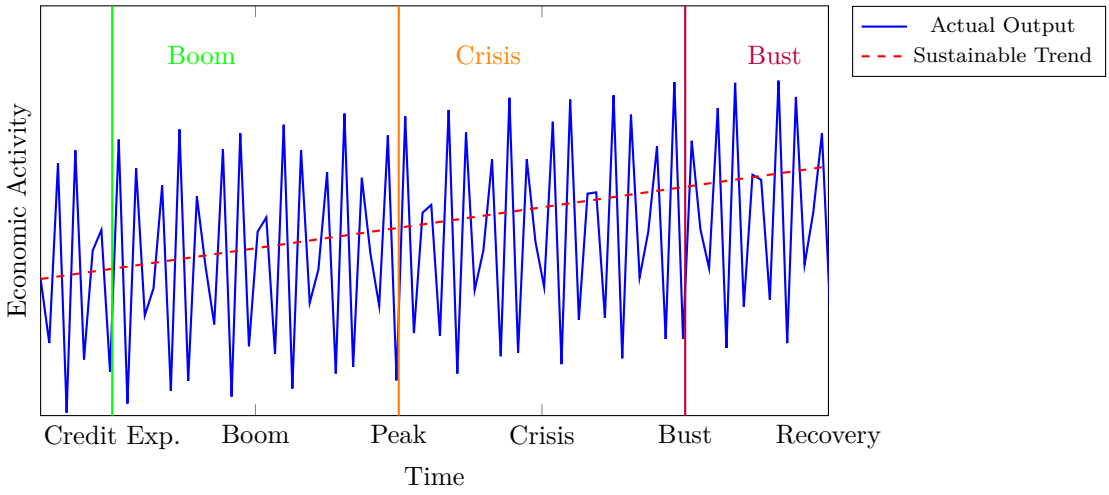


Figure 4: Austrian Business Cycle: Boom, Crisis, and Bust

6.3 Policy Implications

ABCT leads to distinctive policy prescriptions. Government attempts to smooth the cycle through monetary or fiscal stimulus are counterproductive. Easy money creates new distortions, while stimulus diverts resources from necessary adjustments. The proper policy response to recession is to allow liquidation of malinvestments, refrain from credit expansion, maintain sound money, and remove barriers to market adjustment.

Critics of ABCT, including many Keynesians, argue that it cannot explain aggregate demand deficiency or coordination failures that require government intervention. Austrians respond that apparent demand deficiency reflects real resource constraints and the need for structural adjustment, not insufficient aggregate spending.

7 Money, Banking, and Monetary Theory

7.1 The Origin and Nature of Money

Menger's account of the origin of money is one of the Austrian School's most celebrated contributions. Money did not arise from social contract or government decree but emerged spontaneously from the market process. As barter became increasingly costly with complex division of labor, individuals discovered that certain commodities (typically precious metals) were more marketable—more widely accepted in exchange—than others.

Rational actors began acquiring these highly marketable goods not for direct consumption but as media of exchange. Over time, through a process of market selection, one or a few commodities emerged as generally accepted media of exchange: money. This evolutionary account explains money as a spontaneous order, not a designed institution.

7.2 The Regression Theorem

Mises's regression theorem solves an apparent circularity in monetary theory. The value of money today depends on its expected purchasing power tomorrow, but that in turn depends on its value today. How does money acquire value initially?

The regression theorem shows that today's value of money derives from yesterday's value, which derived from the day before's value, and so on, regressing back to the point when the money commodity first began serving as a medium of exchange. At that point, it had value based on its direct use (e.g., gold's ornamental and industrial uses). Thus, the value of money is ultimately grounded in its pre-monetary commodity value.

This theorem demonstrates that money must originate as a commodity with non-monetary value. It cannot begin as fiat (intrinsically valueless) currency. However, once established, money can transition to fiat form, with its value sustained by network effects and convention, though this creates risks of abuse by monetary authorities.

7.3 Free Banking vs Central Banking

Austrian economists generally favor free banking systems over central banking. In a free banking system, banks issue their own notes redeemable in commodity money (typically gold or silver), with no central bank or legal tender laws. Market discipline constrains bank note issue: overissue leads to redemption demands and loss of reserves.

Central banking, by contrast, monopolizes note issue and eliminates market discipline. The central bank can expand credit without immediate penalty, creating the conditions for business cycles. Legal tender laws force acceptance of central bank notes, while deposit insurance and lender-of-last-resort functions encourage moral hazard in banking.

8 Economic Calculation and the Socialist Calculation Debate

8.1 The Economic Calculation Problem

Mises's 1920 article "Economic Calculation in the Socialist Commonwealth" launched the socialist calculation debate. Mises argued that rational economic calculation requires market prices, which in turn

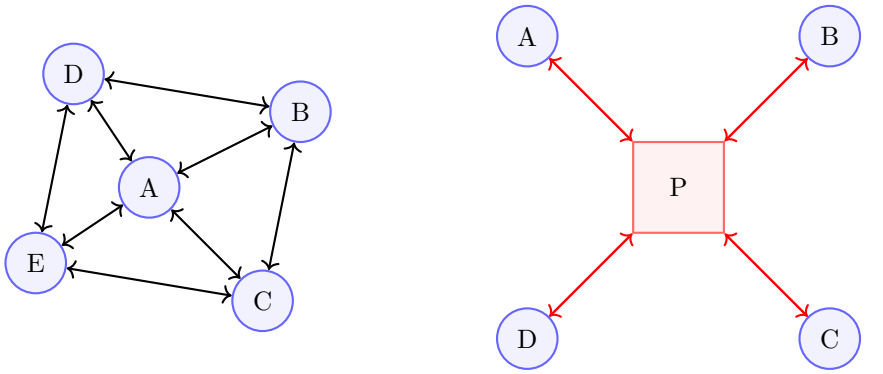
require private property in the means of production. Without private ownership, there can be no market for capital goods, hence no prices for these goods, hence no way to determine which production methods economically allocate resources.

Socialist planners face an insurmountable knowledge problem. They lack the information conveyed by market prices to compare alternative uses of resources. How many resources should be allocated to steel production versus automobile production? What production techniques should be employed? Without market prices reflecting relative scarcities and trade-offs, these questions have no rational answer.

8.2 Hayek's Development: The Knowledge Problem

Hayek extended Mises's insight, emphasizing that the knowledge required for economic calculation is dispersed, tacit, and contextual. The "knowledge of time and place"—knowing local conditions, specific circumstances, and fleeting opportunities—cannot be aggregated and communicated to central planners. This knowledge exists only in dispersed form in the minds of millions of individuals and can be utilized only through the market process.

Prices serve as condensed information signals, coordinating the actions of individuals who know only a tiny fraction of the whole economic system. The price system is a marvel of information processing, enabling complex coordination without conscious direction.



Market: Distributed Knowledge Planning: Centralized (Impossible)

Figure 5: Distributed Knowledge in Markets vs Centralized Planning

8.3 The Competitive Solution and Its Failures

Oskar Lange and Abba Lerner proposed "market socialism," where state-owned enterprises would mimic market behavior, adjusting production based on profit and loss signals. Planners would set prices, observe shortages or surpluses, and adjust prices accordingly, simulating market equilibrium.

Austrians replied that this solution misses the fundamental point. Without genuine private property and profit-seeking entrepreneurs, there is no entrepreneurial discovery, no innovation incentive, and no mechanism to allocate capital to its highest-valued uses. The "pretend market" cannot replicate genuine market processes. Moreover, without tradeable ownership shares, capital cannot be priced or allocated rationally across enterprises.

9 Spontaneous Order and Social Institutions

9.1 The Concept of Spontaneous Order

Hayek distinguished between two types of order: *taxis* (made order) and *cosmos* (spontaneous order). Taxis is deliberately designed and arranged, like an organization or machine. Cosmos emerges from the interactions of individuals following general rules without conscious coordination toward a unitary purpose.

Language, common law, money, and markets are all spontaneous orders. They exhibit complex, functional patterns, yet no one designed them. They emerged through evolutionary processes as individuals pursued their own purposes within frameworks of general rules.

The recognition of spontaneous order has profound implications. It shows that beneficial social institutions need not be designed by conscious intellect and that attempts to redesign spontaneous orders according to rational plans often destroy their functionality.

9.2 Cultural Evolution and the Extended Order

In his final work, *The Fatal Conceit*, Hayek argued that civilization rests on cultural evolution—the transmission of learned rules and practices that enable cooperation beyond the small tribe. These rules, including private property, contract, and liability, are neither instinctive nor consciously designed but evolved through group selection: societies that adopted them prospered and spread.

Modern civilization's extended order of market cooperation depends on abstract rules that often conflict with our tribal instincts for solidarity and distributive justice. Maintaining this extended order requires resisting the atavistic urge to apply tribal morality to large-scale society.

9.3 Law, Legislation, and Liberty

Hayek distinguished between law (general, abstract rules of just conduct) and legislation (specific commands or regulations). True law emerges spontaneously through judicial decisions applying principles of justice to particular cases. Common law exemplifies this evolutionary, discovery process.

Legislation, by contrast, represents deliberate rule-making by political authorities, often pursuing specific purposes or favoring particular interests. The expansion of legislation at the expense of law threatens the rule of law and individual liberty. A free society requires limiting government to enforcing general rules of just conduct, not pursuing specified ends through detailed regulation.

10 Critique of Interventionism and Central Planning

10.1 The Impossibility of the Middle Way

Mises argued that there is no stable "third way" between capitalism and socialism. Interventionism—piecemeal government interference with markets—is inherently unstable. Each intervention creates distortions that lead to further problems, which prompt calls for additional interventions, leading eventually toward comprehensive planning.

For example, price controls create shortages, which lead to rationing, black markets, and quality deterioration. To combat these problems, governments impose production quotas, quality standards, and licensing requirements, steadily extending control over the economy. The logic of interventionism is a slippery slope toward total planning.

10.2 Regulatory Capture and Public Choice

While not originating with the Austrian School, public choice theory resonates with Austrian insights. Regulators and planners, no less than market participants, act in their own interests. Regulatory agencies are prone to capture by the industries they regulate, and political processes systematically favor concentrated interests over diffuse public benefits.

The Austrian analysis suggests that even well-intentioned interventions fail due to knowledge and incentive problems. Regulators lack the knowledge to improve on market outcomes and face perverse incentives created by political processes.

10.3 The Seen and the Unseen

Following Bastiat, Austrians emphasize the importance of analyzing both direct and indirect effects of policies—what is seen and what is unseen. Minimum wage laws are seen to help low-skilled workers who keep their jobs but unseen to harm those priced out of employment. Tariffs are seen to protect domestic producers but unseen to harm consumers and export industries.

Sound economic analysis requires tracing the full consequences of policies through all their ramifications, not merely focusing on immediate, visible effects or concentrated beneficiaries.

11 Contemporary Applications and Debates

11.1 Austrian Economics and Financial Crises

Austrian economists claim that ABCT predicted the 2008 financial crisis, identifying housing bubble driven by Federal Reserve's easy money policy following the 2001 recession. Artificially low interest rates encouraged malinvestment in housing and construction, creating unsustainable boom that inevitably bust.

Critics dispute this interpretation, arguing that Austrian theory cannot explain the severity or specific features of the crisis and that regulatory failures, not monetary policy alone, were primary causes. Austrians respond that regulatory failures were themselves products of interventionism and moral hazard created by government guarantees.

11.2 Cryptocurrency and Monetary Evolution

The emergence of Bitcoin and other cryptocurrencies raises interesting questions for Austrian monetary theory. Cryptocurrencies appear to support the Austrian view that markets can produce private money without government monopoly. Bitcoin's fixed supply appeals to Austrians concerned about fiat money inflation.

However, cryptocurrencies challenge the regression theorem, as they began without commodity value. Some Austrians argue that network effects and technological utility provide sufficient basis for value, while others remain skeptical of pure fiat currencies even in private form.

11.3 Institutional Economics and Economic Development

Contemporary Austrian-influenced work on institutions and economic development, particularly by Douglass North and the new institutional economics, explores how institutional quality affects economic performance. Property rights, rule of law, and limited government correlate strongly with prosperity, supporting Austrian emphasis on institutional frameworks over government planning.

Development economics has largely moved away from top-down planning toward recognizing the importance of bottom-up institutional development, market processes, and entrepreneurship—themes central to Austrian economics.

12 Criticisms and Responses

12.1 Methodological Criticisms

Critics charge that praxeology is unfalsifiable and therefore unscientific. If economic propositions are derived by logical deduction from axioms and cannot be tested empirically, they lie outside the scope of empirical science. Austrians respond that praxeology is akin to mathematics or logic—formal sciences whose propositions are necessarily true given their axioms. Economic laws are apodictic (absolutely certain) given the action axiom, which itself is undeniable (to deny it is to engage in purposeful action).

Mainstream economists argue that mathematics and econometrics have proven indispensable for economics. Austrians respond that mathematical formalism often obscures rather than illuminates economic reasoning and that econometrics cannot establish causal relationships in complex social systems where controlled experiments are impossible.

12.2 The Equilibrium Debate

Some critics, including G.L.S. Shackle, argue that Austrian emphasis on market processes contradicts use of equilibrium constructs. If markets are in constant flux with genuine uncertainty and creativity, equilibrium is never achieved and is therefore not useful for analysis.

Austrians respond with varying positions. Some, like Kirzner, treat equilibrium as a useful analytical device—a tendency toward which markets move but never reach. Others, like Lachmann, embrace radical subjectivism and emphasize disequilibrium, divergent expectations, and kaleidic change. This internal debate remains unresolved.

12.3 The Business Cycle Theory

Critics argue that ABCT cannot explain all business cycles, particularly those unrelated to credit expansion. Not all recessions follow periods of monetary expansion, and some booms occur without apparent credit stimulus. Austrians respond that the theory explains cycles caused by monetary disturbances, not all economic fluctuations. Other shocks (technology, tastes, natural disasters) can cause recessions through different mechanisms.

More fundamentally, critics question whether the theory's microfoundations are sound. Does interest rate manipulation really distort the capital structure in the manner described? Empirical tests have been inconclusive, partly because measuring the relevant variables (capital structure, malinvestment) is extraordinarily difficult.

13 Conclusion: The Enduring Relevance of Austrian Economics

Austrian economics offers a distinctive and powerful framework for understanding economic phenomena. Its emphasis on human action, subjective value, time, and market processes provides insights often missed by mainstream equilibrium analysis. The recognition of knowledge dispersion, entrepreneurial discovery, and spontaneous order remains relevant for economic theory and policy.

Several core Austrian contributions have achieved broad acceptance: subjective value theory, the role of entrepreneurship, skepticism toward central planning, and appreciation for the market's information-processing function. Other aspects remain controversial, particularly praxeological methodology and business cycle theory.

The Austrian tradition reminds us that economics is ultimately about human beings making choices under uncertainty, not about equilibrium equations or aggregate statistics. It cautions against the hubris of central planning and the pretense of knowledge. In an age of expanding government intervention and monetary experimentation, these reminders remain vital.

The future of Austrian economics likely lies not in sectarian purity but in fruitful engagement with other approaches—incorporating insights from behavioral economics, experimental economics, and institutional analysis while maintaining distinctively Austrian emphasis on process, time, and radical uncertainty. The Austrian vision of economics as the study of human action within evolving institutional frameworks continues to illuminate the complex phenomena of economic life.

References

[1] Menger, C. (1871). *Principles of Economics*. (J. Dingwall & B. F. Hoselitz, Trans.). New York: New York University Press, 1981.

[2] Böhm-Bawerk, E. von (1884-1889). *Capital and Interest*. (G. D. Huncke & H. F. Sennholz, Trans.). South Holland, IL: Libertarian Press, 1959.

[3] Böhm-Bawerk, E. von (1896). *Karl Marx and the Close of His System*. New York: Augustus M. Kelley, 1949.

[4] Wieser, F. von (1889). *Natural Value*. (C. A. Malloch, Trans.). London: Macmillan, 1893.

[5] Mises, L. von (1912). *The Theory of Money and Credit*. (H. E. Batson, Trans.). Indianapolis: Liberty Fund, 1981.

[6] Mises, L. von (1920). Economic Calculation in the Socialist Commonwealth. In F. A. Hayek (Ed.), *Collectivist Economic Planning* (pp. 87-130). London: Routledge, 1935.

[7] Mises, L. von (1949). *Human Action: A Treatise on Economics*. New Haven: Yale University Press. (4th ed., San Francisco: Fox & Wilkes, 1996).

[8] Mises, L. von (1957). *Theory and History: An Interpretation of Social and Economic Evolution*. New Haven: Yale University Press.

[9] Hayek, F. A. (1931). *Prices and Production*. London: Routledge, 1935.

[10] Hayek, F. A. (1941). *The Pure Theory of Capital*. Chicago: University of Chicago Press, 1975.

[11] Hayek, F. A. (1945). The Use of Knowledge in Society. *American Economic Review*, 35(4), 519-530.

[12] Hayek, F. A. (1952). *The Sensory Order: An Inquiry into the Foundations of Theoretical Psychology*. Chicago: University of Chicago Press.

[13] Hayek, F. A. (1960). *The Constitution of Liberty*. Chicago: University of Chicago Press.

[14] Hayek, F. A. (1973-1979). *Law, Legislation and Liberty* (3 vols.). Chicago: University of Chicago Press.

[15] Hayek, F. A. (1988). *The Fatal Conceit: The Errors of Socialism*. Chicago: University of Chicago Press.

[16] Rothbard, M. N. (1962). *Man, Economy, and State*. Auburn, AL: Ludwig von Mises Institute, 2004.

[17] Rothbard, M. N. (1963). *America's Great Depression*. Auburn, AL: Ludwig von Mises Institute, 2000.

[18] Rothbard, M. N. (1970). *Power and Market: Government and the Economy*. Kansas City: Sheed Andrews and McMeel.

[19] Kirzner, I. M. (1973). *Competition and Entrepreneurship*. Chicago: University of Chicago Press.

[20] Kirzner, I. M. (1979). *Perception, Opportunity, and Profit*. Chicago: University of Chicago Press.

[21] Kirzner, I. M. (1985). *Discovery and the Capitalist Process*. Chicago: University of Chicago Press.

[22] Lachmann, L. M. (1956). *Capital and Its Structure*. Kansas City: Sheed Andrews and McMeel, 1978.

[23] Lachmann, L. M. (1977). *Capital, Expectations, and the Market Process*. Kansas City: Sheed Andrews and McMeel.

[24] Lachmann, L. M. (1986). *The Market as an Economic Process*. Oxford: Basil Blackwell.

[25] Garrison, R. W. (2001). *Time and Money: The Macroeconomics of Capital Structure*. London: Routledge.

[26] Boettke, P. J. (1993). *Why Perestroika Failed: The Politics and Economics of Socialist Transformation*. London: Routledge.

[27] Boettke, P. J. (2001). *Calculation and Coordination: Essays on Socialism and Transitional Political Economy*. London: Routledge.

[28] Cowen, T., & Kroszner, R. (1997). *Explorations in the New Monetary Economics*. Oxford: Blackwell.

[29] Horwitz, S. (2000). *Microfoundations and Macroeconomics: An Austrian Perspective*. London: Routledge.

[30] Salerno, J. T. (2010). *Money, Sound and Unsound*. Auburn, AL: Ludwig von Mises Institute.

[31] Huerta de Soto, J. (2006). *Money, Bank Credit, and Economic Cycles*. Auburn, AL: Ludwig von Mises Institute.

[32] Cochran, J. P., & Glahe, F. R. (1999). *The Hayek-Keynes Debate: Lessons for Current Business Cycle Research*. Lewiston, NY: Edwin Mellen Press.

[33] Vaughn, K. I. (1994). *Austrian Economics in America: The Migration of a Tradition*. Cambridge: Cambridge University Press.

[34] Caldwell, B. (2004). *Hayek's Challenge: An Intellectual Biography of F. A. Hayek*. Chicago: University of Chicago Press.

[35] Ebeling, R. M. (Ed.). (2003). *Austrian Economics and the Political Economy of Freedom*. Cheltenham: Edward Elgar.

[36] Rizzo, M. J. (Ed.). (1979). *Time, Uncertainty, and Disequilibrium*. Lexington, MA: Lexington Books.

[37] Lavoie, D. (1985). *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered*. Cambridge: Cambridge University Press.

[38] O'Driscoll, G. P., Jr., & Rizzo, M. J. (1996). *The Economics of Time and Ignorance* (2nd ed.). London: Routledge.

[39] White, L. H. (1999). *The Theory of Monetary Institutions*. Oxford: Blackwell.

[40] Selgin, G. (1996). *Bank Deregulation and Monetary Order*. London: Routledge.

[41] Koppl, R. (2002). *Big Players and the Economic Theory of Expectations*. New York: Palgrave Macmillan.

The End