

The Republic of Entrepreneurs: A Critique of Schumpeter on Entrepreneurs, Innovation, and Cycles

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October 31, 2025

Abstract

Schumpeter’s heroic entrepreneur and “creative destruction” remain the dominant metaphors for innovation and cycles. Read against history and theory—from Cantillon’s functional entrepreneur, Mises’s monetary calculation and residual claimancy, Hayek’s dispersed knowledge and discovery, Kirzner’s alertness, Mokyr’s Industrial Enlightenment, McCloskey’s bourgeois dignity, and Phelps’s grassroots dynamism—those metaphors misallocate causal weight. Innovation is chiefly a civic process carried out by a republic of entrepreneurs: many actors proposing small, testable changes under general, impersonal rules; markets and peer criticism supply fast feedback; lawful imitation multiplies gains. Monopoly “havens” are neither necessary nor sufficient for discovery and often dull price and reputation signals. Business cycles need not originate in technology clusters; monetary–financial coordination failures (credit booms, interest-rate mispricing, policy shocks) can amplify or swamp a steady flow of decentralized discovery. Historical cases—Britain, the United States, France, Germany, and modern biomedicine—show the braid of the republics of letters, science, and entrepreneurs turning useful knowledge into useful industry through open entry, standards, and disclosure norms. We propose a republican policy constitution: protect the commons of discovery (contestable markets, interoperable standards, IP that teaches and expires, and publication/priority rules) rather than pick champions or sanctify durable market power. The framework yields testable predictions about proposal density, feedback speed, and diffusion breadth and offers a practical agenda for growth and development.

Keywords: republic of entrepreneurs; entrepreneurship; discovery; diffusion; lawful imitation; creative destruction; business cycles; institutions; open standards; Industrial Enlightenment; bourgeois dignity; grassroots dynamism; republican political economy.

JEL Numbers: B31; B53; O31; O33; O43; N10; E32

1 Introduction: Three Republics and the Making of Modern Prosperity

This paper argues that modern enrichment is best understood as the joint product of three open, overlapping republics—the republic of letters, the republic of science, and the republic of entrepreneurs. Each republic is a rule-governed order that mobilizes dispersed knowledge without a commander; together they form a civic ecology that repeatedly turns useful knowledge into useful industry. Read through this lens, Schumpeter’s brilliant images of the heroic founder and of “creative destruction” misallocate causal weight: they overstate elite invention and monopoly “havens,” understate distributed discovery and lawful imitation, and mistake innovation clusters for the prime mover of business cycles. A republican reframing—entrepreneurship as a widely available role; innovation as discovery and diffusion under general, impersonal rules; cycles as monetary–financial coordination phenomena that can amplify but need not be driven by technology shocks—fits both theory and the historical record better.

The republic of letters arose in early modern Europe as a transnational communications web—correspondence, journals, academies, salons—in which priority, persuasion, and civility were the currencies of status (Goodman 1994; Jacob 1997; Grafton 2009). No ministry told Pierre Bayle what to publish or Voltaire whom to write; yet a recognizable community enforced norms of critique, credit, and disclosure across borders. It was an order without a plan, sustained by etiquette and reputations more than edicts. Crucially, it produced public methods and instruments for judging claims and recording results, and it lowered search costs for non-elites by making knowledge legible in print and epistle (Mokyr 2002, 2009, 2016).

The republic of science, in Michael Polanyi’s phrase, operates by a “mutual adjustment of independent initiatives” (Polanyi 1962). Scientists freely choose problems, but standards of evidence, replication, and priority discipline inquiry; journals and meetings broadcast successes and failures; credit is assigned by priority rules; reputations are portable across borders. In this sense, the republic of science is market-like: information is decentralized and often tacit; rival hypotheses compete; error correction is public and cumulative (Hayek 1945; Polanyi 1962). Its product is not only propositions but also tools: instruments, protocols, and statistical techniques that travel easily into workshops and firms (Rosenberg 1982; Mokyr 2002).

The republic of entrepreneurs—our focus—applies the same logic to production and exchange. In Cantillon’s *Essai* (1755/2010), the entrepreneur is any agent who commits costs today and sells tomorrow at uncertain prices; the function is residual bearing and plan adjustment, not a sociological rank. Mises generalizes this point: in a monetary economy, private ownership and money prices let actors compare alternative plans in a common denominator; profit and loss are the non-substitutable tests of validity (Mises 1949). Hayek explains why rivalry, open entry, and general rules are essential: the knowledge relevant to resource allocation is dispersed, local, and often tacit, and prices communicate

just enough of it to enable mutual adjustment (Hayek 1945, 1960, 1978). Kirzner adds the missing micro-mechanism—alertness to unnoticed price–quality–place discrepancies—making entrepreneurship episodic and widely distributed rather than the preserve of a few (Kirzner 1973, 1979, 1989).

Taken separately, each republic coordinates without a central chooser; taken together, they reinforce one another. The republic of letters publicizes problems worth solving and reputations worth trusting. The republic of science codifies methods and produces generalizable tools. The republic of entrepreneurs translates both into scalable routines, tests propositions in the crucible of cost and demand, and—crucially—teaches society by making successful methods visible and imitable. That braid is the distinctive texture of modern growth (Mokyr 2002, 2009, 2016; Rosenberg 1982; McCloskey 2006, 2010, 2016).

Historical experience fits this civic picture. In eighteenth- and nineteenth-century Britain, learned societies, coffeehouses, and provincial clubs linked savants to fabricants; cheap technical presses and mechanics’ institutes lowered the cost of entry into “useful knowledge” for artisans and apprentices; and competitive markets rewarded adoption and diffusion (Jacob 1997; Inkster 1976; Kelly 1992; Mokyr 2002, 2009). In the United States, liberal patents that taught and expired, exhibitions, and thick trade journals enabled “democratic invention” by ordinary citizens; mass production itself emerged from a chain of incremental, largely anonymous process improvements (Hounshell 1984; Khan 2005, 2020; Thomson 2009). In Germany, the Zeiss–Abbe–Schott model institutionalized the science–shop loop—foundation statutes, shared governance, and research obligations fused laboratory and workshop without conferring discretionary privilege (Abbe 1896/1990; Feldenkirchen 1994). In biomedicine, open science plus entrepreneurial scaling turned discoveries into population-scale therapies—insulin, penicillin, pacemakers, dialysis, and, much later, nucleoside-modified mRNA—via public priority rules, quality systems, and competitive manufacturing (Bliss 1982; Bud 2007; Jeffrey 2001; Nalin & Cash 1970; Karikó et al. 2005). Across these episodes, diffusion, lawful imitation, and complete discovery do most of the social work—precisely the channels minimized in monopoly-centered accounts.

This republican view yields three clarifications that motivate our reappraisal of Schumpeter.

First, entrepreneurship is a role, not a rank. The decisive acts in a modern economy—spotting mispricings, bundling complements, rearranging workflows, translating lab results into reliable processes—are performed by many people who, at that moment, bear uncertainty and accept feedback. A celebrated founder is a vivid instance, not the model case. When general rules secure property and contract, when entry and exit are open, and when failure is survivable, entrepreneurship becomes a mass vocation, exercised episodically across occupations (Cantillon 1755/2010; Mises 1949; Kirzner 1973, 1979, 1989; McCloskey 2016; Phelps 2013).

Second, innovation is discovery and diffusion under rules. General-purpose technologies create social value only after long tails of complementary investment in standards, skills, and organization; those tails are best produced by

open interfaces, contestable markets, and publication norms that reward priority while honoring imitation (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995; Levinson 2006; Polanyi 1962; Mokyr 2002). “Creative destruction” is real, but the creative multiplication of small, replicable improvements is what sustains prosperity.

Third, cycles reflect monetary–financial coordination, not just innovation clusters. The supply of novelty is a near-continuous portfolio of small bets; macro amplitude often arises from money and credit regimes that misprice intertemporal trade-offs, amplifying or damping a steady flow of improvements (Hayek 1976, 1978; Mises 1949; Friedman & Schwartz 1963; Friedman 1968). Technology shocks can matter; they need not be the impulse.

Against this background, Schumpeter’s contributions look different. He brilliantly rephrased a Marxian insight (accumulation through displacement) as a theory of capitalist renewal and drew attention to dynamic competition and finance (Schumpeter 1939, 1942). But he simultaneously (i) elevated the ranked entrepreneur over the functional one; (ii) treated temporary monopoly as the cradle of novelty; and (iii) located business cycles in innovation clusters. Each move clashes with the logic and evidence of the three republics. In an order built on dispersed knowledge, prices and reputations are discovery devices (Hayek 1945, 1978); monopoly dulls them. In a system where profit–loss is the indispensable test (Mises 1949), discretionary shelter weakens feedback precisely where complements must be searched. In a world of open letters and open science, lawful imitation is the channel by which private insight becomes public productivity (Polanyi 1962; Mokyr 2002; Khan 2020). And in monetary economies, credit booms and interest-rate distortions can generate cycles even when innovation flows smoothly (Friedman & Schwartz 1963).

Our contribution is to assemble these strands into a republican political economy of innovation and growth and to draw policy consequences. We show (i) why entrepreneurship scales socially only under general, impersonal rules; (ii) why diffusion, complements, and standards—not monopoly havens—explain most welfare gains from technology; (iii) why business cycles often originate in monetary–financial discoordination rather than in innovation droughts; and (iv) how to design a commons of discovery: rule-of-law protections for residual claimancy and contract; interoperability and open standards; intellectual property that teaches and expires; contestable procurement and licensing; and publication norms that reward priority while facilitating replication and negative results (Hayek 1960; Polanyi 1962; Bresnahan & Trajtenberg 1995; Khan 2020).

Two previewed predictions discipline the argument. First, measured productivity growth should covary with indicators of proposal density (new product/process introductions beyond patents), feedback speed (cycle times, defect discovery cadence), and diffusion breadth (standard adoption, interfirm spillovers). Second, environments that lower the cost of proposing (modular platforms, open-source tools, simple contracting) should exhibit thicker tails of small improvements and faster translation of frontier ideas into ordinary tools. These are testable and policy-relevant.

The rest of the paper proceeds as follows. Section 2 reconstructs Schumpeter’s intellectual debt to Marx and assesses what the shift to heroic innovators and monopoly actually buys. Section 3 critiques Schumpeter’s cycle theory in light of Mises–Hayek–Friedman coordination mechanisms. Section 4 engages Phelps’s and McCloskey’s critiques of neo-Schumpeterian R&D engines, emphasizing values, rhetoric, and everyday innovation. Section 5 develops a republican critique of Schumpeter on entrepreneurs, innovation, and cycles, using historical case material to show how the three republics braid in practice. Section 6 distills a policy program for protecting the commons of discovery. Section 7 concludes.

At bottom, the thesis is simple. From the seventeenth-century coffeehouse to the twenty-first-century code review, prosperity has been made by republics, not courts: by citizens who are free to notice, to try, to be wrong cheaply, and to be copied when they are right. Schumpeter’s metaphors endure; a republican constitution explains the enrichment.

2 Schumpeter’s debt to Marx—and what (little) it buys

Schumpeter’s two most durable phrases—the entrepreneur and creative destruction—stand in a clear lineage from Marx’s account of capitalism as an engine that periodically annihilates value and productive forces. In *The Communist Manifesto*, Marx and Engels describe crises in which “a great part... of previously created productive forces are periodically destroyed” (Marx & Engels 1848). In the *Grundrisse*, Marx ties the system’s generative power to a necessity for devaluation and displacement (Marx 1857–58); in *Theories of Surplus Value* he distinguishes the loss of exchange value from the preservation of use value, explaining how crises clear ground for renewed accumulation (Marx 1863). Werner Sombart popularized this destructive–creative dialectic in German historical sociology (Sombart 1913). Schumpeter picks up the baton in *Business Cycles* (1939) and *Capitalism, Socialism and Democracy* (1942): capitalism is “by nature a form or method of economic change,” propelled by “new consumers’ goods, new methods of production or transportation, new markets, [and] new forms of industrial organization,” a “perennial gale” that incessantly destroys the old and creates the new (Schumpeter 1942).

As rhetoric, Schumpeter’s turn is brilliant. He rebrands Marx’s drama of breakdown into a saga of renewal, swaps revolutionary agents for heroic founders, and furnishes policymakers with a vivid justification for tolerating turbulence. But as theory, the value added is thinner than it appears. The Marxian core—accumulation through displacement—remains intact; the causal mechanics are merely reassigned from systemic contradictions to the charisma of a rare innovator and the finance that backs him. That reassignment sidelines the channels through which private novelty becomes social wealth: diffusion, lawful imitation, and the long tail of complementary investments in organization, standards, skills, and tooling.

What Schumpeter inherits, almost whole. Three elements of the Marx–Sombart program survive intact in Schumpeter. First, the denial of stasis: both frameworks insist that capitalist development is evolutionary rather than stationary, with incessant structural change (Marx & Engels 1848; Schumpeter 1942). Second, the centrality of displacement: novelty does not glide smoothly into coexistence with incumbency; it devalues existing assets, routines, and skills. Third, the link to macro fluctuations: large waves of investment and reorganization are implicated in cyclical movements, whether read as overaccumulation/realization crises (Marx) or as clusters of major innovations (Schumpeter) (Marx 1863; Schumpeter 1939).

What Schumpeter discards—and why it matters. In the move from Marx to Schumpeter, at least four analytic losses occur.

1. From social relations to heroic psychology. Marx’s engine is systemic—competition, accumulation, the wage relation, and the credit system interacting in ways that periodically destroy value. Schumpeter’s engine is the will of the rare innovator: “founding a private kingdom,” “the will to conquer,” “the joy of creating” (Schumpeter 1911/1934). By elevating rank (a special kind of person) over role (a function under uncertainty), the account mislocates where most economically relevant novelty actually arises. A republican lens—Cantillon’s residual-bearing farmer and shopkeeper (1755/2010), Mises’s universal entrepreneurial function disciplined by monetary calculation (1949), Kirzner’s widely distributed alertness to unnoticed discrepancies (1973, 1979, 1989)—shows that the decisive margin is the ubiquity of entrepreneurial roles, not the rarity of heroic ranks.

2. From diffusion to monopoly havens. Marx’s emphasis on the destruction of exchange value amid preservation of use value naturally raises a question Schumpeter underplays: by what institutions do surviving use-values get recombined and diffused? Schumpeter’s answer leans toward temporary monopoly as a nursery for novelty (Schumpeter 1942). Yet the historical record shows that broad welfare gains flow mainly through creative accumulation: open standards, interoperable modules, organization redesign, and skills—phenomena best produced by rivalry under general rules rather than by shelter (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995; Levinson 2006). Monopoly is neither necessary nor sufficient for that work; often it is counterproductive.

3. From institutions to episodes. Marx, whatever one thinks of his diagnoses, offers an institutional account of crisis: money, credit, property, and the labor process. Schumpeter’s story is episodic: “new combinations” arrive in clusters, launch investment booms, and fade as imitation bites (Schumpeter 1939). Missing is an explanation of why some societies convert novelty into generalized productivity—through republics of letters, science, and enterprise—while others stall (Polanyi 1962; Mokyr 2002, 2009, 2016). By abstracting from the rules and reputations that keep proposal costs low and feedback honest, Schumpeter cannot explain cross-sectional variation in diffusion intensity.

4. From monetary coordination to technology “impulses.” Marx’s crises hinge on the credit system’s role in amplifying accumulation and precipitating devaluation; Schumpeter relocates the impulse to technology clusters. But robust

evidence and theory—from Mises’s calculation and intertemporal discoordination (1949) and Hayek’s price-system coordination (1945, 1976) to Friedman and Schwartz’s chronicle of money and credit as prime movers of cycle amplitude (1963) and Friedman’s expectations-based synthesis (1968)—show that monetary–financial regimes can generate booms and slumps even with a smooth flow of small innovations. Technology shocks can amplify or dampen, but they are not required as the impulse.

What the Marx → Schumpeter move gets right—but only halfway. To Schumpeter’s credit, two clarifications genuinely advance the conversation. He insists (against static price theory) that competition is dynamic—about new products, processes, and organizational forms, not merely price-taking. And he places finance at the center of scaling novelty: bankers and capital markets select and fund “new combinations.” Both points survive our critique. But both need anchoring in the civic constitution that makes discovery and diffusion scalable. In the republican view, rivalry is a discovery procedure (Hayek 1978), and finance is an input to a decentralized portfolio of small bets whose outcomes must be rapidly revealed by profit-and-loss (Mises 1949). Monopoly shelter and discretionary privilege weaken the very feedback that finance needs to learn and redeploy.

Re-reading “creative destruction” through the three republics. Marx’s insight about destruction clearing ground for creation is best redeemed—not by celebrating monopolized disruption—but by explaining the institutions that convert preserved use-values and latent capabilities into widespread betterment. That is what the three republics accomplish. The republic of letters lowers the cost of learning and dispute across borders; the republic of science codifies method, priority, and replication so that claims and tools travel; the republic of entrepreneurs applies, tests, and scales, with prices and reputations rewarding correct conjectures and punishing error (Polanyi 1962; Mokyr 2002, 2009, 2016; Rosenberg 1982). In that braid, destruction is disciplined: it does not merely sweep; it teaches. Social learning is not the accidental by-product of heroic entry; it is the point of the game.

Historical calibration. Consider three emblematic episodes often invoked in Schumpeterian narratives. First, Watt’s separate condenser. Its social payoff depended less on the leap itself than on a swarm of micro-inventions—precision boring (John Wilkinson), gauges, fuels, boiler practice—diffused through voluntary associations and competitive markets (Mokyr 2002, 2009; Rosenberg 1982). Second, the “American system” of manufactures: interchangeable parts and flow were not birthed by a monopoly haven but accumulated across armories, shops, and later bicycles and autos, coordinated by standards, skilled labor, and open information channels (Hounshell 1984; Thomson 2009). Third, twentieth-century biomedicine: insulin, penicillin, the pacemaker, dialysis, and nucleoside-modified mRNA became epochal because open science and entrepreneurial scaling co-evolved under rules that rewarded disclosure and permitted imitation (Bliss 1982; Bud 2007; Jeffrey 2001; Nalin & Cash 1970; Karikó et al. 2005). In each case, the republics made the difference. Creative destruction as a metaphor adds color; without the civic machinery of diffusion, it lacks explanatory bite.

Why the debt buys less than it promises. If Schumpeter’s reworking of Marx is judged by its power to explain who innovates, how improvements compound, and why prosperity persists, the scorecard is mixed. He sharpened the focus on novelty and finance, but he (i) mis-specified entrepreneurship as a scarce personal trait instead of a widespread function (Cantillon 1755/2010; Mises 1949; Kirzner 1973, 1979, 1989); (ii) under-weighted imitation, standards, and organizational complements—the very routes by which private discovery becomes public wealth (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995; Mokyr 2002); and (iii) over-credited technology clusters for macro fluctuations that are often monetary–financial in origin (Mises 1949; Hayek 1976; Friedman & Schwartz 1963; Friedman 1968). What remains most useful in Schumpeter—novelty displaces incumbency; finance matters; culture and institutions condition supply—can be retained without monopoly sanctuaries or wave-driven macro.

A republican restatement. Take the Marxian kernel—creation via displacement—and embed it in a constitutional order that multiplies proposals and learning. General, impersonal rules (secure and alienable property; predictable contract; freedoms of entry, exit, speech, and association) make residual-bearing assignable and feedback credible (Hayek 1960; Mises 1949). Publication and priority norms in the republic of science (Polanyi 1962) ensure that methods and instruments travel; open standards and contestable markets ensure that complements are discovered quickly and rents are eroded by entry (Bresnahan & Trajtenberg 1995; David 1990). In such a republic, destruction is not the price paid for occasional heroism; it is the mechanism of social learning by which many ordinary entrepreneurs—mechanics, nurses, coders, shopkeepers—translate useful knowledge into useful industry.

That is why Schumpeter’s debt to Marx buys less than advertised. The metaphor endures, but the mechanism that makes it economically meaningful lies elsewhere—in the civic architecture of letters, science, and enterprise that disciplines destruction, scales creation, and makes prosperity a generalized achievement rather than a courtly spectacle.

3 Why Schumpeter’s cycle theory fails in a world coordinated by prices, profit–loss, and money

Schumpeter’s business-cycle architecture treats macro fluctuations as the echo of “swarms” of major innovations. New combinations arrive in clusters; visionary bankers extend credit to scale them; investment surges; as imitation erodes the pioneers’ rents and the capital stock adjusts, a downswing follows. Superimposed “Kitchin,” “Juglar,” and even “Kondratiev” movements are read, in varying time scales, from the cadence of these innovation bursts (Schumpeter 1939, 1942). The picture is elegant and often repeated. It is also, as theory and history, the wrong center of gravity. Once we take seriously the coordination mechanisms emphasized by Mises, Hayek, and Friedman—monetary calculation,

intertemporal price signals, and the empirical force of money and credit—the Schumpeterian cycle story misallocates causality twice over: it over-attributes upswings and downswings to technology clusters and under-models how money, interest rates, and relative prices align (or misalign) plans across time.

Begin with the core economic function of prices in time. For Mises, the rate of interest is not a policy lever but the critical coordinating price between present and future uses of resources. It condenses the community’s time preferences into a common denominator, allowing entrepreneurs to compare alternative, multi-period production plans “in a common monetary calculus” (Mises 1949). When that coordinating price is distorted—especially by credit expansion not backed by voluntary saving—the monetary profits on long, roundabout projects rise relative to short projects and consumption. Entrepreneurs are not foolish; they read the signals and reallocate. The trouble is not their judgment but the signal. Cheap credit transmits a false intertemporal scarcity: society has not actually deferred the consumption needed to release the real resources to finish all those lengthened plans. What looks like a technology-led boom is in fact a credit-led misalignment of the structure of production with underlying preferences. The bust that follows is not “caused” by the exhaustion of innovation; it is the revealed necessity to reprice and reallocate when profit–loss and cash flow disclose that too many resources were committed to the wrong stages of production.

Hayek’s contribution deepens this diagnosis by making explicit the informational structure underneath. The facts relevant to coordinating production plans are dispersed, tacit, and local. In a well-functioning order, prices—especially relative prices across stages and maturities—serve as the discovery and communication device that permits a “mutual adjustment of independent initiatives” (Hayek 1945, 1978). Push the market rate of interest below the “natural” constellation that would have emerged from voluntary saving, and you generate not a general “boom,” but systematic error with a common sign: projects whose profitability depends on unusually patient finance all look attractive at once. Clusters of entrepreneurial error do not require synchronized myopia; they require a common perturbation to the very signals on which entrepreneurs rely. In this view, the “cluster” Schumpeter observes is endogenous to monetary–credit conditions, not a primitive fact about the arrival of inventions.

Friedman’s empirics close the loop. If Schumpeter were right in the strong form, we would expect the amplitude and persistence of cycles to line up with the observed timing of major innovation waves. Instead, the best macro evidence lines up with money and credit. In their *Monetary History*, Friedman and Schwartz document that large swings in money growth—especially rapid decelerations or outright contractions—closely track the timing and depth of U.S. downturns, with the 1929–33 collapse as the canonical case: a one-third fall in the money stock and a catastrophic contraction in spending and output (Friedman & Schwartz 1963). Schumpeter’s own periodization cannot explain why a decade dense with product and process innovation associated with electrification, chemicals, and organizational change could coincide with such macro carnage. Nor can an innovation-cluster account make sense of the 1937–38 relapse, which is well-explained by a sharp policy-induced tightening of money and

credit. Likewise, the expectations-augmented Phillips-curve logic in Friedman (1968) explains the 1970s stagflation as the product of monetary variability, not a mysterious drought of “basic innovations.” When the monetary–credit regime is unstable, cycles result with or without a change in the flow of new ideas.

Once we foreground Mises–Hayek–Friedman coordination, three deeper problems in Schumpeter’s cycle theory come into focus.

First, the identification problem. The notion of a distinct, dated “cluster” of major innovations is fragile *ex post*. General-purpose technologies unfurl through long, overlapping S-curves. Their social returns turn on complements discovered and installed over years: standards, interfaces, supply chains, skills, organization redesign (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995). These complement build-outs look like waves in investment because they are waves, but the investment is responding to a near-continuous portfolio of small discoveries, not to discrete, time-stamped “swarm arrivals.” Treating these overlapping adjustments as the impulse to cycles confuses propagation with cause. A monetary–credit disturbance can hit at any point on these S-curves and will shape aggregates powerfully regardless of where the idea frontier happens to be.

Second, the aggregation problem. By fixating on the leap at the frontier, Schumpeter under-models the quotidian flow of incremental proposals that constitute most innovation input in a healthy economy. In a republic of entrepreneurs, trial-and-error is pervasive—numerous small bets across firms, stages, and regions, constantly pruned by profit–loss. The supply of novelty is therefore much smoother than Schumpeter’s narrative suggests; macro volatility reflects how financing conditions amplify or damp the testing and scaling of that flow. A credit boom can masquerade as a surge in opportunity because it raises measured profits in investment-heavy sectors; a credit crunch can masquerade as an “innovation drought” because it chokes off the financing of complements. In neither case do we need a true change in the idea flow to generate a cycle.

Third, the mechanism problem. Schumpeter’s banker-centric mechanism gestures at finance but never quite specifies the price-signal channel that coordinates intertemporal plans. Mises does: monetary calculation requires commensurate money prices; profit and loss are the indispensable “report cards” of plan validity (Mises 1949). Hayek explains how relative prices create knowledge by eliciting and aggregating local responses (Hayek 1945, 1978). Friedman shows that when the nominal anchor drifts, these coordinating devices misfire in predictable, measurable ways (Friedman & Schwartz 1963; Friedman 1968). Without this micro-to-macro linkage, the Schumpeterian cycle story lacks the very gear train that turns individual plans into aggregate fluctuations.

Concrete episodes underline the point. The U.S. housing and credit boom of the 2000s is often described as a “financial” cycle—and so it was. But observe its Schumpeterian temptation: the simultaneous diffusion of information technology, logistics, and financial engineering created a real sense of frontier dynamism. Read through Mises–Hayek, the cycle turns on a common mispricing—credit conditions and risk weights that made long-duration, collateral-intensive projects look unusually safe and profitable. Clusters of entrepreneurial error

followed, not because entrepreneurs were dupes, but because their coordinating signals were wrong. The subsequent bust liquidated not a cluster of played-out inventions but a set of plans that could not be completed on the originally implied terms. Or consider the Volcker disinflation of 1979–82. The dramatic tightening of money and the re-anchoring of inflation expectations produced a deep recession and a rapid subsequent recovery (Friedman 1968; Friedman & Schwartz 1963). No plausible “innovation cluster” chronology can do similar work. The impulse was monetary; the propagation ran through relative prices, cash flows, and balance sheets.

A Schumpeterian might reply that money and credit only mediate the real impulse from innovation clusters. But this retreat collapses the distinctiveness of the theory. If money–credit conditions do the heavy lifting on timing and amplitude, the innovation-cluster story explains at best a secular background—why investment is high for a decade rather than a year—not the cyclical dance that concerns us here. And even on that secular margin, the “cluster” view sits uncomfortably with the evidence that diffusion and complement discovery—organizational change, standards, human capital—explain much of the payoff to frontier advances (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995). Put differently: the macroeconomy need not wait for a heroic leap to grow; it needs steady institutions so that thousands of small proposals can be tried and scaled. Disturb those institutions—especially the nominals—and you will get cycles whether or not a “basic innovation” happened to arrive this year.

The republican lens clarifies the normative stakes. In a republic of entrepreneurs, entrepreneurship is a role many can occupy episodically; innovation is a civic process of discovery and imitation; and macro stability depends on rules that keep proposal costs low and feedback honest. Schumpeter’s cycle story tempts policymakers to romanticize turbulence as the necessary price of progress—perhaps even to coddle incumbents as “islands of certainty” to incubate the next wave. The Mises–Hayek–Friedman synthesis counsels the opposite. The task is not to buy novelty with privilege or to celebrate volatility as destiny. It is to preserve the coordinating institutions—secure and alienable property, predictable contract, open entry and exit, freedom of criticism—and to run a monetary regime that does not lie. When money and credit are rule-bound, the interest rate reflects true intertemporal scarcity; profit and loss reveal plan quality promptly; relative prices guide complements into place; and the continuous portfolio of small innovations can be financed and tested without boom–bust amplification.

This does not deny that technology can jolt the macroeconomy. A general-purpose technology can swell investment demand and reprice factors. But even then, the amplitude and social cost of adjustment depend mostly on coordination quality. If monetary policy accommodates the higher real demand for liquidity without destabilizing expectations, and if financial intermediation prices risk without subsidies and hidden guarantees, then the diffusion of the GPT will be less cyclical, not more. If, instead, credit is mispriced and policy is discretionary, the same GPT can be shoehorned into a classic boom that ends in liquidation, breeding the false inference that “innovation did it.” The republic

does better by refusing that inference and fixing the plumbing.

Seen this way, Schumpeter’s cycle theory is not so much wrong about the existence of clusters as it is wrong about their causal primacy. Clusters of entrepreneurial error are real; they arise precisely when the common coordinating signals—money, interest rates, relative prices—are falsified. And waves of investment in complements are real; they reflect the arduous work by which ordinary entrepreneurs translate frontier ideas into general productivity. But to explain cyclical rises and falls in output and employment, one must start where Mises, Hayek, and Friedman start: with how a monetary economy coordinates plans across time. Get that right, and the republic of entrepreneurs hums—discovering, copying, diffusing—without recurrent macro drama. Get it wrong, and you will have cycles even in an innovation drought, and slumps even in an age of discovery.

4 A republican critique of Schumpeter on entrepreneurs, innovation, and cycles

Schumpeter gave economics two unforgettable pictures: the entrepreneur as heroic disruptor and capitalism as a storm of “creative destruction.” Those images still anchor syllabi and policy speeches. But when we set them against the combined record of theory and history—Cantillon’s functional entrepreneur, Mises’s monetary calculation and residual claimancy, Hayek’s discovery-through-prices, Kirzner’s alertness, Mokyr’s Industrial Enlightenment, McCloskey’s bourgeois dignity, and Phelps’s grassroots dynamism—the pictures prove more theatrical than explanatory. They misallocate causal weight. They overstate the primacy of elite invention and monopoly “havens,” understate the ubiquity of distributed discovery and lawful imitation, and treat macro fluctuations as if they were keyed primarily to clusters of major innovations. A republican reframing—entrepreneurship as a widely available role, innovation as discovery-plus-diffusion under general rules, and cycles as monetary-financial coordination phenomena—fits both theory and the historical record better.

Start with the entrepreneur. In *The Theory of Economic Development* Schumpeter cast the innovator as a rare figure who introduces “new combinations,” often financed by a discerning banker, briefly escaping price competition until imitation arrives (1911/1934). In *Capitalism, Socialism and Democracy* he later argues that this function migrates to large corporations as capitalism matures (1942). Both moves treat entrepreneurship as a rank rather than a role. Cantillon had already located entrepreneurship as a function—bearing residual uncertainty when contracting costs precede sales—performed by farmers, carriers, provisioners, and traders (1755/2010). Mises universalizes this logic: because genuine uncertainty pervades purposive action, the entrepreneurial aspect is present whenever people commit resources ahead of unknown demand, and the discipline is monetary calculation through profit and loss (1949). Kirzner supplies the missing micro-mechanism: alertness—the episodic, widely distributed

noticing of misalignments in prices, qualities, places, and time (1973, 1979, 1989). In this republican view, a nurse who redesigns a handoff, a machinist who improves a jig, or a coder who rebundles open-source modules is exercising entrepreneurial judgment in the same functional sense as a celebrated founder. Schumpeter’s psychology—“founding a private kingdom,” “the will to conquer”—obscures this civic ubiquity.

History amplifies the point. Mokyr’s micro-histories show torrents of “micro-inventions” by millwrights, instrument makers, foremen, and shopkeepers doing the compounding work that star artifacts alone cannot explain (1990; 2002; 2009). U.S. evidence on the nineteenth century documents “democratic invention,” enabled by liberal patents, thick markets for technology, exhibitions, handbooks, and prize systems—institutions that let people of modest schooling patent, license, or sell improvements and finance further tinkering (Khan 2005, 2020; Hounshell 1984; Thomson 2009). Even in the twentieth century, small firms often generate more innovations per employee than large ones, which sits awkwardly with the claim that sheltered monopoly is the main seat of novelty (Acs & Audretsch 1988). The rule in successful periods is a republic of entrepreneurs; Schumpeter’s court is the occasional exception.

Innovation itself is likewise misframed by a fixation on disruption. “Creative destruction” directs attention to discontinuities at the frontier, but modern growth mostly reflects creative accumulation via diffusion and complement discovery. General-purpose technologies (GPTs) do not deliver their social returns at the moment of invention; they require long tails of complementary investments in organization, standards, skills, and tooling before they transform productivity (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995). Steam demanded gauges, fuels, boiler practice, and precision boring; electrification required factory redesign; the shipping container needed standard dimensions, cranes, and reengineered port logistics (Mokyr 2002; Levinson 2006). The biomedical record is even starker: insulin, penicillin, pacemakers, dialysis, and (decades later) nucleoside-modified mRNA became world-changing only when open science (priority, disclosure, peer criticism) braided with entrepreneurial scaling (quality systems, process engineering, capital) (Bliss 1982; Bud 2007; Jeffrey 2001; Nalin & Cash 1970; Karikó et al. 2005). Schumpeter acknowledges imitation, but his analytical weight remains with the original leap and the temporary monopoly he thinks it creates. In a republic, lawful imitation is not an afterthought; it is the very mechanism by which private discovery becomes public wealth. Entry, rivalry, and open standards steadily erode rents and raise consumer surplus—precisely the dynamic minimized in a monopoly-centered theory.

This brings us to markets and knowledge. Schumpeter’s sympathy for monopoly as an “island of certainty” from which to finance R&D understates the epistemic function of contestable markets. Hayek’s central claim is that economically relevant knowledge is dispersed and often tacit; prices and reputations are discovery devices, not bookkeeping conveniences (1945, 1978). Rivalry keeps those devices sharp; monopoly dulls them. Mises adds that profit and loss, under private ownership and commensurate money prices, are the non-substitutable tests

of plan validity (1949). A theory that invokes shelter as the condition for novelty risks confusing an outcome (quiet margins) for the input actually required (reliable signals and transferable residual claims). The German optics triangle of Zeiss–Abbe–Schott shows how to institutionalize the science–shop loop—foundation statutes, research obligations, worker profit-sharing, and university ties—without conferring discretionary privilege (Abbe 1896/1990; Feldenkirchen 1994). Britain and the United States show the complementary pattern: open standards, liberal patents that teach and expire, and associational life (learned societies, mechanics’ institutes, trade journals) maximize proposal density and diffusion speed (Hounshell 1984; Khan 2005; Mokyr 2002). Monopoly is neither necessary nor sufficient for high inventive productivity; republican rules routinely are.

Schumpeter’s cycle story compounds the misallocation. By reading upswings as the echo of innovation swarms and downswings as the fading of pioneer rents, he over-aggregates the innovation process and under-models coordination through money and relative prices. As argued in Section 3, a modern economy constantly supplies a near-continuous portfolio of small bets; macro amplitude largely reflects money/credit regimes and coordination shocks that can amplify (or swamp) that steady flow. Overlapping S-curves of adoption and complement build-outs generate investment waves without a discrete, dated “cluster” at the root (David 1990; Bresnahan & Trajtenberg 1995). Monetary variability and credit mispricing can make a routine diffusion phase look like a boom, then an ordinary digestion phase look like a drought—mistaking propagation for impulse (Friedman & Schwartz 1963; Friedman 1968). A republican lens says: keep the coordinating signals honest and the proposal rate high, and innovation proceeds with less macro drama, regardless of whether a “basic innovation” arrived this year.

Finally, Schumpeter’s political economy—the prediction that routinized corporate R&D, bureaucratization, and hostile culture would drain the entrepreneurial impulse—has not materialized in the modal way. Late-twentieth- and early-twenty-first-century economies display repeated surges of entry, venture experimentation, open-source production, user-driven innovation, and platform-based recombination: phenomena hard to square with an inexorable drift toward corporate stasis. McCloskey’s account explains why: dignity and liberty for improvers raise the proposal density by changing who is socially licensed to try; law then secures the feedback loop (2006, 2010, 2016). Phelps adds the experiential layer—curiosity at work, appetite for novelty—which helps to explain why some apparently well-institutionalized places nonetheless lose dynamism when values tilt toward security and credentialed deference (2013; Phelps et al. 2020). When modular technologies lower the cost of trial and open standards lower the cost of complement search, a republic of entrepreneurs renews itself even without a priesthood of laboratories or a shelter of monopoly.

What remains of Schumpeter is valuable but slimmer than the myth. Three insights endure: novelty displaces incumbents and creates transitory rents; finance is integral to scaling new combinations; and institutions and culture condition the supply of attempts. None of these requires elitism, monopoly sanc-

tuaries, or wave-determined macro dynamics. Reframed in republican terms, “creative destruction” becomes creative multiplication: many proposals, made cheap by general rules; rapid feedback through prices and peer criticism; and lawful imitation that turns private insight into public productivity. That is how useful knowledge becomes useful industry at scale (Mokyr 2002), how bourgeois dignity turns into proposal density (McCloskey 2016), and how prosperity is sustained by the everyday entrepreneurship that Kirzner analyzed and Phelps celebrated (Kirzner 1973; Phelps 2013).

5 Policy: protecting the commons of discovery

If the central claim of this paper is that prosperity flows from a republic of entrepreneurs braided with the republics of letters and science, then policy’s job is constitutional, not commissarial. It is to maintain the legal–informational commons that makes proposing cheap, imitation lawful, and feedback honest. The first principle is generality: rules should be abstract, predictable, and impersonal so strangers can form plans without courting discretionary favor. This is the Hayekian core of a discovery-friendly order (Hayek 1960): secure and alienable property, credible contract enforcement, and freedom of association and speech. These are not adornments; they are the institutional preconditions for Misesian calculation to work—so that residual bearers can compare plans in money terms and learn quickly from profit and loss. When general rules are replaced by outcome targets and carve-outs, the informational value of prices erodes and the rate of proposals falls.

Translating the republican constitution into the plumbing of modern markets begins with interoperability. General-purpose technologies become social multipliers only when complements can be found and combined at low cost (Rosenberg 1982; David 1990; Bresnahan & Trajtenberg 1995). That requires open standards, documented interfaces, and portability obligations that keep would-be complements from being fenced out. Legally, that means competition policy and sector regulation should prefer interoperability mandates and data mobility to structural micromanagement. Technically, it means reference implementations, conformance test suites, and standard-setting bodies that are open, multi-stakeholder, and procedurally constrained (transparent agendas, due process, public archives), with licensing terms that preserve contestability—FRAND where proprietary contributions are unavoidable; royalty-free where they are not. The goal is not to punish scale but to keep complement discovery cheap. In shipping, a 20/40-foot box unlocked dockside mechanization and global trade (Levinson 2006); in code and communications, open protocols play the same role. A republic of entrepreneurs needs sockets that anyone can plug into.

Intellectual property belongs inside this interoperability frame. Its republican purpose is pedagogical and temporary: to teach the method by requiring enabling disclosure and then to expire so that complements and entrants can lawfully imitate (Khan 2020). That design logic implies narrower claims,

clearer enablement standards, shorter or tailored terms in fast-cycle domains, and robust experimental-use and interoperability exceptions. It also argues for tools that buy information into the commons faster—patent buyouts, prizes for disclosure, or advance market commitments that swap exclusivity for scale (consistent with Polanyi’s republic of science, which rewards priority but keeps methods public). Conversely, thickets, evergreening, and non-practicing aggregation tax the discovery procedure by raising the cost of peeking into adjacent opportunity sets. Where innovation depends on cumulative discovery (software, synthetic biology), default-open licenses and defensive pools can preserve contestability without abolishing appropriation altogether. The test is functional: does the regime lower the social cost of proposals and speed imitation once a proposal works?

Public procurement and licensing are often where republics are lost or kept. Because governments are large buyers of health, defense, infrastructure, and digital services, their purchasing rules shape market structure. Contestable procurement—modular scopes, outcome-based specifications, short contracts with frequent recompetes, transparent evaluation criteria, and open performance telemetry—rewards entrants who discover cheaper or better methods. Exclusive “national champion” awards, bespoke interfaces, and gold-plated requirements do the opposite: they create courts of privilege in the republic’s name. The licensing side has similar leverage. Occupational and facility licenses should be narrowly tied to measurable externalities, portable across jurisdictions, and bounded by sunset review. Broad, discretionary licensing authority chills proposals—especially the incremental process improvements that rarely have lobbyists but account for much of productivity growth.

Publication, disclosure, and measurement norms connect the republic of science to the republic of entrepreneurs. Polanyi’s point—that science works because priority and public criticism discipline inquiry (1962)—has policy analogues that matter for diffusion. Mandates and incentives for open methods, data, and negative results (especially for publicly funded research) shorten the distance from bench claims to shop practice. Quality registries, conformance databases, and replication audits turn tacit performance into visible signals outsiders can trust. In biomedicine and software safety alike, registries and post-market surveillance let rivals and adopters learn which combinations actually work at scale; without such measurement scaffolding, imitation is either too risky or too slow. Because diffusion, not discovery, explains most welfare gains (Mokyr 2002; McCloskey 2016), investing in these informational commons yields high social returns even when it does not produce a single “new combination.”

Finance should be judged less by how much it spends on laboratories than by how well it prices and prunes portfolios of small bets. A republican regime aligns capital with discovery by making failure survivable and feedback swift. That argues for bankruptcy law that is speedy and even-handed, collateral rules that do not categorically privilege tangible assets over intangibles, and securities rules that preserve market entry for smaller issuers without compromising honesty. At the macro level, monetary frameworks should minimize avoidable discoordination—dampening credit cycles that turn ordinary diffusion phases

into booms and digestion phases into busts (Friedman & Schwartz 1963; Friedman 1968). When credit is cheap or dear for reasons unrelated to technological opportunity, the signal-to-noise ratio of profit and loss degrades, and both entrepreneurs and funders learn the wrong lessons. Sound money is not a slogan here; it is the background condition for the discovery procedure to aggregate local information rather than amplify policy noise.

Regulation should be performance-based and error-tolerant rather than prescriptive and permission-heavy. Because many improvements are organizational and incremental, *ex ante* rules that dictate process steps often freeze yesterday's knowledge and penalize better-than-compliant methods. Outcome standards with third-party certification, safe harbors for sandboxed trial at modest scale, and tiered approval regimes let entrepreneurs translate bench claims into reliable routines without spending years in queue for blanket permission. This is the republic's answer to the standard objection that "permissionless innovation" ignores risk: it requires measured evidence of safety and efficacy, but it lets many actors produce that evidence in parallel under known tests. Where harms are idiosyncratic and dispersed, tort and insurance can complement *ex ante* rules; where they are systemic, transparency and stress testing do more work than bespoke waivers.

Labor market rules should widen the circle of effective proposers. Non-compete clauses, training-repayment penalties, and occupational licensing cartels not only depress wages; they throttle diffusion by constraining the movement of know-how across firms and regions. The Industrial Enlightenment prospered because artisans, instrument makers, and engineers could learn by moving; the same is true of today's coders, machinists, and clinicians. Policies that favor portable credentials, apprenticeships, and recognition of prior learning expand upper-tail human capital in the Mokyrian sense—numeracy, instrument competence, experimental habit—and thereby increase proposal density. McCloskey's lesson is cultural as much as legal: rhetoric matters. When curricula, civic narratives, and public honors esteem commercial problem-solving and useful tinkering, more people step forward with small, testable proposals. Phelps's addition—values of self-expression and initiative—suggests that civic education should cultivate responsibility and imagination at work, not only test-taking skill.

Antitrust and competition policy fit the same constitutional pattern: the purpose is not to punish scale but to keep rents contestable and learning channels open. That means bright-line scrutiny of acquisitions whose business case is primarily the neutralization of nascent rivals (the "killer acquisition" problem), skepticism toward exclusivity that forecloses complements at interfaces protected by network effects, and remedies that restore interoperability rather than merely extracting fines. It also means restraint where scale economies are genuine and contestability is preserved through open standards and portability. The republic's criterion is procedural: do outsiders with better ideas have a path to customers without asking permission from incumbents?

Finally, the state's own innovation programs should be evaluated by whether they enlarge the commons of discovery. Prizes, AMCs, public testing facilities,

and open-data infrastructures pull private effort toward public problems without anointing permanent favorites. When subsidies are used, they should be sunsetted, transparent, and conditional on disclosure that lowers follow-on costs for others. Foundation statutes like Abbe’s Zeiss model—binding firms to research, worker participation, and university links while preserving commercial discipline—show one way to institutionalize the science–shop loop without creating courts of privilege. The through-line is consistent: do not try to buy progress with discretion; multiply progress by lowering the cost of proposing and raising the reliability of feedback.

A republic of entrepreneurs is not a program but a constitution. It asks lawmakers to think like maintainers of a public road network: keep lanes open, signage honest, and tolls low; punish fraud and recklessness; and resist the temptation to grant private gatehouses in exchange for promises of speed. Where such constitutional craftsmanship prevails—general rules, interoperable interfaces, IP that teaches and expires, contestable procurement, open publication and measurement—discovery becomes a civic process. Ordinary people can notice, try, be wrong cheaply, and be copied when right. That is the policy art that turns useful knowledge into useful industry at scale.

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7 Appendix: More Details from Mises (1949)

7.1 Profit and Loss as a Civic Discovery Procedure (Mises, Ch. XXI; Ch. XXVII; Ch. XV §§8–10)

Sections 2 and 4 argued that entrepreneurship is a role—residual-bearing choice under uncertainty—diffused across a wide citizenry rather than a rank reserved for heroic founders. Mises supplies the missing institutional engine: profit and loss are the republic’s truth-telling devices. They are not mere accounting leftovers but epistemic tests of rival conjectures. Because production unfolds in time and under ignorance, plans cannot be validated *ex ante* by engineering ratios; only *ex post* money calculation—made possible by private ownership and market prices for capital goods—can establish whether a plan actually moved resources toward configurations strangers value more (Mises 1949, Ch. XXI; Ch. XXVII).

This test works along several margins central to our thesis. First, profit or loss reports a comparative success in appraising future prices and technological/organizational complements relative to the marginal rival, which explains both the evanescence of rents under open entry and the civic character of gain (Ch. XV §10): the surplus is social information that invites imitation and erodes itself. Second, profit/loss is allocative: it scales correct plans and liquidates error quickly—precisely the high-frequency correction mechanism we identified as the operating logic of a republic of entrepreneurs (Ch. XXI §5). Third, the test is systemic: even when a single transaction is zero-sum at the instant of exchange, the aggregate process is positive-sum because loss-making lines are shuttered and profit-making lines expand, shifting the production structure toward what consumers actually want (Ch. XV §10; Ch. XXI).

Mises connects this epistemic role to the preconditions of monetary calculation (Ch. XXVII). Absent market prices for heterogeneous capital goods, there is no commensurability and thus no way to rank feasible plans. This is why fully administered systems abolish entrepreneurship in the strict sense: they remove the very institution—the price system—that makes the profit/loss test possible. Equally, he warns that monetary disturbance garbles the test. In inflationary settings, historical-cost accounts can report fictitious profits while the firm is silently consuming capital because replacement costs have outrun book depreciation (Ch. XXI §6; Ch. XXVII). In deflation, the mirror image can overstate losses. The republic therefore requires sound money to keep the discovery statistics honest.

Two policy upshots follow and reinforce Section 5. First, bankruptcy is not pathology but discipline: swift, even-handed reallocation of assets from error to promise (Ch. XXI §5). Second, regimes that confiscate profits while socializing losses—by subsidies, selective guarantees, or procurement discretion—degrade the feedback loop and keep defective plans alive. The “commons of discovery” we advocate is exactly the legal-monetary environment in which the profit/loss test bites and error is inexpensive to admit.

7.2 Capitalists, Managers, and Entrepreneurs: Distinct Functions under One Roof (Ch. XVIII §5; Ch. XV §§8–10; Ch. XXI)

Our republican reframing also benefits from Mises’s clean functional decomposition. Capitalists advance present goods (savings) and earn interest, a universal category grounded in time preference (Ch. XIX). Entrepreneurs choose plans under uncertainty and bear the residual, earning profit or loss (Ch. XV §§8–10; Ch. XXI). Managers supply the labor of coordination and control and earn wages—even when contingent or option-like, conceptually wages for a factor service (Ch. XV §8). One person may wear two or three hats, but the sources of return remain distinct: time preference for interest, superior or inferior judgment for profit/loss, labor scarcity for wages.

This map clarifies corporate economies without inventing a special “managerial capitalism.” In widely held firms, where the entrepreneurial function sits is a question of effective residual control. Boards, blockholders, and the market for corporate control exercise entrepreneurial judgment when they replace planners or redirect strategy; top officers exercise it in daily plan selection. Whoever bears the residual is, in Mises’s sense, the entrepreneur (Ch. XV §9; Ch. XXI). This is why contestable control rights and takeover threats instantiate the republic’s selection mechanism inside large organizations.

The triad also disentangles interest from profit, avoiding policy confusions. Interest does not derive from the productivity of capital or from entrepreneurial skill; it is the discount rooted in universal time preference (Ch. XIX). Profit is contingent, the net result of superior appraisal, and can be negative (loss) (Ch. XV §10; Ch. XXI). Suppressing interest below time preference through credit expansion falsifies calculation and recruits entrepreneurs into lines later revealed as malinvestments (see Section 9; Ch. XX). Taxing “profits” when the measured residual merely compensates for higher replacement costs consumes capital (Ch. XXI §6; Ch. XXVII). And treating sophisticated speculation as aberrant misses that every plan entails a view about future prices; speculation is a subset of entrepreneurship, not its opposite (Ch. XV §10).

For governance, this means our policy design should bind residual risk to plan-makers. “Champion picking” and loss guarantees sever entrepreneurship from responsibility, degrading judgment and slowing selection. The virtue of republican commercial law—general rules on property, contract, entry/exit, and bankruptcy—is precisely that it locates responsibility and enforces it through an honest profit/loss test (Ch. XXI). This is the organizational micro-mechanism by which Section 1’s republics of letters, science, and entrepreneurs stay braided: scholars disclose, engineers instrument, firms plan—and residual claimants decide and learn.

7.3 Interest, Credit Expansion, and the Trade Cycle: Why Booms Miscalculate and Busts Recalculate (Ch. XIX–XX; Ch. XV §10)

Section 3 critiqued Schumpeter’s attribution of cycles to clusters of major innovations. Mises (with Hayek’s structure-of-production emphasis and Friedman’s monetary evidence as complements) provides the alternative coordination mechanism. The interest rate is the intertemporal price that aligns the plans of savers and investors. In a regime of sound money, the market rate reflects originary interest (time preference) plus premia for expected price change and entrepreneurial components (Ch. XIX). When banks or authorities push the money rate below the natural rate compatible with time preferences—via fiduciary media expansion—they falsify calculation (Ch. XX §2). Entrepreneurs read the cheap funds as if society had saved more. They lengthen the production structure, adopting more roundabout, capital-intensive methods that only pay if consumers truly defer consumption (Ch. XX).

Because underlying time preferences have not changed, the resources needed to complete the entire new pattern—specific skills, complementary inputs, inter-stage capacity—do not exist at the necessary relative prices. The boom is therefore forced growth at wrong margins: early-stage and durable-goods sectors surge; land, construction, and capital-goods prices leap; reported profits swell thanks to illusory calculation at the distorted rate (Ch. XX §2; Ch. XXVII). This is not sustainable enrichment but malinvestment—a misallocation in kind and time.

The bust is the recalculation. As consumer-goods prices and cost squeezes reveal the inconsistency of the pattern, false profits flip to losses, write-downs follow, and the structure must shorten to match true time preferences (Ch. XX). Attempts to reflate to preserve the configuration prolong the reallocation and risk further capital consumption (Ch. XXVII). The cure is constitutionally simple and politically hard: stop distorting the coordinating price, allow relative prices and wages to adjust, let bankruptcies reassign assets, and restore a framework in which the profit/loss test again conveys reliable information (Ch. XIX–XX; Ch. XXI).

Three clarifications complete the republican reading. First, the theory does not require a prior technology shock; mispriced credit can coordinate errors across thousands of plans by itself (Ch. XX). Second, the boom’s “full employment” is illusory: labor is employed in a pattern that cannot be completed; the bust does not destroy what would otherwise have endured—it recognizes that part of the apparent wealth never existed at true costs (Ch. XX; Ch. XXI §5). Third, this Austrian transmission mechanism is complementary to Friedman–Schwartz’s empirical finding that monetary variability explains much cycle amplitude; Mises tells us how monetary disturbance degrades the calculation environment entrepreneurs use, while Hayek explains where the mispricing bites across the structure of production.

Reinserted into our broader critique, the lesson is straightforward. Cycles need not originate in innovation; they frequently arise from monetary-credit

regimes and can swamp or dampen a near-continuous portfolio of small discoveries. A Schumpeterian focus on innovation clusters therefore over-aggregates the supply of novelty and under-models the monetary coordination that actually drives macro amplitude. A republican constitution—sound money, general rules, contestable markets—keeps the coordinating prices honest so that the republics of letters, science, and entrepreneurs can keep compounding useful knowledge into useful industry.