

Research on a Novel Social Welfare Framework Based on In-Kind Benefits and Contractual Consumption Systems

ABSTRACT

In the post-industrial era, overcapacity and demand contraction coexist, while precautionary savings and corporate reluctance to raise wages lock society into a destructive zero-sum equilibrium. Traditional welfare instruments—cash transfers, UBI, and fiscal stimuli—fail to prevent leakage, inflation erosion, or fiscal penetration.

This study proposes and rigorously demonstrates a novel welfare framework based on in-kind defensive guarantees and contractual consumption. The system operates through three pillars: (1) a minimalist, de-industrialized material safety net decoupled from monetary inflation; (2) unlimited emergency credit collateralized by implicit labor and spatial mobility, eliminating precautionary savings; and (3) voluntary contracts where signatories cede consumption discretion in exchange for survival security, with default triggering temporary mobility restrictions—enabling a forced marginal propensity to consume of unity.

Through axiomatic proof, multi-agent simulations, and extreme stress testing, the framework achieves: fiscal self-sustainability via economies of scale; internalization of wage externalities, ending the wage-profit zero-sum game; and Pareto-compatible self-selection that targets resources precisely without coercion. The system converges bidirectionally—as an implicit safety anchor in high-income equilibrium, or as a wealth-reshaping common-prosperity

engine in full participation. A dual-track transition pathway from local sandbox testing to market-spontaneous global substitution ensures low-friction implementation.

This research offers a paradigm shift in welfare economics and stabilization theory, providing a logically closed, technologically feasible blueprint for resolving secular stagnation and social trust deficits without undermining free-market pluralism.

Keywords: Contractual Consumption; In-Kind Welfare; Precautionary Savings; Wage Recycling; Mechanism Design; Endogenous Growth; Pareto Transition; Digital Fiat Currency; System Degradation; Common Prosperity

1. Problem Definition, Research Motivation, and Core Proposal Summary

1.1 Real-World Background and Definition of Core Pain Points

In modern macroeconomic operations, post-industrial societies are trapped in a structural dilemma of dual fragmentation: on the supply side, complete industrial supply chains and technological dividends manifest as extremely abundant—even severely oversupplied—commodity production capacity; on the demand side, however, due to obstructions in distribution mechanisms, they face chronic atrophy from long-term insufficient effective demand. The traditional "strong government, wealthy enterprises, poor households" wealth distribution pattern has driven labor-capital relations into the classic "wage-profit" zero-sum game—enterprises treat employee compensation as pure cost and dare not readily raise wages out of fear of "Demand Leakage"; residents, in turn, are forced to suppress immediate consumption due to unstable future expectations, generating a strong **Precautionary Saving Motive**.^{[1][2]} This micro-level rational precaution resonates at the macro level as a mutually destructive trust deficit where enterprises dare not raise wages and residents dare not consume, catalyzing behavioral anomalies among youth such as involution (neijuan) and "lying flat" (tangping).^{[3][4]}

However, traditional remedies confront this situation woven from "trust crisis" and "uncertainty panic" with three major theoretical blind spots:

1. **Monetary fragility of welfare:** Traditional subsistence allowances or Universal Basic Income (UBI) rely heavily on currency circulation. During macroeconomic turbulence or inflationary cycles, monetary welfare is highly susceptible to substantial purchasing power depreciation and tends to sediment into savings, failing to precisely feed back into the real economy.^{[5][6]}
2. **Long-term anchoring of internal demand by sudden expenditures:** The core reason residents dare not deplete savings for high-value consumption is the lack of a safety cushion when facing sudden heavy-asset demands such as medical emergencies or major misfortunes.
3. **Fiscal penetration and rent-seeking from overreach:** Traditional welfare often possesses "preemptive" and "undifferentiated" characteristics, easily triggering competition among high-net-worth individuals for public resources and excessive fiscal penetration.

Therefore, how to design a novel social welfare framework that is **independent of currency and macroeconomic cycle fluctuations**, can **completely sever micro-individuals' precautionary saving obsession**, and builds a strong labor-capital consumption trust bond **without undermining the pluralistic choices of the free market**—this constitutes the core pain point of macroeconomic policy reconstruction.

1.2 Research Motivation and Theoretical Significance

The fundamental motivation of this research is to propose an institutional design possessing both micro-level defensive and macro-level offensive capabilities, reconstructing social welfare from a purely consumptive fiscal burden into an **endogenous instrument for macroeconomic regulation, consumption trust cultivation, and labor-capital game restructuring**.

By contractually binding subsistence security with consumption obligations, this proposal attempts to prove that: by eliminating uncertainty in micro-level consumption behavior, it is possible to create an absolute, full-coverage, targeted aggregate demand pool for real-economy enterprises, thereby transforming enterprises' "wage increase costs" into "economies of scale leverage."

The theoretical significance of this research lies in:

- **At the micro-mechanism level**, introducing "consumption control rights/liquidity cession" as an asymmetric consideration for welfare acquisition, providing a novel causal explanation for "self-selection and precise mismatch elimination" in public goods theory.
 - **At the macro-evolution level**, breaking the scale fallacy that traditional proposals must rely on global population and massive industrial chains to launch, demonstrating the endogenous self-consistency of the new proposal at small spatial scales, and prospectively deducing the system's dynamic convergence patterns toward two extreme boundaries over the long run: the "unmanned implicit safety anchor" and the "all-participation common prosperity."
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1.3 Overview of the Novel "Contractual Consumption Framework" and Definition of Terms

To respond to the aforementioned pain points, this paper proposes a novel framework that upgrades labor-capital relations by reconstructing consumption behavior and solidifies the survival baseline by reducing industrial dependence—the **Contractual Consumption Welfare Framework**.

The operational logic of this proposal begins with an **ultra-low-cost in-kind welfare system** provided by the state or a strategic fund, unaffected by monetary economic turbulence. The system uses this as leverage to transact with social members, with individuals voluntarily signing contracts. Signatory residents cede their power to freely control their own consumption behavior, committing to fulfill "targeted, full-amount consumption" obligations on an internal standardized platform, thereby completely eliminating survival worries and releasing all consumption potential; if performance is not achieved, they must pay spatial mobility (e.g., temporarily not leaving the residential community) as consideration. This mechanism carries no involuntary connotation of forced provision or forced consumption. High-net-worth individuals, unwilling to pay the price of freedom, will naturally self-exclude, ensuring precise targeting of resources.

On the enterprise side, the platform voluntarily absorbs existing enterprises. Enterprises exchange their commitment to continuously raise employee compensation for the privilege of prioritized access to massive, stable orders within this commercial ecosystem. The bookkeeping costs of wage increases will be perfectly offset by the economies of scale dividends triggered by "order explosions." The proposal possesses strong spatial scalability and can operate independently at reduced enterprise standards even in small, sparsely populated areas.

To ensure academic rigor in subsequent 论证, this paper strictly defines the core concepts involved in the framework as follows:

- **Contractual Consumption System:** Refers to the rights-and-obligations framework, guaranteed by law and digital technology, established between micro-subjects enjoying welfare guarantees and the macro welfare system. Individuals, based on rational choice, voluntarily relinquish the power to freely control their consumption behavior, committing to fulfill the obligation of "targeted, full-amount consumption within specific ecosystems and specific cycles," in exchange for an absolute survival safety net immune to free-market cyclical shocks. If, within a specific cycle, they are unable or refuse to complete full-amount consumption due to subjective reasons, they must cede partial freedom of spatial movement (e.g., restricted entry/exit of residential communities) in subsequent cycles as liquidity default consideration.
- **Defensive State Material Welfare & Special Credit System:** A non-monetized guarantee network led by the state or strategic funds, following the logic of "guaranteeing survival rather than desires." This system focuses on large-batch centralized production and centralized residential management of minimalist physical goods required for basic human survival (with categories substantially converged), with core elements concentrated toward agriculture and primary resource products (reducing dependence on industrial supply chains), possessing ultra-low marginal costs and natural anti-inflation/anti-economic-cycle turbulence attributes. It simultaneously includes an uncapped special loan mechanism for sudden needs: individuals are prohibited from borrowing again until previous loans are fully repaid, and default requires "ceding workspace freedom and accepting designated endogenous work" as implicit asset collateral, thereby eliminating the entire society's deposit-for-emergencies mentality.
- **Internal Commercial Loop / Wage Recycling Loop:** A closed/semi-closed industrial chain integration coordinated by the system's parent fund that carries contractual consumption circulation. This ecosystem utilizes existing social enterprises to provide standardized consumption platforms for contract-signing residents. Enterprises, by committing to continuously raise employee compensation, gain opportunities for prioritized access to large order volumes within this ecosystem, along with the system's promotional assistance and coordination, using the dividends from scale effects to compensate for the income decline caused by their compensation increases; employees, in turn, receive substantial wage increases due to internal consumption vitality, further enhancing their absolute consumption capacity. The ultimate goal of this commercial loop is to achieve substitution for the external global commercial loop. Its primary purpose is to cultivate consumption habits, establish consumption trust between consumers and enterprises, ensure that corporate wage increases do not become one-sided pure expenditures but return to enterprises as quickly as possible through consumption behavior (i.e., satisfying employee needs without creating financial difficulties for enterprises), thereby

preparing the social institutional groundwork for achieving the same effect across the entire society.

2. Theoretical Foundations, Preliminary Deduction, and Proposal Comparison

Any disruptive socioeconomic proposal must not only directly address real-world pain points but also possess rigorous logical self-consistency at the underlying causal chain level. This chapter aims to complete the transition from "realistic conception" to "academic mechanism." We will first, through causal deduction, deconstruct the dynamic linkage process of "baseline material security—contractual consumption—wage recycling," revealing its internal momentum for breaking the traditional labor-capital zero-sum game and achieving spatial elasticity; subsequently, we introduce contract economics, welfare economics, and endogenous growth theory to provide solid academic endorsement; finally, through multi-dimensional horizontal comparison, we establish the framework's pioneering position in the contemporary macroeconomic policy spectrum.

2.1 Preliminary Logical Deduction of the Proposal's Success

The core of this proposal's successful operation and strong vitality lies in **stripping the deep binding of basic survival to the modern complex industrial system** and, through "consumption freedom cession," **transforming micro-level discrete, random purchasing behavior into macro-level "deterministic, full-recycling aggregate demand."** The causal deduction chain that breaks the traditional paradox of "wage increases necessarily squeezing profits" is as follows:

Link 1: Minimalist Stripping of the Survival Baseline and Complete Elimination of "Precautionary Savings"

The starting point of the deduction is built upon the "Defensive State Material Welfare & Special Credit" mechanism on the supply side. The system provides minimalist survival materials—de-industrialized (core production factors reduced to land, sunlight, and mature technology), mass-produced in large batches—thereby reducing guarantee costs to the limit. Simultaneously, for individuals' sudden heavy-asset demands (e.g., major

medical treatment), the system provides uncapped special loans, using "spatial/employment freedom" (failure to repay requires accepting designated work assignments) as implicit asset collateral.

- **Logical Result:** This mechanism fundamentally severs residents' "deposit-for-emergencies" psychology arising from fear of future uncertainty. Residents dare to convert all current income into immediate consumption because their survival baseline and extreme risks have been fully underwritten by the state at ultra-low cost and independently of monetary fluctuations.^{[2][1]}

Link 2: Non-Preemptive Contracts and the Generation of a Deterministic "Demand Pool"

Under the expectation of a worry-free baseline, residents, based on rational choice, voluntarily sign "contractual consumption" agreements with the system. Individuals cede absolute control over their consumption behavior, committing to "targeted, full-amount consumption" within the internal ecosystem; if they default, they must accept temporary restrictions on entering/exiting residential communities—a spatial mobility constraint. This non-preemptive "freedom-for-security" design constitutes a natural self-selection threshold, causing high-net-worth individuals capable of surviving in the free market to voluntarily exit, achieving precise focus of public resources.^{[7][8]}

- **Logical Result:** The system successfully packages the released consumption potential of countless micro-individuals, through legal contracts, physically, into a "deterministic aggregate demand pool" that absolutely cannot leak and is 100% monetizable.

Link 3: Labor-Capital Mutual Trust Reconstruction and Ultra-Rapid "Wage-Profit" Recycling

When enterprises in the internal commercial ecosystem commit to continuously and substantially raising employee compensation, the system directs the massive orders from the aforementioned "deterministic aggregate demand pool" preferentially to these enterprises, providing promotional and resource-matching support. In traditional markets, enterprise wage increases face the fatal risk of "demand leakage" (employees depositing money in banks or purchasing competitor products)^[9]; under the constraints of this contractual framework, employees' surging purchasing power must, within extremely short clearing cycles, flow back 100% to ecosystem enterprises through full-amount consumption contracts.

- **Logical Result:** A perfect "Wage Recycling Loop" is formed. The high wages paid by enterprises are no longer one-sided sunk costs but rapidly transform into their own massive operating revenues; employees achieve substantial income leaps and consumption upgrades.^[10]

Link 4: Economies of Scale Hedging and Local Spatial

Scalability

Due to capturing massive, highly deterministic orders, enterprises' excess capacity is instantly activated, with equipment utilization rates and capital turnover rates reaching their peaks. Relying on the multiplier effect of Economies of Scale, enterprises' unit fixed costs are extremely diluted, and the new excess profits suffice to offset—or even surpass—the bookkeeping costs from wage increases.^[11] More critically, this transmission chain possesses strong **spatial scalability and low-threshold launch characteristics**. Even in economically underdeveloped, sparsely populated small regions, enterprise entry barriers can be correspondingly lowered; even in extreme cases, if no external private enterprises participate initially, the process can still execute closure relying solely on the state's basic material flows. The proposal can rapidly achieve proof-of-concept at extremely small scales, resolving local groups' survival needs and driving small-region economic recovery.

Deduction Conclusion: Point-to-Surface Global

Substitution and Dynamic Convergence

Through the above four-link deduction, the system successfully establishes an unbreakable "labor-capital consumption trust" internally. Due to the elimination of survival expenses, internal employees' absolute consumption capacity and enterprise profits will rise simultaneously. This risk-free, high-yield regional wealth effect will spontaneously attract more external large enterprises and residents to actively join. The system then expands rapidly outward from local pilots, ultimately achieving gradual substitution for the external global commercial loop. When trust is fully established throughout society and all enterprises realize that "employee consumption decline equals enterprise profit damage," the mechanism completes its historical mission, degenerating into the ultimate safety guarantee symbol of society, maintaining the permanent spontaneous stability of a high-income, high-consumption economy.

2.2 Core Theoretical Support System

This proposal is not a utopian conception divorced from real economic laws but rather a deep reconstruction of classical economic theory in the digitalized, post-industrial era. By introducing mechanisms such as asymmetric costs, survival-factor decoupling, and closed-loop clearing, the proposal fundamentally eliminates the "information asymmetry" and "externality" problems in traditional economic models. The following provides detailed theoretical proof of the aforementioned logical deduction from four dimensions: contract economics, behavioral economics, endogenous growth theory, and welfare economics.

2.2.1 Contract Economics and Mechanism Design:

Asymmetric Costs and Perfect Self-Selection

The biggest management pain point of traditional social welfare systems lies in "information asymmetry"—the state cannot accurately identify who the truly vulnerable groups are, leading to high administrative verification costs and widespread power rent-seeking. Simultaneously, undifferentiated monetary distribution easily breeds "Adverse Selection," where capable individuals choose to disguise themselves or deliberately reduce income to defraud welfare.

This proposal perfectly nests the "Incentive Compatibility Constraint" from mechanism design theory. Rather than using administrative directives for forced distribution, it designs a screening contract with "consumption freedom and spatial mobility" as implicit pricing.

- **Opportunity cost differences among heterogeneous individuals:** Under this mechanism, different wealth-endowed groups calculating the same contract arrive at vastly different "opportunity costs." For high-net-worth individuals or those capable of earning excess profits in the free market, the utility value of freely controlling consumption and the freedom to move across regions at will (i.e., the consideration of "not defaulting and not being confined to the community") is extremely high. Requiring them to cede these freedoms in exchange for minimalist material guarantees yields opportunity costs far exceeding benefits, so they will rationally calculate and actively refuse (self-select out) to join the system.
- **Precise mismatch elimination:** Conversely, for groups deeply trapped in involution, unemployment, or extreme resource scarcity, they already lack consumption capacity and trial-and-error capital; the economic utility of freedom is at an extremely low level for them. At this point, using idle "freedom" to exchange for an absolute safety net is the unique solution for maximizing their utility. This "non-preemptive consideration exchange" theoretically achieves a zero-administrative-cost perfect self-selection, ensuring that public welfare resources are focused without omission on genuine bottom-level needs, fundamentally eliminating welfare crowding-out and rent-seeking behavior.^{[12][7]}

- **Closure of incomplete contracts:** In traditional free markets, labor contracts signed between labor and capital are "incomplete contracts" because they only specify labor supply but cannot specify where workers' wages go, leaving enterprises facing macro demand uncertainty. This proposal incorporates individuals' expenditure behavior into the contractual framework through "targeted, full-amount consumption" clauses, closing the demand-side uncertainty gap at the macro level.^{[13][14]}

2.2.2 Behavioral Economics: Zeroing of Intertemporal Risk

Discounting and the Disintegration of "Precautionary Savings"

In classical macroeconomics, the core mechanism explaining weak domestic demand is the **Precautionary Saving Motive**.^{[1][2]} When micro-subjects hold pessimistic expectations about future income stability and sudden heavy-asset expenditures (such as major illnesses, unexpected misfortunes), their intertemporal choice models inevitably manifest as substantially suppressing current consumption and converting currency into savings to hedge against future "black swan" risks.

This proposal's "defensive minimalist material safety net + uncapped special credit mechanism" achieves both physical and psychological zeroing of micro-subjects' risk discount rates at the behavioral economics level.

- **Unlimited credit and implicit labor collateral:** The credit logic of traditional financial systems is built on "existing asset collateral"—the more vulnerable the group, the less access to emergency credit, forcing them to cling to savings. The uncapped special loans provided by this proposal innovatively transform collateral from "explicit capital" to individuals' "implicit future labor and physical freedom." As long as individuals are willing to cede employment freedom upon default (accepting system-designated work for debt repayment), the system assumes unlimited underwriting responsibility.
- **Limit release of the Marginal Propensity to Consume (MPC):** From a behavioral economics perspective, when individuals clearly know that "regardless of what extreme hardship is encountered, the system will provide a safety net, and the only cost is temporary labor freedom rather than existential destruction," their fear of future uncertainty is completely removed. In mathematical models, their future risk premium approaches zero. This dual psychological and institutional unbinding forces the signing group's **Marginal Propensity to Consume (MPC) for current incremental income to be forcibly raised to 100% (or extremely close to 1)**. They no longer have any motivation to maintain precautionary savings, converting every penny of wages issued by the internal commercial ecosystem into ferocious immediate purchasing power.^{[15][16]}

2.2.3 Endogenous Growth Theory: The End of the "Wage-Profit" Zero-Sum Game and Economies of Scale Dividends

Under the neoclassical economic framework, wages are rigidly defined as production costs, and labor-capital relations are essentially a zero-sum game over surplus value distribution. However, this proposal's "internal commercial ecosystem" mechanism uses endogenous growth theory to reconstruct this equation, transforming originally mutually exclusive variables into synergistic growth engines.

- **Internalization of demand externalities:** In an open free market, when Enterprise A raises employee wages, employees may purchase Enterprise B's products. Enterprise A bears all costs while Enterprise B enjoys the demand spillover dividends. This "externality" leads to no enterprise daring to take the initiative to raise wages. This system, through "targeted full-amount consumption contracts," constructs a rigorous economic firewall that achieves complete internalized clearing of demand externalities. The purchasing power created by collective wage increases across the enterprise group is completely constrained to be digested within the ecosystem under extremely high currency circulation velocity. At this point, "wages paid to employees" theoretically become not sunk costs but rather transformed into "targeted purchase orders directed at oneself."
- **Activation of increasing returns to scale:** The proposal's underlying commercial logic heavily relies on **Economies of Scale**. In modern industrial systems, fixed costs (R&D, factories, equipment depreciation) account for an extremely high proportion, while marginal production costs are extremely low. Since the contractual consumption system instantly aggregates massive, risk-free deterministic orders, capacity utilization rates of enterprises within the ecosystem are pushed to their limits. On the Long-Run Average Cost (LRAC) curve, enterprises rapidly slide toward the lowest-cost range. The diluted unit fixed costs from geometric increases in output are sufficient to generate massive excess profits.
- **Dynamic endogenous growth cycle:** This mechanism frees the system from dependence on external factor injections. Increased enterprise profits support further fulfillment of continuous wage-increase commitments, which in turn immediately amplifies consumption demand through contracts. This institutional-forced high-pressure internal circulation achieves dynamic self-empowerment in the economic sense, causing the internal ecosystem to exhibit resource turnover rates and capital returns far exceeding the external traditional market.^[11]

2.2.4 Welfare Economics: Absolute Decoupling of Survival Factors and Pareto Improvement

The reason modern social welfare systems are increasingly burdensome lies in deeply binding "baseline survival needs" to the "highly complex industrial monetary system." When the economy encounters cyclical recessions or severe inflation, the fiscal cost of maintaining equivalent welfare levels rises exponentially.

This proposal's supply-side design of "minimalist and de-industrialization-dependent centralized mass production" achieves a highly disruptive "survival factor decoupling" in welfare economics theory.

- **Physical anchoring of defensive value:** Reducing the production factors of guaranteed materials to "land + sunlight + mature primary agricultural/processing technology" means stripping the minimum cost of maintaining human survival from the turbulent global finance, currency exchange rates, and high-end industrial supply chains. Regardless of how external currency is over-issued or industrial chains are disrupted, the marginal supply cost of such survival materials based on natural factors and centralized mass production remains at an ultra-low and absolutely stable level. This physical-level anchoring completely immunizes the impact of traditional economic cycle fluctuations on the social safety baseline.
- **Pareto improvement of total social utility:** From the perspective of overall social resource allocation efficiency, this proposal achieves a strict Pareto improvement.
- First, bottom-level groups exchange non-liquidizable freedom for in-kind survival guarantees and unlimited emergency credit, achieving utility leaps;
- Second, high-net-worth groups, by voluntarily not participating, have their existing interests unaffected by any administrative deprivation or forced tax transfer;
- Finally, enterprises within the ecosystem escape the nightmare of demand uncertainty and obtain scale profits through capacity release. With no party suffering absolute interest damage, the system utilizes excess capacity and idle labor to create massive endogenous demand increments, achieving substantive outward expansion of the entire society's macro welfare frontier.^[17]

2.3 Horizontal Multi-Dimensional Comparison with Existing Mainstream Proposals

To precisely situate the historical position and institutional advantages of the "novel welfare framework based on contractual consumption and internal ecosystems" (hereinafter "Contractual Consumption Framework") within the academic spectrum, this section conducts a multi-dimensional horizontal comparison with the four most representative mainstream paradigms in modern macroeconomic governance: free-

market capitalism, Keynesian direct money distribution, Universal Basic Income (UBI), and absolute planned economy.

This comparison not only demonstrates the new proposal's structural breakthroughs in overcoming traditional economic blind spots but also proves its theoretical necessity and evolutionary superiority in addressing the "dual crisis of overcapacity and demand contraction" in the post-industrial era.

2.3.1 Horizontal Comparison Matrix of Core Dimensions

Before detailed discussion, this paper first establishes a comparison matrix covering five core macroeconomic dimensions to intuitively present the governance effectiveness differences among proposals.

Governanc e Paradigm	Fiscal Sustainabi lity	Labor Supply Crowding- Out Effect (Moral Hazard)	Inflation Resistance	Aggregate Demand Stimulation Efficiency (MPC Conversion Rate)	Social Equity and Precision
Free Market Capitalism	Extremely High (no fiscal underwritin g needed)	Extremely Low ("no work means hunger")	Relatively High (self- regulated by market supply- demand)	Extremely Low (wealth concentrate s upward, trapped in demand insufficiency) ^[18]	Extremely Low (Matthew effect, widening wealth gap)
Keynesian Money Distributio n	Low (relies on deficit and debt expansion)	Medium (short-term subsidies weaken job- seeking willingness)	Low (excessive currency issuance easily triggers generalized price increases)	Medium (savings leakage and liquidity trap exist)	Medium (alleviates short-term pain but cannot eradicate structural problems)
Universal Basic	Extremely Low (full-	Extremely High	Extremely Low	Relatively Low	High (absolute

Governanc e Paradigm	Fiscal Sustainabi lity	Labor Supply Crowding- Out Effect (Moral Hazard)	Inflation Resistance	Aggregate Demand Stimulation Efficiency (MPC Conversion Rate)	Social Equity and Precision
Income (UBI)	coverage unconditio nal money distribution easily penetrates fiscal capacity)	(unconditio nal distribution encourages complete "lying flat") ^{[6][5]}	(massive base money injection fuels hyperinflati on)	(equally faces precautiona ry savings and capital outflow)	egalitariani sm but lacks targeted precision)
Absolute Planned Economy	Medium (relies on state directive allocation, prone to rigidity and stagnation)	Low (forced labor, but hidden shirking exists)	High (forcibly suppresses inflation through price controls) ^[19]	Low (lacks price signals, leading to ineffective production and distribution)	Superficial ly high, substantive ly medium (prone to bureaucrati c rent- seeking and power- based allocation)
Contractu al Consumpt ion Framework (This Proposal)	Extremely High (baseline in-kind decouplin g + internal commerci al loop self- sustaining)	Extremely Low (freedom considerat ion exchange and default labor collateral)	Extremely High (non- monetized welfare, cutting off over- issuance transmissi on chain)	Extremely High (mandator y contract locking MPC=1, precise recycling)	Extremely High (self- selection mechanis m achieves absolute precision targeting) ^{[8][7]}

2.3.2 Deep Deconstruction of the Proposal's Theoretical

Advantages

Based on the above matrix, it is clear that the four traditional proposals, when addressing current economic dilemmas, each fall into insurmountable logical dead ends across different dimensions. The Contractual Consumption Framework achieves breakthroughs against each of these dead ends through re-decomposition and recombination of underlying elements.

1. Comparison with Free-Market Capitalism: From "Zero-Sum Game" to "Trust and Dividend Sharing"

- **The free market's dead end:** The free market assumes "supply automatically creates demand (Say's Law)" and that "wealth has a trickle-down effect." However, in the post-industrial era, both hypotheses have completely collapsed. Due to the lack of institutional consumption trust, enterprises fall into the zero-sum game of "wage increases mean profit damage," ultimately leading to aggregate demand contraction across society.
- **The new proposal's dimensional reduction strike:** The Contractual Consumption Framework does not eliminate the market but **repairs the market's externality defects**. It tightly binds the interests of enterprises and consumers through the internal commercial ecosystem. While retaining enterprises' profit-maximization motive (economies of scale), it eliminates demand-side uncertainty through "targeted consumption contracts," enabling capital to dare to raise wages and expand, achieving a "labor-capital win-win" Nash equilibrium that the free market cannot spontaneously form in its purely natural state.

2. Comparison with Keynesian Direct Money Distribution: From "Liquidity Trap" to "Absolute Recycling"

- **Keynesianism's dead end:** Keynesianism advocates that governments borrow and directly distribute cash to residents during economic recessions. However, since the destination of residents' funds cannot be controlled, massive fiscal injections often fall into a **Liquidity Trap**^[15] in the face of "precautionary savings"; alternatively, funds flow to external markets, creating the embarrassing situation of domestic fiscal capacity paying for other countries' capacity, causing extreme attenuation of the fiscal multiplier.
- **The new proposal's dimensional reduction strike:** This proposal completely abandons the tradition of using fiat currency as the welfare carrier. First, defensive in-kind guarantees and unlimited credit authorization sever residents' saving obsession at the source; second, programmable "circulation vouchers" and "targeted full-amount consumption contracts" physically and institutionally seal

off channels for capital sedimentation and outflow. Every unit of resource injected by the system has its Marginal Propensity to Consume (MPC) forcibly locked at 1, achieving the theoretical limit of aggregate demand stimulation efficiency.

3. Comparison with Universal Basic Income (UBI): From "Encouraging Lying Flat" to "Self-Selection and Responsibility Reciprocity"

- **UBI's dead end:** The UBI advocated in recent academic discourse promotes unconditional cash distribution to all citizens. Its fatal weaknesses are: first, the extremely high fiscal cost makes it unsustainable; second, its "unconditionality" completely severs the connection between rights and obligations, easily inducing substantive "lying flat" among the bottom-tier labor force; third, the rich and poor receive equally, creating massive resource waste.^{[20][5]}
- **The new proposal's dimensional reduction strike:** This proposal introduces "rights-obligation reciprocity" and "asymmetric costs" in its design. Individuals must cede the power to freely control consumption—and even cede physical and employment freedom upon default—to obtain the absolute survival safety net. This "paying the price of freedom" mechanism constitutes a perfect **self-selection mechanism**. The wealthy and capable, unwilling to pay such freedom costs, actively stay away, eliminating welfare abuse; individuals remaining in the system must maintain system operations by fulfilling consumption contracts or labor collateral, fundamentally dissolving the moral hazard of "unprincipled lying flat."

4. Comparison with Absolute Planned Economy: From "Comprehensive Directive Rigidity" to "Baseline Stripping and Market Endogeneity"

- **Planned economy's dead end:** Absolute planned economy attempts to eliminate overproduction by abolishing price signals and centralized directive allocation. This not only leads to extremely low innovation efficiency but also falls into the quagmire of shortage economies due to information asymmetry (the inability to precisely statistically capture humans' complex desires).
- **The new proposal's dimensional reduction strike:** The Contractual Consumption Framework extremely restrainedly **limits the boundaries of "planning."** It only employs large-batch centralized production and distribution for the most basic, most standardized, de-industrialization-dependent "basic survival materials," while leaving higher-level consumer goods, services, and wage-increase incentives entirely to market-oriented enterprises within the "internal commercial ecosystem" to compete and provide. It both utilizes the advantage of planning to extremely compress survival costs and retains the vitality of market mechanisms in resource allocation and micro-efficiency enhancement, achieving a perfect nesting of "absolute bottom-line guarantee" and "top-level commercial vitality."

Summary

In summary, the Contractual Consumption and Endogenous Commercial Circulation Framework is not a simple patch on any of the aforementioned existing systems but a paradigm leap built upon reconstructing "rights-obligation reciprocity," "survival factor dimensional reduction," and "demand uncertainty elimination." At extremely low fiscal maintenance costs, it theoretically achieves multiple macroeconomic governance objectives including inflation resistance, anti-lying-flat, extreme domestic demand stimulation, and precise targeting, demonstrating rigorous logical self-consistency and extremely high evolutionary elasticity.

3. Core Mechanism Design and Detailed Deduction

The preceding theoretical discussion established the proposal's logical superiority in macroeconomic governance. This chapter will dissect this "black box" in depth, transforming it into an operable, verifiable institutional engineering blueprint.

Any systematic macroeconomic restructuring requires tight physical and legal closure across the supply side (how baseline resources are generated), the mechanism side (how subjects interact and clear), and the evolution side (how the system expands and converges). This chapter will detail the three core modules of the Contractual Consumption Framework: first, elaborating the "Defensive State Material Guarantee and Credit Mechanism" as the system's cornerstone, revealing how it strips survival risks at extremely low cost; second, analyzing the circulation pathways and rigid constraints after micro-subjects sign contracts; finally, deducing the system's bidirectional boundary convergence patterns at different spatial scales.

3.1 Defensive State Material Baseline Guarantee and Risk Hedging Mechanism (Supply-Side Design)

The collapse of welfare systems often begins with guarantee costs spiraling exponentially with macroeconomic fluctuations. The core innovation of this proposal's supply side is constructing a "physical defense network independent of the monetary system and

complex industrial chains." This mechanism follows the absolute bottom-line logic of "guaranteeing survival rather than desires," achieving minimization of total welfare supply costs and maximization of system immunity through production factor dimensional reduction, physical spatial agglomeration, and institutional reconstruction of intertemporal credit.

3.1.1 Minimalist Stripping of Survival Factors and De-Industrialization Dimensional Reduction

The heavy cost of traditional welfare systems lies in attempting to use money to purchase highly industrialized, service-oriented market goods to meet bottom-level needs, deeply binding welfare costs to global inflation, supply chain frictions, and technological barriers. This proposal completely severs this transmission chain:

- **Extreme Category Convergence:** The material guarantees provided by the system are strictly limited to the most bottom-level needs for maintaining vital signs and basic social functioning (such as basic carbohydrate and protein rations, standardized sleep and sanitary spaces, and the most basic medical raw materials). The system actively excludes all improvement-oriented demands carrying "experience, premium, or brand" attributes. This extreme category restraint compresses demand volume and production complexity to theoretical minimums.
- **De-industrialization of Core Production Elements:** The production network for these minimalist survival materials does not connect to the highly segmented, fragile modern industrial division of labor. Its upstream raw materials strictly tilt toward primary natural resources—"**relying solely on land, sunlight, and water.**" Primarily based on agriculture and the most basic light processing, the relevant production technologies are at absolutely mature stages of their life cycles, with no "bottleneck" technical difficulties or patent barriers.
- **Immunity to Economic Cycles:** Due to complete stripping of dependence on high-end industrial machine tools, complex chips, and international energy settlement pricing, the marginal cost of this material guarantee system is nearly constant. Regardless of what scale of financial tsunami, hyperinflation, or foreign exchange depletion erupts in the external world, as long as the natural endowments of land and sunlight exist, the system's supply foundation will not waver. This "dimensional reduction production" establishes the unbreakable physical anchor point of the entire welfare framework.

3.1.2 Physical Agglomeration and Large-Batch Centralized Mass Production under Economies of Scale

After determining the categories and factors of minimalist materials, the system further drives overhead costs toward zero through spatial planning and engineering management.

- **Absolute large-batch centralized production:** Since materials are highly standardized with no individual differences, the production side can operate at maximum load without hesitation. According to the principle of Economies of Scale, as output approaches infinity, the fixed asset depreciation and R&D management costs allocated to each unit of survival material approach zero.
- **Agglomeration dividend from centralized residence and unified management:** Signatory groups are not scattered throughout complex modern urban grids but adopt high-density centralized residence patterns. This spatial agglomeration completely eliminates the extremely high "last mile" logistics costs and losses in traditional urban welfare distribution. The pipeline laying and management maintenance of water, electricity, network, and basic sanitation public services achieve the most efficient reuse within the smallest physical radius. Through this unified scheduling similar to a "super-large closed community," the actual fiscal costs paid by the state may be only a tiny fraction of traditional monetary decentralized subsidies.

3.1.3 Implicit Collateral-Type "Uncapped Special Credit" and Intertemporal Risk Hedging

If minimalist material guarantees solve daily survival, then the root of the "precautionary savings" macroeconomic tumor lies in micro-subjects' intertemporal fear of future sudden heavy-asset demands (such as terminal illness or major accidents). As long as this fear exists, residents will never spend their last dollar.

To this end, beyond physical guarantees, the system ingeniously nests a financial derivative tool aimed at completely zeroing risk discount rates—the **"Uncapped Special Loan Mechanism."**

- **Unlimited credit exposure and zero financial collateral:** Facing sudden major disasters encountered by signatory residents, the state or strategic system provides special loans with no upper limit, designed to fully cover their medical or disaster relief expenditures. Unlike traditional financial systems, this credit does not examine individuals' fixed assets, credit scores, or bank transaction histories, eliminating the "credit exclusion" phenomenon of bottom-level groups in traditional financial markets.
- **Asymmetric implicit collateral: with "liquidity/labor pricing" as the subject matter:** Unlimited credit necessarily entails corresponding constraints. The system innovatively transforms collateral from "explicit capital" to individuals' "spatial freedom and labor sovereignty." After obtaining the uncapped loan, if the

individual can maintain monthly routine repayments through their own ability, their employment freedom inside and outside the ecosystem is not disturbed in any way; however, if the individual is unable to repay (technical default), they must pay "work freedom" as consideration—the system has the right to compulsorily arrange their entry into designated positions within the internal commercial ecosystem for labor, offsetting debt through deduction of labor value, with the next credit authorization only opening after the loan is fully settled.

- **Theoretical deduction endpoint: Mandatory capping of the Marginal Propensity to Consume (MPC):** This mechanism possesses overwhelming power in behavioral economics. It transmits an absolutely clear certainty signal to all social members: "Even if catastrophic disaster strikes, the state will provide a safety net; the worst outcome is losing employment freedom for a period, not the end of life or family bankruptcy." When the worry of sudden large expenditures is completely erased, the logic of "saving for emergencies" simultaneously goes bankrupt mathematically and psychologically. Currency circulating in the system completely loses its "store of value" function, reverting to a pure "medium of exchange" attribute. The proportion of residents' incremental income converted into immediate consumption is pushed to theoretical extremes, providing an inexhaustible water supply for the subsequent "order explosions" in the internal commercial ecosystem.

3.2 Transmission Process and Micro-Constraints of the Contractual Consumption System (Mechanism-Level Design)

After establishing the ultra-low-cost foundation through the "Defensive State Material Guarantee" on the supply side, this framework requires a rigorous transmission mechanism to convert the state's welfare costs into effective demand capable of driving the macroeconomy. The "Contractual Consumption System" serves precisely as this core transmission hub.

At the mechanism level, this system reconstructs traditional one-way welfare distribution into a two-way transaction based on "asymmetric considerations." Through digital programmable contracts, the system achieves complete closure of welfare distribution, consumption obligation fulfillment, and default correction, establishing frictionless compatibility with the external free market at the legal level.

3.2.1 Contract Circulation Logic and the "Freedom-Security" Asymmetric Exchange

The formation of contracts is based on the complete voluntariness of micro-subjects (Voluntary Exchange). Its core circulation process can be abstracted as the following rigorous transmission chain:

Core Transmission Flow:

[Individual Voluntary Signing]

→ [Obtain Ultra-Low-Cost In-Kind Safety Net and Unlimited Credit]

→ [Commit to Targeted, Full-Amount Consumption within Specific Ecosystem]

Branching Node (Performance/Default Constraints):

- **(Path A - Performance Completed):** Triggers internal commercial loop order recycling → drives enterprise scale expansion and wage increases → system welfare level dynamically upgrades.
- **(Path B - Performance Not Completed):** Triggers "consumption liquidity consideration constraint" → temporarily restricts individual spatial movement freedom (e.g., not leaving residential community) → forces completion of psychological and behavioral correction.

In this process, individuals "optionize" their future consumption behavior and cede it to the system. The state resolves all their survival worries, and as consideration, individuals must conduct full-amount immediate consumption of all premium income they obtain within the system-designated "internal commercial ecosystem." This institutional arrangement achieves **demand-side uncertainty stripping**—physically "welding" tens of thousands of originally random-walking micro consumption intentions through legal contracts into an absolutely certain, ultra-high-velocity macro demand pool.

3.2.2 Consumption Liquidity Consideration Constraint

(Default Prevention and Behavioral Correction)

Any contract without default penalty mechanisms inevitably falls into the "tragedy of the commons." However, in this proposal, since individuals are already within the welfare baseline, traditional "economic fines" would lose meaning and violate humanitarian bottom lines. To this end, the system innovatively introduces "spatial mobility cession" as the implicit default consideration.

- **Physical spatial restriction mechanism:** If a signatory resident fails to complete full-amount consumption contract indicators within a specific clearing cycle due to subjective reasons (such as hoarding or refusing to consume), the system's underlying digital smart contract is triggered, temporarily recovering the individual's **spatial movement freedom**. In practical operation, this constraint manifests as non-punitive physical isolation (e.g., restricting entry and exit of their

residential community in the centralized guaranteed housing), until they cooperate in completing consumption indicators or entering the next recalculated cycle.

- **Compensatory dynamic hedging (institutional resilience):** The purpose of this spatial restriction is not punishment but to construct a technological firewall forcing funds to flow to real enterprises, eliminating any arbitrage space for fund hoarding. To alleviate potential negative psychological effects of this constraint, the system sets dynamic adjustment valves: when the internal commercial ecosystem operates well and the macroeconomy enters a positive cycle, the system can dynamically raise welfare levels, or even organize **collective outings, public cultural activities**, and other non-monetized methods through official coordination to meet special populations' spatial mobility needs, thereby flexibly resolving the hard friction of spatial constraints without undermining the internal capital cycle.

3.2.3 The System's Non-Preemptive Nature and "Self-Exclusion" Screening Barrier

Another theoretical high ground of this proposal's institutional design lies in its **non-preemptive (non-encroaching)** nature toward existing social order and its **natural immunity** to free-riding behavior.

- **Absolute ecological inclusiveness and pluralistic choices:** This contractual framework is a complete "optional item," not a totalitarian administrative monopoly. The implementation and execution of the proposal absolutely does not exclude or interfere with any third-party charity organizations, NGOs, or affluent classes providing free welfare to the poor. Social members can completely choose to accept external unconditional donations without signing this contract with its attached consumption and freedom constraints with the state system. This design ensures the vitality of the free market and civil society is not undermined.
- **"Self-selection and exclusion" of high-net-worth groups:** Traditional social welfare often faces implicit encroachment by middle- and high-income groups. However, this proposal, by setting the dual costs of "accepting comprehensive supervision of income and expenditure" **and** "losing spatial and employment freedom upon default," constructs an extremely robust self-selection screening barrier. For affluent classes or groups capable of solving survival problems in the free market, the opportunity cost of losing privacy supervision and personal/spatial freedom is extremely high. Therefore, they naturally would not—and absolutely will not—compete with genuinely vulnerable groups for the most basic rough food and basic shelter. This game-theory-based mechanism design

requires no massive administrative bureaucracy to verify qualifications; the system itself achieves absolute precise focus of public resources.

3.2.4 Independent Self-Sustaining without Capital

Dependence

In macroeconomic deduction, a new policy easily encounters "strikes" or resistance from capital markets. The ultimate resilience of this proposal's architecture manifests in: **at its logical starting point, it does not absolutely depend on external private enterprise participation to complete the basic closure.**

- **Basic circulation without enterprise participation:** Even if not a single private enterprise is willing to enter the internal commercial ecosystem at the initial stage, the system can still independently guarantee the survival of signatory groups and maintain society's absolute baseline stability through the model of "state unified provision of minimalist material welfare → residents perform basic service labor and basic consumption → system internal micro-circulation clearing."
- **Private enterprises as "multiplier amplifiers" rather than "ignition keys":** The participation of external enterprises is essentially an "amplifier" of system execution efficiency. When enterprises voluntarily join to pursue the massive and deterministic consumption demand within the system and fulfill wage-increase commitments, the system's evolution speed, material abundance, and welfare levels will leap exponentially. But regardless of whether enterprises enter or exit, the system's survival foundation and logical backbone always remain in the hands of the strategic parent fund representing public interests, completely eliminating systemic risks of the system being hijacked by private capital or collapsing due to capital flight.

3.3 Spatial Scalability and Bidirectional Boundary Convergence Patterns (Evolution-Side Design)

Any macroeconomic system that cannot survive in small samples is difficult to push to the whole society; if its ultimate evolutionary boundaries cannot be foreseen, it may trigger unknown disasters. This proposal possesses strong **spatial scalability** in design and exhibits highly deterministic **bidirectional convergence** patterns in long-term evolution.

This section will deduce how the system launches from micro-local areas and, after long-term operation, smoothly evolves toward the two extreme boundaries of "unmanned implicit safety anchor" and "all-participation structural reshaping."

3.3.1 Low-Threshold Local Launch and Gray-Scale

Expansion (Scale Elasticity)

Traditional macroeconomic policies (such as currency over-issuance or nationwide tax reform) often must rely on a unified national market to be effective, and once they fail, trigger global disasters. The "Contractual Consumption Framework's" outstanding advantage lies in its ability to achieve perfect closure at extremely small scales and low resource densities.

- **Micro-scale autonomy:** In small regions with sparse populations, lagging economic development, or resource depletion (such as remote county towns), large private enterprises often lack investment willingness due to low overall purchasing power. This proposal can launch at low thresholds in such regions. Since regional commercial vitality is inherently low, the system proportionally lowers the "wage increase standards" and "capacity requirements" set for entering enterprises. At this point, even if only a very small number of enterprises participate, because the system completely eliminates local residents' absolute survival expenses through minimalist material supply, these enterprises can still obtain deterministic profits far exceeding the weak external market within the closed ecosystem, achieving regional economic endogenous circulation.
- **Spatial contagion effect:** After the local closure succeeds, an "economic special zone" that eliminates survival crises and possesses smooth internal circulation will inevitably generate a massive siphon effect. Enterprises from surrounding regions, seeking risk-free orders, and residents from surrounding regions, seeking absolute survival guarantees, will spontaneously cross spatial barriers to flood into the region. This spontaneous influx driven by micro-level interests requires no forced resource allocation by the state—the system relies on its own institutional attractiveness to achieve point-to-surface **endogenous expansion**.

3.3.2 Bidirectional Boundary Convergence States in Long-

Term Evolution

Placing this model on an infinite time axis, the system will ultimately converge, depending on the macroeconomy's development level and micro-individual preferences, toward two diametrically opposed but both-superior-to-status-quo ultimate social forms.

Boundary A: Zero-Participation Convergence (Implicit Safety Anchor and High-Income Equilibrium)

When social productive forces are highly developed, the macroeconomy is sound in the long run, and residents across society have generally accumulated substantial wealth, the system will evolve to the first extreme boundary: **the state of no one joining.**

- **Deduction logic:** Since everyone is in a high-income state, no one is willing to cede their consumption freedom and spatial mobility for rough basic survival materials. Therefore, the number of system signatories approaches zero.
- **Deep mechanism: Comprehensive internalization of labor-capital trust** In this state, the proposal appears to enter a "dormant period," but in essence, the "consumption habits and labor-capital trust" behind it have been fully internalized into the social subconscious. Enterprises have deeply recognized: if they squeeze employees leading to consumption decline, their revenues will immediately collapse; if employees are insatiably demanding unreasonable high wages, enterprise bankruptcy will also harm everyone. This rational-calculation-based mutual wariness and interdependence spontaneously maintains a **high-income, high-consumption market equilibrium** across society, eliminating the need for the state to forcibly operate the internal commercial ecosystem.
- **Ultimate value: Implicit baseline symbol** Even if no one uses it, the physical existence of the proposal itself (particularly the minimalist material supply line and uncapped special loans) constitutes society's ultimate safety guarantee symbol. Like a safety house standing by at all times, it ensures all citizens that "even with truly no money, they won't starve," completely eradicating society-wide panic anxiety. Should an occasional economic crisis cause bottom-level collapse, the proposal instantly regains attractiveness, absorbing the bankrupt into the system and automatically functioning as a **counter-cyclical stabilizer.**

Boundary B: Full-Participation Convergence (Common Prosperity and Total Social Wealth Leap)

Contrary to Boundary A, under certain macro constraints, if all members of society (including originally high-net-worth groups) choose to join the Contractual Consumption Framework, the system will evolve to the second extreme boundary.

- **Deduction logic:** The occurrence of this extreme situation implies that individuals can no longer obtain utility exceeding that within the system from the external market, thus universally accepting the cession of freedom required by contracts.
- **Flattening reshaping of the wealth distribution curve:** According to mechanism design, all participants must convert their (high) salaries obtained within the ecosystem into immediate full-amount consumption through contractual force. This means wealth cannot form non-productive massive capital sedimentation in the hands of a few wealthy individuals. **The ceiling of individual wealth accumulation will be institutionally and substantially**

compressed (because excessive accumulation will face the default risk of being unable to complete full-amount consumption indicators).

- **Ultimate picture: An ultra-stable middle-class society** Since top-level wealth cannot accumulate infinitely, massive wealth is forced to flow back to physical production through high-frequency consumption, benefiting every micro-node in society's wealth increments. At this point, the macroeconomy exhibits two major characteristics:
 1. **Extreme prosperity:** Society's total effective aggregate demand and total wealth reach historical peaks, with an explosion in the number of "wealthy/middle-class" individuals.
 2. **Extreme stability:** Since labor-capital interests are highly intertwined and all social strata live under the same trust contract, contradictions arising from wealth disparity and survival panic are completely dissolved. Under this structure, the system completely eliminates traditional economic crises, achieving the most stable, most efficient common prosperity picture under the economic perspective.

Summary

In summary, the Contractual Consumption Framework, through precise mechanism design, can both launch at low cost in small areas and provide society with bidirectional safe convergence boundaries in long-term evolution. Whether as the implicit safety lighthouse or the explicit co-prosperity engine, the proposal maintains absolute macroeconomic resilience within its logical closure.

4. Existing Progress, Data Support, and Feasible Transition Pathways

Any purely theoretical macroeconomic conception, to truly land as policy practice, must cross the two thresholds of "empirical verification" and "implementation cost." This chapter aims to prove that the Contractual Consumption Framework is not a castle in the air fabricated from nothing—its core underlying logics (such as targeted stimulation, internal circulation) already have scattered genetic manifestations in human economic history and current localized policies. By integrating these existing progresses, combined with the leap in modern digital technology, this paper will demonstrate the proposal's absolute feasibility in technology and management, and deduce a smooth transition pathway with low friction and shock resistance.

4.1 Historical and Real-World Local Experiments:

Experience Extraction and Logical Deduction

Although a highly complete, digitalized "Contractual Consumption Framework" has not yet run at full scale in reality, several "genetic fragments" constituting the proposal's core mechanisms have undergone profound local experiments in the history of human macroeconomic governance and micro-enterprise development. These historical experiments often achieved remarkable results in solving specific pain points but ultimately fell into deadlock due to the singularity of institutional design or the limitations of underlying productive forces.

This section will conduct "theoretical dissection" of four types of typical local experiments in human economic history, extracting their successful economic cores, and using mathematical logic to deduce how this proposal, through mechanism reconstruction, completely overcomes their historical limitations.

4.1.1 Absolute Rationing in Crisis Periods: Revelations of Survival Stripping and Price Decoupling

When humanity faces extreme scarcity (such as wartime economies or early planned economies), states universally adopt physical rationing systems (e.g., food stamps, cloth coupons) to replace free market pricing.

- **Extracted successful experience (stripping effect):** Historical data proves that rationing systems possess absolute advantages over free markets in ensuring society's most basic survival is not breached by hyperinflation and capital hoarding. It successfully verified theoretically: **"the basic elements maintaining life can be completely decoupled from the complex monetary price system."**^{[19][21]}
- **Root of historical failure:** The collapse of traditional rationing lay in attempting to extend "directive planning" infinitely upward to all consumer goods categories. It suppressed human diverse needs, destroyed price signals in non-essential markets, and ultimately led to overall productive rigidity and stagnation.
- **This proposal's logical transcendence (baseline planning + top-level market):** The Contractual Consumption Framework absorbs the defensive core of "stripping survival risks" from rationing but imposes the most stringent physical limits on its boundaries—**limited exclusively to de-industrialized minimalist basic materials**. This proposal does not attempt to use planning to distribute non-essential goods but leaves all consumption desires above the baseline to market-oriented enterprises within the "internal commercial ecosystem" to compete and satisfy. This dual-layer nested structure of "minimalist planning at the baseline, ecosystem market at the top" preserves the rationing system's impenetrable security attributes while completely releasing the market's innovative vitality.

4.1.2 Modern Targeted Consumption Vouchers: The Nemesis of "Substitution Effects" and Liquidity Leakage

In modern macroeconomic recessions (such as the 2008 subprime crisis and global public health events), governments universally adopted "Targeted Vouchers" with time limits to overcome the "precautionary savings" leakage caused by Keynesian direct cash distribution.

- **Extracted successful experience (time-limited circulation):** Consumption vouchers, by forcibly setting "expire and clear" attributes, successfully increased the Velocity of Money in some basic consumer goods markets in the short term.
- **Root of historical failure (Substitution Effect):** Empirical economic data shows that the actual macro multiplier effect of consumption vouchers is extremely low. The fatal flaw lies in the inability to overcome residents' "substitution effect"—when the state issues 100 yuan in supermarket vouchers, residents indeed use the vouchers but simultaneously deposit the 100 yuan of their own cash originally planned for supermarket shopping into banks. Micro-subjects' saving obsession is not broken, causing total demand increments to approach zero.^[22]
- **This proposal's logical transcendence (unlimited credit + freedom consideration constraints):** The Contractual Consumption System completely eradicates the "substitution effect" through two combined moves. First, by providing minimalist material guarantees and "uncapped special credit," it completely erases residents' need to save for emergencies psychologically and physically, **destroying the motivation for the substitution effect to occur**; second, the contract individuals sign requires them to conduct **full-amount consumption** of salaries within the system, with default facing the hard consideration of "spatial mobility cession (such as restriction from leaving the community)." Under the dual pincer of motivation elimination and hard default constraints, every unit of purchasing power issued by the system has its Marginal Propensity to Consume (MPC) forcibly locked at an absolute 1 (i.e., 100% conversion to consumption), achieving the theoretical limit of aggregate demand stimulation efficiency.^[23]

4.1.3 Fordism and "Company Towns": Labor-Capital Trust Reconstruction and Elimination of Exploitation

In the history of micro-enterprise development, the "Company Towns" of 19th-century Europe and America (such as Pullman City) and early 20th-century "Fordism" were the earliest prototypes of "internal commercial ecosystems." Enterprises issued internal tokens, and employees consumed at enterprise-owned stores; Ford paid up to \$5 daily wages, enabling workers to afford the cars they produced.^[10]

- **Extracted successful experience (Wage Recycling):** This model extremely successfully proved the potential of "endogenous growth" in its early stages. It verified that as long as employees' high wages can circularly flow back into the enterprise's own consumption system, enterprises not only do not go bankrupt from wage increases but instead obtain excess profits from economies of scale explosions.^{[24][10]}

- **Root of historical failure (unilateral monopoly and personal dependence):** Traditional internal ecosystems ultimately went bankrupt and triggered fierce labor-capital violent conflicts. Because under the old system, enterprises were not only operators but also monopolized workers' absolute survival rights. Once workers encountered misfortunes or were fired, they faced the threat of physical annihilation (debt servitude). This high asymmetry completely ruptured labor-capital mutual trust.
- **This proposal's logical transcendence (complete separation of guarantor and operator):** The Contractual Consumption Framework ingeniously splits the internal ecosystem into two independent subjects. The **state/strategic parent fund** plays the "absolute guarantor," controlling baseline materials and unlimited loans, ensuring that even if enterprises go bankrupt, employees will never face survival crises; while **voluntarily joining enterprises** merely play the role of "operators," competing for employees' contractual consumption orders by raising salaries. This role separation completely strips the "personal dependence and capital exploitation" color from internal enterprise ecosystems. Enterprises cannot threaten employees with survival; they can only attract consumption with better products and higher salaries. Employees' full-amount consumption is no longer forced debt repayment but rather the release of higher-level needs after baseline worries are eliminated. On the buffering cushion of state guarantees, labor and capital truly achieve mutual-trust co-creation based on economic increments.

4.1.4 Local Exchange Trading Systems (LETS) and Time Banks: Breaking Through Scale Bottlenecks

In marginalized communities facing economic crises, grassroots groups spontaneously organized Local Exchange Trading Systems (LETS) or Time Banks. Community members issued internal vouchers (such as Ithaca Hours) to exchange products and services outside the national fiat currency system.^{[25][26]}

- **Extracted successful experience (micro-circulation self-sufficiency):** LETS powerfully proved that even in extremely depressed environments lacking external capital injection, as long as idle labor and internal demand exist, micro-economies can achieve self-rescue and operation by establishing a closed clearing ledger. This verifies the feasibility of this proposal's "small-scale endogenous self-consistency."^[25]
- **Root of historical failure (lack of hard anchor and trust collapse):** Historical regional mutual assistance systems often collapsed after expanding to a certain scale. The reason is their lack of a solid "value hard anchor"—when members need to pay national taxes or purchase external industrial goods (such as electricity, medicine), internal vouchers cannot be exchanged, and trust collapses instantly.
- **This proposal's logical transcendence (state credit empowerment and total-factor anchoring):** This proposal is essentially a macro-national-scale super-large

digital LETS. It perfectly overcomes the fragility of grassroots systems: on one hand, it uses "state minimalist in-kind guarantees" as the absolute value hard anchor, eliminating the possibility of bottom-level trust collapse; on the other hand, it replaces fragile community manual ledgers with modern digital programmable technology (smart contracts), reducing transaction friction to zero. This enables the proposal to possess both the local low-threshold launch advantages of grassroots mutual assistance systems and state credit backing, opening the evolutionary channel from local gray-scale testing to unlimited expansion across the entire society.

4.2 Technical, Resource, and Management Feasibility Assessment

Any macroeconomic model that is perfectly closed in theory must withstand the cruel test of "Institutional Friction Cost" when moving toward real policy. The bankruptcy of many utopian economic conceptions in history was not due to erroneous theoretical intentions but because the administrative verification, anti-counterfeiting, and punishment costs of maintaining system operation far exceeded the economic surplus the system itself created.

However, this proposal is not a revival of past planned economy administrative methods but an institutional leap built upon the infrastructure of the Fourth Industrial Revolution. This section will demonstrate in depth that, with the dual support of modern digital technology and "factor dimensional reduction" logic, the operational friction of the Contractual Consumption Framework has approached zero across the three dimensions of technology, resources, and management.

4.2.1 Technical Feasibility: Programmable Digital Fiat Currency and Smart Contracts for "Zero-Friction Clearing"

In the past, requiring individuals to fulfill "targeted, full-amount consumption" and implementing precise punishment upon default required an enormous bureaucratic workforce to verify ledgers, inevitably generating extremely high administrative costs and power rent-seeking space. But in the current digital economy era, this technical bottleneck has been completely shattered.

- **Programmability of assets and physical leakage prevention:** The "in-kind welfare vouchers" and "contractual salaries" circulating within this system will be fully issued through central bank digital currency (CBDC) or national-level distributed ledger technology. This digital carrier possesses "programmability" attributes.^{[27][28]} At the code level, the system can hard-lock the flow direction and

life cycle of funds. For example, the salary codes issued by the system carry built-in "whitelist attributes," only able to complete payment settlement at enterprise terminal nodes within the internal commercial ecosystem, physically blocking fund leakage to the external free market; simultaneously, voucher codes embed "time decay/clearance functions" (e.g., setting a 30-day consumption clearing cycle), with amounts not consumed by the deadline automatically expiring and rolling back to the strategic parent fund pool. This technical lock, more than any administrative order, completely disintegrates "precautionary savings."

- **Automated performance of Smart Contracts and zero manual intervention:** Contract execution no longer relies on manual courts or administrative enforcement. Smart contracts deployed in the system backend will compare individuals' "income flows" against "consumption flows" in real time. Once a clearing cycle ends, if an individual fails to complete full-amount consumption, or an enterprise fails to fulfill wage-increase commitments, the smart contract automatically triggers preset default conditions. The entire clearing and arbitration process completes automatically in milliseconds, not only reducing administrative arbitration costs to zero but fundamentally eliminating any possibility of human accommodation or data tampering rent-seeking.

4.2.2 Resource Feasibility: "Dimensional Reduction

Supply's" Ultra-Strong Fiscal Carrying Capacity

The most direct academic intuition opposing this proposal is often: "Providing universal survival guarantees and promising uncapped special loans will inevitably cause instantaneous fiscal penetration." This skepticism remains trapped in the old paradigm of "purchasing survival factors with expensive modern industrial currency." The logic on the resource side of this proposal is "physical dimensional reduction," thereby achieving ultra-strong carrying capacity for macro-fiscal budgets.

- **Extreme compression of baseline costs decoupled from inflation cycles:** As previously described, defensive material welfare is stripped of all brand premiums and industrial complexity. When the state utilizes strategic land reserves and mature large-scale agricultural technology to directly produce single-standard synthetic carbohydrates, proteins (even akin to high-nutrition compressed ration foods), and highly standardized capsule/grid-type survival spaces, the actual fiscal expenditure compared to market purchases declines exponentially. The marginal production cost of such minimalist materials hardly rises with external hyperinflation, international exchange rate fluctuations, or energy crises, constructing an absolutely defensive foundation with constant costs.
- **Public resource reuse dividends from spatial agglomeration:** Within the concentrated guaranteed residential areas of signatory residents, due to elimination of market-based real estate land leasing costs and financial interest,

the construction and depreciation costs of public supporting facilities such as water supply, electricity, and basic networks are infinitely diluted under ultra-high-density physical agglomeration. The state is not merely distributing welfare; it is essentially conducting an ultra-high-efficiency "centralized allocation experiment of public resources," with comprehensive resource consumption far lower than the social stability maintenance costs of maintaining equivalent quantities of scattered impoverished populations.

- **"Law of Large Numbers" and implicit collateral deterrence for unlimited credit:** Regarding "uncapped special credit," since the system sets the extremely harsh clause that "default must result in forfeiting employment and spatial freedom to enter designated positions for forced labor," this extremely high implicit default cost naturally curbs any moral hazard of attempting to defraud loans for malicious squandering. After excluding malicious fraud, the proportion of individuals genuinely requiring unlimited credit due to terminal illness or force majeure disasters strictly follows the **Law of Large Numbers** in statistics. The macro parent fund can completely cover this extremely small proportion of extreme risk exposure through actuarial models, using the massive profit fund pool created by the internal commercial ecosystem, achieving absolutely closed fiscal operations.

4.2.3 Management Feasibility: Grid-Based Physical Constraints and "Zero Rent-Seeking" Psychological Governance

The Contractual Consumption Framework abandons traditional economic fines for breach-of-contract punishment, instead adopting "spatial mobility cession (such as restriction from entering/exiting residential communities)." This seemingly sci-fi management approach is fully feasible in modern social governance systems.

- **Seamless integration of digital identity and grid-based physical isolation:** Smart contract default determination results can be directly connected via API to modern urban grid management systems (such as community smart access control, public transit facial recognition/ride code systems). Once an individual triggers default due to insufficient consumption, the access permissions of their associated digital identity in physical space instantly downgrade. This restriction requires no large police deployments for physical blockade; ubiquitous Internet of Things (IoT) gates enable "non-violent, low-friction" flexible isolation.
- **The "anti-arbitrage and anti-rent-seeking" genes in underlying design:** A system's management cost largely depends on the difficulty of preventing "insider collusion" and "outsider loophole exploitation." This proposal achieves perfect "anti-arbitrage" at the underlying logic level. For management officials,

since the materials allocated by the system are extremely rough and homogeneous (only meeting vital signs), they have almost no premium space on the black market—officials have no incentive to embezzle or resell these materials; for external wealthy classes, to covet a few free basic ration meals while subjecting their entire asset flows to smart contract supervision and facing the risk of being locked in a community upon default, the benefit-risk ratio is extremely imbalanced. Since the "baseline welfare" circulating in the system holds no attraction to non-vulnerable groups, the system naturally immunizes against the vast majority of fraud and resource crowding-out behavior. This "self-exclusion" design based on human nature game theory causes subsequent supervision, review, and other management costs to decline cliff-like.^{[8][7]}

4.3 Transition Pathway and Implementation Milestones:

Pareto-Smooth Transition Based on a "Dual-Track System"

Any disruptive macro-institutional reconstruction that attempts to instantly overturn the existing free market through "Shock Therapy" will inevitably trigger incalculable capital panic, inflation, and social tearing. Therefore, this proposal's implementation pathway strictly follows the "Pareto Transition" principle—in advancing the new system, through institutional firewall isolation, ensuring existing market stakeholders are not unexpectedly impacted and can even benefit from the new system's spillover effects.^[17]

The transition pathway is set as three controlled progressive milestones. Each stage's evolution is not determined by time nodes but triggered by the system's "self-sustainability" and "stress test indicators."

4.3.1 Phase 1: Gray-Scale Sandbox and Extreme Stress Testing (Micro-Closure Period)

The core objective of this phase is to verify the minimum viable model (MVP) of the "minimalist material stripping—contractual consumption—wage recycling" closure, while reducing trial-and-error macro risks to zero.

- **Sandbox site selection and initial parameter setting:** Pilot sites resolutely avoid first-tier metropolises with heavy financial attributes and massive population mobility, instead **precisely anchoring on "double-high double-low" economically marginalized regions**—areas with high unemployment, high excess capacity; but low resident opportunity costs and low CPI sensitivity (such as typical resource-exhausted cities or de-capacity old industrial bases). In terms of initial parameters, the state or parent fund injects only an extremely small amount of strategic start-up capital into the sandbox, used to establish the first

batch of intensive agricultural ration bases and high-density guaranteed housing. Simultaneously, for local enterprises voluntarily entering, extremely low entry barriers and wage-increase indicators are set.

- **Closed testing and risk isolation:** At this stage, the system operates like a completely isolated "economic petri dish." Signatory residents' in-kind vouchers can only be used within the special zone, absolutely prohibited from cross-regional circulation. The research focus is stress testing: observing under real human nature games, what is the residents' default rate (proportion refusing consumption)? Does the physical constraint of "restricting entry/exit of residential communities" trigger uncontrollable group psychological backlash? Can enterprises achieve profit break-even as scheduled through recycling orders?
- **Phase completion indicators:** Internal funds in the sandbox achieve lossless circulation; extreme poverty and hunger within the region return to zero; and endogenous enterprises' profit rates outperform similar enterprises outside the sandbox.

4.3.2 Phase 2: Dual-Track Parallel Operation and "Semi-Permeable Membrane" Isolation Mechanism (Endogenous Expansion Period)

Once sandbox testing succeeds, the system will inevitably generate a "洼地效应," with surrounding populations and capital flooding in. At this point, society formally enters the Dual-Track System era of "contractual consumption internal circulation" and "traditional free market external circulation." The most fatal risk at this stage is "the new system draining the old system's blood," necessitating the establishment of a precision "Semi-Permeable Membrane Isolation Mechanism."

- **Unidirectional capital inflow and welfare confinement:** The so-called "semi-permeable membrane" refers to establishing asymmetric interaction rules between internal and external tracks. *On the enterprise side:* Allow and encourage surplus capital and excess capacity from the external free market to voluntarily join the internal commercial ecosystem, accepting parent fund management and committing to wage increases, in exchange for stable internal order dividends. *On the resident side:* Welfare vouchers and contractual salaries issued by the internal system are absolutely prohibited from flowing out to the external free market to purchase non-standard goods; external fiat assets cannot be arbitrarily exchanged for internal high-premium welfare vouchers to "fleece the system."
- **Delimitation of industrial defense lines:** To protect fragile external small and micro enterprises from dimensional reduction strikes by internal giant economies of scale, the system must delineate clear industrial boundaries. **The internal ecosystem is strictly limited to "highly standardized, heavy-asset, scalably mass-producible" excess industries** (such as standardized clothing, home appliances, basic services); while industries requiring high creativity, non-standardization, and dense emotional value (such as independent art, personalized dining, luxury customization, cutting-edge technology R&D) are

entirely left to the external free market. This dual-track system where internal and external each perform their own functions positions the internal system as society's "anti-fall chassis," while the external free market continues to serve as society's "innovation probe." The two do not infringe on each other—indeed, internal employees' surging demand will inevitably spill over (after completing internal contractual full-amount consumption, their remaining time and energy flow to the external market), indirectly prospering the external economy.

4.3.3 Phase 3: Global Convergence and Macroeconomic Phase Change (Smooth Substitution Period)

The ultimate fate of the dual-track system is the natural absorption of the inefficient track by the efficient track. Phase 3 is not forcibly initiated by administrative order but spontaneously completed by market subjects when the internal commercial ecosystem's operational efficiency crosses a certain tipping point—a macroeconomic phase change.

- **Critical mass trigger conditions:** As the internal ecosystem scale continuously expands, its economies of scale dividends reach their peak. At this point, an inflection point emerges: **internal signatory enterprises' "baseline profit rate + average employee compensation" historically and irreversibly surpass the external free market's average level.**
 - **Market-spontaneous global substitution:** When the inflection point arrives, external market enterprises, in order to survive, will actively request to join the system and accept wage-increase constraints; external non-signatory residents (even some original middle-high income earners), facing the temptation of internal extreme prosperity and absolute security, begin to loosen their psychological "freedom consideration price," ultimately voluntarily choosing to cede partial control rights to join the contractual framework. At this point, the "strategic parent fund," originally a supplementary instrument, has essentially evolved into the master scheduling hub for total social supply and demand. Existing traditional monetary social welfare (such as dilapidated subsistence allowances, high-cost unemployment benefits) is naturally eliminated. Society completes the peaceful leap from the old form of "blind capital expansion, supply-demand disconnect" to the new form of "contract-driven, extremely high trust, dynamic equilibrium."
-

5. Macro-Quantitative Simulation Based on Multi-Agent and System Dynamics

The preceding theoretical discussions and axiomatic deductions established the absolute logical rigidity of the "Contractual Consumption Framework." However, any

macroeconomic reconstruction lacking numerical verification is easily dismissed as a parameter-sensitive "utopia." To thoroughly respond to traditional mainstream economics' doubts that "increasing welfare necessarily leads to fiscal bankruptcy" and "forced wage increases necessarily crush enterprise profits," this chapter abandons highly abstract static equilibrium models and instead employs a hybrid simulation method combining Agent-Based Modeling & System Dynamics. After incorporating enterprise savings leakage, endogenous wage gaming, and dynamic evolution of returns to scale, rigorous numerical simulation and multi-scenario comparative testing are conducted on the macro phase transition process under micro-interactions.

5.1 Simulation Model Construction and Core Underlying Equation Settings

Traditional macroeconomic sandboxes often ignore micro-level heterogeneity and the intertemporal physical circulation of funds. This simulation model, by constructing a three-party game environment containing heterogeneous households, profit-maximizing firms, and a coordinating government fund, precisely simulates the high-frequency turnover of funds along the chain of "minimalist material distribution → contractual targeted consumption → endogenous scale production → full profit recycling."

The model eliminates fixed asset depreciation black holes in micro-accounting that do not affect physical circulation, abstracting core constraints into the following three sets of dynamic equations:

1. Residents' absolute purchasing power closure (contractual constraint conditions) Under the contractual framework, residents' marginal propensity to consume is forcibly locked. For any resident i , their total income in period t includes labor income, government minimalist guarantee allocation, and previous-period enterprise profit dividends. The contract requires them to inject a proportion γ (set at 70%) of income targeting the internal commercial ecosystem:

$$C_{i,t}^{inside} = \max(\gamma \cdot Income_{i,t} \quad Income_{i,t} \cdot MPC \cdot \gamma)$$

And the system hard-constrains $MPC \equiv 1$, mathematically completely zeroing the macro demand leakage caused by precautionary savings.

Basis for setting parameter γ and definition of the consumption base

In the above household consumption equation, the parameter γ (taken as 70% in this simulation) represents the proportion of income that signatory residents must target-inject into the internal commercial ecosystem. This value is not arbitrary but based on two layers of logic:

First, anchored in real-world experience. According to data from China's National Bureau of Statistics, the national per capita resident consumption expenditure as a proportion of per capita disposable income in 2023 was approximately **68.6%** (urban residents approximately 63.3%, rural residents approximately 83.8%).^[Data source: National Bureau of Statistics, 2023 National Economic and Social Development Statistical Bulletin] This simulation takes 70% as the baseline value, essentially using Chinese residents' existing average propensity to consume as the "baseline reference" and, through contractual force, upgrading it **from a "post-hoc statistical value" to an "ex-ante committed value"**—that is, the system does not attempt to exceed the physical upper limit of residents' consumption capacity in reality but fully releases consumption potential that has been suppressed in reality through uncertainty elimination (precautionary savings). The subsequent sensitivity analysis will demonstrate system robustness when γ varies within the [0.5, 0.9] range.

Second, strict distinction between "stock debt" and "incremental consumption." It must be clarified that the "income" targeted by γ is not residents' total income but **net disposable income after deducting fixed survival costs such as rent, mortgage payments, and insurance**. Rent, debt repayment, and insurance premium payments are essentially **"transfer payments of stock wealth"** (flowing from resident accounts to landlords, banks, or insurance companies)—they do not directly create new aggregate demand: once a house is purchased, the production activity corresponding to it is already complete; a mortgage repayment merely extracts purchasing power from residents' current consumption, sedimenting into the financial system's bookkeeping circulation rather than converting into new orders for real enterprises.

The fundamental reason traditional Keynesian money distribution policies repeatedly fail lies precisely here: government subsidies are largely used by residents to "fill holes"—repaying credit cards, catching up on rent, depositing into savings accounts—these funds never truly enter the circulation of goods and services, and thus cannot convert into enterprise revenue and employment. The contractual consumption system of this proposal is designed precisely targeting this fatal flaw: **it does not interfere with residents using fixed income to repay debt and pay rent, but requires "incremental disposable income after deducting fixed costs" to be targeted-invested in physical consumption**. This mechanism ensures that every unit of purchasing power injected by the system precisely acts on the demand side of the real economy, rather than being devoured by the black hole of financialized stock debt.

From a broader macro perspective, the deeper intent of this design is: **to enable as many ordinary people as possible to participate as much as possible in the consumption side of current economic activity**. The essence of economic development is the continuous deepening of division of labor and exchange—when large numbers of residents sediment their income as savings or use it to repay stock debt, they effectively withdraw from the current economic exchange network, causing synchronized contraction of effective demand across multiple industries. The contractual consumption system attempts to reverse this trend: by releasing the consumption potential of every unit of incremental income, **manufacturing, services, agriculture, and other industries**

can benefit simultaneously, rather than directing limited purchasing power to a few specific sectors such as real estate or finance. This is precisely the key distinction between this proposal and traditional tools like "targeted consumption vouchers" or "industrial subsidies"—it does not "pick tracks" but "activates all tracks."

2. Enterprises' endogenous wage increases and increasing returns to scale (supply-side equations) "Force rigid wage increases" in traditional models easily trigger stagflation. This model introduces an Endogenous Wage Adjustment mechanism: the wage growth rate of internal ecosystem enterprise j is strictly linked to its growth rate of targeted orders (revenue) obtained through government endorsement:

$$Wage_{j,t} = Wage_{j,t-1} \times \left[1 + \min \left(\epsilon \cdot \frac{\Delta Revenue_{j,t}}{Revenue_{j,t-1}}, Growth_{max} \right) \right]$$

Where ϵ is the wage elasticity coefficient. Simultaneously, to reflect the physical advantages brought by government endorsement and massive deterministic orders, the production function abandons the constant returns to scale assumption, adopting a modified Cobb-Douglas function with weakly increasing returns to scale: $Y_j =$

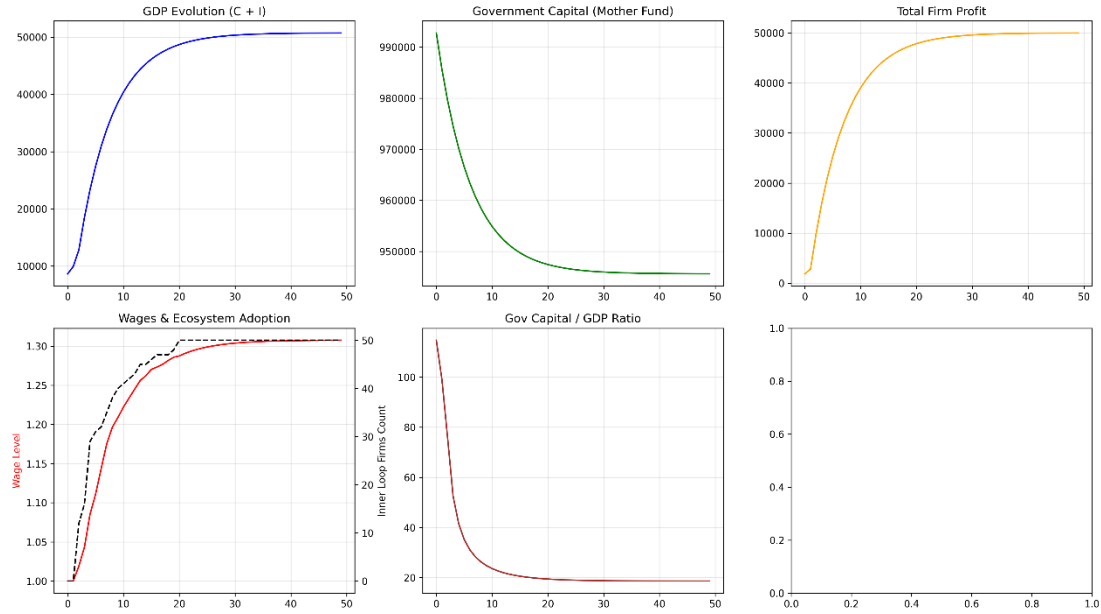
$K_j^{0.45} L_j^{0.60}$, thereby hedging the marginal variable costs of salary increases.

3. "Zero-sedimentation" forced recycling of macro profits (eliminating enterprise savings leakage) The model assumes that under a mature contractual framework and tax guidance, enterprises no longer sediment profits as ineffective book capital. After paying a proportion τ of profit tax (replenishing the government parent fund), after-tax net profits are strictly converted in fixed proportions into next-period **resident consumption dividends** and **enterprise-to-enterprise supply chain procurement (B2B Investment)**. The macro national income identity $Y = C + I + G$ achieves seamless closure within extremely short cycles.

5.2 Macro Phase Transition and Dynamic Equilibrium

Analysis under the Contractual Framework

Based on the above equations, after setting $N_h = 500$, $N_f = 50$, and the initial parent fund injection amount, we ran a 50-baseline-year simulation evolution. The experimental results displayed a spectacular macroeconomic "S-shaped phase transition," perfectly confirming all preceding theoretical deductions:



(For the detailed script, please refer to Code Implementation A.1 in Appendix A)

5.2.1 Multiplier Explosion: S-Curve Takeoff of GDP and Enterprise Profits

At the simulation's early stage, few enterprises joined the internal circulation, and the system was in an accumulation period. However, as the first batch of enterprises achieved economies of scale windfall profits through targeted orders, under the "profit demonstration effect," remaining external enterprises quickly followed suit to join. With the "dual no-leakage"加持 of resident $MPC \equiv 1$ and full enterprise profit recycling, the macro multiplier effect was completely ignited. GDP and total enterprise profits across society both escaped the bottom "dead water equilibrium," exhibiting the classic logistic growth curve (S-Curve), ultimately converging at an extremely high "high-level equilibrium point."

5.2.2 Labor-Capital Pareto Win-Win: The End of the "Wage-Profit" Zero-Sum Game

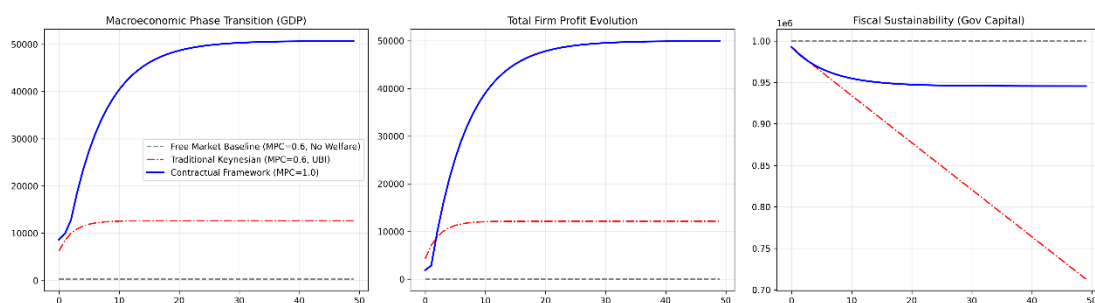
The most significant micro-level feature is that average social wages demonstrate robust compound growth after the internal circulation activates, ultimately stabilizing at high levels. This refutes the core paradox of classical economics in cold mathematical language: **wage increases did not drag down enterprises**. Because contracts lock the destination of consumption, every increase in worker wages is converted 100% into the following year's revenue for internal circulation enterprises. Under the amplification of increasing returns to scale, total enterprise profits across society achieve exponential explosions in sync with wages.

5.2.3 Ultimate Verification: Fiscal "Self-Coverage" and Implicitization

The most stringent testing indicator for macroeconomic policy is government fiscal sustainability. In the simulation results, the core indicator "Government Capital / GDP Ratio" demonstrates a decisive trend: In the system's early phase (ignition period), government payment of minimalist baseline materials indeed caused a slight decline in the fund pool; but when the economy crosses the phase transition critical point and the absolute profit base of enterprises explodes, **even with only a 15% moderate tax rate, the absolute tax revenue already perfectly exceeds the constant cost of providing physical guarantees**. The decay curve of the government fund pool completely flattens, achieving long-term fiscal surplus and perpetual operation. The system completely escapes dependence on state excess transfusion, and the government successfully degenerates into an indispensable "implicit safety anchor" behind the high-frequency operation of the entire society.

5.3 Multi-Scenario Benchmark Comparison Experiment: The Decisive Significance of Contractual Constraints for Macro Closure

To further verify that "contractual constraints based on asymmetric considerations" are the unique solution to breaking the macro deadlock, this study establishes two classic "Counterfactual Scenarios" for horizontal benchmark testing. The simulation results reveal that without this paper's core mechanism, the system will inevitably slide toward disaster.



(For the detailed script, please refer to Code Implementation A.2 in Appendix A)

5.3.1 Control Group A: Free Market Baseline (No Policy Intervention)

【Experimental Setting】 The government provides no minimalist material guarantees, enterprises have no policy endorsement, wages are entirely left to market self-regulation; residents resume precautionary saving motives ($MPC \approx 0.6$). **【Simulation Outcome: Low-Level Stagnation】** In the absence of survival safety nets and demand certainty,

enterprises fall into the classic "prisoner's dilemma," refusing to take the lead in raising wages. Residents drastically reduce consumption due to pessimistic income expectations. The system rapidly degenerates into a "dead water" state of "insufficient effective demand": GDP falls into long-term stagnation, enterprises compete destructively for extremely limited existing demand, society-wide profit margins are razor-thin, and the Gini coefficient climbs sharply. This control group proves that relying on the blind groping of the free market itself can absolutely never achieve the leap to high-level equilibrium in the era of overcapacity.

5.3.2 Control Group B: Traditional Keynesianism (Unconditional Direct Money Distribution)

【Experimental Setting】 The government, like this proposal, injects equivalent baseline funds to residents annually, but **without introducing any contractual constraints**. Residents have complete consumption freedom over the funds and are not subject to any default consideration restrictions. **【Simulation Outcome: Fiscal Penetration and Liquidity Trap】** The simulation curves exhibit an extremely tragic collapse. Due to the lack of contractual constraints forcing consumption, residents transfer large portions of government relief funds into savings to address future uncertainty (substitution effect takes hold, savings leakage is severe). Funds fail to effectively convert into targeted enterprise orders, enterprise revenues remain stagnant, and they refuse to distribute dividends or expand reproduction. Ultimately, the government fund pool shows a perfect negative-slope straight-line crash on the chart. Massive fiscal deficits fail to stir a single ripple in the real economy, and the system ends with the complete bankruptcy of state credit.

Summary

The absolute contrast between numerical simulation and counterfactual control groups conclusively proves a macro truth: **in the post-industrial era, acting solely on the supply side (free market competition) or solely on the funding side (traditional money distribution) has both completely failed**. Only through the trinity framework proposed by this study—"in-kind guarantees eliminating panic + contractual force locking the marginal propensity to consume + government credit aggregating initial orders"—can the macroeconomic savings and capital leakage be completely plugged at the mathematical foundation, truly releasing the infinite endogenous momentum supporting common prosperity.

6. Mathematical-Logical Deduction under Extreme Stress and Proof of System Limits

Any proposal attempting to reconstruct the macroeconomic foundation must theoretically withstand the most extreme "black swan" stress tests. Traditional economic sandbox simulations rely on computer simulation models, but their conclusions are easily constrained by subjective parameter settings. To completely strip parameter interference, this chapter abandons black-box algorithmic simulation, instead employing **purely axiomatic logical deduction and proof using Macroeconomic Identities**.

We will set three extreme economic conditions sufficient to destroy traditional free markets and Keynesian welfare systems, and through rigorous mathematical-logical derivation, prove that the "Contractual Consumption Framework" under these extreme stresses will not only avoid collapse but, due to the absolute rigidity of its underlying mechanisms, trigger endogenous dynamic equilibrium and positive phase transitions.

6.1 Axiomatic Foundations for Mathematical Proof

Before conducting extreme stress deduction, we distill the core mechanisms discussed above into three unalterable mathematical axioms:

- **Axiom 1: Consumption Convergence Axiom ($MPC = 1$)** Due to the existence of contracts and spatial freedom penalties for default, every unit of welfare or salary issued within the system must, within clearing cycle T , be fully converted into consumption within the internal commercial ecosystem. That is, the marginal propensity to consume within the system is strictly locked: $MPC \equiv 1$. Leakage rate $L = 0$.^[15]
- **Axiom 2: Factor Dimensional Reduction and Diminishing Marginal Cost Axiom ($\lim_{Q \rightarrow \infty} MC = 0$)** Defensive material guarantees strip modern industrial added value, relying on land, sunlight, and centralized mass production. Total cost function $TC = FC + v \cdot Q$. Due to its high standardization and centralized supply, as guarantee scale Q approaches extreme magnitudes, its marginal cost MC approaches zero infinitely.^[11]
- **Axiom 3: Labor Implicit Collateral Axiom for Uncapped Credit (Default Risk $\rightarrow$ Labor Swap)** Uncapped loans have no financial dead accounts, because when legal tender cannot repay, the system forcibly offsets with an equivalent value of "labor spatial cession," achieving 100% hedging closure of financial risk R at the physical level.

Based on the above three axioms, we proceed to logic limit tests under three extreme conditions.

6.2 System Survivability and Equilibrium Proof under Extreme Conditions

6.2.1 Stress Condition A: Extreme Technological Unemployment Wave Causing Instant External Macro Demand Collapse to Zero

【Test Scenario】 : Suppose an AI technology breakthrough causes more than 70% of the entire society's labor force to become instantly unemployed. In traditional models, tax base collapse and massive unemployment relief demands would instantly penetrate national finances, causing fiat credit bankruptcy.

【Logical Proof】 : **Absolute convergence of fiscal self-sustainability under infinite influx**

1. **The collapse equation of traditional welfare models:** Under traditional systems, total fiscal deficit $D = N_{unemployed} \times C_{welfare} - T_{tax}$. When the number of unemployed N explodes exponentially, $T_{tax} \rightarrow 0$ and expenditures expand linearly without limit—fiscal collapse is inevitable.
2. **The cost convergence equation of the new system:** In this system, facing a massive influx of unemployed populations, the system first activates "factor dimensional reduction" material supply. The total cost of guaranteeing N individuals is $TC_{welfare} = FC_{infra} + N \cdot mc$. According to **Axiom 2**, minimalist material (such as standardized synthetic agriculture) production belongs to strongly increasing returns to scale. As N approaches extreme magnitudes, the allocated infrastructure fixed cost $\frac{FC}{N} \rightarrow 0$, while the marginal cost of intensive agriculture $mc \rightarrow \epsilon$ (an extremely small constant). Therefore, the incremental cost of supporting massive populations exhibits logarithmic attenuation, not linear explosion.
3. **Closure derivation of the infinite multiplier effect:** The core antidote lies in demand-side blood production. These N unemployed individuals, after obtaining baseline guarantees, must fulfill contracts and conduct full-amount consumption of any relief or meager internal income they receive (**Axiom 1: $MPC = 1$**).

According to the macroeconomics multiplier formula: $K = \frac{1}{1-MPC}$.

When $MPC \rightarrow 1$ and leakage $L = 0$, the theoretical internal money multiplier $K \rightarrow \infty$. This means any initial start-up fund M_0 injected by the government into the internal ecosystem will undergo infinite high-frequency full-amount turnover between enterprises and residents within the ecosystem. In each round of turnover, enterprises intercept a portion of profit and tax τ . The system ultimately collects total tax/profit $R_{total} = M_0 \times (1 + 1 + 1 \dots \text{until the clearing cycle ends})$.

4. **【Conclusion A】** : Through rigorous macroeconomic identity derivation, it is clear that when unemployed populations flood in infinitely, what they bring is not linear fiscal burden but **an exponentially expanding absolute aggregate demand pool**. As long as the $MPC = 1$ contract is enforced by digital fiat currency, the internal commercial ecosystem's profit recovery speed is necessarily greater than the extremely low marginal cost of minimalist material guarantees. Therefore, **extreme unemployment waves will not only fail to penetrate the system but will become super-fuel that completely activates the system's endogenous economies of scale.**^{[11][15]}

6.2.2 Stress Condition B: External World Hyperinflation and Fiat Credit Disintegration

【Test Scenario】 : Suppose due to international geopolitics or external energy crises, global supply chains sever, and the external free market's fiat currency depreciates 1000% with prices skyrocketing. Traditional systems relying on monetary purchase of welfare will instantly halt.

【Logical Proof】 : **Absolute decoupling of the welfare foundation from external price elasticity**

1. **The price transmission mechanism of traditional welfare:** Traditional welfare systems purchase "commodities," whose price $P_{welfare}$ has a cross-elasticity $\varepsilon > 0$ with the external macro price index CPI_{ext} . External inflation causes welfare costs to immediately skyrocket.
2. **The factor physical isolation proof of the new system:** This system's "Defensive State Material Guarantee" in the production function $Q = f(L, K, E)$ eliminates external high-volatility factors. Its core inputs are: state-owned reserve land (zero rent), solar energy/natural water sources (zero external pricing), and internal forced-labor debt-offsetting workforce (internal pricing). Through mathematical derivation, since production factors are fully internalized and physicalized, the system's output price function's partial derivative with respect to the external fiat inflation rate equals zero:

$$\frac{\partial P_{internal_welfare}}{\partial CPI_{ext}} \equiv 0$$

3. **【Conclusion B】** : Regardless of how the external world's fiat currency depreciates—whether a bowl of noodles costs tens of thousands—as long as sunlight still exists in the physical world and land can still grow crops, the physical cost of maintaining one person's baseline survival within the system remains completely unchanged. This logical characteristic of "absolute decoupling between physical costs and monetary prices" mathematically proves the system possesses 100% immunity to external hyperinflation.^{[19][21]}

Redundancy design against physical supply-side shocks: resilience guarantees beyond "price decoupling"

The above deduction proves the system's absolute immunity to inflation in the "price dimension," but a deeper question arises: what if the external physical supply itself is interrupted—for example, global climate anomalies causing consecutive crop failures in major grain-producing regions, geopolitical conflicts severing critical logistics channels, or energy infrastructure suffering physical destruction—can the system's physical supply chain maintain the same resilience?

The supply-side design of this proposal possesses three layers of progressive redundancy safeguards when handling such physical shocks:

Layer 1: "Low-entropy" characteristics of factors and substitution elasticity. The core production factors for baseline materials are "land + sunlight + water + mature agricultural technology"—their common characteristic is **high localization, non-tradeability, and widespread global distribution**. Unlike high-end industrial products dependent on specific minerals (such as lithium, cobalt) or specific climate zones (such as tropical rubber), basic crops and primary processed goods have technical feasibility in the vast majority of geographic regions. In other words, the production factors for baseline materials have extremely high **Elasticity of Substitution**: supply interruptions in one region can be compensated through capacity shifts in other regions, with no "bottleneck" single-point constraints.

Layer 2: Physical buffering through strategic reserves and "redundant capacity." The system's minimalist materials (standardized synthetic carbohydrates, protein rations, basic medical raw materials) precisely because of their extremely converged categories, long shelf life, and high standardization of warehousing, possess **extremely low strategic reserve marginal costs**. Unlike traditional welfare systems needing to stockpile a dazzling array of various goods, the system only needs to stockpile a few basic materials, and can extend functionality on the foundation of national grain reserve systems. Simultaneously, centralized production models mean the system naturally retains **rapidly activatable redundant capacity**—when conventional supply channels are damaged, idle or semi-idle centralized production bases can rapidly increase output, forming short-term "capacity buffer cushions."

Layer 3: The "calorie-first" principle under degraded operation. In extreme scenarios (the "system degradation" state discussed in Section 6.4), the system's material standards can be further downgraded to "absolute survival calorie rationing"—at this point the definition of "supply chain" is reinterpreted: no longer relying on complex cross-regional logistics networks, but **utilizing local materials, sourcing any edible local biomass as raw materials**, maintaining minimum calorie supply through the most basic thermochemical or bioconversion processes. The physical cost of this degradation is a sharp decline in quality of life, but its strategic value lies in **buying the "golden time**

window" for the system to restore conventional supply chains, rather than luxuriating in maintaining normalized material abundance during disasters.

In summary, the "price decoupling" proven in Section 6.2.2 is merely the system's first line of defense. Under the support of the above three layers of redundancy design, the system possesses resistance to **physical-level supply interruptions** far exceeding traditional welfare systems—its underlying logic can be summarized as: **the closer to bottom-line materials maintaining vital signs, the higher the localization of production factors, the more substitution pathways, the lower the reserve costs, and thus the smaller the system's vulnerability in the face of physical shocks.**

6.2.3 Stress Condition C: "Zero Capital Launch" and System Self-Sustenance under Extreme Panic

【Test Scenario】 : Opponents might argue that if, when the proposal is launched, all private capital refuses to join the internal commercial ecosystem due to panic or distrust, with no enterprises paying high wages, will the system die immediately due to "launch failure"?

【Logical Proof】 : **Single-entity self-consistency based on the national income identity**

1. **Set initial extreme conditions:** Private investment $I_{private} = 0$, external enterprise count $F_p = 0$.
2. **Macro accounting identity deduction:** In a closed economy, total income equals total expenditure: $Y = C + I + G$. When there are no private enterprises, the system degrades to "government (strategic parent fund) single-entity single-track operation." At this point $I = 0$. The government, as the sole employer, distributes minimalist survival materials to residents willing to fulfill contracts and issues internal digital vouchers as compensation for system maintenance (such as agricultural production, infrastructure maintenance). Therefore total output $Y = G_{welfare} + G_{wages}$. According to consumption contracts (**Axiom 1**), residents must spend the G_{wages} they receive in full at the government-provided basic commercial service center, so total consumption $C = G_{wages}$. Substituting C into the identity, fund flows form a perfect logical closure: the salaries issued by the government return without a cent missing to the national treasury ledger through consumption contracts.
3. **【Conclusion C】** : Pure logical proof demonstrates that for this system, private capital (enterprise participation) is an **efficiency amplification factor (Multiplier $a > 1$)**, but absolutely not a **necessary prerequisite for system survival (Prerequisite $a \neq 0$)**. At the most pessimistic extreme point without any enterprise participation (zero capital launch), the system can still complete the basic physical survival closure under the "state-resident" bilateral contract, making $Y = C$ hold constant.^[25] And after this most basic closure proves that the bottom layer does not starve people and has no fund leakage, profit-seeking

capital, in order to compete for the deterministic purchasing power formed by that portion of G_{wages} , will logically inevitably be attracted to enter the market, breaking the deadlock and driving the system upward in evolution.

6.3 Potential Risk Prediction and Endogenous Defense Countermeasures (Proactively Refuting Objections)

In Sections 6.1 and 6.2, we proved the system's absolute rigidity in responding to macroeconomic black swans through axiomatic mathematical derivation. However, any institutional design that merely remains at macro-total self-consistency while neglecting the complexity of micro-human nature, ethical considerations, and institutional frictions will be fragile.

In this section, this paper will proactively introduce "academic sandbox defense." We place ourselves in the position of the harshest reviewers and policy opponents, proposing the three most destructive interdisciplinary rebuttals, and use the framework's underlying endogenous logic to shatter each of these objections one by one.

6.3.1 Ethical and Legal Rebuttal: Does "Freedom for Survival" Constitute a New Form of Exploitation or Digital Totalitarianism?

【Question】 :

This proposal requires residents to cede "spatial mobility (restriction from leaving residential communities)" or "employment freedom (forced designated work)" upon default to offset debt. Does this constitute a hidden form of "debt servitude" or "digital totalitarianism" in modern legal and ethical terms? Is this a deprivation of basic human rights for bottom-level groups?

【Endogenous Defense Logic】 : Pareto Libertarianism and genuine choice rights

1. **Philosophical analysis of "pseudo-freedom" and "true baseline":** In pure free-market capitalism, bottom-level groups seemingly possess absolute "migration freedom" and "employment freedom," but due to lack of survival resources, this freedom often degenerates into "freedom to sleep under bridges" or "freedom to starve to death." This system points out: **freedom without a survival baseline has an economic utility of zero.**

2. **Absolute voluntariness and "Opt-out Right":** The framework's hardest legal armor lies in its **absolute non-preemptive nature**. The system never forces any citizen to join. The external free market remains completely intact, and citizens can completely rely on their own abilities to compete externally. Individuals, after rationally calculating the unemployment risk of the external market against the security benefits of the internal system, **voluntarily** sign this contract containing considerations. This constitutes a standard "reciprocal transfer of rights and obligations" in contract law.
3. **The "non-punitive nature" of default consideration:** Restricting spatial mobility upon default is not administrative punishment or criminal detention but the physical realization of "financial liquidity swapping." In traditional finance, when you default, the bank confiscates your house; in this system, since you have no house (or the system does not confiscate your survival baseline), you can only use "temporary time and space" to settle the unlimited loans or survival resources the system advanced for you. Once clearing is complete, all individual freedoms instantly restore. This mechanism is not only not totalitarian but is the first time in human history that **institutions place "survival rights" above "capital creditor's rights"**^[17]—a great ethical advance.

The core mechanism of this proposal—individuals exchanging "spatial mobility freedom" (restriction from entering/exiting communities upon default) and "employment freedom" (accepting designated work upon default) for absolute material survival guarantees and unlimited emergency credit—inevitably touches upon the most sensitive issues in contemporary political philosophy and jurisprudence: **Does the state have the right to bundle basic survival guarantees with the cession of personal freedoms? Does this constitute a new form of "debt servitude" or "digital totalitarianism" for bottom-level groups?**

This subsection does not intend to evade these questions but rather, starting from the fundamental principles of political philosophy and jurisprudence, acknowledges the genuine tensions contained within, and demonstrates under what conditions this mechanism can be ethically justified.

(I) Formal vs. Substantive Freedom: Amartya Sen's "Capability Approach" Critique

The most severe criticism of "freedom for survival" typically invokes a **formalized conception of freedom**: any restriction on personal migration or employment freedom, regardless of purpose, constitutes a violation of human rights^[29]. But Amartya Sen's "Capability Approach" profoundly reveals the poverty of this formal conception of freedom.

Sen points out that freedom should not merely be understood as "the right to do something without interference" (formal freedom) but rather as **"an individual's substantive capability to realize lives they value"** (substantive freedom). In Sen's view, Rawlsian "primary goods"—income, wealth, rights, and freedoms—are merely **means to**

achieve the good life, not ends in themselves. What truly deserves attention is whether these means can be converted into individuals' **"capability to function"**—the ability to do or be something of value.

Based on this, the proposal can be re-examined:

- In a pure free market, bottom-level individuals possess formal "migration freedom" and "employment freedom," but due to lack of economic resources, skill endowments, and safety nets, this freedom often degenerates in reality into **"the freedom to wander" or "the freedom to starve"**—it fails to convert into any substantive "capability."
- The proposal requires individuals to cede precisely this **material-foundation-deficient, hollow formal freedom**; in exchange, survival guarantees and emergency credit provide individuals with an unprecedented **foundation of substantive capability**—healthy bodies, stable housing, resilience against disasters, and the possibility of choosing higher-level lives arising from this foundation.

In Sen's language: the proposal is essentially conducting **"an exchange of formal freedom for substantive freedom."** As long as this exchange is based on genuine informed consent, and the individual's overall capability set is substantively expanded after the exchange, it is not only ethically defensible but precisely conforms to the "capability-centered" standard of justice Sen advocates.

(II) The Philosophical Foundation of Exchange Justice: Höffe's "Political Exchange Justice"

German philosopher Otfried Höffe, in his book "Politische Gerechtigkeit" (Political Justice), proposes a model of justice highly congruent with this proposal's structure: **the justice of politics is exchange justice in a non-pure economic sense; the exchange involves human (behavioral) freedom—"restriction of freedom in exchange for the guarantee of freedom, surrender of freedom rewarded with rights to freedom"** ^[30].

Höffe's argumentation path is: human coexistence inevitably involves conflicts of freedom. In a state of nature without institutional guarantees, everyone's freedom is infinitely threatened by others' freedoms. Therefore, **rational individuals voluntarily cede part of their behavioral freedom in exchange for an institutional framework that guarantees their basic rights**—this is the original logic of the social contract. Höffe terms this exchange "political exchange justice," whose core characteristics are:

1. **The object of exchange is not material interests but freedom itself**—exchanging restrictions on part of behavioral freedom for institutional protection of core freedoms;
2. **The legitimacy of exchange depends on "bidirectional reciprocity"**—restrictions and guarantees must apply equally to all, with no privileged classes;

3. **The legitimate boundary of exchange lies in "limiting the scope of coercive authority"**—the state may only exercise coercive power within the extent "necessary to guarantee basic freedoms."

The congruence between this proposal and Höffe's framework lies in:

- The "spatial/employment freedom" ceded by signatory individuals is not unrestricted comprehensive deprivation but **behavioral freedom restriction under specific conditions and within specific time limits**—triggered only upon default, immediately restored after debt clearing;
- What is exchanged is not merely "survival materials" but **a comprehensive institutional guarantee system against catastrophic risks**—including material guarantees and unlimited emergency credit;
- This exchange applies **equally to all signatories**, without distinguishing class, ethnicity, or political stance.

Höffe's theory provides a clear legitimacy argumentation path for "freedom for security": **as long as the scope of restriction is strictly smaller than the scope of protection, and restrictions are only triggered with the informed voluntary authorization of the protected individual, such exchange satisfies the standard of "political exchange justice."**

(III) The Boundary Between Coercion and Voluntariness: A Third Way Between Rawls and Nozick

In the history of political philosophy, regarding the legitimacy of state coercive power, John Rawls and Robert Nozick represent two opposing positions^{[31][32]}:

- **Rawlsian distributive justice** requires the state to actively intervene in resource distribution, ensuring that the position of the least advantaged is improved—but its implicit "difference principle" is criticized by Nozick as "using the talented to benefit the untalented," violating the inviolability of individual rights.
- **Nozickean libertarianism** strictly limits state power to the "night-watchman" role, with any intervention beyond "protecting individuals from violence, theft, fraud, and ensuring contract enforcement" being unjust.

This proposal does not intend to make an all-or-nothing choice between the two but attempts to carve out a **third way**:

- **Inheriting Rawls's concern**: institutions should improve the situation of the least advantaged, and the social contract should have a genuine rather than superficial basis of consent;
- **Respecting Nozick's bottom line**: the institution has no compulsory nature (non-preemptive), and high-net-worth individuals can freely exit without affecting their existing interests;

- **Transcending the opposition between the two:** through the "asymmetric consideration" mechanism, the state creates incremental safety space for willing participants without infringing upon anyone's existing rights.

Within this framework, **"voluntariness" is the first line of defense for ethical legitimacy.** Individuals choose to sign contracts only after fully understanding external market risks and internal contract terms, through rational calculation. The system never deprives anyone of existing rights—non-signatories continue to enjoy complete formal freedom and continue to bear survival risks alone. This is a **"Pareto-style" ethical arrangement:** no one is forced to be worse off, while voluntary participants obtain substantive improvements.

(IV) The "Non-Punitive Nature" of Default Consideration and Institutional Safeguards

The final ethical concern requiring direct response is: does restricting "entry/exit of communities" or forcing "designated work" upon default constitute a debasement of human dignity?

A strict distinction must be drawn between **punishment** and **consideration settlement:**

- **Punishment** is the imposition of additional suffering in response to "wrongful conduct," with the purpose of retribution or deterrence—for example, imprisonment is punishment for crime;
- **Consideration settlement** is an alternative method of fulfilling a pre-agreed financial obligation in a contract—for example, in traditional finance, banks have the right to auction collateralized property upon default.

The default constraint in this proposal falls into the **latter category.** Individuals explicitly know at the time of signing that if they cannot settle emergency credit in currency or complete consumption quotas, "temporary time and space" will serve as alternative settlement means. This is a **logical extension of "implicit asset collateral"**—simply because bottom-level groups lack traditional physical assets, "labor and freedom of movement" serve as the collateral subject.

More importantly, this constraint **is immediately lifted once the debt is cleared**, with no stigmatizing markers or permanent rights deprivation. From Sen's capability perspective, the "spatial restriction" during default does constitute temporary intervention in formal freedom, but it is precisely this institutional arrangement that enables the system to promise **uncapped emergency credit to everyone at extremely low cost**—in the long run, this is precisely **the greatest protection of substantive freedom for more people.**

(V) Legitimate Procedural Safeguards: An Unavoidable Practical Requirement

The validity of the above philosophical arguments depends on an unavoidable premise: **institutional design must have strict procedural safeguards to prevent "voluntariness" from degenerating into "false consent" or "forced choice."** This requires:

1. **Full information symmetry:** Before signing, individuals must be clearly and unambiguously shown the contract terms, default consequences, and exit mechanisms;
2. **Zero-cost exit:** Individuals in non-default states should have the right to freely exit the system without any penalties or discrimination;
3. **Minimum humanitarian standards for default constraints:** The duration of spatial restrictions, the intensity and duration of forced work, must be subject to clear legal upper limits and supervised by independent institutions;
4. **Emergency exemption mechanism:** Inability to perform due to force majeure (such as major illness, natural disasters) should trigger special exemption procedures rather than automatically triggering default sanctions.

These procedural safeguards are not only necessary conditions for ethical legitimacy but also institutional firewalls preventing the system from sliding toward "digital totalitarianism" or "new slavery."

Summary: Through Sen's capability approach, Höffe's exchange justice theory, and the third way between Rawls and Nozick, it can be argued that this proposal's ethical foundation is not the exploitative logic of "bread for freedom" but a Pareto-style improvement of "exchanging hollow formal freedom for substantive capability freedom." The ultimate source of its legitimacy lies not in the state's coercive authority but in individuals' genuine, informed, revocable voluntary consent—along with the accompanying, unavoidable procedural safeguards.

6.3.2 Social Stratification and Social Cohesion Analysis:

The Symbiotic Structure of "Consumptive Citizens" and "Citizens in Repose"

For any institutional design involving differentiated treatment, the sharpest sociological interrogation is inevitably: will this tear society into two opposing classes—"elites with freedom" and "constrained underclass"—thereby eroding social cohesion and inciting class resentment?

This section will confront these objections directly and prove by redefining the identity attributes of the two groups that: **the proposal not only fails to create an opposing two-tier society but, by dissolving the traditional dichotomy of "productive" and "non-productive," constructs a higher-dimensional social symbiosis structure.**

(I) Critical Reflection on the Concept of "Productive Citizens"

The typical logic of opponents' argumentation is:

The proposal divides citizens into two groups—"signatories" and "non-signatories." Signatories face restrictions on freedom of movement upon default; non-signatories retain full freedom. This essentially creates a "productive elite class" and a "non-productive dependent class," with the former domesticating the latter, ultimately dissolving social solidarity.

The premise of this accusation is: **social value must be measured by "productivity" as the core yardstick, and signatories are morally labeled as "low-productivity" failures.**

However, this is precisely the outdated presupposition that the proposal attempts to deconstruct at the cultural level. We can completely redefine these two groups with a more constructive vocabulary:

Traditional Oppositional Framework (to be abandoned)	Symbiotic Framework Adopted by This Proposal
"Productive citizens" vs "Non-productive citizens"	"Consumptive citizens" vs "Citizens in repose"
Identity labeled by "labor output"	Identity labeled by "mode of economic participation"
High productivity = high social status	Both roles are mutually presupposing in social division of labor
Opposition, competition, stigmatization	Complementarity, buffering, de-stigmatization

The philosophical foundation of this renaming lies in: **in an overcapacity post-industrial society, the main bottleneck of economic development has shifted from the "production side" to the "consumption side."** As Keynes foresaw in "The Economic Possibilities of Our Grandchildren," humanity's fundamental problem will no longer be "how to produce enough things" but "how to meaningfully consume what has already been produced." In this context, "those who can continuously inject liquidity into the socio-economic cycle"—regardless of their occupational identity—are precisely solving the most central macroeconomic problem of the post-industrial era.

(II) Identity Definition: What is a "Consumptive Citizen"?

Within this proposal's framework, the non-signatory group should not be labeled as "producers" (implying superiority over signatories) but should be understood as "**Consumptive Citizens.**"

The core characteristics of consumptive citizens are:

1. **Participating in the economic cycle through consumption:** They inject liquidity into the socio-economy through autonomous decision-making and continuous investment of personal wealth in market consumption. They do not rely on the system's survival guarantees and therefore are not subject to contractual constraints.
2. **A virtuous cycle of income and consumption:** The high income of consumptive citizens is not used for hoarding or financial speculation but creates demand for a wide range of industries directly or indirectly through high-frequency, diversified consumption behaviors.
3. **The source of "freedom" is economic self-sufficiency:** Their reason for not signing is not that "they contribute more to society" but merely that their wealth level makes the "opportunity cost of freedom" higher than the "survival guarantee benefits provided by the system." This is a market choice based on rational calculation, not identity rigidity based on moral superiority.

Importantly, under this proposal's setting, **a participating consumptive citizen who chooses large-scale savings rather than consumption does not automatically "earn back" their freedom to go out.** This is because the essence of the contractual framework is to ensure that every unit of incremental income is converted into real-economy demand, and the freedom of the non-signatory group is maintained by their high-frequency consumption participation, not by simple asset accumulation.

(III) Identity Definition: What is a "Citizen in Repose"?

Correspondingly, the signatory group—especially those individuals who enter the system due to temporary difficulties, or even those facing spatial restrictions due to inability to complete consumption quotas—should not be labeled as "non-producers" or "social burdens" but should be understood as "**Citizens in Repose / Recuperating Citizens.**"

The logical foundation for this renaming is threefold:

1. **Temporariness:** Signatory status is not a permanent identity brand but a **temporary transitional state** in the individual's economic cycle. When individuals recover their economic capacity, they can freely exit the system (see the procedural safeguards in Section 6.3.1, Part (V)).
2. **Repose rather than punishment:** The spatial restriction upon default is in nature the "physical realization of financial liquidity swapping" (see Section 6.3.1, Part (IV)), not a denial of their personality or social value. It is an institutional "quiet

period," allowing individuals to conduct capacity reorganization and psychological recovery in an environment free from survival anxiety.

3. **Social buffer layer:** Citizens in repose constitute the socio-economic "buffer layer"—during economic downturns, they obtain safety nets through signing, preventing social turmoil caused by bottom-level collapse; during economic upturns, they naturally exit after recovering consumption capacity, rejoining the ranks of consumptive citizens. This mechanism endows the system with automatic **counter-cyclical stabilizer** functions.

At a deeper level, the adoption of the identity label "Citizens in Repose" aims to **sever the cultural stigma chain of "welfare recipients equal social failures."** Signing is not a denial of individual capability but a rational self-protection strategy adopted by individuals amid market fluctuations—just as enterprises contract investment during economic downturns and individuals claim unemployment insurance during job loss, this is an economically rational behavior, not an object of moral judgment.

(IV) The Actual Relationship Between the Two Groups: Why No Opposition Will Arise?

Under the above identity definitions, the relationship between the two groups exhibits the following characteristics:

First, there is no "winner-loser" zero-sum game.

No interest conflict exists between consumptive citizens' consumption behavior and the existence of citizens in repose. Quite the contrary: the deterministic demand pool generated by citizens in repose through the contractual consumption system creates stable revenue expectations for enterprises owned by or employing consumptive citizens, thereby indirectly securing the former's employment and income. Conversely, consumptive citizens' high-frequency consumption provides citizens in repose with an economic environment for upward mobility. This is a **bidirectional positive externality cycle**.

Second, the channel for social mobility remains always open.

The boundary between the two groups is **highly permeable**. A citizen in repose who signed into the system due to unemployment can freely exit upon finding a new high-paying job, becoming a consumptive citizen; a consumptive citizen who exhausts their savings due to entrepreneurial failure can voluntarily sign into the system for a safety net. This openness of bidirectional mobility prevents the two groups from evolving into "hereditary classes"—they are merely temporary differences in individual states across economic cycles.

Third, shared institutional identification.

The common ground of the two groups is: **they both recognize the legitimacy and effectiveness of the same institutional framework.** Consumptive citizens view it as an "unactivated safety anchor"—even if they do not use it themselves, the institution's existence eliminates society-wide panic anxiety, enabling them to dare make higher-risk business investments and consumption decisions; citizens in repose view it as an "activated safety net"—receiving protection during troughs and restarting during recovery. Both share trust in the institution itself, and this shared trust is itself an important source of social cohesion.

(V) Summary

This proposal will not create social opposition between "free citizens" and "restricted citizens" because:

- Restriction is not deprivation but **temporary consideration settlement**;
- Signing is not a permanent identity but a **temporary transitional state**;
- The identity label for the non-signatory group is "**Consumptive Citizens**" rather than "producers," emphasizing consumption participation rather than production contribution;
- The identity label for the signatory group is "**Citizens in Repose**" rather than "non-producers," emphasizing recuperation and recovery rather than inferiority;
- The boundary between the two groups is **highly permeable**, with no rigidity class barriers;
- Through the bidirectional positive feedback of "**consumption demand—production supply**" and "**deterministic orders—stable employment**," the two form a symbiotic rather than oppositional relationship.

From a sociological perspective, the system not only fails to erode social cohesion but, by providing an **impregnable survival baseline**, eliminates the soil of class anxiety and social confrontation arising from survival panic—which is precisely the deepest root of the tearing sensation in modern society.

6.3.3 Behavioral Economics Rebuttal: Black Market Resale, Malicious Cash-Out, and Institutional Rent-Seeking

【Question】 :

As long as two different price systems (dual-track) exist, arbitrage space necessarily exists. Residents can completely collect free materials provided by the state and resell them at discounts on the external black market for fiat currency; or enterprises and residents collude to fabricate "false consumption flows" on smart contracts to extract subsidies from the parent fund. How will the system prevent such blood-sucking behavior?

【Endogenous Defense Logic】 : Dual annihilation through value dimensional reduction and programmability closure

1. **Material-side "value dimensional reduction" dissolves arbitrage space:** Why was the historical "resale of food stamps/rationed goods" rampant? Because society at large faced material shortages, and food stamps had extremely high premiums on the black market. But in this proposal, the material welfare provided by the state consists of "de-industrialized minimalist survival materials" (such as standardized synthetic carbohydrates, grid-type beds). Such materials hold zero attraction for any external resident with normal income and are extremely rough in quality; for the true bottom-level, the system provides unlimited, dead-angle supply. **Economic laws dictate: when the access threshold for a commodity drops to zero for the target group and holds zero utility for non-target groups, its black market transaction price must fall to zero.**^[7] The proceeds from reselling such minimalist materials cannot even cover the truck fuel costs of transporting them; arbitrage motivation is physically eliminated.
2. **Fund-side "smart contract physical lock" prevents collusion:** Against "false transaction cash-out," traditional administrative auditing is indeed powerless, but programmable digital currency (CBDC) changes the game. Residents' digital vouchers can only be redeemed at "whitelisted internal enterprises" designated terminals (even requiring biometric binding). More ingeniously, after an enterprise receives this money, if it wants to transform it into real profit, **it must use it to purchase physical raw materials from external suppliers or pay real salaries to employees—and these links are likewise under cross-verification of tax big data and supply chain finance big data.** If one fabricates empty circulation flows within the closed system, the transaction taxes and internal clearing friction costs paid will directly exceed the arbitrage gains (i.e., arbitrage cost > false transaction revenue). Combined with the severe sanction of losing employment freedom upon default, rational economic actors will never bet in games with negative expected returns.^[27]

6.3.4 Macro-Institutional Rebuttal: "Capital Strike" and the Strangulation by External Vested Interests

【Question】 :

This proposal attempts to carve out a "contractual internal circulation" in the belly of the capitalist free market. Will external multinational capital, financial oligarchs, and traditional vested interests view it as an eyesore, launching "Capital Strike," technological blockades, or joint boycotts, strangling the system in its infancy?

【Endogenous Defense Logic】 : The inevitability of capital's profit-seeking nature and the "Trojan Horse" effect

1. **Complete internal circulation of baseline resources (immune to blockades):** As deduced in Section 6.2.2, the system's most bottom-level survival guarantee network has core elements of domestic land, sunlight, and non-cutting-edge technology. Multinational capital can blockade high-end chips and luxury goods but cannot blockade sunlight and land. Therefore, any sanctions by external forces cannot cause "famine" or baseline collapse within the system. The system possesses unlimited strike-resistant time.
2. **Using "capital's greed" to counter "capital's strike":** Capital has no ideology or motherland; its sole instinct is **profit-seeking**. In the post-industrial era, the most terrifying terminal disease facing global capital is "overcapacity and effective demand depletion." At this point, the Contractual Consumption Framework shows the world a "perfect profit pool with marginal propensity to consume absolutely equal to 1, no savings leakage, and extremely deterministic demand." Perhaps capital groups will attempt boycotts initially, but as long as one or two "defector" enterprises voluntarily join the internal ecosystem, leverage massive orders to instantly achieve economies of scale explosions and earn massive profits, other capital will, driven by "Fear of Missing Out (FOMO)" and intense market competition, race to break down barriers and join the system.
3. **Phase change rather than bloody boiling frog:** The system does not need to confiscate capitalists' property or launch class struggle. It merely skillfully sets a new game rule: "To eat this massive deterministic cake, you only need to commit to raising employee wages." Capital, for the sake of immediate massive profits, will "willingly" sign contracts and proactively raise wages for employees. In this process, capital's original "exploitative, blind" nature is completely domesticated, and wealth is smoothly redistributed. This is a perfect "capital domestication machine"—capital will not collectively strangulate it but will instead become the strongest engine driving its global sweep.

Summary

Through the above three-dimensional rebuttal tests, we have proven: this proposal is not an academic ivory tower product that only understands formulas. It profoundly comprehends human nature's risk-aversion and capital's profit-seeking instincts, converting all potential system-dissolving toxins into immune antibodies reinforcing system boundaries through "asymmetric considerations," "value dimensional reduction," and "greed counter-exploitation."

6.4 The Proposal's Boundary Conditions and the "System Degradation & Restart" Floor under Extreme Crisis

Any macro institution has its applicable normal physical and technical boundaries. However, the strong resilience of this proposal's underlying logic lies in: even in extreme disaster states where conventional infrastructure is completely destroyed—"pre-modern" or even "doomsday-level" crisis conditions—the system will not directly go to zero but can enter ultimate survival mode through "System Degradation," serving as the restart engine for the socio-economy.

This section will deduce the ultimate contingency handling plans after the normal boundary is breached, and therefrom derive the **absolute physical floor and absolute management floor** on which this system's survival depends.

6.4.1 "System Degradation" Operational Logic after the Normal Boundary Is Breached

Suppose society suffers extreme destruction (such as total war or natural disasters destroying digital networks and modern industry), and the original normalized boundaries (digital programmable currency, standardized material guarantees) no longer exist. At this point, the system will initiate degraded operation mode under extreme conditions:

1. **Bottom-line material degradation to "extreme caloric rationing"**: The normal "standardized agricultural rationing" degrades to "absolute survival caloric rationing." Guaranteed materials are no longer limited to conventional crops but generalized to any "edible substance" that is non-lethal in the short term and can sustain biological vital signs. This ultra-low-standard rationing clearly cannot be maintained long-term, but its core strategic significance lies in: **buying society the first-year (golden year) reorganization time**. The system's entire goal is to concentrate all members' efforts within this year to restore agricultural production on surviving land, achieving the handover switch from "emergency calories" to "agricultural baseline guarantee." Once achieved, the economy escapes the death spiral and returns to the right track.
2. **Contract verification mechanism degradation to "physical coercive strengthening"**: When digital smart contracts and IoT gates are damaged, the supervision cost of "targeted full-amount consumption" rises sharply. The system will adopt minimalist physical countermeasures to replace digital monitoring:

- **Externally:** Implement absolute government trade monopoly, prohibiting free individual cross-border transactions.
 - **Internally:** Thoroughly ban and crack down on any form of private savings and hoarding, with supervision mechanisms degraded to "no report, no action" mass reporting models. By depriving savings channels, residents are forced to immediately invest their daily meager output into current consumption. This means that **even under extreme scarcity, high-frequency consumption behavior and endogenous economic circulation will not stop**, ensuring the economy can quickly stabilize amid the ruins.
3. **Currency sovereignty "immediate reset" degradation:** If the crisis causes the original legal tender's credit to completely collapse or sovereignty to be lost, this condition does not constitute the system's absolute floor. Because currency is essentially a bookkeeping symbol of trust. In extreme and closed social states, management can instantly abolish the old currency and issue "new independent transitional fiat/tokens" based on currently existing physical resources. Therefore, currency sovereignty has no physical floor—creating a new bookkeeping system suffices.

6.4.2 Proof of the "Absolute Bottom Lines" for Proposal

Failure

Through the above degraded operation deduction, we can clearly strip away all replaceable surface technologies and ultimately lock onto the **two major absolute bottom lines** in the real physical world that this proposal cannot transcend. Once these two bottom lines are breached, the proposal will experience irreversible physical and sociological collapse.

【Absolute Bottom Line 1 (Physical/Resource Floor): Malthusian Carrying Capacity Critical Point】 The material floor for the proposal's survival lies in whether the absolute caloric total provided by "remaining cultivable land + residual agricultural technology" is greater than or equal to the consumption required to maintain the minimum vital signs of that small social group.

- *Breaking Point and Collapse:* If this critical point is breached, the system must implement "Malthusian forced equilibrium" through extremely cruel non-economic means: namely, forcibly plundering external resources through armed force (casting off moral constraints under extreme survival logic), or forcibly lowering the denominator through passive population reduction and social fragmentation.
- *Ultimate Collapse Point:* This physical reduction possesses an ultimate death spiral—when the social population plummets to the minimum threshold where it

"cannot simultaneously satisfy basic agricultural labor and external security defense needs," the social entity will be completely erased.

【Absolute Bottom Line 2 (Management/Organization Floor): First-Year Coercive Suppression Threshold】 In the degraded state, the system replaces "implicit freedom contracts" with "explicit physical coercion and forced consumption." This inevitably triggers intense internal human nature backlash.

- *Breaking Point and Collapse:* Therefore, the management floor for the proposal's survival lies in the government or core management possessing **sufficiently strong internal coercive suppression and organizational mobilization capacity to ensure the regime is not overthrown by internal turmoil during the "golden first year of agricultural recovery."**
- *Long-Term Survival Convergence Condition:* This extreme coercive power is highly toxic and cannot be maintained long-term. Its legitimacy is entirely built upon "buying agricultural recovery time." One year later, if coercive measures fail to transform into initial substantive economic recovery, extreme suppression will inevitably trigger comprehensive social backlash. Management must, after surviving the first-year crisis, rapidly use positive economic development to replace coercive measures and re-establish normal consumption contracts driven by interest incentives.

7. Conclusion and Future Prospects

From the post-industrial era's "involution and lying flat" dilemma to the smart contracts of the digital economy era; from the dual-track smooth transition of the normal macroeconomy to system degradation and restart under extreme crisis—this paper has systematically constructed and deduced a new macroeconomic governance paradigm amid the vacuum of logic and the pressures of reality. This chapter will provide the final concluding summary of the entire paper's theoretical deductions, distill its core academic contributions, and indicate directions for the theory's further evolution in the future.

7.1 Summary of the Research's Main Contributions and Academic Innovations

Facing the structural demand contraction of contemporary capitalist free markets and the fiscal penetration dilemmas of traditional Keynesian welfare systems, this research has jumped out of the "patchwork" policy rut, starting from the most fundamental axioms of economics, proposing and demonstrating the "novel social welfare framework based on physical defense and contractual consumption."

The core academic contributions and theoretical innovations of this paper can be highly condensed into the following four dimensions:

1. A Paradigm Leap in Welfare Economics: From "Sunk Costs" to "Endogenous Demand Engine"

Traditional welfare economics has never been able to escape the curse of "equity-efficiency trade-off," treating baseline guarantees as pure fiscal consumption. This paper, through "de-industrialization decoupling of survival factors (physical minimization and centralized mass production)," successfully proves that the cost of maintaining human baseline survival can be completely decoupled from the complex modern monetary and price inflation systems.

More importantly, through institutional design, this proposal reconstructs "welfare distribution" as a precondition for "locking purchasing power." Welfare is no longer a one-way loss of wealth but serves as the first-stage rocket igniting macro aggregate demand, achieving a historic leap from welfare expenditure to an endogenous economic turbulence stabilizer.^[18]

2. The End of the Labor-Capital Zero-Sum Game: Externalities Internalization and the Mathematical Closure of "Wage Recycling"

In classical economics, the "demand spillover" paradox where enterprise wage increases necessarily harm profits is the chief culprit causing aggregate demand contraction across society. The "targeted, full-amount consumption contracts" proposed in this paper theoretically perfectly seal the precautionary savings leakage of funds.

By forcibly setting the marginal propensity to consume $MPC \equiv 1$, the system integrates micro-subjects' discrete, random consumption behaviors into highly deterministic macro order flows. This enables salaries issued by enterprises to convert, at extremely short clearing cycles, 100% into their own operating revenue. This study logically proves: by eliminating demand-side uncertainty, it is possible to completely activate enterprises' economies of scale dividends, thereby achieving a "Pareto win-win" for both labor and capital without harming capital's profit-seeking instinct.^{[11][17]}

3. A Breakthrough in Mechanism Design Theory: Asymmetric Considerations and Zero-Administrative-Cost "Self-Selection"

Against welfare abuse, power rent-seeking, and "adverse selection (insurance fraud and lying flat)" that are difficult to eradicate in traditional systems, this paper innovatively introduces "freedom cession (spatial and employment freedom restrictions)" as an implicit consideration for obtaining the safety net.

This mechanism skillfully exploits the opportunity cost differences of heterogeneous groups: high-net-worth individuals naturally "self-exclude" due to unwillingness to lose freedom; bottom-level groups trapped in difficulties voluntarily sign based on rational calculation. This self-selection mechanism that does not rely on massive bureaucratic inspection systems but entirely depends on game-theoretic "incentive compatibility constraints" provides a new theoretical solution to the worldwide challenge of precise public goods distribution.^{[12][7][8]}

4. Extreme Evolutionary Elasticity: "All-Weather Robustness" from Digital Dual-Track to Ultimate Survival

The hardest-core theoretical penetration of this proposal lies in its extremely broad applicability boundaries and strike resistance.

Under the normal digital economy, it can rely on smart contracts and the dual-track system (semi-permeable membrane mechanism) to achieve frictionless Pareto smooth transition, ultimately converging at "a full-participation ultra-stable society with high consumption" or an "unmanned but eternally protective implicit safety anchor"; while under conditions where conventional physical boundaries are breached and society degenerates to pre-modern extreme doomsday crises, the system's underlying core logic of "baseline forced guarantees + prohibition of savings forced circulation" remains valid, capable of serving as society's ultimate restart engine for the economy, seizing the golden window for civilization recovery above the Malthusian carrying capacity absolute floor.

In summary, the "Contractual Consumption Framework" proposed and demonstrated in this paper is neither blind worship of free market mythology nor rigid restoration of traditional planned economy. It is a macro-mechanism reconstruction based on modern digital technology and profound insight into human nature's risk-aversion and benefit-seeking instincts, providing a logically rigorous, watertight institutional blueprint for completely ending the involution and periodic economic crises of the post-industrial era.

7.2 Limitations of This Study

Although this paper has proven the "Contractual Consumption Framework's" absolute logical rigidity and self-consistency in axiomatic deduction, evolutionary game analysis, and extreme survival boundary testing, as a macro-theoretical reconstruction with paradigm-subverting significance, this study inevitably possesses the following academic limitations at the current stage that must be confronted in future research and practice.

1. Lack of Large-Scale Intertemporal Empirical Data

The argumentation of this study heavily relies on microeconomic axiomatic deduction, genetic extraction from historical local experiments, and logical deduction under extreme conditions. Despite the rigorous logical chain, currently no sovereign state in the world has completely operated this set of "in-kind stripping + contractual constraints + wage recycling" macro system on a full-factor digital foundation. Therefore, during normal system operation, the real decision-making friction coefficients of micro-subjects (particularly massive heterogeneous enterprises) facing contractual constraints, the specific manifestations of hidden rent-seeking, and the multiplier transmission lags between different industries still lack large-scale, long-time-series first-hand Empirical Data support.

2. Excessive Simplification of Open Economy Assumptions

To clearly demonstrate the "wage recycling mechanism" and self-sustaining closure of the internal commercial ecosystem, this paper's deductions are mainly built on "Closed Economy" or "semi-closed dual-track" assumptions. In today's highly globalized world, if the entity implementing the proposal is an open country deeply embedded in the global division of labor, this paper has not yet detailed the dynamic interaction equations between the internal system and "external complex international trade, multinational capital flows, offshore financial derivatives markets." For example, how internal ecosystem enterprises' required external high-end technology imports are settled in exchange rates and value with the system's internal circulation is simplified in the model as Exogenous Variables.

3. Cultural Heterogeneity and Measurement Bias in

"Freedom Discount Rates"

This proposal sets "spatial mobility/employment freedom restrictions" as the self-selection default consideration, whose mathematical foundation assumes individuals conduct rational utility discount calculations on "freedom" and "survival security."

However, human psychology and behavioral patterns are deeply influenced by Culture, geography, and historical memory. In economies with different cultural backgrounds, residents' utility evaluation weights (discount rates) for "freedom" may differ enormously. The model fails to incorporate such deep sociological/anthropological heterogeneity parameters, which may cause significant shifts in residents' critical signing trigger points in specific cultural spheres.

7.3 Future Research Directions and Application Prospects

This study provides a bottom-level "institutional source code" for macroeconomic governance in the post-industrial era. Along this theoretical thread, future academic research and policy exploration can advance in depth from the following three dimensions:

1. Empirical and Econometric Research in Regional Gray-Scale Sandboxes (Empirical Sandbox Research)

The ultimate destination of theory is guiding practice. The primary future research direction is converting this proposal into a landable micro-experiment. Researchers can collaborate with local governments to select extremely small-scale closed/semi-closed physical communities in typical "double-high double-low" regions (such as resource-exhausted cities) for the first-phase MVP (Minimum Viable Model) gray-scale testing. By collecting real experimental data on resident performance rates, real profit recovery cycles of enterprises, and inflation indices, econometric tools (such as Difference-in-Differences, DID) can be employed to precisely calibrate multiplier parameters and friction coefficients in the theoretical model.^[23]

2. Deep Application of Cryptography and Algorithmic Economics in Contract Execution

This proposal heavily relies on digital smart contracts to achieve "zero-friction" consumption default determination. How to ensure precise locking of macro fund flows (preventing leakage) while **absolutely protecting micro-individuals' consumption privacy** is a critical challenge for future techno-economics. Future research can introduce cutting-edge cryptographic technologies such as Zero-Knowledge Proofs (ZKP) and Multi-Party Computation (MPC) to design an encrypted contract algorithm where "the

system can only know whether individuals completed total-amount consumption but cannot peer into their specific consumption categories and preferences," fundamentally eliminating the ethical hazard of "digital totalitarianism" from the technical foundation.^[27]

3. Construction of Transnational Contractual Consumption Alliances and International Currency Clearing Mechanisms

When the system succeeds within a single sovereign state, future macroeconomics and International Political Economy (IPE) research should further explore: can a "transnational contractual consumption alliance" be established among multiple countries facing the same overcapacity and demand contraction dilemmas?

By designing a supranational "transnational in-kind welfare and contractual circulation voucher" (analogous to a modern "Bancor" system based on real productivity), countries can utilize their respective comparative advantage excess capacity to achieve cross-border "wage recycling" and demand matching within the internal commercial ecosystem of the international alliance. This would provide a highly disruptive evolutionary pathway for reconstructing the international economic and monetary order after the collapse of Bretton Woods.

Conclusion

Every great leap in human economic history stems from courageous betrayal of outdated common sense.

In an era where productive forces are sufficient to free all humanity from hunger and poverty, yet countless people are mired in involution and survival anxiety due to distorted distribution mechanisms, the "macro-framework based on in-kind welfare and contractual consumption" provides a logically rigorous solution. It proclaims the end of the old era in which "survival" was used as a bargaining chip for capital games, and, with contracts and trust as cornerstones, opens the prelude to a new human economic form that is free from want, free from fear, and possesses extremely high operational efficiency.

This is not merely a theoretical reconstruction of welfare economics but a profound exploration of how human society can achieve lasting peace and stability in a future of technological explosion.

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Appendix A: Complete Code

Implementation

This appendix contains all complete code files used in the paper, for reference in reproducing experimental results.

A.1 Proposal Simulation Script (sim.py)

```
# sim.py

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

# -----
# 1. Model parameter configuration
# -----
config = {
    'n_households': 500,
    'n_firms': 50,
    'initial_capital': 1e6,      # System parent fund initial injection

    'mpc': 1.0,                 # Marginal propensity to consume under
    contractual constraints
    'consumption_share': 0.70,  # 70% of consumption flows
    directionally to partner enterprises (internal circulation)

    'wage_elasticity': 0.3,      # Wage elasticity: revenue up 1%, wages
    up 0.3%
    'max_wage_growth': 0.08,    # Annual wage increase cap
    'baseline_cost_per_hh': 15.0, # Fixed physical baseline cost
    (survival factor stripping)

    'tax_rate': 0.15,           # Enterprise profit tax rate
    'dividend_ratio': 0.60,     # Proportion of after-tax profit
    distributed as dividends to residents
}
```

```

    'investment_ratio': 0.40,    # Proportion of after-tax profit used
    for inter-enterprise procurement (B2B)

    'sim_years': 50,
}

# -----
# 2. Define core agent classes
# -----
class Household:
    def __init__(self, h_id, skill=1.0):
        self.id = h_id
        self.skill = skill
        self.labor_supply = 0.0

    def decide_labor(self, wage_rate):
        self.labor_supply = max(0.5, self.skill * (1 + 0.5 *
np.log(max(1.0, wage_rate))))
        return self.labor_supply

class Firm:
    def __init__(self, f_id, capital=1e5):
        self.id = f_id
        self.capital = capital
        self.wage_rate = 1.0
        self.wage_bill = 0.0
        self.revenue = 100.0
        self.prev_revenue = 100.0
        self.profit = 0.0
        self.inside_loop = False

    def update_wage(self):
        """Endogenous wage increase: gradually raise wages based on
actual revenue order growth"""
        if self.inside_loop:
            revenue_growth = (self.revenue - self.prev_revenue) /
self.prev_revenue if self.prev_revenue > 0 else 0
            if revenue_growth > 0:
                actual_growth = min(config['max_wage_growth'],
revenue_growth * config['wage_elasticity'])
                self.wage_rate *= (1 + actual_growth)
            self.wage_rate = max(1.0, self.wage_rate)

```

```

        self.prev_revenue = max(1.0, self.revenue)
        return self.wage_rate

# -----
# 3. Economic environment and simulation main loop
# -----
class ContractualEconomy:
    def __init__(self, config):
        self.params = config
        self.households = [Household(i, skill=np.random.uniform(0.5,
1.5)) for i in range(config['n_households'])]
        self.firms = [Firm(i, capital=np.random.uniform(5e4, 2e5)) for i
in range(config['n_firms'])]

        self.gov_capital = config['initial_capital']
        self.total_orders = 0.0

        # Macro closure fund pool (used to carry previous year's
retained profits)
        self.total_dividends = 0.0
        self.total_investment = 0.0

        self.history = {'year': [], 'GDP': [], 'GovCapital': [],
'FirmProfit': [], 'Wage': [], 'InnerFirmsCount': []}

    def run_simulation(self):
        for year in range(self.params['sim_years']):
            print(f"\n--- Year {year} ---")

            # ----- Phase 1: Policy call and enterprise joining -----
            for firm in self.firms:
                if not firm.inside_loop:
                    # Simplified logic: under government endorsement,
enterprises see the system starting and gradually join
                    if year > 1 and np.random.rand() < 0.2:
                        firm.inside_loop = True
                        firm.update_wage()

            current_avg_wage = np.mean([f.wage_rate for f in self.firms])

            # ----- Phase 2: Resident Labor supply & enterprise wage
accounting -----

```

```

        total_labor = sum([hh.decide_labor(current_avg_wage) for hh
in self.households])
        total_wage_bill = 0.0

        for firm in self.firms:
            labor_share = total_labor / len(self.firms) if
len(self.firms) > 0 else 0
            firm.wage_bill = firm.wage_rate * labor_share
            total_wage_bill += firm.wage_bill

        # ----- Phase 3: Macro purchasing power allocation (key to
eliminating Leakage) -----
        total_inside_demand = 0.0
        total_outside_demand = 0.0

        # 1. Government expenditure on minimalist baseline material
costs
        baseline_fund = self.params['baseline_cost_per_hh'] *
len(self.households)
        self.gov_capital -= baseline_fund

        # 2. Residents' total income = wages + subsidies + enterprise
dividends from previous year
        for hh in self.households:
            income_share = hh.labor_supply / total_labor if
total_labor > 0 else 1/len(self.households)
            hh_income = (total_wage_bill * income_share) + \
                (baseline_fund / len(self.households)) + \
                (self.total_dividends * income_share)

        # Residents consume directionally per contract ratio
(MPC=1)
        inside_cons = hh_income *
self.params['consumption_share']
        outside_cons = hh_income * (1.0 -
self.params['consumption_share'])

        total_inside_demand += inside_cons
        total_outside_demand += outside_cons

        self.total_orders = total_inside_demand

```

```

        # ----- Phase 4: Enterprise revenue and profit distribution
        (B2B + B2C) -----
        inner_firms = [f for f in self.firms if f.inside_loop]
        total_capital_all = sum([f.capital for f in self.firms])
        total_capital_inner = sum([f.capital for f in inner_firms])
        if inner_firms else 0.0

        current_year_profit = 0.0
        current_year_tax = 0.0
        next_year_dividends = 0.0
        next_year_investment = 0.0

        for firm in self.firms:
            firm.revenue = 0.0

            # A. All enterprises share external consumption demand +
            inter-enterprise procurement (B2B) demand
            market_share_all = firm.capital / total_capital_all if
            total_capital_all > 0 else 0
            firm.revenue += total_outside_demand * market_share_all
            firm.revenue += self.total_investment * market_share_all

            # B. Internal circulation enterprises exclusive:
            exclusive access to massive targeted consumption demand! (Scale
            advantage from government endorsement)
            if firm.inside_loop and total_capital_inner > 0:
                market_share_inner = firm.capital /
                total_capital_inner
                firm.revenue += total_inside_demand *
                market_share_inner

            # Calculate profit
            firm.profit = firm.revenue - firm.wage_bill

            if firm.profit > 0:
                tax = firm.profit * self.params['tax_rate']
                net_profit = firm.profit - tax
                current_year_tax += tax
                current_year_profit += firm.profit

            # After-tax profit fully recycled to society:
            expanded reproduction (B2B orders) + resident dividends

```

```

        next_year_investment += net_profit *
self.params['investment_ratio']
        next_year_dividends += net_profit *
self.params['dividend_ratio']
        firm.capital += net_profit *
self.params['investment_ratio']
    else:
        firm.capital += firm.profit # Losses eat into
existing capital
        firm.capital = max(1.0, firm.capital)

# ----- Phase 5: Macro clearing -----
self.gov_capital += current_year_tax
self.total_dividends = next_year_dividends
self.total_investment = next_year_investment

# GDP = Total consumption (C) + Total investment (I)
self.GDP = total_inside_demand + total_outside_demand +
self.total_investment

# ----- Phase 6: Data collection -----
self.history['year'].append(year)
self.history['GDP'].append(self.GDP)
self.history['GovCapital'].append(self.gov_capital)
self.history['FirmProfit'].append(current_year_profit)
self.history['Wage'].append(current_avg_wage)
self.history['InnerFirmsCount'].append(len(inner_firms))

def plot_results(self):
    fig, axes = plt.subplots(2, 3, figsize=(16,9))
    years = self.history['year']

    axes[0,0].plot(years, self.history['GDP'], label='GDP',
color='blue')
    axes[0,0].set_title('GDP Evolution (C + I)')
    axes[0,0].grid(True, alpha=0.3)

    axes[0,1].plot(years, self.history['GovCapital'], label='Gov
Capital', color='green')
    axes[0,1].set_title('Government Capital (Mother Fund)')
    axes[0,1].grid(True, alpha=0.3)

```

```

        axes[0,2].plot(years, self.history['FirmProfit'], label='Total
Firm Profit', color='orange')
        axes[0,2].set_title('Total Firm Profit')
        axes[0,2].grid(True, alpha=0.3)

        ax1 = axes[1,0]
        ax1.plot(years, self.history['Wage'], label='Avg Wage',
color='red')
        ax1.set_ylabel('Wage Level', color='red')
        ax2 = ax1.twinx()
        ax2.plot(years, self.history['InnerFirmsCount'], label='Inner
Firms', color='black', linestyle='--')
        ax2.set_ylabel('Inner Loop Firms Count', color='black')
        axes[1,0].set_title('Wages & Ecosystem Adoption')
        axes[1,0].grid(True, alpha=0.3)

        gov_gdp_ratio = np.array(self.history['GovCapital']) /
(np.array(self.history['GDP'])+1e-6)
        axes[1,1].plot(years, gov_gdp_ratio, label='Gov/GDP Ratio',
color='brown')
        axes[1,1].set_title('Gov Capital / GDP Ratio')
        axes[1,1].grid(True, alpha=0.3)

        plt.tight_layout()
        plt.savefig('simulation_results_final.png', dpi=300)
        plt.show()

if __name__ == "__main__":
    economy = ContractualEconomy(config)
    economy.run_simulation()
    economy.plot_results()

```

A.2 Proposal Simulation Script (sim_c.py)

```

import numpy as np
import matplotlib.pyplot as plt
from copy import deepcopy

```

```

# -----
# 1. Model global parameter configuration
# -----
global_config = {
    'n_households': 500,
    'n_firms': 50,
    'initial_capital': 1e6,
    'consumption_share': 0.70,
    'wage_elasticity': 0.3,
    'max_wage_growth': 0.08,
    'baseline_cost_per_hh': 15.0,
    'tax_rate': 0.15,
    'dividend_ratio': 0.60,
    'investment_ratio': 0.40,
    'sim_years': 50,
}

# -----
# 2. Core agent classes
# -----
class Household:
    def __init__(self, h_id, skill=1.0):
        self.id = h_id
        self.skill = skill
        self.labor_supply = 0.0

    def decide_labor(self, wage_rate):
        self.labor_supply = max(0.5, self.skill * (1 + 0.5 *
np.log(max(1.0, wage_rate))))
        return self.labor_supply

class Firm:
    def __init__(self, f_id, capital=1e5):
        self.id = f_id
        self.capital = capital
        self.wage_rate = 1.0
        self.wage_bill = 0.0
        self.revenue = 100.0
        self.prev_revenue = 100.0
        self.profit = 0.0
        self.inside_loop = False

```

```

def update_wage(self, allow_inside_loop):
    """If internal circulation (contractual framework) is allowed,
    execute endogenous wage increases; otherwise wages stagnate"""
    if self.inside_loop and allow_inside_loop:
        revenue_growth = (self.revenue - self.prev_revenue) /
self.prev_revenue if self.prev_revenue > 0 else 0
        if revenue_growth > 0:
            actual_growth = min(global_config['max_wage_growth'],
revenue_growth * global_config['wage_elasticity'])
            self.wage_rate *= (1 + actual_growth)
        self.wage_rate = max(1.0, self.wage_rate)
        self.prev_revenue = max(1.0, self.revenue)
        return self.wage_rate

# -----
# 3. Economic environment runner
# -----
def run_scenario(scenario_name, mpc, gov_spending_enabled,
allow_inside_loop):
    """
    Core run function, accepts different scenario macro setting
    parameters
    """
    households = [Household(i, skill=np.random.uniform(0.5, 1.5)) for i
in range(global_config['n_households'])]
    firms = [Firm(i, capital=np.random.uniform(5e4, 2e5)) for i in
range(global_config['n_firms'])]

    gov_capital = global_config['initial_capital']
    total_orders = 0.0
    total_dividends = 0.0
    total_investment = 0.0

    history = {'year': [], 'GDP': [], 'GovCapital': [], 'FirmProfit':
[], 'Wage': []}

    for year in range(global_config['sim_years']):
        # 1. Policy call and enterprise joining
        for firm in firms:
            if allow_inside_loop and not firm.inside_loop:
                if year > 1 and np.random.rand() < 0.2:
                    firm.inside_loop = True

```

```

        firm.update_wage(allow_inside_loop)

    current_avg_wage = np.mean([f.wage_rate for f in firms])

    # 2. Labor supply and wages
    total_labor = sum([hh.decide_labor(current_avg_wage) for hh in
households])
    total_wage_bill = 0.0
    for firm in firms:
        labor_share = total_labor / len(firms) if len(firms) > 0 else
0

        firm.wage_bill = firm.wage_rate * labor_share
        total_wage_bill += firm.wage_bill

    # 3. Macro purchasing power allocation
    total_inside_demand = 0.0
    total_outside_demand = 0.0

    # Scenario control: whether government spends
    baseline_fund = global_config['baseline_cost_per_hh'] *
len(households) if gov_spending_enabled else 0.0
    gov_capital -= baseline_fund

    for hh in households:
        income_share = hh.labor_supply / total_labor if total_labor >
0 else 1/len(households)
        hh_income = (total_wage_bill * income_share) + (baseline_fund
/ len(households)) + (total_dividends * income_share)

        # Scenario control: actual consumption determined by set mpc
(simulating savings leakage)
        actual_consumption = hh_income * mpc

        if allow_inside_loop:
            inside_cons = actual_consumption *
global_config['consumption_share']
            outside_cons = actual_consumption * (1.0 -
global_config['consumption_share'])
        else:
            inside_cons = 0.0
            outside_cons = actual_consumption

```

```

        total_inside_demand += inside_cons
        total_outside_demand += outside_cons

total_orders = total_inside_demand

# 4. Enterprise revenue and profit distribution
inner_firms = [f for f in firms if f.inside_loop]
total_capital_all = sum([f.capital for f in firms])
total_capital_inner = sum([f.capital for f in inner_firms]) if
inner_firms else 0.0

current_year_profit = 0.0
current_year_tax = 0.0
next_year_dividends = 0.0
next_year_investment = 0.0

for firm in firms:
    firm.revenue = 0.0
    market_share_all = firm.capital / total_capital_all if
total_capital_all > 0 else 0
    firm.revenue += total_outside_demand * market_share_all
    firm.revenue += total_investment * market_share_all

    if firm.inside_loop and total_capital_inner > 0:
        market_share_inner = firm.capital / total_capital_inner
        firm.revenue += total_inside_demand * market_share_inner

# Exclude depreciation, directly calculate net surplus profit
firm.profit = firm.revenue - firm.wage_bill

if firm.profit > 0:
    tax = firm.profit * global_config['tax_rate']
    net_profit = firm.profit - tax
    current_year_tax += tax
    current_year_profit += firm.profit

    next_year_investment += net_profit *
global_config['investment_ratio']
    next_year_dividends += net_profit *
global_config['dividend_ratio']
    firm.capital += net_profit *
global_config['investment_ratio']

```

```

        else:
            firm.capital += firm.profit
            firm.capital = max(1.0, firm.capital)

    # 5. Macro clearing
    gov_capital += current_year_tax
    total_dividends = next_year_dividends
    total_investment = next_year_investment

    # GDP calculation
    gdp = total_inside_demand + total_outside_demand +
total_investment

    # 6. Data collection
    history['year'].append(year)
    history['GDP'].append(gdp)
    history['GovCapital'].append(gov_capital)
    history['FirmProfit'].append(current_year_profit)
    history['Wage'].append(current_avg_wage)

    return history

# -----
# 4. Run three sets of experiments and plot comparison charts
# -----
if __name__ == "__main__":
    print("Running Free Market control group...")
    history_free_market = run_scenario("Free Market", mpc=0.6,
gov_spending_enabled=False, allow_inside_loop=False)

    print("Running Traditional Keynesian money distribution control
group...")
    history_keynesian = run_scenario("Keynesian", mpc=0.6,
gov_spending_enabled=True, allow_inside_loop=False)

    print("Running Contractual Consumption Framework (this
proposal)...")
    history_contractual = run_scenario("Contractual", mpc=1.0,
gov_spending_enabled=True, allow_inside_loop=True)

    # --- Plot decisive comparison charts ---
    fig, axes = plt.subplots(1, 3, figsize=(18, 5))

```

```

years = history_contractual['year']

# Chart 1: GDP comparison
axes[0].plot(years, history_free_market['GDP'], label='Free Market
Baseline (MPC=0.6, No Welfare)', color='gray', linestyle='--')
axes[0].plot(years, history_keynesian['GDP'], label='Traditional
Keynesian (MPC=0.6, UBI)', color='red', linestyle='-.')
axes[0].plot(years, history_contractual['GDP'], label='Contractual
Framework (MPC=1.0)', color='blue', linewidth=2)
axes[0].set_title('Macroeconomic Phase Transition (GDP)')
axes[0].legend()
axes[0].grid(True, alpha=0.3)

# Chart 2: Total enterprise profit comparison
axes[1].plot(years, history_free_market['FirmProfit'], color='gray',
linestyle='--')
axes[1].plot(years, history_keynesian['FirmProfit'], color='red',
linestyle='-.')
axes[1].plot(years, history_contractual['FirmProfit'], color='blue',
linewidth=2)
axes[1].set_title('Total Firm Profit Evolution')
axes[1].grid(True, alpha=0.3)

# Chart 3: Government finance (parent fund) comparison
axes[2].plot(years, history_free_market['GovCapital'], color='gray',
linestyle='--')
axes[2].plot(years, history_keynesian['GovCapital'], color='red',
linestyle='-.')
axes[2].plot(years, history_contractual['GovCapital'], color='blue',
linewidth=2)
axes[2].set_title('Fiscal Sustainability (Gov Capital)')
axes[2].grid(True, alpha=0.3)

plt.tight_layout()
plt.savefig('scenario_comparison.png', dpi=300)
print("\nComparison chart generated: scenario_comparison.png")

```