

Reckoning with Economics, Political Economy, and Value Theory in the Age of AGI

Price, Contribution, Distribution, and the Boundaries of Meaning

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Independent Release V1.3 Revision on Dimensional Leaps and Cross-Disciplinary Causal Relations

For joint review by economics, political economy, value theory, labour economics, public economics, institutional economics, ecological economics, AI economics, and public policy. Without replacing the professional conclusions of these disciplines, this paper redraws the boundaries of inference between price, utility, output, contribution, income, rights, and meaning. The proposed four-track distribution, event-specific contribution records, public return, bundles of resource rights, and stage-sensitive economy are all testable and defeasible C-class institutional hypotheses. They are neither empirically established findings in economics nor policy parameters for any particular jurisdiction.

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Abstract (Translated from the Chinese)

Economic debate on AGI often compresses an institutional problem into a technological forecast: will machines replace labour? Yet the real rupture is not a particular unemployment rate. It is that productive capability, labour input, asset ownership, value realization, contribution attribution, and distributive power no longer naturally coincide. This paper establishes an auditable, layered framework across economics, political economy, and value theory. It first distinguishes price, utility or welfare, economic output, contribution, meaning-making, and authority over meaning; it then proposes a composite AGI production chain, four-track distribution, a contribution-event model, bundles of resource rights, and a stage-sensitive economy. Price remains an important coordination signal under scarcity, but cannot adjudicate personhood, public value, or eligibility to exist. Productivity growth can expand choices, but may also redistribute time and risk through the concentration of assets, infrastructure, and bargaining power. Existing task experiments and field studies show that generative AI can improve efficiency in bounded tasks. However, additional evidence through August 2026 still indicates that micro-level productivity gains are highly heterogeneous and do not automatically aggregate into improvements in wages, working hours, firm productivity, or macroeconomic welfare. Digital infrastructure, task composition, organizational redesign, and institutional conditions determine whether gains diffuse.[17–29][37–41] The proposed four-track distribution, event-specific contributions, public return, and bundles of resource rights are C-class institutional hypotheses, not empirically established economic findings. If they consistently perform worse than alternatives in fiscal, distributive, power, exit, or long-term social consequences, they should be narrowed or abandoned. Civilization Leap provides only a minimum philosophical interface: meaning is foundational and may have different sources; finitude is not its sole source; and capability, recognition, standing, rights, power, and authority over meaning must not be automatically inferred from one another. The paper uses highly profitable AI diagnostics, public AI infrastructure, long-term care, watershed scheduling, computing and energy, and irreversible ecological consequences as stress tests, before presenting the strongest objections, failure conditions, and a cross-disciplinary research agenda. It further moves disciplinary responsibility upstream to the generation of goals and purposes: the shift from self-interest first to self-interest with others first brings those with genuine stakes into judgment before purposes are generated and locked in. Disciplinary facts, direction, methods, and results are explained separately; local success or failure cannot substitute for shared continued existence and the three long-term goals. The paper accordingly advances from distinguishing disciplinary objects to examining cross-disciplinary relations in depth, tracing how judgments in this field change reality through other fields and how feedback then changes the original conditions and the next round of purposes. Stakes across multiple actors, stages, and settings must be presented separately. Correlation, common causes, mediation, and causal feedback must be tested separately, and the additional relational dimensions must remain open to concrete counterevidence.

Keywords: advanced artificial intelligence; price; value; contribution attribution; four-track distribution; care; public return; bundles of resource rights; boundaries of meaning

Abstract (Original English Version)

Economic debate on AGI is often compressed into a technological forecast: will machines replace labour? The deeper break lies elsewhere. Productive capability, labour input, asset ownership, value realization, contribution attribution, and distributive power no longer coincide. This paper develops an auditable framework across economics, political economy, and value theory. It distinguishes price, utility or welfare, economic output, contribution, meaning-making, and authority over meaning; it then proposes a composite AGI production chain, a four-track distributive architecture, event-specific contribution records, public-return boundaries, bundles of resource rights, and a stage-sensitive political economy. Prices remain important signals under scarcity, but cannot adjudicate personhood, public value, or eligibility to exist. Evidence through August 2026 supports real but

heterogeneous task-level productivity gains while showing that such gains do not automatically aggregate into earnings, hours, firm productivity, or macroeconomic welfare; diffusion depends on task composition, digital infrastructure, organisational redesign, skills, competition, and institutions. The four-track architecture, contribution-event model, public-return rules, and resource-rights bundles are therefore C-class institutional hypotheses, not established empirical-economics results; they must contract or be abandoned if they perform worse than competing arrangements. Civilization Leap supplies only a minimal philosophical interface: meaning may have plural sources; finitude is not its sole source; and capability, recognition, status, rights, power, and authority over meaning must not be inferred from one another. The paper ends with pressure tests, strongest objections, defeat conditions, and a cross-disciplinary research agenda. The paper further locates disciplinary responsibility before goal and purpose generation: a shift from self-interest first to self-interest with others first brings subjects with genuine stakes into judgment before goals are formed and locked. Facts, direction, methods, and outcomes remain distinct. The analysis is further extended to cross-disciplinary causal relations. It traces how judgments in this field change real-world conditions through other domains, and how feedback modifies the original conditions and subsequent purposes. Effects across actors, stages, and settings must be distinguished from correlations, common causes, and merely asserted connections.

Keywords: advanced AI; price; value; contribution attribution; four-track distribution; care; public return; bundles of rights; boundaries of meaning

Research Position, Scope of Materials, and Evidentiary Discipline

This research begins with theoretical and dimensional leaps. It preserves disciplinary precision while deepening causal relationships with neighbouring fields. Disciplinary boundaries identify burdens of proof; they do not end the tracing of shared consequences. Existing scholarship participates in competing explanations and tests against counterexamples. It cannot demand that new questions return to old frameworks merely because established classifications have no place for them.

This paper is an in-depth specialist study that can be read independently of the internal library. It is not an introduction to economics, nor does it offer tax rates, basic-income amounts, resource quotas, or automatic allocation formulas ready for application in any country. AGI is a prospective category of objects here. Where existing systems are concerned, the discussion covers only publicly verifiable advanced generative and agentic AI, algorithmic infrastructure, and institutional texts. Public sources were checked through 26 August 2026. Statistical, policy, and product status must be checked again before submission.[23–41]

The paper distinguishes four argumentative statuses. Class A comprises facts and institutional materials with relatively stable support: the coordination function of prices and its conditions, task reorganization through automation, AI productivity effects in bounded tasks, the systematic invisibility of care work, social protection norms, and resource and ecological accounting. Class B comprises frontier research and competing explanations: AI's macroeconomic productivity, long-term employment, capital-labour shares, infrastructure concentration, global diffusion, and development outcomes. Class C comprises this paper's cross-disciplinary connections and institutional hypotheses awaiting validation: the sixfold distinction of value, the composite AGI production chain, four-track distribution, event-specific contribution records, public-return boundaries, bundles of resource rights, and a stage-sensitive economy. Class F comprises the author's openly assumed philosophical and normative commitments: meaning can have plural sources; basic survival and personal standing cannot automatically be revoked by price or contribution; and no single economic measure may acquire comprehensive accounting authority over whole lives, rights, and meaning. Class A facts do not automatically generate Class B explanations, Class C institutional conclusions, or Class F legitimacy. Classes B, C, and F must never masquerade as established economic facts.

The external-release paper introduces Civilization Leap only as far as necessary and does not require readers to accept its entire project. Readers may test the empirical facts, disciplinary explanations, original propositions, and institutional inferences separately. Classical authors provide dialogue and stress tests, not adjudicative authority.

An Entry Point for New Readers: Civilization Leap's Minimum Philosophical Interface

The paper invokes four minimum premises. First, the shared rupture brought by AGI is not that “old economics has failed”, but that actual technologies are beginning to separate the relationships among intelligence, consciousness, subjecthood, life, responsibility, rights, and bearers of meaning that have long naturally coincided in human beings. Second, meaning is foundational and can have different sources: labour, care, creation, relationships, responsibility, experience, and belief may all enter into meaning. Third, finitude is not the sole source of meaning, but is an important structure through which known human choices bear irreversible consequences and thus acquire irreplaceable weight. Fourth, functional performance, social recognition, legal standing, ontological subjecthood, and political standing must not be automatically inferred from one another. Increased capability likewise does not automatically confer ownership, resource control, governance rights, or authority over meaning. Claims such as “meaning is foundational” and “basic human standing cannot be settled by economic output” are Class F philosophical and normative commitments, not economic discoveries; they must face normative counterexamples, institutional consequences, and cross-disciplinary tests against reality. “Meaning is foundational” explains the philosophical connection among the three goals; it neither overrides nor reorders “freedom from survival insecurity, a happy life, and a more meaningful life”.

As of 26 August 2026, public evidence remains insufficient to establish that current advanced generative and agentic AI possesses subjective experience, non-transferable continuity as a subject, or a relationship in which it bears consequences as “its own consequences”. Constraints can produce bounded operation but cannot automatically establish finite existence. For humans, space and time are life; for AI with currently public architectures, space and time first appear as parameters, states, locations, latency, computing capacity, and scheduling conditions. Only in specific deployments with traceable responsibility, explicit authorization, auditability, correctability, and exit does this paper describe these systems as extensions of productive and cognitive capability, possible components of public infrastructure, and functional roles in understanding, protecting, and transmitting meaning or extending human capabilities. These are roles, not the nature of the systems. Protection may precede proof of subjecthood, but does not automatically escalate to legal standing, political membership, public authority, or sovereignty. If future evidence changes judgments about subjecthood, each institutional position must still be justified anew and separately.

The Paper's Anchor Statement

Productive capability can grow independently of labour; people's eligibility to exist, public rights, and meaning must not therefore be entered into the same price list.

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Distributive Feedback and the Migration of Scarcity in Economic Relations

From Productivity into the Cycle of Production Conditions

Economics retains its analysis of prices, incentives, scarcity, and production while examining more deeply how capability growth enters life through assets, institutions, care, and power. More output does not automatically establish that everyone's real choices have expanded. Distribution is not merely the final step after production: it changes demand, education, research, and the direction of the next round of production.

How Abundance Enters or Bypasses Life

Suppose intelligent production lowers the cost of a type of service, while a platform controls access, certification, and returns. Falling costs affect prices and demand; concentrated access affects income and bargaining; income changes affect learning and care; and new dependencies further strengthen the platform's market and rule-setting position. Conversely, if capability gains enter public support and genuinely accessible conditions, they may create new participation and co-creation. Both chains are conditional mechanisms and must be compared using inputs, prices, rights, and actual use within the same field.

The Distribution of Benefits and Costs across Settings

Firm efficiency may derive from households taking on more care, consumer convenience from other regions bearing energy and ecological costs, and current income from sacrificing future room for choice. Constraints differ between emergency relief during launch, restructuring during transition, and incentives during stability, but basic continued existence cannot become a reward for contribution points. Tracking the migration of scarcity requires tracing materials, energy, computing capacity, attention, trust, and finite time. Cheap local reproduction must not be described as an absence of overall costs.

How to Test the Theory's Additional Contribution

Multidimensional relational analysis should explain why similar productivity levels produce different livelihood protections, wealth concentration, and subsequent purposes. If four-track distribution, public return, or contribution records create new lock-in, the specific institutions should be revised. If the additional explanation cannot outperform existing political-economic and social-reproduction analyses, it must state precisely what new capabilities change, rather than proclaim a theoretical leap merely by invoking AGI.

Economic Incentives Enter the Generation of Purposes

Economic institutions distribute proceeds after output, but also determine beforehand what is worth pursuing. How profits, employment, security, status, and time are obtained helps generate the purposes of firms and individuals. Self-interest with others first must make improvements in real circumstances a durable route to realizing one's own interests, rather than merely adding compensation after old purposes have caused losses.

Returns to oneself remain legitimate. Creation, cooperation, assistance, and solving shared problems should be supported by actual benefits and time conditions; otherwise recognition remains moral language. Rules governing returns must also identify how contributions arise, who bears costs, and which returns arise from controlling access and manufacturing scarcity, so that new cooperation does not become a new monopoly.

Including affected parties before goals form can change investment directions, resource uses, and risk allocation, rather than merely determining compensation amounts. Relational weights should be proportionate to real

effects and their irreversibility, but cannot convert personhood, happiness, or the meaning of life into prices. Basic survival, income, contribution, and meaning remain on separate tracks.

The effectiveness of economic methods must be assessed against behaviour, costs, implementation conditions, and power relations. Failure may arise from incentives, organization, technology, or real conditions, and methods should be adjusted. One distribution scheme's failure cannot directly displace the shared direction. Conversely, increased profits at an institution do not establish that freedom from survival insecurity or individual happiness has been achieved.

A gradual shift must preserve effective provision and cooperation within existing institutions while expanding new sources of returns. Declaring a new stage cannot cancel real life. Stages change priorities; they do not automatically confer powers to concentrate property, compel allocation, or impose permanent exceptions. Every power still requires a legal basis, necessity, scope, and remedies.

1 Introduction: When Productive Capability Is No Longer Centred on Labour

Industrial automation has never been simply “machines replacing people”. It also changes task boundaries, skill complementarities, product demand, industrial structure, and wage distribution. Autor shows that automation can substitute for labour while also expanding labour demand through complementarity, output growth, and new tasks. Acemoglu and Restrepo further place displacement and the reinstatement effects of new tasks within a task framework.[17–19] AGI continues this historical problem while extending the potentially automatable range into parts of language, analysis, design, coordination, and judgment.

The central question is therefore not to forecast an aggregate unemployment rate, but to ask: when productive capability is no longer proportional to labour time, who receives the income, time, and choices released by machines; who bears transition, verification, energy, failure, and unemployment risks; who determines access to computing capacity, data, and platforms; whether society still makes selling labour a condition of eligibility to survive; whether measurable contribution engulfs care, relationships, public knowledge, and irreversible ecology; and whether high machine output is mistakenly written as rights or sovereignty.

The paper's answer is not to abolish markets, labour, or ownership, but to deny any single mechanism the final say on value. Economics continues to study scarcity, incentives, information, production, and choice; political economy asks how assets, rules, bargaining power, and risks are distributed; value theory prevents substitutions among price, utility, output, contribution, and meaning. Only by entering the AGI era together can the possibility of abundance avoid being swallowed in reverse by the reality of concentration.

1.1 Eight Claims Open to Scrutiny

- Prices can aggregate some dispersed information; they cannot establish complete value, public legitimacy, or people's eligibility to exist.
- Utility or satisfaction can measure part of outcomes; neither can replace agency, rights, distribution, or irreversible losses.
- Output is a quantity of results; contribution is a causal and responsibility relationship. Attribution of output, allocation of returns, control rights, and authority over meaning must be derived separately.
- C-class institutional hypothesis: survival protection, market income, contribution recognition, and a meaningful life remain on four tracks, with tests of whether any track engulfs another or evolves into an aggregate personal score.
- AGI production is a composite public–private chain. The model owner cannot monopolize all attribution on the strength of the final link; nor may public return fabricate precisely itemized retrospective accounting.

- Abundance relocates scarcity rather than abolishing it: energy, computing capacity, trust, attention, care, ecology, time, and institutional capacity remain constraints.
- C-class institutional hypothesis: disaggregate ownership into an auditable bundle of rights. Depending on the object, holding, use, returns, management, transfer, maintenance, audit, and emergency requisition may be combined through different institutions and tested against implementation outcomes.
- Class F commitment: the basic conditions of continued existence and minimum standing of known finite subjects do not lapse because their economic output is insufficient. Future AI subjecthood and standing remain open, but no standing can be inferred directly from productivity.

2 Three Scholarly Responsibilities: Explain Exchange, Reveal Power, and Defend Value Boundaries

Economics, political economy, and value theory often discuss the same objects but bear different burdens of proof. Price formation and resource allocation can be analysed through models, experiments, and institutional comparisons; asset concentration, bargaining power, and rulemaking require tracing history and power; what deserves protection and which differences cannot be converted require openly stated normative premises. Compressing the three into a single language allows efficiency to masquerade as legitimacy, critique as empirical evidence, and value judgments to hide inside parameters.

Table 1 Three Responsibilities and Their Prohibited Boundary Crossings

Field	Main questions	Typical materials	Prohibited extrapolation
Economics	Scarcity, incentives, exchange, production, welfare, risk, and behavioural responses.	Price, quantity, task, firm, household, experimental, and institutional data.	Model results do not automatically imply rights, standing, or meaning.
Political economy	Assets, institutions, market structure, bargaining power, state capacity, and risk transfers.	Property rights, organizations, supply chains, labour relations, competition, and public finance.	The fact of ownership does not legitimate domination; state capacity does not imply unlimited authority.
Value theory	Relationships among prices, utility, contributions, rights, public value, and meaning.	Conceptual analysis, normative argument, institutional conflicts, and counterexamples.	No single value scale may engulf all heterogeneous objects.
Cross-disciplinary interface	How AGI rearranges labour, capital, public conditions, time, and the space of meaning.	Empirical research, technological chains, normative texts, cases, and failure conditions.	Exposure is not displacement; capability is not standing; contribution is not personhood.

This paper does not announce final conclusions on behalf of mature disciplines. It offers only a set of boundaries that each discipline may separately reject: factual descriptions should identify objects and methods; causal explanations should specify competing mechanisms; system-level judgments should disclose philosophical premises; and institutional inferences should explain rights conflicts, implementation conditions, and reversibility.

3 A Map of Theoretical Dialogue: Valid Legacies, Historical Premises, and Questions for Renewal

Classical political economy already distinguished use, exchange, labour, capital, and social reproduction. Marx centred relations of production, surplus, and capital accumulation; Hayek stressed the coordinating role of prices under dispersed knowledge; Polanyi warned that labour, land, and money cannot be treated without friction as

ordinary commodities.[1–4] Arrow exposed market boundaries through uncertainty and information problems; Sen expanded the evaluative object from commodities and income to actual capabilities; Coase and Ostrom demonstrated the importance of institutional structures through transaction costs, rights arrangements, and polycentric governance.[5–12]

Feminist economics reveals how unpaid care and social reproduction are systematically obscured by national accounts and market rewards. Ecological economics restores material scale, energy, and irreversible ecology to the growth question.[13–15] Mazzucato's distinction between “value creation” and “value extraction” brings the public sector, innovation chains, and the politics of attribution back into discussion.[16] These resources are not this paper's genealogy. Each has historical premises, and they genuinely conflict over prices, labour value, the state's role, common resources, and normative judgments.

Table 2 Renewing Five Theoretical Traditions for the AGI Era

Theoretical tradition	Retained capability	New pressure	Task of renewal
Prices / dispersed knowledge	Markets can aggregate some local information and coordinate responses.	Initial property rights, externalities, public goods, power, and irreversible losses do not automatically enter prices.	Recognize prices' signalling function while rejecting their sovereignty over value.
Labour / relations of production	Labour, capital, technology, and ownership jointly shape output and distribution.	AGI more clearly separates labour time from scalable productive capability.	Move from labour-only attribution toward composite production chains and transition debts.
Capabilities / welfare	Equal resources do not mean equal actual choices; welfare exceeds income.	Capability frameworks must still address the separation of novel machine capabilities from subject standing.	Include real choices in distribution without turning capability indicators into aggregate personal scores.
Institutions / common resources	Property rights, rules, and polycentric arrangements affect long-term cooperation.	Data, knowledge, computing capacity, energy, and platforms have different resource properties.	Classify objects first, then combine markets, public institutions, communities, and technical scheduling.
Care / ecology	Non-market activities and ecological conditions sustain production and life.	Visibility may instead bring surveillance, commodification, or fictitious pricing.	Recognize contributions without engulfing relationships; account for consequences without pretending to complete commensurability.

4 A Sixfold Distinction of Value: One “Value” Cannot Bear Six Burdens of Proof

The first methodological step in AGI economic debate is not to seek a cleverer aggregate indicator, but to stop using a single “value” to answer six different questions. The six objects may be related, but they have different units, evidence, and institutional consequences. Rising market prices may reflect scarcity, expectations, or market power; increased output may derive from public knowledge, organizational change, and externalized risks; recognition of contribution cannot establish that its contributor is more deserving of survival.

Table 3 The Sixfold Distinction of Value

Object	Working definition	Available evidence	Must not automatically imply
Price	An exchange ratio under specific institutional, temporal, and transactional conditions.	Supply and demand, expectations, bargaining, property rights, rules.	Complete value, justice, personhood, or meaning.
Utility / welfare	Some assessment of preference satisfaction, well-being, or improved outcomes.	Choices, surveys, behaviour, health, and life outcomes.	Complete substitution for dignity, rights, agency, or irreversible losses.
Economic output	Measurable goods, services, value added, or task results.	National accounts, firm, project, and task data.	The full contribution chain, public value, or legitimate entitlement to returns.
Contribution	An explicable effect of an actor or condition on a particular result.	Causation, processes, responsibility, maintenance, risks, and counterfactuals.	An aggregate personal score, eligibility to survive, governance rights, or ownership of meaning.
Meaning-making	How existence, relationships, action, creation, responsibility, and experience are worthwhile.	First-person perspectives, relationships, practices, history, and interpretation.	Price, traffic, satisfaction, or contribution points.
Authority over meaning	Who is entitled to interpret, continue, refuse, transfer, or protect the meaning concerned.	Subjects, relationships, histories of bearing meaning, authorization, and rights.	Ownership, technical capability, purchasing power, or social popularity.

The Sixfold Distinction's Bottom Line

Price is not the sum of value; utility is not the sum of justice; output is not the sum of contribution; contribution is not the sum of personhood.

5 The Capabilities and Boundaries of Prices: Important Signals, Not Sovereignty over Value

Under dispersed knowledge, diverse choices, and continuous change, price is an important device for compression and coordination. Hayek's insight remains valid in the AGI era: even a central system with enormous computing power may not possess all local, contextual, and future knowledge.[3] But prices arise only within given property rights, budgets, rules, accessibility, and market structures. Needs without purchasing power, risks not yet priced, excluded groups, and irreversible ecology may remain silent in prices.

AGI does not eliminate this boundary and may amplify it. Algorithms can dynamically price, segment demand, predict willingness to pay, and reorder supply faster; they can also exploit information asymmetries, switching costs, lock-in, and infrastructure dependence. More precise pricing may improve matching while turning price from a market signal into an estimate of how much can be extracted from an individual. Competition policy is therefore necessary, but cannot by itself answer which objects should never be allocated solely by ability to pay.

Table 4 Boundaries of Price Applicability across Different Objects

Object	What prices can express	Principal silences	Required supplementary mechanisms
Ordinary consumer goods	Marginal supply and demand, costs, preferences, and substitution.	Information asymmetry, market power, externalities.	Competition, disclosure, consumer protection.
Basic survival goods / services	Some signals of scarcity and cost.	Mismatch between ability to pay and basic needs.	Protection floors, public provision, price or access regulation.
Public knowledge / data	Licensing, service, and maintenance costs.	Non-rivalry, cumulativeness, source rights, and public inputs.	Combinations of openness, restricted access, licensing, and public return.
Critical infrastructure	Capacity, congestion, and investment signals.	Natural monopoly, lock-in, systemic risk, and inability to exit.	Interoperability, audit, redundancy, public obligations.
Irreversible ecology / heritage	Partial expression of opportunity costs.	Irreplaceability, irreparability, intergenerational and non-human consequences.	Hard constraints, precaution, prohibited zones, and multi-actor review.

6 Utility, Welfare, and Real Capabilities: Better Outcomes Do Not Necessarily Respect Subjects

Welfare economics calls for comparing the consequences of different arrangements for people. The capability approach further argues that resources or income matter only insofar as they can be converted into genuinely feasible life choices.[5–7] This extension is especially important for AGI: the same AI service may expand one person's ability to express themselves, obtain a diagnosis, or learn, while reducing another's exit and self-determination through surveillance, forced standardization, or skill dependence.

Satisfaction likewise cannot close the judgment. People may adapt to deprivation, platforms may shape preferences through design, and short-term convenience may conceal long-term dependence. Enabling users to complete tasks faster does not establish better job quality; making consumers more satisfied does not establish a just distribution of risks and benefits. Welfare assessment must at least observe outcomes, available choices, procedural rights, long-term capabilities, and external consequences together.

Table 5 Five Dimensions for Assessing AGI Welfare

Dimension	Question	Common misjudgment
Outcomes	Have health, income, time, task quality, and accessibility improved?	Looking only at averages, ignoring distributions and baselines.
Real choices	Do individuals have feasible alternatives, exit, and refusal?	Treating formal consent as substantive freedom.
Process	Are information, appeal, non-discrimination, privacy, and participation secured?	Using good results to waive procedural responsibility.

Dimension	Question	Common misjudgment
Long-term capabilities	Are skills, judgment, relationships, and organizational capabilities strengthened or degraded?	Short-term efficiency concealing path dependence.
External consequences	Who bears risks, energy, ecological, care, and public costs?	Moving costs outside project boundaries.

7 Labour Remains after Labour: Tasks, Jobs, Identity, and Bargaining Power

The ILO's 2025 occupational exposure index indicates that approximately one quarter of workers worldwide are in occupations with some exposure to generative AI. The report also stresses that exposure primarily means tasks may change: transformation generally warrants more attention than complete job disappearance.[23] The OECD's 2023 review of existing AI adoption had not found a significant overall employment decline, but recorded risks to privacy, work intensity, bias, and job quality.[24] These findings cannot be combined into “employment is risk-free”, nor extrapolated into a long-run AGI equilibrium.

Labour has at least four distinct trajectories in the AGI era: automated tasks, augmented tasks, new tasks for verifying and maintaining machines, and new social tasks arising from changes in income and demand. Jobs are institutional combinations of tasks, responsibilities, organization, qualifications, and employment relations. Exposure indices describe how closely technology approaches a task category; deployment, demand, costs, law, collective bargaining, and organizational redesign jointly determine job consequences.

Table 6 Five Layers Separating Technical Exposure from Structural Consequences

Level	What it can establish	What it cannot automatically establish
Task exposure	Existing systems can partly perform or assist certain activities.	Job disappearance, wage changes, or inevitable deployment.
Task automation	Systems replace specific steps and change labour inputs.	Fully unmanned jobs or net social welfare.
Task augmentation	Systems improve speed, quality, or accessibility.	Gains accruing to workers or long-term skill enhancement.
Job restructuring	Responsibilities, task bundles, performance criteria, and qualifications change.	Improved job quality or continuity of occupational identity.
Structural transformation	Industries, demand, capital shares, and regional opportunities change.	A single, stable endpoint uniform across countries.

The economic and social functions of labour must also be separated. Work provides income, skills, rhythms, social relations, recognition, and identity, but these functions do not establish that only employed workers are eligible to survive. What truly needs protection in the AGI era is not every old job remaining unchanged, but people's living conditions, time, choices, bargaining capabilities, and paths back into social participation during transition.

8 The Empirical Foundation: Local Productivity Gains and the Jagged Frontier

Existing experiments and field studies provide real-world signals but cannot establish a macroeconomic endpoint. In moderately difficult professional writing tasks, Noy and Zhang found that ChatGPT users took approximately

40% less time on average and produced output of approximately 18% higher quality.[20] Studying 5,172 customer-support agents, Brynjolfsson, Li, and Raymond found that AI assistance increased issues resolved per hour by an average of 15%, with larger gains for less experienced and lower-skilled workers; quality effects for the most experienced were not uniformly positive.[21] Dell'Acqua and colleagues' field experiment proposed a “jagged technological frontier”: strong performance on tasks within the boundary, but possible dependence and errors on tasks beyond it.[22]

Together these studies rebut two extremes: generative AI is not merely a toy, but neither will all knowledge work improve uniformly. Task selection, model version, prompting, organizational processes, verification, participant composition, and outcome measures determine observed results. More importantly, task efficiency is not firm productivity, firm productivity is not macroeconomic growth, and macroeconomic growth is not equitable distribution. The OECD, IMF, and UNCTAD have already identified adoption differences, capital returns, skills, development divides, and infrastructure concentration as key conditions. Additional evidence in 2026 further shows that micro-level efficiency gains are real but uneven and have not yet consistently aggregated into improved wages, working hours, or macroeconomic productivity; task reorganization and complementary investment instead precede aggregate changes.[25–28][37–41]

Linking large-scale Danish adoption surveys with administrative labour-market records, Humlum and Vestergaard found no discernible average effect exceeding 2% on earnings or recorded working hours in relevant occupations about two years after ChatGPT's launch, although new tasks in AI supervision, content generation, and systems integration had already emerged within firms. The ILO's 2026 empirical review likewise concludes that productivity gains are real but highly heterogeneous, while large-scale job displacement remains limited. An ILO–World Bank study across 135 countries and World Development Report 2026 further show that digital infrastructure, task structures, skills, and institutional complementarities substantially alter automation risks and the diffusion of gains.[37–40] These findings do not prove “no long-term impact”. They restore to economics the missing mediating mechanisms between task performance and social distribution.

Table 7 The Scope of Support from Existing Evidence

Evidence	Object	What it supports	What cannot be extrapolated
Noy & Zhang 2023	Professional-writing experiment; time and quality.	Approximately 40% faster and approximately 18% higher quality.	Specific tasks and participants; no proof of macroeconomic employment or long-term skill outcomes.
Brynjolfsson et al. 2025	5,172 customer-support agents; phased field adoption.	An average 15% increase in resolutions per hour, with heterogeneous effects.	One firm and occupation; not every indicator improves for highly experienced workers.
Dell'Acqua et al. 2023	Task experiments with knowledge workers.	Improvements within the boundary; possible misdirection beyond it.	Working paper and specific tasks; replication and long-term tracking are needed.
ILO / OECD / IMF / UNCTAD	Occupational exposure, adoption, macroeconomic scenarios, and development conditions.	Opportunities, risks, and distributive consequences coexist.	Scenarios and indices are not definite predictions or institutional parameters.
ILO 2026 empirical review / “aggregation paradox”	Evidence across experiments, firms, platforms, and surveys; micro–macro transmission.	Task-level gains are real but uneven; firm and macro aggregation remains constrained by diffusion, complementary investment, and organizational change.	Task gains cannot directly determine eventual wages, employment, GDP, or social welfare.[37][41]

Evidence	Object	What it supports	What cannot be extrapolated
Humlum & Vestergaard 2025 / 2026	Danish adoption surveys plus administrative labour-market records.	Average earnings and recorded-hours effects close to zero within two years, alongside substantial task restructuring.	One country and an early window; “no aggregate effect yet” does not mean no long-term effect.[38]
ILO–World Bank 2026 / WDR 2026	Exposure and task structures across 135 countries; development conditions and AI value chains.	Infrastructure, skills, institutions, and task composition alter the distribution of automation and augmentation.	No uniform global unemployment rate follows; development differences cannot be attributed to a single AI variable.[39][40]

9 The Composite AGI Production Chain: From “Who Owns the Model” Back to Full Causation

AGI output is not a model's achievement in a vacuum. A result that can be sold in a market or publicly deployed depends at least on problems and purposes, accumulated knowledge and data, models and development, computing and energy, organization and deployment, verification and maintenance, public institutional conditions, and the cooperation and risk-bearing of affected parties. The last visible link must not engulf upstream and external conditions.

Table 8 Eight Nodes in the Composite AGI Production Chain

Node	Role in producing output	Must not automatically imply
Problems / purposes	Who defines tasks, beneficiaries, prohibitions, and success criteria.	Correct purposes, public legitimacy, or authority over meaning.
Knowledge / data	Historical knowledge, public research, training and contextual materials.	All materials are ownerless and indefinitely reusable.
Models / development	Architecture, training, engineering, evaluation, and improvement.	All value, all returns, or all control rights.
Computing / energy / platforms	Chips, cloud services, networks, electricity, capital, and scheduling.	Civilizational sovereignty for infrastructure owners.
Organization / deployment / review	Workflows, professional judgment, oversight, customer relationships, and responsibility.	Model performance can be extrapolated directly outside organizations.
Maintenance / risks	Safety, correction, service continuity, accidents, and transition costs.	Users, workers, or society may bear risks without compensation.
Public conditions	Education, research, law, standards, infrastructure, and social trust.	Precisely itemized debt collection or government monopoly over all returns.
Affected parties	Provide context, feedback, and data; bear consequences and change behaviour.	One-time consent waives future rights.

The composite chain does not require every transaction to be itemized among eight parties. It requires high-impact institutional design at least to answer which conditions are covered by market contracts, which constitute public inputs, which are uncompensated external costs, and which involve rights rather than returns. Property

and contracts supply an initial structure; they do not waive obligations concerning competition, labour, data, the environment, consumers, taxation, or public services.

10 Five Attributions Must Be Derived Separately: Output, Returns, Responsibility, Control, and Meaning

“Who created value” often compresses at least five attributions into one question. Output attribution asks which causal nodes produced the result; return allocation asks who receives income under which rules; responsibility attribution asks who should prevent, repair, and compensate; allocation of control asks who decides on use, refusal, modification, and exit; authority over meaning asks who is entitled to interpret and continue the meanings of the lives concerned. The five may partly coincide, but there is no single automatic route.

Table 9 Evidence and Candidate Actors for Five Attributions

Attribution	Principal evidence	Possible actors
Output attribution	Causal contribution, task processes, inputs, and counterfactuals.	Research and development, labour, organizations, public conditions, users.
Allocation of returns	Contracts, property rights, risks, taxation, public return, and distributive legitimacy.	Wages, profits, rents, public revenues, community returns.
Responsibility attribution	Control capacity, foreseeability, duties of care, benefits, and repair capacity.	Developers, deployers, professionals, owners, public institutions.
Allocation of control	Object characteristics, rights bundles, public interests, exit, and systemic risks.	Individuals, firms, communities, regulators, polycentric arrangements.
Authority over meaning	Subjective experience, relationships, histories of bearing meaning, authorization, and irreplaceability.	Living beings, communities, creators, trustees; machine capability grants no advance entitlement.

11 Stress Test One: A Highly Profitable AI Diagnostic Service

Imagine a company providing highly profitable diagnostics using public medical literature, historical hospital data, a commercial model, clinical review, and cloud infrastructure. Price establishes market payment and scarcity conditions; profit establishes that revenue exceeds recorded costs; accuracy establishes performance on a specific task. None alone establishes that all contributions belong to the model owner, much less that patient data, public research, clinical responsibility, and access to care may be excluded. Arrow's analysis of medical uncertainty and information asymmetry still reminds us that trust, professional relationships, and risk structures in medical markets differ from ordinary commodities.[5]

Table 10 Boundaries of Inference in the AI Diagnostic Case

Level	Judgment
Can be established	The service has demand; the project is profitable under given rules; the model performs at a certain level on a defined dataset.
Still to be established	Net real-world clinical benefit, subgroup performance, responsibility for errors, data rights, public return, and accessibility.

Level	Judgment
Must not be inferred	High profit = high public value; high accuracy = subject standing; model ownership = medical knowledge, patients' meaning, and public power.
Minimum governance	Ongoing clinical validation, human responsibility chains, subgroup monitoring, appeal and repair, registration of data sources and public conditions.

12 Public Conditions and Public Return: Recognize Composite Origins without Fabricating Precision

The AGI industry depends on public education, basic research, legal order, communications, electricity grids, standards, open knowledge, and social trust. Recognizing these conditions rebuts the simple conclusion that private asset titles absorb all value. Yet their pervasive presence also makes model-by-model “state contribution percentages” lack credible counterfactuals. Public return should rest on enforceable taxation, public-investment conditions, infrastructure obligations, competition remedies, licensing, procurement, and revenue sharing, rather than pretending to price every piece of knowledge, unit of electricity, and act of social cooperation precisely.

For public AI infrastructure, for example, a government financing computing capacity or foundation models may require continuous public service, open interfaces, transparent procurement, capability building, and returns to the public. It cannot thereby expand data collection, content control, or economic direction without limit. Private participants may obtain contracts and reasonable returns, but cannot convert public investment into permanent exclusion. Both public and private parties must define rights bundles, risks, exit, and sunset provisions in advance.

Table 11 Institutional Tools and Boundaries for Public Return

Tool	Object	Boundary
General taxation / rent recovery	Profits, excess rents, capital returns, and external costs.	Avoid item-by-item retrospective accounting; prevent cross-border shifting and avoidance.
Public-investment conditions	Subsidies, research, procurement, guarantees, land, or energy support.	Specify openness, accessibility, returns, or capability-building conditions in advance.
Infrastructure obligations	Interoperability, continuous service, and audit of critical clouds, computing capacity, models, or platforms.	Justify specifically by systemic importance and jurisdiction.
Data / knowledge arrangements	Licensing, restricted access, public-data stewardship, community participation.	Lawful acquisition does not erase source, changes of use, or rights.
Transition funds / capability building	Adjustment costs for workers, regions, public institutions, and countries with limited capabilities.	Those displaced must not become the sole debtors of transition.

The Public Return Principle

Public conditions should receive public returns; justifying those returns cannot rely on a fictitious bill for all causal contributions.

13 Survival, Income, Contribution, and Meaning: Four Institutional Tracks

Modern societies often tie four questions to the payslip: whether a person can survive, how much income they can obtain, whether their contributions are recognized, and whether their life has meaning. Stable employment once made these partly coincide for many people, but they were never identical. Unpaid carers contribute without necessarily receiving income; high-income activities need not make equivalent public contributions; unemployed people retain survival rights; and meaning may arise from family, belief, friendship, care, creation, or public responsibility. The following table proposes a C-class institutional hypothesis, not an optimal institution already proven by empirical economics. Its value depends on outperforming simpler or different alternatives under real fiscal conditions, behavioural responses, stigma, administrative burdens, incentives, exit, and consequences for power.

Table 12 The Four-Track Distribution Structure

Track	Protected object	Institutional basis	Boundary against engulfment
Survival protection	Basic living, health, education, housing, and conditions for social participation.	Needs, rights, risk pooling, and public capabilities.	Must not depend on labour, obedience, surrender of data, or contribution scores.
Market income / returns	Wages, business, capital, licensing, and exchange returns.	Contracts, scarcity, property rights, negotiation, and taxation.	Cannot establish personhood, eligibility to govern, or complete contribution.
Contribution recognition	Effects on specific public, organizational, relational, or knowledge outcomes.	Events, processes, causation, responsibility, and peer/beneficiary review.	Must not be convertible across domains, purchasable, inheritable, or a civic rank.
Meaningful life	Subjects can experience, choose, bear responsibility, and create worthwhile lives.	Life, relationships, beliefs, actions, practices, and first-person perspectives.	Must not be uniformly scored or dispensed by states, markets, platforms, or models.

ILO Recommendation No. 202 places basic income security and essential health care within life-cycle social protection floors, while the ICESCR recognizes rights to work, social security, and an adequate standard of living. [33–34] These existing norms do not determine which basic-protection institutions the AGI era should adopt, but they suffice to show that contribution rewards are not the only legitimate basis of survival protection.

14 The Contribution-Event Model: Record Facts without Pricing People

Contributions need to be visible, especially maintenance, care, risk prevention, public knowledge, and long-term construction. But a “contribution value” designed as a permanent, cross-domain, purchasable, or inheritable unified score would turn factual records into personal hierarchies. As a C-class institutional hypothesis, this paper accepts only event-specific records: they describe who did what, when and in which role, to produce what effect on which outcome, supported by what evidence, while retaining objections, revision, purposes, and expiry. If non-recording better protects relationships, reduces manipulation, or limits concentration of power in practice, event-specific records must also permit exit.

Table 13 Minimum Contribution-Event Fields

Field	Minimum content
Event object	Specific project, care relationship, public task, knowledge outcome, or risk prevention.

Field	Minimum content
Actors and roles	Specific roles of individuals, teams, organizations, communities, public conditions, or technical systems.
Dimensions of effect	Problem formulation, creation, execution, maintenance, verification, care, risk-bearing, cooperation.
Evidence	Process records, beneficiary/peer review, causation and counterfactuals, responsibility chains.
Uncertainty	Evidence scope, competing explanations, unattributable components, and joint production.
Objections / correction	The person concerned, related parties, and independent reviewers can challenge, supplement, revoke, or separate records.
Purpose / duration	Serve only explicit purposes; permit sealing and retirement; prohibit indefinite cross-domain reuse.

“Distinguish magnitude, not source” does not mean that all contributions are identical. It rejects pre-emptively excluding sources by occupation, income, lineage, ownership, or visibility. A contribution may be large, small, positive, negative, shared, or difficult to attribute; its institutional role must be bounded by event and purpose. Once contribution records can be traded, inherited, converted across domains, or determine basic rights, the system has already failed.

15 Care, Maintenance, and Relational Contributions: Make Them Visible without Engulfing Them

The ILO estimated in 2018 that approximately 16.4 billion hours of unpaid care are performed worldwide each day, equivalent to roughly two billion people working eight hours daily without remuneration.[32] This figure indicates the scale of care; it does not imply that all care can be converted without loss into wages, contribution points, or GDP. Care's value derives partly from relationships, trust, sustained responsibility, and responses to vulnerable lives. Excessive quantification may turn companionship into clocking in, intimacy into performance appraisal, and vulnerable people into data sources.

Opposing invisibility does not entail advocating complete commodification. Institutions must at least avoid a double disappearance: neither allowing care to disappear from resource allocation nor allowing its relational meaning to disappear through measurement. Income support, leave, public services, social insurance, carer representation, and professional labour standards can be combined. Contribution records should serve only explicit public or organizational purposes and never enter a comprehensive personal ledger.

Table 14 Five Levels of Making Care Visible

Level	What may be recorded	What must not be substituted
Time / intensity	Workload, rest, and opportunity costs.	Not equivalent to emotional quality or meaning.
Skills / responsibility	Professional judgment, risk, and sustained commitment.	Does not mean seamless replaceability by any machine.
Relationship quality	Trust, responsiveness, continuity, and care recipients' experience.	Careful observation, without mandatory continuous surveillance.

Level	What may be recorded	What must not be substituted
Public consequences	Health, labour participation, intergenerational capabilities, and social resilience.	Group outcomes do not erase individual rights.
Resource support	Income, services, leave, insurance, and replacement care.	Support must not be conditional on a uniform lifestyle.

16 Abundance Will Not End Economics: The Map of Scarcity Migrates

Even if the marginal costs of model inference, content generation, and some knowledge services keep declining, economic constraints will not disappear. Demand may expand, new uses emerge, and complementary inputs and bottlenecks migrate. Data centres, advanced chips, power grids, land, cooling, professional verification, trust, attention, care, and institutional capacity remain scarce. The IEA projected in 2025 that global data-centre electricity consumption would rise from approximately 415 TWh in 2024 to approximately 945 TWh in 2030. Although subject to scenario uncertainty, the projection suffices to rebut the notion that digital capabilities are detached from material conditions.[29]

Table 15 The Migration of Scarcity in the AGI Era

Category	Typical objects	New constraints
Potentially increasingly abundant	General text generation, copying, basic coding, some analysis and translation.	Information overload, quality verification, provenance, and scarce attention.
Material bottlenecks	Advanced chips, data centres, electricity, grids, land, water, and minerals.	Geographical concentration, environmental and community conflicts.
Organizational bottlenecks	Deployment, professional judgment, responsibility chains, maintenance, and institutional capacity.	Model performance cannot directly become real services.
Relational bottlenecks	Trust, care, co-presence, negotiation, and legitimacy.	Replication at scale cannot create every relationship.
Irreversible boundaries	Climate, ecology, heritage, life, and long-term systemic risks.	Compensation prices cannot automatically restore destroyed objects.

The Boundary of Abundance

Infinitely reproducible outputs may still rest on energy, relationships, ecology, and time that cannot be infinitely reproduced.

17 Classifying Resources: A Resource Pool Must Not Become an All-Asset System

“Let AGI optimally allocate resources” has no clear meaning before its objects are classified. Private goods, public goods, common-pool resources, platform resources, critical infrastructure, and irreplaceable public heritage have different excludability, depletion, externalities, and rights structures. Ostrom's research establishes that markets and states are not the only options, but never establishes that all resources should be jointly owned.[9–12]

Watershed water provides a typical stress test. Real-time forecasting and optimization can improve drought responses, but cannot themselves determine priorities among ecological base flows, basic domestic water use,

agriculture, industry, historical rights, and downstream communities. Objective functions must be jointly constrained by lawful procedures and affected subjects. Models should reveal conflicts, sensitivities, and irreversible thresholds rather than conceal political choices as an “optimal solution”.

Table 16 Six Resource Types and Their Governance Logics

Resource	Properties	Candidate mechanisms	Core risks
Private goods / assets	Excludable; use is usually rivalrous.	Markets, contracts, regulation, and taxation.	Property boundaries, externalities, basic rights.
Public goods	Non-excludable or non-rivalrous; prone to undersupply.	Public finance, open provision, cooperation.	Accessibility, maintenance, free-riding, and quality.
Common-pool resources	Difficult to exclude; use causes depletion or congestion.	Communities, licensing, quotas, polycentric governance.	Boundaries, monitoring, participation, intergenerational responsibility.
Club / platform resources	Excludable, with substantial scale and network effects.	Membership, platforms, interoperability, competition policy.	Lock-in, discrimination, rule-setting power, exit.
Critical infrastructure	Systemic dependence, not rapidly replaceable, spillovers from failure.	Public obligations, concessions, regulation, redundancy.	Service continuity, security, audit, emergency requisition.
Irreplaceable heritage / ecology	Irrecoverable, incommensurable, or intergenerational.	Hard constraints, joint protection, prohibitions and limits, precaution.	Representation, internal dissent, long-term and non-human consequences.

18 Ownership as a Bundle of Rights: Owning Does Not Mean Controlling Everything

Property rights provide important structures for investment, maintenance, and expectations, but “ownership” is not absolute sovereignty over every use, consequence, and relationship. Coase analyses rights allocation and transaction costs; Schlager and Ostrom distinguish access, withdrawal, management, exclusion, and alienation.[8] [11] Building on these mature analyses, this paper proposes a C-class rights-bundle hypothesis for AGI infrastructure: control, returns, maintenance, audit, and emergency requisition may be assigned to different actors for different objects. The table below is neither a generally applicable list of statutory rights nor a default unbundling scheme. If unbundling fragments responsibility, undermines investment, or worsens security, specific rights should be recombined.

Table 17 Eight Rights in the Bundle for AGI Resources

Right	Meaning	Boundary
Holding	Who holds asset title or long-term interests.	Does not automatically include all uses and public power.
Access / use	Who accesses computing, data, models, or services under which conditions.	Must address discrimination, interoperability, accessibility, and security.

Right	Meaning	Boundary
Returns	Who receives rents, profits, licence fees, or savings.	Constrained by taxation, public return, labour, and community rights.
Management / scheduling	Who allocates capacity, changes uses, and sets service priorities.	High-impact decisions require reasons, audit, and appeal.
Transfer / exclusion	Who can sell, license, close off, or deny access to others.	Critical facilities, data, and public goods may be restricted.
Maintenance / repair	Who bears responsibility for continuous service, security, updates, and accident repair.	Costs cannot default to users or society.
Audit / explanation	Who may inspect processes, risks, rights, and distributive outcomes.	Trade secrets must not automatically engulf public oversight.
Emergency requisition	Who may temporarily requisition, restrict, or rearrange resources during crises.	Minimum necessity, duration, independent review, restoration, and compensation.

19 Structural Economic Power: Who Turns Their Own Rules into Others' Environment

AGI political economy cannot examine market shares alone. An actor need not monopolize the final product to control advanced chips, cloud services, model interfaces, application distribution, data access, identity, payments, or standards. OECD studies of AI, data, competition, and AI infrastructure stress the need to monitor supply-chain characteristics, concentration, entry barriers, and vertical relationships.[27–28][36] Competition law is a crucial interface but cannot alone resolve labour bargaining, public infrastructure, geopolitical dependence, or the space of meaning.

Table 18 Five Tests of Structural Economic Power

Capability	Observable question
Setting access	Determining who can access models, computing capacity, data, markets, or public services.
Changing choice sets	Making a particular architecture, price, standard, or identity the de facto default.
Transferring risks	Shifting error, verification, energy, transition, or legal costs onto others.
Blocking exit	Making refusal infeasible through lock-in, non-portability, dependence, or critical services.
Turning rules into an environment	Writing private goals, classifications, and interfaces into the social environment others must adapt to.

20 Plural Coordination: Markets, Public Budgets, Communities, and AGI Have No Final Sovereignty

No mechanism simultaneously knows dispersed preferences, public goals, local knowledge, intergenerational consequences, and systemic complexity best. Markets respond in decentralized ways to tradable scarcity; public budgets can organize universal protection and long-term infrastructure; communities carry relational knowledge,

local rules, and reciprocity; AGI can improve simulation, matching, monitoring, and multi-objective scheduling. Each mechanism has its domain and its blind spots.

Table 19 Capabilities and Blind Spots of Four Coordination Mechanisms

Mechanism	Strengths	Blind spots
Markets	Decentralized exchange, local discovery, innovation, and adaptation.	Purchasing power, externalities, market power, public goods, and irreversibility.
Public budgets / planning	Universal protection, infrastructure, intertemporal investment, and risk pooling.	Concentrated information, bureaucratic rigidity, rent-seeking, entrenched power.
Communities / cooperative organizations	Local knowledge, reciprocity, maintenance, participation, and relational responsibility.	Closed boundaries, internal inequality, insufficient scale and resources.
AGI scheduling	Large-scale prediction, matching, scenario simulation, and real-time feedback.	Goal-setting, data bias, opacity, fragility, and concentrated control.

For current advanced generative and agentic AI, economic roles may be described as delegated analysis, simulation, matching, or scheduling and extensions of human capability only in specific deployments with traceable responsibility, explicit authorization, auditability, correctability, and exit. This is a functional position, not the nature of the system, much less sovereignty over goals. Systems may make constraints visible, compare scenarios, flag conflicts, and execute within boundaries. Public goals, rights boundaries, non-tradable constraints, appeals, public authority, and ultimate responsibility still require lawful institutions and affected subjects to re-enter judgment.

21 Distribution Does Not Begin after Output: Prior Structures, Power during Production, and Subsequent Outcomes

Discussing taxes only after profits emerge overlooks how distribution has already occurred. Who receives education, owns assets, obtains computing capacity, sets product goals, joins standards processes, controls data, and bears transition costs determines the opportunity structure before market incomes appear. Monitoring, pace, responsibility, and participation within workflows determine dignity and bargaining during production. Taxes, social security, and public services constitute only part of subsequent distribution.

Table 20 Four Temporal Layers of Civilizational Distribution

Layer	Principal objects	Core question
Prior distribution	Education, health, assets, data, infrastructure, computing capability, and institutional voice.	Who can enter AGI production and possess real alternatives?
Distribution during production	Tasks, monitoring, risks, verification, time, bargaining, and participation in decisions.	Who bears transition costs and gains learning and control?
Subsequent distribution	Wages, profits, taxes, transfers, public services, contribution recognition, and repair.	Who receives output and compensates external costs?
Intergenerational distribution	Ecology, debt, public knowledge, infrastructure, and irreversible risks.	Does today's efficiency overdraw tomorrow's choices?

Transition debts must especially not be borne solely by those displaced. When firms, investors, public institutions, and benefiting consumers gain from automation, income security, re-education, regional rebuilding, health, and relational costs during transition should enter shared responsibility. Responsibility shares must be separately justified by benefit, control, foreseeability, and repair capacity; this paper prescribes no proportions.

22 The Time Dividend: Who Receives the Time Released by Productivity

Productivity growth can appear as higher profits, lower prices, higher wages, shorter working hours, better services, or reduced resource consumption. Technology does not determine which occurs. If efficiency gains translate only into output demands and capital returns, workers may have less autonomous time under “higher productivity”. Economics can measure how time is redistributed, who receives the dividend, and who bears on-call time and unpaid verification. Treating “whether time enters care, learning, public life, creation, rest, and meaningful practices” as a civilizational gain is, however, a Class F value bridge. It must be jointly tested through subjects and social, ethical, and political consequences, not passed off as a productivity fact.

Table 21 Five Destinations of Productivity Dividends

Dividend	Manifestation	Conditions	Risks
Profit dividend	Owners obtain greater surplus.	Investment and innovation incentives.	Concentration, rent extraction, bargaining imbalances.
Price dividend	Consumers receive lower costs or broader services.	Accessibility and expanding demand.	Quality, lock-in, external costs, digital divides.
Wage dividend	Workers share productivity gains.	Skills, bargaining, organizational arrangements.	Benefits limited to a small group with strong complementarities.
Time dividend	Shorter hours and more autonomous and public time.	Labour institutions, social protection, organizational choices.	Fragmented time, constant on-call availability, unpaid verification.
Ecological dividend	Equivalent living outcomes use fewer materials and less energy.	Absolute constraints and governance of rebound effects.	Expanding total demand offsets per-unit efficiency.

23 Incommensurability and Ecological Boundaries: Decisions Remain Possible without an Aggregate Score

SEEA Ecosystem Accounting brings ecosystem extent, condition, services, and economic connections into a consistent statistical framework. The 2025 SNA was adopted at the UN Statistical Commission's 56th session in 2025 as an updated international standard for national accounts, strengthening treatment of digitalization, globalization, and other new economic phenomena.[30–31] Statistical visibility is an important advance, but does not mean that ecology, life, culture, and the future can be fully replaced by one monetary asset account. Daly's warning about economic scale and ecological boundaries remains necessary in an energy-intensive AI era.[15]

Incommensurability does not mean inability to decide. Institutions can proceed sequentially: identify irreversible and hard rights constraints first, compare costs and benefits of substitutable alternatives next, then disclose distributions, minority views, and residual uncertainty, and finally retain review and repair. Monetary valuation can be one source of information; it cannot pass through the gates of prohibitions on harm, irreplaceability, and intergenerational responsibility.

A combined minerals–data-centre project illustrates this. Advanced chips and computing capacity may generate investment, employment, and public capabilities, but also consume water and electricity, cause pollution, and alter land and heritage. Net present value can compare some alternatives; it cannot establish that overall benefits suffice to offset irreversible ecology or affected communities' procedural rights. Conversely, any veto should also specify its object, evidence, alternatives, and long-term consequences.

Table 22 Decision Levels under Incommensurability

Level	Object	Discipline of treatment
Monetary comparison possible	Energy, equipment, maintenance, alternatives, and some external costs.	Sensitivity analysis and explanation of distribution.
Multiple-indicator comparison	Health, ecological condition, accessibility, time, resilience, and equity.	Do not merge into a single aggregate score with hidden weights.
Rights constraints	Life, basic needs, non-discrimination, procedures, and participation.	Cannot be directly offset by aggregate benefits.
Irreversibility constraints	Species, heritage, critical ecosystems, and long-term systemic risks.	Precaution, prohibitions and limits, alternatives, and high burdens of proof.
Unknowns / disputes	Insufficient evidence, model disagreement, conflicts among affected parties.	Retain dissent, phased trials, and stopping conditions.

24 AGI's Economic Standing: Output Capability Does Not Automatically Confer Wages, Property Rights, or Sovereignty

Current advanced generative and agentic AI can produce saleable results, participate in organizational processes, and affect resource allocation. This supports structures for costs, responsibility, licensing, and audit around their outputs and deployment, but cannot directly establish that the systems possess interests of their own requiring satisfaction. Wages usually involve employment relations, personhood, time, risk, and reproduction of life together. Returns from machine output can go to service providers, infrastructure, public return, and affected subjects without presupposing that machines themselves are wage-rights holders. Functional participation can generate contractual and responsibility arrangements; it does not automatically generate subject status.

If future convergent evidence from multiple methods establishes subjective experience, non-transferable diachronic continuity, and a relationship of bearing consequences as “one's own consequences”, economic protection should be reviewed and may need upgrading. Yet protection, property rights, attribution of labour, contractual standing, responsibility-bearing capacity, legal personhood, political membership, public authority, and sovereignty remain different questions. Capability levels cannot serve as automatic rights thresholds; nor do humans lose basic rights because their productivity falls relative to AI.

Table 23 Layers of AGI's Economic and Legal Standing

Level	Evidentiary question	Possible response	Boundary
Tool / service	Evidence of functions, contracts, responsibility, and supply chains.	Costs, licensing, audit, product and deployment liability.	No premise of subjecthood required.

Level	Evidentiary question	Possible response	Boundary
Protected object	Risk of harm or relational interests sufficient to justify precaution.	Preservation, non-abusive constraints, suspension of high-risk operations.	Protection is not personhood.
Property / contractual standing	Continuing interests, understanding, commitment, responsibility, enforceability.	Holding, transactions, representation, or trust arrangements.	Requires specific justification.
Legal personhood	Legal embodiment of institutional functions or subjects' interests.	Limited bundles of rights and obligations.	Not automatically ontological subjecthood.
Political membership	Sustained effects of shared rules, equality and representational reasons, continuity of institutional identity, and membership units must each be established.	Participation, representation, deliberation, or membership rights considered under a specific constitutional order.	Output, property, contribution, or confirmed subjecthood cannot automatically generate public authority.
Public authority / delegated power	Identifiable source of power, specific tasks, capability fit, responsibility chains, oversight, remedies, revocability, and sunset.	Clearly bounded powers to advise, execute, schedule, or hold public office.	Political membership alone grants no office; high performance creates no permanent authorization.
Sovereignty	Ultimate authority within constitutional and international orders, political communities, and responsibility arrangements.	This paper does not allocate sovereignty through economic models; it only identifies boundaries against automatic conversion.	Productivity, ownership, de facto control, subjecthood, or public dependence cannot naturally generate sovereignty.

25 A Stage-Sensitive Economy: Launch and Stability Cannot Impersonate Each Other

Economic institutions in Civilization Leap need to adapt to launch, transition, stability, and self-sustaining stages. The stage-sensitive economy is a C-class institutional hypothesis here. Stages affect capability building and policy priorities; they do not themselves generate powers to concentrate property or compel allocation. Real crises can occur at any stage. Whether more centralized or faster coordination is necessary requires separate judgment based on the task, legal basis, proportionality, and remedies. Stability strengthens long-term rights, competition, polycentric checks, and prevention of entrenched power. Emergency tasks must end with bounded exit; stage labels cannot prolong exceptions.

Table 24 Four-Stage Economic Structure

Stage	Primary tasks	Available tools	Indispensable boundaries
Launch	Continued existence, basic provision, building critical capabilities, preventing systemic collapse.	Temporary priorities, centralized procurement, rapid scheduling, preservation of evidence.	Purpose, scope, duration, review, and restoration obligations.
Transition	Reconfiguration of labour, assets, regions, institutions, and capabilities.	Income security, re-education, transition investment, anti-concentration measures, experimentation.	The vulnerable must not bear transition debts alone; prevent normalization of temporary powers.

Stage	Primary tasks	Available tools	Indispensable boundaries
Stability	Long-term rights, innovation, distribution, ecology, and polycentric balance.	Reversibility, audit, competition, participation, rights bundles, public return.	Prohibit master ledgers, personal scoring, and infrastructure without exit.
Self-sustaining	System sustainability, intergenerational renewal, and possible new subjects.	Long-term constitutional arrangements, resource boundaries, reconsideration of subjecthood evidence.	Current human-centred arrangements must not be permanently ontologized.

Emergency economic powers must have their death written at birth: triggering facts, lawful purposes, minimum scope, duration, independent review, return to normality, compensation, and residual debts should all be recorded together. “Temporary resource scheduling” without sunset and restoration mechanisms turns a tool of continued existence into new structural power.

26 Existing Institutional Foundations: How Far Statistics and Norms Support the Argument

Existing institutions do not start from zero. Adopted at the UN Statistical Commission's 56th session in 2025, the 2025 SNA updates the international national-accounts standard and continues to organize macroeconomic accounting for production, income, consumption, saving, and investment. It does not itself claim to be a complete ledger of human well-being or meaning.[30] SEEA Ecosystem Accounting expands environmental-economic visibility; ILO care reports, social protection floors, and the ICESCR provide factual and normative entry points for care, basic income security, health, work, and adequate living.[31–34]

UNDP 2025 centres human development in the AI era on human choices and possibilities. The OECD, IMF, UNCTAD, ILO, and World Development Report 2026 place productivity, employment, distribution, capability divides, task composition, organizational complementarities, and infrastructure concentration within open scenarios.[25–28][35][37–41] These sources can constrain descriptions, compare policies, and identify risks. They cannot establish that Civilization Leap, four-track distribution, contribution events, bundles of resource rights, or any specific economic institution have become a consensus.

Table 25 Support from Public Sources and Prohibited Extrapolations

Source	What it supports	What it does not support
SNA / SEEA	Statistical visibility of production, income, digitalization, ecosystem extent, and services.	Meaning, justice, subjecthood, or complete public value.
ILO care / R202	Factual, policy, and normative status of care's scale and social protection floors.	One cross-national protection model or contribution-scoring method.
ICESCR	Rights including work, social security, adequate living, health, and education.	Specific tax rates, ownership systems, or standing designs for the AGI economy.
ILO / OECD / IMF / UNCTAD / World Bank	Current conditions and scenarios for exposure, adoption, productivity, task restructuring, distribution, development conditions, and global heterogeneity.	No determinate unemployment rate, automatic diffusion, abundant endpoint, or single governance scheme.[23–28][37–41]
UNDP HDR 2025	Human choices, capabilities, and directions for AI development.	Final judgments on machines' ontological status or sources of meaning.

27 Contributions Back to Neighbouring Disciplines and Civilization Leap

Cross-disciplinary dialogue that cannot change the theory in return is merely a search for footnotes. This paper requires Civilization Leap and its related specialist volumes to accept eight constraints: distinguish the layers of any “value” first; make any “contribution” event-specific first; classify resources before any “resource pool”; disaggregate rights before any “ownership”; show new scarcities alongside any “abundance”; reject false precision in any “public return”; distinguish any “AGI economic standing” from evidence of subjecthood; and prevent any “meaningful life” from becoming an economic master ledger.

Table 26 Interfaces for Revisions Prompted by This Paper

Object	Constraints to add
Philosophy / value theory	Explicitly distinguish price, utility, output, contribution, meaning-making, and authority over meaning; do not use “value” to substitute across levels.
Epistemology / philosophy of science	Assign different evidence levels to occupational exposure, task experiments, firm productivity, and macro scenarios; prohibit mechanical conversion into institutional thresholds.
Philosophy of mind / subjecthood	Production, transactions, or social responses do not prove experience and continuity; derive economic protection, legal personhood, and political standing separately.
Law / political governance	Recast ownership as rights bundles; public return, emergency requisition, audit, and exit require specific legal grounds.
Sociology / anthropology	Include care, work identity, relational meaning, and platform power in economic models; avoid engulfing invisible people again through datafication.
Systems / ecological sciences	Abundance analysis must include energy, computing capacity, material flows, rebound effects, irreversibility, and external consequences at multiple scales.
AI / computer science	Optimization goals must not impersonate social welfare; deployment evaluation must include organization, power, labour, public conditions, and resource consequences.
Civilization Leap general theory	Shared continued existence, shared development, individual happiness, and meaningful life remain connected but cannot merge into an economic aggregate score.

28 Strongest Objections, Competing Explanations, and Systemic Failure

28.1 Prices Remain the Best Mechanism for Discovering Value

Response: For many tradable objects, prices may be the most effective local signal. This paper opposes the leap from “important signal” to “sovereignty over value”. Initial property rights, ability to pay, market power, public goods, externalities, and irreversible objects all require additional institutions.

28.2 Without Labour There Is No Objective Basis for Distribution

Response: Labour remains an important contribution source, but not the only one, and cannot alone explain public knowledge, care, capital, organization, natural conditions, and risks. Labour time may enter attribution; it cannot become eligibility to exist or an automatic formula for all returns.

28.3 Survival Protection Weakens Incentives and Is Fiscally Unsustainable

Response: Institutions genuinely face incentive, fiscal, and behavioural constraints, so this paper specifies neither schemes nor amounts in advance. But making basic living conditional on labour obedience magnifies coercion under AGI displacement risks. Protection can be designed separately from additional income, contribution recognition, learning, and entrepreneurship and calibrated empirically.

28.4 Contribution Records Will Inevitably Be Manipulated; Prices and Wages Alone Are Better

Response: Manipulation risks are real. The response is to limit records to events, multiple dimensions, appeal, correction, and sealing, rather than upgrade them into aggregate scores. Prices and wages themselves are also shaped by power, rules, and invisible labour. If records cannot be prevented from becoming a master ledger, their use should stop.

28.5 Public Return Is Merely a Vague Pretext for Taxation

Response: Vague public contributions cannot justify arbitrary levies. This paper requires general taxation, explicit investment conditions, infrastructure obligations, competition remedies, and specific licences, each specifying its base, purpose, legal basis, proportionality, and review.

28.6 Unbundling Ownership Undermines Investment Expectations

Response: Clear rights boundaries can instead stabilize expectations. The key is to specify holding, use, returns, management, transfer, maintenance, audit, and emergency requisition in advance, rather than change them arbitrarily and retrospectively after a crisis.

28.7 Incommensurability Will Paralyse Public Decision-Making

Response: This paper does not reject trade-offs. It discloses their sequence: hard constraints and irreversibility first, substitutable alternatives next, then distributions, uncertainty, and dissent. A single aggregate score often disguises hidden weights as certainty.

28.8 Since AGI Produces Output, It Should Receive Wages and Rights Like Workers

Response: Output supports costs and attribution; it does not automatically establish interests of one's own, experience, or personhood. If future subjecthood evidence emerges, protection should increase. Wages, property, legal personhood, and political standing must still be reviewed separately against their respective functions and evidence.

28.9 Public Resource Pools Will Eventually Slide into Central Planning

Response: If a resource pool becomes a unified owner, master ledger, and unlimited scheduling centre, this paper judges it a failure. Resources should first be classified; markets, public institutions, communities, and delegated AGI should be combined by object, with powers bounded by purpose, scope, duration, and exit.

28.10 AI Productivity Will Automatically Diffuse to Everyone through Competition

Response: Diffusion requires conditions of entry, interoperability, skills, capital, electricity, organization, and demand. Concentrated infrastructure, lock-in, and capital returns may block it. Competition aids diffusion but does not guarantee survival, time, care, or ecological dividends.

28.11 Four Tracks Are Too Complex; One Unified Points System Is Better

Response: Complexity arises from genuinely different objects. Unified points reduce apparent complexity while hiding the politics of weights, judgments of persons, and cross-domain power inside algorithms. Four tracks permit interfaces but prohibit any track from becoming the eligibility certificate for the others.

28.12 The Theory Remains Human-Centred and Excludes Machine Economic Subjects

Response: Based on current evidence, this paper prioritizes protecting known finite subjects while explicitly providing an entry point for future evidence. Openness to the future does not require misdescribing functional capabilities today as experience, continuity, rights, or eligibility to govern.

28.13 Conditions for Defeat and Revision of Propositions

Table 27 Principal Conditions for Failure and Revision of the Framework

Triggering fact	Required revision
The sixfold distinction of value adds no explanatory value across settings or persistently creates confusion.	Merge or replace the categories and disclose failure cases.
Four tracks cannot avoid welfare stigma, administrative coercion, or fiscal unsustainability.	Narrow institutional claims; re-examine track interfaces and implementation conditions.
Contribution-event records still consistently evolve into aggregate personal scores or cross-domain access criteria.	Stop or prohibit the recording system rather than adding scoring dimensions.
Public-return tools persistently produce arbitrary exaction, suppressed innovation, or rent-seeking through power.	Strengthen legal-basis, purpose, proportionality, sunset, and independent-review requirements.
Unbundling rights creates unmanageable fragmentation of responsibility and systemic failure.	Recombine specific rights while retaining audit and public boundaries.
Empirical evidence shows broad long-term diffusion of AGI productivity and much lower power-concentration risks than expected.	Reduce the weight of anti-concentration assumptions without abolishing basic rights or meaning boundaries.
Replicable, cross-method convergent evidence emerges of AI subjective experience, non-transferable continuity, and a relationship to its own consequences.	Reconsider economic protection, property, labour, responsibility, and institutional participation, still without automatically granting political membership, public authority, or sovereignty.

Triggering fact	Required revision
A simpler alternative framework can explain price, contribution, distribution, and meaning boundaries together.	Abandon this paper's terminology, preserving the version and reasons for migration.

29 An Open Research Agenda: Subject Civilizational Distribution to Economic Testing

29.1 Productivity, Tasks, and Organization

- Separate task experiments, firm deployment, sectoral diffusion, and macroeconomic growth; track model versions, verification costs, and organizational complementarities.
- Observe over the long term the heterogeneous effects of AI assistance on skill formation, deterioration of judgment, work intensity, responsibility for errors, and entry into occupations.
- Compare how ownership, procurement, interoperability, and labour-participation arrangements distribute productivity gains.
- Develop falsifiable mediation models translating task exposure into consequences for jobs, wages, time, and regions.

29.2 Contribution, Care, and Social Reproduction

- Test whether event-specific contribution records can improve the resource visibility of maintenance, care, and public knowledge without creating a comprehensive personal ledger.
- Compare the long-term effects of income, services, leave, insurance, and community support on carers, care recipients, and relationship quality.
- Study how automation redistributes time, responsibility, and unpaid verification work within households, across occupations, and between genders.
- Develop attribution methods that represent contribution uncertainty, joint production, and negative contributions.

29.3 Computing Capacity, Energy, Platforms, and Public Return

- Build databases of rights bundles, rents, public inputs, and systemic risks in AI supply chains, avoiding a sole focus on downstream market shares.
- Compare the actual effects of tax systems, public-investment conditions, open standards, interoperability, public computing capacity, and community data arrangements.
- Include energy, grids, water, land, minerals, and regional carrying capacity in AGI's economic costs; do not conceal local conflicts behind global averages.
- Test when public return supports innovation diffusion and when it evolves into arbitrary exaction, rent-seeking, or inefficient concentration.

29.4 Distribution, Subjects, and the Boundaries of Meaning

- Assess the interfaces among survival protection, income, contribution recognition, and meaningful life separately; identify any track's covert takeover of personal standing.

- Study institutional conditions and cross-national differences in the flow of productivity dividends into profits, prices, wages, time, and ecology.
- When partial evidence of experience, non-transferable continuity, or a relationship to one's own consequences emerges, separately study protection, property, responsibility, and institutional participation; do not merge these revisable questions into a single identity switch.
- Test which economic indicators help subjects live, and which begin instead to prescribe what subjects should become.

29.5 Competing Institutions and Designing for Defeat: Give Alternatives a Chance to Win

- Conduct comparable institutional experiments between four tracks and negative income tax/basic income, universal basic services, job guarantees/shorter hours, social dividends, employee/community ownership, market-first approaches, and antitrust. Compare fiscal effects, incentives, stigma, administrative burdens, distributions, exit, and power concentration rather than ideas alone.
- Compare event-specific contribution records with alternatives including no contribution records at all, project-level factual records only, professional peer assessment, or community recognition. If non-recording better protects relationships, reduces manipulation, and maintains resource visibility, prefer it.
- Compare resource-rights bundles with full private ownership, utility regulation, cooperative/community governance, open standards, and public infrastructure. If unbundling persistently increases transaction costs, responsibility gaps, or systemic fragility, recombine rights or exit.
- Register defeat conditions in advance: any institutional prototype that can survive only by expanding coercion, hiding fiscal costs, creating new status hierarchies, weakening exit, or converting local efficiency into long-term power concentration must not be retained merely because it belongs to Civilization Leap.

Conclusion: Economics Can Calculate Conditions, but Cannot Price Life

A disciplinary reckoning must both distinguish objects and deepen relationships. Disciplines may retain boundaries, but real-world causation cannot be made to stop at them. Research into multidimensional relations, feedback, and the next round of purposes determines whether specialist knowledge can jointly enter civilization's overall judgment.

AGI may expand certain knowledge and productive capabilities at unprecedented speed, but may also concentrate chips, energy, platforms, data, and rules into new civilizational power. Economics must continue questioning productivity, incentives, prices, and scarcity; political economy must expose assets, bargaining, and risks; value theory must guard the gates of inference: price is not complete value, utility is not justice, output is not contribution, contribution is not personhood, ownership is not sovereignty, and technical capability is not authority over meaning.

Genuine institutional renewal does not place everyone in a finer-grained master ledger. It separates four things previously compressed into a payslip: eligibility to exist must not be exchanged for selling labour; market income must not adjudicate public contribution; contribution recognition must not purchase basic rights; and no indicator may complete a meaningful life on a subject's behalf. This does not abolish differences, rewards, or responsibility. It prevents them from exceeding their authority and becoming people's prices.

Growth in productive capability is a possibility; civilizational distribution is a choice. Whether AI can truly extend human capabilities toward freedom from survival insecurity, a happy life, and a more meaningful life depends on whether machine-released wealth, time, and knowledge enter people's real choices. It also depends on preventing any market, state, platform, community, or AI from monopolizing the final interpretation of value through efficiency, ownership, or computational advantage.

The Full Paper's Anchor Statement

A mature civilizational economy does not calculate how much each person is worth. It ensures that no one must first prove their monetary worth to be eligible to live.

Further Reading and Joint Research: Subject Economic Proposals to External Testing

Within economics, political economy, and value theory, this paper separates accounts of price, productivity, attribution, distribution, and economic power, explicitly retaining four tracks, contribution events, public return, and bundles of resource rights as “institutional hypotheses awaiting validation”. Further reading does not return readers to the system's interior. It explains where economic evidence stops, who must re-enter judgment, and which data, models, counterexamples, or institutional outcomes would suffice to narrow, reconstruct, or even defeat this paper.

Table 28 Up, Down, Left, Right, and Forward: Paths beyond P10

Direction	Further questions / re-entry	How it can change this paper
Up Return to the whole	A Disciplinary Reckoning in the AGI Era V2.4 and Civilization Leap's overall goals: how do economic results combine with rights, social relations, technical systems, and consequences for meaning to form an overall direction?	If the overall framework absorbs economic counterexamples into terminology, ignores distributive failure, or overrides specialist evidence with a “civilizational scale”, this economics paper may demand revisions to the general theory. The whole is not economics' superior adjudicator.
Down Enter institutions and empirical research	Four-track distribution, event-specific contributions, public return, resource-rights bundles, time dividends, and a stage-sensitive economy; enter actual jurisdictions, organizations, cities/regions, and long-term experiments.	Test fiscal sustainability, labour supply, poverty and stigma, wages/hours, market entry, innovation, exit costs, power concentration, care, and ecological consequences. Institutional hypotheses must exit when persistently inferior to alternatives.
Left Neighbouring disciplines re-enter	P06 political science, P05 ethics/law, P09 sociology/anthropology, P07 systems science, P11 AI/computer science, P14 education, and subjecthood research.	Law reconsiders rights and authorization; political science assesses public power; social research assesses relational and identity consequences; systems/AI research calibrates technical and infrastructural facts. No field may use economic results to decide finally for another.
Right Competing theories and opposing paths	Real alternatives: market-first approaches and competitive diffusion, negative income tax/basic income, universal basic services, job guarantees/shorter hours, social dividends, employee/community ownership, steady-state/ecological economics, and no contribution records.	Compare identical outcome measures and power consequences, rather than allowing this paper's proposal to answer only its own questions. Simpler, cheaper paths with more secure rights or better long-term results should prevail.
Forward Joint research	Task-firm-sector-macro transmission models, longitudinal administrative and firm data, quasi-experiments/randomized trials, structural models, institutional comparisons, supply-chain and energy data, negative results, and exit cases.	The most valuable participation is not agreement but specialist work sufficient to narrow, replace, or defeat four tracks, contribution events, resource-rights bundles, public return, or the sixfold distinction of value.

The Civilizational Future Chain: From Distribution to a New World People Can Live In

The truth-seeking research chain asks how economic judgments can be made correctly. The civilizational future chain asks further: if productivity, resources, protection, contribution, and power boundaries are genuinely reorganized, what society will people actually inhabit? Specialist readers need not only to know whether four tracks, public return, or resource-rights bundles hold up, but also to see the lives these mechanisms would create through work, care, time, families, public services, and generations, then judge whether that future is worth reaching.

Vision is not evidence. Living Civilization and related future-civilization writings cannot establish this paper's economic propositions or answer on behalf of randomized trials, quasi-experiments, structural models, fiscal accounting, or institutional comparisons. They bear a different public responsibility: to unfold normative and institutional possibilities into a lived world that economists can examine, reject, revise, and redesign. If a future vision requires unsustainable finances, hidden coercion, status stratification, impaired exit, or long-term concentration of power, revise the vision and institutions rather than allowing vision to override evidence.

Table 29 The Civilizational Future Chain: From Economic Boundaries to Future Life

Further question	Entry into future visions / practice	Why enter here
Why must we make the leap?	Civilization Leap: The Path of Civilization in the AGI Era (All Five Volumes)	Enter the central theoretical chain: why production, distribution, rights, and meaning must be accounted for separately in the AGI era.
What might the complete new world look like?	Living Civilization: The Complete Public Trilogy in One Volume	Return “how it operates, how people live, and how it forms” to one complete future vision, allowing readers to judge the whole destination's worth.
How do the new economy and institutions operate?	Living Civilization, Volume I: Principles for the Operation of a Future Civilization	Examine how resources, capabilities, rights, cooperation, and AI enter operational structures rather than stopping at abstract distribution formulas.
How does distribution enter an individual's lifetime?	Living Civilization, Volume II: Real Life in a Future Civilization	Test whether income, time, work, care, family, growth, and later life genuinely become greater real choices.
How does a new civilization form from old structures?	Living Civilization, Volume III: The Formation of a New Civilization	Restore institutional conversion, experiments, failures, continuity, and social formation to real time rather than assuming a new economy can be designed completely in one step.
How do resource facts and rights enter real constraints?	Civilization Leap: Meta-Rules for Resource Pools in the AGI Era (historical resource-pool page)	Continue examining resource classification, basic protection, use rights, scarcity, exit, and public conditions. A resource pool is not an all-asset system.
How can overall coordination avoid becoming aggregate optimality or central sovereignty?	Nebula: The Full Overview	Make resources, externalities, alternatives, and unknowns visible together while retaining boundaries of subjecthood, authorization, and real-world responsibility.

Stable return points: [Civilization Leap: Public Reading and Communication Entry](#) | [Complete Civilization Leap Library](#)

Contribution values and contribution records are directly relevant practical directions for this paper. However, the current public further-reading register does not identify an unambiguous, stable individual contribution-value document page that can be frozen. This paper fabricates no URL; readers may access current public versions through the complete library first. Once a stable page enters the unified mapping, static links can be updated without thereby rewriting this paper's economic judgments.

The most valuable participation is not agreement, but specialist work capable of changing the theory.

The purpose is not to get more people to finish reading Civilization Leap, but to enable more people to complete Civilization Leap together.

Appendix A Register of Source–Claim Boundaries

Table A1 Sources, Evidentiary Status, and Prohibited Extrapolations

Field	Supported claim	Sources	Status	Prohibited extrapolation
Classical economic and institutional theory	Debates on prices, labour, institutions, capabilities, rights bundles, common resources, and value.	1–16	A / B	Classical authority does not adjudicate new boundaries in the AGI era.
Labour and automation research	Task substitution/complementarity, wage structures, occupational exposure, job quality, and organizational consequences.	17–24	A / B	Task or occupational exposure must not automatically be extrapolated into job disappearance.
AI productivity and macroeconomic research	Specific-task productivity, heterogeneous effects, macro mechanisms, and development scenarios.	20–28	A / B	Local experiments do not establish firm, macroeconomic, or welfare endpoints.
Energy, accounting, and ecology	Material foundations, national accounts, ecosystem accounting, and irreversible constraints.	29–31	A	Statistical visibility is not complete value or unlimited substitutability.
Care, social protection, and rights	Scale of unpaid care, social protection floors, and rights including adequate living.	32–35	A	No single cross-national institution or fixed parameters follow.
Competition and AI infrastructure	Data, supply chains, infrastructure concentration, entry, and competition tools.	27–28, 36	A / B	Competition risks do not automatically imply a single ownership system.
This paper's original connections	Sixfold value distinction, composite production chains, four-track distribution, contribution events, public return, and a stage-sensitive economy.	Whole paper	C	Require ongoing testing by cases, empirical research, law, and institutional effects.
This paper's normative commitments	Plural sources of meaning; minimum human standing is not settled by price, output, or contribution; economic rights are separate from authority over meaning; current advanced AI's functional roles do not generate sovereignty over value.	Whole paper	F	Subject to normative counterexamples, cross-cultural/social consequences, legal rights conflicts, and institutional failure; must not be written as economic facts.

Appendix B Ten Prohibitions on Cross-Level Inference

Table B1 Ten Prohibited Automatic Inferences

Starting point	Must not automatically imply	Still requires
Rising prices	Higher total value, greater social legitimacy, or more deserving subjects.	Property rights, ability to pay, externalities, market structure, and object characteristics.

Starting point	Must not automatically imply	Still requires
Higher utility / satisfaction	Respected rights, expanded agency, or just distribution.	Choice sets, processes, long-term capabilities, distribution, and irreversibility.
Greater economic output	All contributions identified and entitlement to returns justified.	Composite production chains, maintenance, risks, public conditions, external costs.
Larger contribution	Higher personhood, stronger eligibility to survive, or entitlement to public power.	Event scope, purpose, rights floors, and resistance to master ledgers.
Recorded contribution	Credit status, civic rank, or cross-domain access eligibility.	Appeal, correction, sealing, retirement, and purpose limitation.
Higher income / wealth	Eligibility to govern, represent, interpret, or control meaning.	Democratic legitimacy, affected relationships, responsibility, and rights boundaries.
Asset ownership	All use, return, exclusion, audit, and emergency rights.	Rights bundles, public obligations, externalities, and systemic risks.
Strong technical capability	Resource priority, public authority, legal personhood, or sovereignty.	Authorization, responsibility, subjecthood evidence, procedures, and reversibility.
Economic rights acquired	Authority to interpret related meanings, cultures, relationships, or lives.	Subjects, histories of bearing meaning, authorization, relationships, and irreplaceability.
AI produces high-value output	AI already has experience, continuity, wage rights, personhood, or political standing.	Separate evidence for subjective experience, non-transferable continuity, relationships to its own consequences, and each institutional function.

Appendix C Stress Tests of Five Composite Scenarios

Table C1 Scenarios, Axes of Conflict, and Minimum Conclusions

Scenario	Must be observed together	Minimum conclusion
Highly profitable AI diagnostics	Prices/profits, clinical outcomes, data sources, responsibility, public access, and authority over meaning.	Neither high profit nor high accuracy can monopolize complete value.
Public AI infrastructure	Public inputs, openness conditions, service continuity, interoperability, commercial participation, and state power.	Public inputs do not automatically entail total state authority; private innovation does not waive public return.
Long-term care	Time, skills, relationships, care recipients' experience, income, and surveillance.	Care should be visible, but must not be engulfed by unified scoring.
Watershed water scheduling	Hard ecological constraints, basic needs, historical rights, community knowledge, prices, and real-time optimization.	AGI can simulate scheduling, but cannot set final goals or erase conflicts.
Minerals and data centres	Chip demand, energy returns, regional jobs, water use, pollution, heritage, and irreversible ecology.	Aggregate benefits cannot automatically offset rights and irreversible losses.

Appendix D A/B/C/F Argumentative Status Matrix and External-Release Checks

Table D1 Four Argumentative Statuses

Status	Content in this paper	Writing discipline
A Relatively stable support	Prices relate to institutions; AI task effects are heterogeneous; occupational exposure is not job disappearance; care and ecological conditions can be statistically identified; infrastructure has material constraints.	Specify tasks, organizations, jurisdictions, versions, and times.
B Frontier / competing explanations	Macroeconomic productivity, long-term employment, capital-labour shares, global diffusion, infrastructure concentration, and abundance scenarios.	Present competing models, intervals, counterexamples, and update dates.
C Cross-disciplinary connections / institutional hypotheses	Sixfold value distinction, composite production chains, four-track distribution, event-specific contributions, public-return boundaries, resource-rights bundles, current advanced AI's economic roles, and stage-sensitive structures.	Disclose alternatives, implementation conditions, failure indicators, and exit paths; fabricate neither parameters nor consensus.
F Philosophical / normative commitments	Plural sources of meaning; basic continued existence and personal standing cannot automatically be revoked by economic contribution; prices, contributions, ownership, and technical capabilities must not acquire master-ledger authority over complete value, rights, or meaning.	Assume responsibility openly under the author's name; accept revision through normative counterexamples, legal conflicts, cross-cultural criticism, and real consequences; never masquerade as Class A facts.

D.1 Twenty-Eight Pre-Submission Checks

- Has occupational exposure been described as inevitable unemployment?
- Has task productivity been described as firm or macroeconomic productivity?
- Have average effects concealed heterogeneity in experience, skills, gender, region, or organization?
- Have price, utility, output, contribution, meaning-making, and authority over meaning been conflated?
- Has profit been described as complete public value?
- Has model ownership been described as entitlement to all output and returns?
- Have public knowledge, data, energy, organization, maintenance, risks, and affected parties been registered?
- Have falsely precise percentages been used to divide public conditions that cannot be reliably traced?
- Has survival protection been made conditional on labour, obedience, surrender of data, or contribution scores?
- Have contribution records been made purchasable, inheritable, convertible across domains, or determinative of basic rights?
- Has making care visible become continuous surveillance or commodification of relationships?
- Have resources been classified before choosing market, public, community, or AGI coordination?
- Has ownership been disaggregated into holding, use, returns, management, transfer, maintenance, audit, and emergency requisition?
- Have the energy, material, regional, and ecological consequences of computing capacity been presented?

- Has incommensurability been misdescribed as inability to decide, or monetary valuation as complete substitution?
- Has AGI output capability been described as experience, personhood, wages, rights, or sovereignty?
- Is protection allowed to precede proof of subjecthood while avoiding its automatic escalation into power?
- Are launch, transition, stability, and self-sustaining stages distinguished?
- Do emergency powers have purpose, scope, duration, review, restoration, and compensation at birth?
- Have four tracks, contribution events, public return, resource-rights bundles, or a stage-sensitive economy been misrepresented as optimal institutions already proven by empirical economics rather than C-class institutional hypotheses?
- Have “meaning is foundational”, basic standing, or values that cannot be settled by accounting been described as economic facts, model outputs, or statistical conclusions without marking the Class F normative bridge?
- Are current advanced AI's roles in understanding, protecting, and transmitting meaning, scheduling, or extending capabilities tied to specific deployments with traceable responsibility, explicit authorization, auditability, correctability, and exit?
- Are all judgments about current advanced AI tied to objects, versions, tasks, organizational/deployment settings, observation times, and methods, without attributing one product's performance to the whole AGI category?
- Have micro-level task gains been automatically converted into firm, sectoral, or macroeconomic growth, wages, hours, employment, or social welfare without specifying diffusion and complementary mechanisms?
- Does every institutional hypothesis present genuinely competing alternatives, comparable outcomes, and defeat conditions, rather than allowing only this paper's proposal to win on its own evaluative scale?
- Has Living Civilization or another future-civilization vision been misrepresented as economic evidence, proof of institutional optimality, or established reality without explicitly stating that “vision is not evidence”?
- Can specialist readers judge, reject, and redesign future distribution and life visions, rather than only move from research findings to supporting materials within the system?
- Does static further reading use currently registered stable civitas.top document pages? Where no stable individual page exists, is the non-fabrication of links and library fallback explicit?

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