

Work as Distribution Infrastructure: Participation in AI-Led Growth Beyond Employment

A framework for labor income, productive ownership, and value creation

Johnny Kao

Independent Researcher, Tokyo, Japan

ORCID: 0009-0004-1446-6001

Abstract

Employment is commonly treated as a source of labor income, but in modern market economies a stable job often performs a much larger distributive function. It provides current earnings, produces human capital, anchors access to social insurance and retirement saving, supports credit and asset accumulation, and gives households a recurring claim on the gains generated by productive firms. This paper develops the concept of Work as Distribution Infrastructure by formalizing an argument introduced in Kao (2026): when firms can produce more value with fewer additional workers, the economic importance of employment extends beyond the number of jobs at risk. The question becomes how productivity gains continue to reach households when job growth is a weaker transmission mechanism.

The paper distinguishes three participation channels. Work connects households to growth through wages, experience, and employment-linked benefits. Ownership connects them through returns to productive assets, directly or through pensions, funds, employee financial participation, and other intermediated forms. Creation connects them through entrepreneurship and the formation of new products, firms, and positions. These channels are complements rather than substitutes. Ownership does not replace the developmental and social functions of work, and entrepreneurship cannot be a universal solution. The framework therefore treats distribution infrastructure as a portfolio of institutional connections rather than a single policy instrument.

Korea provides a useful motivating case. Its growth model historically linked industrial expansion, large-firm employment, skill formation, and household advancement, while current household balance sheets remain concentrated in real assets. At the same time, AI may raise the return to capital, alter the labor share, and lower some organizational barriers to small-team production. The contribution is not a policy prescription for

universal asset ownership or startup formation. It is a diagnostic framework for asking whether AI-led productivity growth remains broadly connected to household income, capability accumulation, and claims on future economic value.

Keywords: artificial intelligence; income distribution; labor income; capital income; ownership; entrepreneurship; pensions; productivity; Korea

1. Introduction

Economic growth reaches households through institutions. Wages are one channel, but a job usually does more than transfer current income. It places a person inside a productive organization, creates opportunities to learn, supports access to social insurance and retirement saving, provides income records that matter for credit, and allows households to convert recurring earnings into financial and real assets. Employment is therefore not only a production arrangement. It is also part of the infrastructure through which market economies distribute claims on present and future output.

This broader function becomes easier to see when technology weakens the historical relationship between firm growth and headcount growth. If an AI-assisted firm can produce substantially more value without adding workers at the same rate, the firm may still be successful by conventional measures: revenue, output, margins, exports, and market value can rise. Yet the share of that success that reaches households through new jobs may increase more slowly. The resulting question is not whether employment disappears. It is how the distributional functions previously bundled into employment continue to operate.

Kao (2026) develops this question in the context of South Korea. The book describes employment as a form of distribution infrastructure and argues that participation in growth increasingly needs to be considered through three connections: work, ownership, and creation. This paper formalizes that intuition, places it in the literature on AI, functional income distribution, wealth, pensions, and entrepreneurship, and clarifies what the framework does and does not imply.

The argument is not that work should be replaced by capital income, nor that every worker should become an entrepreneur. Work has developmental, social, and organizational functions that asset ownership cannot reproduce. The narrower claim is that an economy in which productivity gains are increasingly capital- and software-intensive should not assume that employment alone will transmit those gains broadly. The relevant analytical object is the architecture of participation.

2. From jobs to distribution infrastructure

Definition 1 - Distribution infrastructure. Distribution infrastructure is the set of recurring institutions through which productive growth creates household claims on

current income, future income, capabilities, and assets. It includes market arrangements that operate before taxes and transfers as well as institutions that pool or intermediate claims over time.

Definition 2 - Work as distribution infrastructure. Work functions as distribution infrastructure when employment simultaneously transmits labor income, experience and skill, employment-linked protection, and the capacity to accumulate assets. The concept concerns the bundle created by sustained participation in productive organizations, not merely the wage paid in a given period.

Definition 3 - Participation channel. A participation channel is a durable mechanism through which households can share in the economic value created by productive activity. This paper distinguishes three channels: work, ownership, and creation.

The phrase 'distribution infrastructure' is intentionally broader than redistribution. Taxes and transfers remain important, but much distribution occurs before fiscal policy intervenes. Firms decide whom to hire, what to pay, whom to train, which workers receive performance-linked compensation, and how much profit is retained or distributed to owners. Pension systems and investment funds determine how households are indirectly exposed to capital returns. Credit markets influence whether earnings can be transformed into durable assets. Entrepreneurship determines who can create new claims rather than only receive existing ones.

Function bundled into work	Economic consequence if the bundle weakens
Current labor income	Households receive a smaller direct share of firm expansion through payroll.
Human-capital formation	Fewer workers gain the experience that raises future productivity and earnings.
Social insurance and retirement saving	Protection and long-horizon asset accumulation may become less tied to productive participation.
Creditworthiness and saving capacity	Households may find it harder to convert income into housing or financial assets.
Mobility and option value	Workers may have fewer credible paths into higher-productivity firms or occupations.

3. Why AI makes the bundle analytically important

The distributional effects of AI depend on more than wage changes. IMF work separates labor income, capital income, and other income when modeling AI adoption and emphasizes that households differ greatly in their exposure to capital returns (International

Monetary Fund, 2024; Rockall, Tavares, and Pizzinelli, 2025). In calibrated scenarios, AI can raise aggregate productivity while increasing the value of capital holdings, which may amplify wealth inequality even when wage effects are more equalizing. The implication is straightforward: who owns claims on productive capital becomes more important when technology shifts part of the return from labor toward capital.

At the firm level, productivity and pay are related but not mechanically distributed. Wallskog et al. (2024) show that workers at more productive firms tend to earn more, but that the pay-productivity relationship differs across the earnings distribution. AI can further complicate the mapping because productivity gains may be realized through lower labor requirements, new organizational designs, or changes in bargaining power. A national productivity gain is therefore not itself evidence about which households receive the resulting income or wealth.

This point does not imply a zero-sum conflict between labor and capital. Higher productivity can lower prices, expand output, raise wages, create new products, and support new investment. Acemoglu and Restrepo (2019) emphasize that technological change can create new tasks as well as displace existing ones. The distribution-infrastructure perspective simply refuses to collapse these channels into a single aggregate. It asks how each gain is transmitted and to whom.

4. Three participation channels

4.1 Work

Work remains the most immediate and broadly used participation channel. It provides wages and often combines them with training, social insurance, retirement contributions, professional networks, and a sequence of responsibilities through which workers accumulate human capital. For that reason, a policy that replaces lost earnings but not lost experience is not economically equivalent to employment, and a financial asset that yields returns does not substitute for the developmental role of a career.

The first satellite paper in this series focuses on one specific risk: productive growth may become less tightly connected to career-entry capacity. That Employment Transmission Gap is one reason to treat work as infrastructure rather than a single flow of wages. If fewer workers enter high-productivity organizations, the effect can propagate into future earnings, mobility, and asset accumulation even if aggregate output continues to rise.

4.2 Ownership

Ownership is the second channel. When productivity gains raise profits, firm values, intellectual-property rents, or returns to productive capital, households can participate only to the extent that they hold claims on those assets directly or indirectly. This can occur through equities, diversified funds, pensions, employee stock ownership, profit-sharing arrangements, or other institutional forms. The framework is agnostic about which

instrument is appropriate; each has different risk, governance, and distributional properties.

The distinction between housing wealth and productive-asset ownership is particularly relevant in Korea. The 2025 Survey of Household Finances and Living Conditions reports that real assets accounted for 75.8% of household assets and financial assets for 24.2% as of the end of March 2025 (Statistics Korea, 2025). Housing is economically valuable, but appreciation in residential property is not the same claim as ownership of firms whose profits rise because of AI-enabled productivity. A growth model concentrated in technology-intensive firms can therefore coexist with household balance sheets that are only indirectly connected to the source of new corporate value.

Pensions are an important intermediary rather than a complete solution. OECD data show that Korea has accumulated unusually large public pension reserves relative to GDP (OECD, 2025a). Such institutions can connect household retirement security to diversified financial assets without requiring every person to select individual stocks. Yet pension coverage, benefit formulas, portfolio structure, and household access differ from direct ownership, and large aggregate reserves do not imply equal household exposure to capital gains. The relevant question is how broadly and securely productive-asset returns are transmitted.

Evidence on employee financial participation illustrates another possibility but also cautions against simple conclusions. Nimier-David, Sraer, and Thesmar (2025) find that mandatory profit-sharing in France increased labor's share of excess profits without measurable reductions in investment or productivity in their setting. Xu et al. (2024) find that majority employee-owned firms preserved more jobs during the COVID-19 shock. These studies do not establish that employee ownership is the preferred response to AI. They show instead that ownership and profit-sharing arrangements can materially alter how firm-level gains and risks are allocated.

4.3 Creation

Creation is the third channel: households can participate not only by supplying labor to incumbent firms or holding claims on them, but also by creating new firms, products, and positions. Generative AI may lower some fixed costs of this process by accelerating coding, design, research, translation, customer support, and administrative work. OECD reviews conclude that generative AI can reduce certain entry barriers for entrepreneurs and small firms, while emphasizing that trust, complementary expertise, data, finance, and customer access remain decisive (Calvino, Reijerink, and Samek, 2025; OECD, 2025b).

Creation therefore should not be romanticized as a universal escape from weaker employment growth. Entrepreneurship has highly unequal outcomes, requires risk-bearing capacity, and often depends on institutions that are themselves unequally accessible. In Korea, the additional issue raised in Kao (2026) is re-entry: if leaving a large employer to

build a company imposes a lasting career penalty after failure, the option value of entrepreneurship is lower even when AI reduces technical startup costs. The creation channel depends on labor-market mobility as much as on software capability. This re-entry friction is economically important because it raises the downside cost of experimentation even when AI lowers the technical cost of starting. The relevant option is not simply “start or do not start,” but “start with a credible path back to paid employment if the venture fails.” OECD analysis of Korea has explicitly recommended entrepreneurial leave arrangements with a guaranteed return to employment and career systems that do not penalize such leave, illustrating that the institutional value of the creation channel depends partly on reversibility (OECD, 2023).

Channel	Primary claim on growth	What it cannot replace
Work	Wages, experience, benefits, and career progression	Capital returns and entrepreneurial upside
Ownership	Dividends, capital gains, profit sharing, pension returns	The learning, identity, and responsibility created by work
Creation	Founder income, enterprise value, and new organizational positions	Broad income security for people who do not or cannot start firms

5. Korea as a motivating case

Korea makes the framework concrete because its modern growth experience linked industrial expansion with employment, training, and household advancement. Large firms did not only produce exports; they also absorbed cohorts of workers and developed engineers, managers, and specialists inside organizations. Kao (2026) argues that this employment-intensive transmission mechanism was one reason national industrial upgrading could become visible in household life.

AI may weaken that transmission mechanism without weakening industrial performance. Bank of Korea research finds that generative AI use reduces reported work time and creates potential productivity gains, while later work shows that realized productivity depends on complementary organizational change (Bank of Korea, 2025; 2026). A firm can therefore become more capable without expanding payroll proportionally, and some of the resulting gain can appear in margins, prices, investment, or asset values rather than new labor income.

Korea's household balance sheet and pension architecture then become part of the same analytical picture. A household whose wealth is concentrated in housing participates differently in an AI-driven rise in technology-sector profitability from a household with diversified financial assets or pension claims. At the same time, household financial risk

capacity is unequal, which means that simply telling workers to buy more equities would shift risk toward people who may be least able to absorb it. The framework therefore treats ownership as an institutional design problem rather than an individual investment prescription.

The creation channel raises a parallel question. If AI lowers the minimum team size required to build some products, small groups may be able to operate at productivity levels previously associated with larger organizations. But startup formation will not broaden participation unless new firms can access customers, data, finance, and talent, and unless failed founders can re-enter employment without prohibitive penalties. The relevant unit is not the number of AI tools available to entrepreneurs but the full system through which new productive organizations can emerge.

6. A diagnostic framework for participation in AI-led growth

The framework suggests that analysis of AI-led growth should track four separate objects. First is productive performance: output, productivity, margins, investment, and prices. Second is labor participation: employment, entry opportunities, wages, training, and mobility. Third is ownership participation: who holds claims on firms and diversified productive assets, directly or through intermediaries. Fourth is creation: whether new firms and occupations are being formed and whether their opportunities are broadly accessible. These indicators are intentionally presented as a dashboard rather than collapsed into a single index: the dimensions are not naturally commensurable, and any fixed weighting would imply empirical precision that the framework does not yet possess.

These objects can move in different directions. A country can have strong productivity growth with weak entry-level hiring; rising equity values with households concentrated in nonfinancial assets; or rapid startup formation with a highly skewed distribution of outcomes. None of these configurations is fully described by GDP, employment, or inequality alone. Distribution infrastructure is the connective architecture between them.

Diagnostic question	Illustrative indicator
Is growth reaching households through work?	Labor share, wage growth, entry hiring, training intensity, mobility.
Are households connected to productive capital?	Financial asset ownership, pension participation, employee financial participation, concentration of capital income.
Can people create new productive positions?	Firm entry, startup survival, customer access, founder re-entry into employment.
Are channels complementary or compensating?	Whether weaker labor transmission is offset by broader ownership or creation rather than by concentration.

7. What the framework does not claim

Three boundaries are important. First, the framework does not predict that AI will permanently reduce employment. New tasks, products, and industries can expand labor demand. Second, it does not prescribe a particular ownership regime. Direct equity ownership, pensions, diversified funds, employee ownership, and profit sharing have different objectives and risks. Third, it does not treat entrepreneurship as a scalable substitute for jobs. Most people will continue to rely primarily on work, and societies still need broad access to stable, productive employment.

The framework also leaves post-tax redistribution conceptually separate. Taxes, transfers, public services, and social insurance can change final household outcomes even when market participation is unequal. They are essential to a complete welfare analysis. The purpose of focusing on work, ownership, and creation is to make visible the pre- and co-distributional channels through which households can participate in production before fiscal correction occurs.

8. Research agenda

Future empirical work should measure how AI adoption changes the composition of household claims on growth. Firm-worker datasets can test whether productivity gains are transmitted through wages, employment, bonuses, profit sharing, or capital returns. Household balance-sheet data can show whether groups most exposed to weaker labor demand also hold the assets that appreciate when AI adoption raises profits. Pension and fund data can be used to examine the extent to which indirect ownership broadens access to capital returns. Entrepreneurship data can test whether lower technical entry costs translate into durable firm formation or merely more experimentation with high failure rates.

Cross-country comparison is especially promising because distribution infrastructure differs institutionally. Economies with broad occupational pensions, high household equity participation, portable benefits, fluid labor mobility, or strong startup re-entry may transmit the same productivity shock differently from economies where employment is the dominant gateway to training, security, and asset accumulation. AI therefore provides not only a technology shock but also a test of how robust different participation architectures are.

9. Conclusion

A job is more than a wage payment. It is one of the main institutions through which households receive income, accumulate capability, gain protection, and build assets. That bundle is easy to overlook when employment growth and productive growth move

together. AI makes the bundle visible because firms may increasingly be able to create more value without adding workers at the same rate.

Work as Distribution Infrastructure reframes the resulting problem. The question is not whether work ceases to matter; it remains central. The question is whether work can continue to carry all of the distributional functions that modern economies have placed on it. Where that connection weakens, ownership and creation become more important complementary participation channels. The central empirical task is to determine whether AI-led productivity growth remains connected to broad household income, capability accumulation, and claims on productive assets, or whether those connections narrow even as the economy becomes more efficient.

AI Use Disclosure

OpenAI's ChatGPT was used to assist with literature discovery, bibliographic verification, drafting, and language editing. The underlying concepts developed here originate in the author's prior published work (Kao, 2026). The author independently reviews the final manuscript and remains solely responsible for its arguments, source selection, citations, and conclusions.

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