

SBCM Economics: A Meso-Economic Framework for Maximizing Wealth Retention and Circulation

— Redefining Regional Economic Cycles and Fiscal Multipliers via Standard Block Theory —

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Date: November 30, 2025

Reference (Part 1): 10.5281/zenodo.17766254

(<https://doi.org/10.5281/zenodo.17766254>)

Abstract

Traditional economics has long been bifurcated into "Macroeconomics" (dealing with nations) and "Microeconomics" (dealing with individuals/firms). However, there is a critical theoretical gap in the "**Meso-Economics**" domain, which deals with the "**Basic Municipality (Standard Block)**," the actual unit of administrative service and community life.

This paper applies the **Standard Block Comparison Method (SBCM)** to economic theory to propose a new framework. We demonstrate mathematically that maximizing "**Wealth Retention** (

R_{block})" rather than "Gross Domestic Product (GDP)" is the only sustainable path for aging societies. Furthermore, we define the "**SBCM Fiscal Multiplier** (M_{sbcm})," revealing that high-budget public works with high distortion (D_{index}) often result in negative economic effects due to leakage (the Straw Effect).

1. Introduction: The Failure of GDP-Centric Models

1.1 The Missing Link: Meso-Economics

In the 20th century, economic success was measured by the total flow of money (GDP). However, in a depopulating society, a high GDP does not necessarily imply local prosperity.

- **Macro view:** "The nation grew by 1%." (Ignores the collapse of rural areas)
- **Micro view:** "This company made a profit." (Ignores the cost of public infrastructure)

What is missing is the "**Meso-Economic**" perspective: **Is the basic unit of governance (the municipality) biologically healthy?**

SBCM Economics treats the nation not as a monolith, but as an aggregate of 1,718 "**Standard Blocks**" (cellular units).

1.2 Objective

The goal of this study is to establish a "**Thermodynamics of Regional Economy**." We aim to quantify how injected tax money (Energy) is converted into resident welfare (Work) or dissipated as leakage (Heat), and to propose policies to maximize thermodynamic efficiency.

2. Fundamental Theorems of SBCM Economics

2.1 First Law: The Law of Scale Neutrality

"Economic health is determined not by absolute production volume, but by Economic Density (

$E_{density}$ **) per Standard Block."**

A municipality with a huge budget but low retention is like a patient with high blood pressure but anemia.

$$E_{density} = \frac{\text{Local Retained Wealth}}{B_{std}}$$

Even if the total budget is small, a block with high density and circulation is economically robust.

2.2 Second Law: The Law of Leakage (The "Straw Effect")

"Public investment exceeding the capacity of a Standard Block (B_{capa}) generates zero regional multiplier effect. Over 90% of the capital instantly leaks to external entities."

This phenomenon is defined as the **"SBCM Straw Effect."**

When a massive project (e.g.,

$D_{index} \gg 10$) is imposed on a small municipality:

1. Local SMEs cannot handle the scale.
2. Orders are placed with general contractors in the capital (Tokyo).
3. Money bypasses the local economy and returns to the center.

The massive budget acts as a "straw" that sucks local resources (labor/land) out, rather than irrigating the region.

3. Core Metrics: Redefining the Multiplier

3.1 Block Retention Rate (R_{block})

This metric quantifies the "stickiness" of money within a block. It measures the percentage of expenditure that is re-spent within the same block.

$$R_{block} = \frac{\text{Re-expenditure within Block}}{\text{Total Input}}$$

- $R_{block} \rightarrow 0$ (**Colonial Economy**): Economies dominated by "Hakomono" (white elephant) construction and chain stores. Profits flow to headquarters/investors immediately.
- $R_{block} \rightarrow 1$ (**Autonomous Circulation**): Economies based on local currency, local production/consumption, and SMEs.

3.2 SBCM Fiscal Multiplier (M_{sbcm})

The traditional Keynesian multiplier (

$M_{nominal}$) is a fantasy that assumes a closed economy. In reality, leakage occurs. We propose the **True Multiplier**:

$$M_{sbcm} = M_{nominal} \times R_{block} \times \frac{1}{D_{index}}$$

- $M_{nominal}$: Nominal economic ripple effect (theoretical value).
- R_{block} : Correction for regional leakage.
- $1 / D_{index}$: Correction for inefficiency (Distortion).

Implication:

Even if the government claims an economic effect of "2.0 times," if the project is distorted (

$D = 10$) and outsourced ($R = 0.2$):

$$M_{sbcm} = 2.0 \times 0.2 \times \frac{1}{10} = 0.04$$

The real economic effect is almost zero. This mathematical proof explains why rural economies do not improve despite decades of public works.

4. Structural Analysis & Policy Recommendations

4.1 Identification of "4th Quadrant Industries"

Just as there are 4th Quadrant (High Cost/Low Reach) public projects, there are **4th Quadrant Industries**.

- **Definition:** Industries with huge sales (Input) but minimal local employment/tax payment (Retention).
 - Examples: Unmanned mega-solar power plants, fully automated logistics centers of giant tech firms.
- **Policy:** These should not be subsidized as "Growth Industries" but taxed as "**Wealth Extractors**."

4.2 SB-BI (Standard Block Basic Income)

SBCM Economics proposes switching fiscal policy from "Public Works" to "Direct Household Distribution."

Logic of Efficiency:

- **Public Works:** High D_{index} , Low R_{block} (Money goes to cement/machines).
- **Household Consumption:** Low D_{index} , High R_{block} (Money goes to food, haircuts, medical care = Local Services).

Therefore, distributing the budget saved by canceling 4th Quadrant projects (S_{saved}) directly to residents is the most rational economic stimulus.

$$\text{SB-BI Payment} = \frac{S_{saved}}{B_{std}}$$

This is not social welfare, but an "**Economic Investment Strategy to maximize**

M_{sbcm} ."

5. Conclusion: From Growth to Circulation

SBCM Economics proposes a paradigm shift from "**Growth**" to "**Circulation**."

In a society with a shrinking population, pursuing macro-GDP growth accelerates the exploitation of local Standard Blocks.

By managing the "**Wealth Retention Power** (

R_{block})" and "**Appropriate Investment Balance** ($D_{index} \approx 1$)" of each block, we can maximize the "Quality of Wealth" even in a zero-growth era.

The role of administration is not to pour water (Tax) into a bucket full of holes (The current economy), but to **close the holes (Improve Retention)**.

References

1. **Koyama, H. (2025).** *Proposal for the Standard Block Comparison Method (SBCM) in the Quantitative Evaluation of Administrative Measures*. Zenodo.
<https://doi.org/10.5281/zenodo.17766254>
(<https://doi.org/10.5281/zenodo.17766254>)
2. **Keynes, J. M. (1936).** *The General Theory of Employment, Interest and Money*. Macmillan.
3. **Leontief, W. (1986).** *Input-Output Economics*. Oxford University Press.
4. **Melnus. (2025).** *Standard-Block-Comparison-Method*. GitHub Repository.

Keywords: Meso-Economics, Regional Circular Sphere, Fiscal Multiplier, Basic Income, Straw Effect

