Land prices and the persistent effects of wealth inequality

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Empirical motivation
Rising inequality, falling GDP growth, declining firm entry:

![Graph showing rising inequality](image1)

Figure 1: Income Share of Top 1 Percent and 5-Year Average Per Capita GDP Growth. Sources: World Inequality Database and NIPA.

Rising capital share, majority of increase due to housing:

![Graph showing rising housing share](image2)

Figure 2: Share of National Income From Housing and Real Estate Price Indices. Note: methodology of [1]. Source: NIPA.

Theoretical question
Can increased inequality cause low growth and higher importance of housing?

This paper
Build parsimonious endogenous growth in which:
- Land necessary for both housing and R&D.
- Inequality affects allocation of land between sectors.

Consumer problem
Consumers care about consumption $c_1$ and housing $c_2$.
Preferences:
$$\int_0^\infty e^{-\rho t}[\alpha \ln c_1 + (1-\alpha) \ln c_2]dt$$
Impose restriction $c_2 \geq \mu$. Implication:
- Preferences non-homothetic.
- Expenditure shares non-constant in cross-section (as in data).
- Inequality affects demand for housing.

Production
Inputs: land $l$, labor $L$, $x := (x_i)_{i\in[0,A]} = \text{intermediate inputs, capital}$.
Technology:
- Final consumption:
  $$F^C(L, x) = L \int_0^A x_i^{1-\gamma}di$$
- Production of “blueprints”:
  $$F^R(l) = \delta R_l.$$  
- Housing:
  $$F^h(l) = \delta_h l.$$  
- Production of intermediate producers:
  $$x_i(k) = \eta^{-1}k.$$

Balanced growth path
An allocation in which consumption, wages and land prices grow at constant rates.
Characterized as follows:
- Markets clear, marginal products equated across sectors.
- Consumption growth consistent with optimal savings decision.

Main Theorem
Initial distribution of wealth permanently affects growth, and higher inequality lowers growth.

Intuition for result
Land fixed so land price and consumption grow at same rate.
Expenditure shares:
- non-constant in cross-section;
- constant over time.
Everyone becomes richer at the same rate but land also becomes more expensive.
$$\implies$$ effect of non-homotheticities permanent.

Conclusion
Simple but novel mechanism.

If fixed factor enters consumption and production + preferences non-homothetic, inequality can have permanent effects on growth

References