

Mass Production of Houses in Factories in the United States: The First and Only “Experiment” Was a Tremendous Success*

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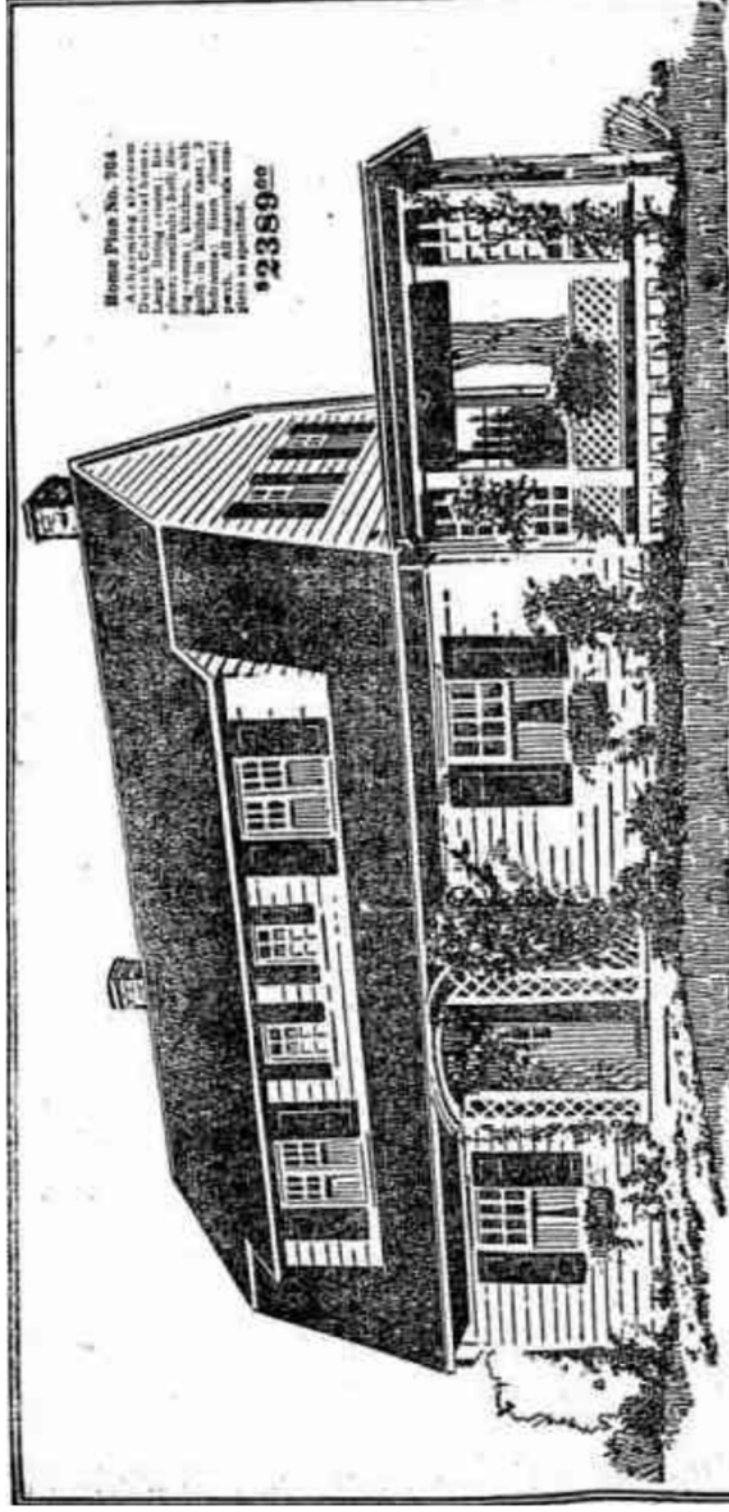
Great Hope for Mass Production of Houses During First Half of 20th Century

- Mass production techniques brought significant price declines to many goods consumed by low/middle income
- Great hope mass production could be achieved in residential construction
- Though there were many attempts, all failed

Failures Due to Opposition from Opponents in Traditional (Stick-Built) Sector

- Well documented that many failures were due to opponents sabotaging factory-built homes
- Opponents: Local builders, local unions, building inspectors (fearing inspection in factories), producers of specialized materials made for local building codes
- Many great forebears wrote about this: Judge Keensaw Mountain Landis (1920, “Chicago residential construction is a thing ‘diseased’”), Thurman Arnold (1947)

Landis Arbitration Award Permits Import of Factory-Built Homes (Kit Homes)

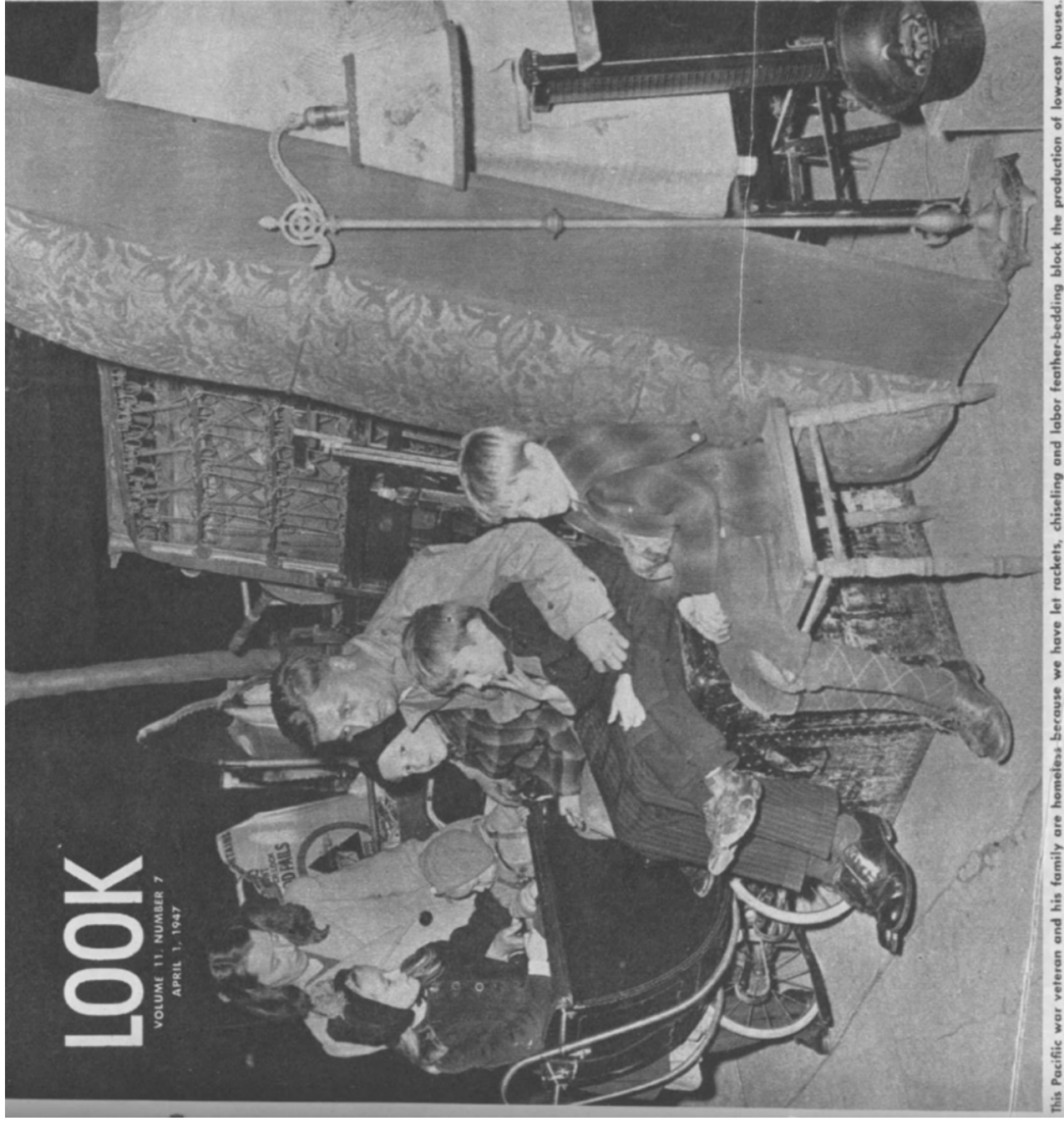


Judge Landis'

Decision Gives You Wholesale Prices on Building Material!

In the agreement between the Unions and Building Contractors before Judge Landis last Saturday, Rule No. 3 says: "There shall be no restriction in the use of any raw material or manufactured material except prison made."

Arnold: “Why We Have a Housing Mess”



“Why We Have a Housing Mess,” Thurman Arnold, *Look*, 1947

Why can't we have houses like Fords? For a long time, we have been hearing about mass production of marvelously efficient post-war dream houses, all manufactured in one place and distributed like Fords. Yet nothing is happening. The low-cost mass production house has bogged down.

“Why? The Answer Is This:”

When a Henry Ford of housing tries to get into the market with a dream house for the future, he doesn't find just one organization blocking him. Lined up against him are a staggering series of restraints and private protective tariffs.

Conclusions:

- Affordable housing has long been an issue
- Tied to craft builders blocking factory-built homes

First Successful Effort at Mass Production Launched Late 1940s

- Launched in new sector of factory-built home industry, Mobile Homes (today, called Manufactured Homes)
- There was fierce opposition to Mobile Homes, yet attempts to block them failed

Industry Achieves Mass Production (1948-1973) by Developing Identical Building Codes

- Uniform or Identical code: “if a home manufactured for one town, the same home can be sold in any town.”
- Mobile Home Manufacturers Association (MHMA) began working on such codes in early 1950s. In 1960, required all members to meet this code.
- In 1963, ANSI certifies the code. In 1965, National Fire Protection Association cosponsors the code.
- Then MHMA asks states to make code mandatory for all producers; by 1973, 44 states had done so.

Mass Production Ends 1974

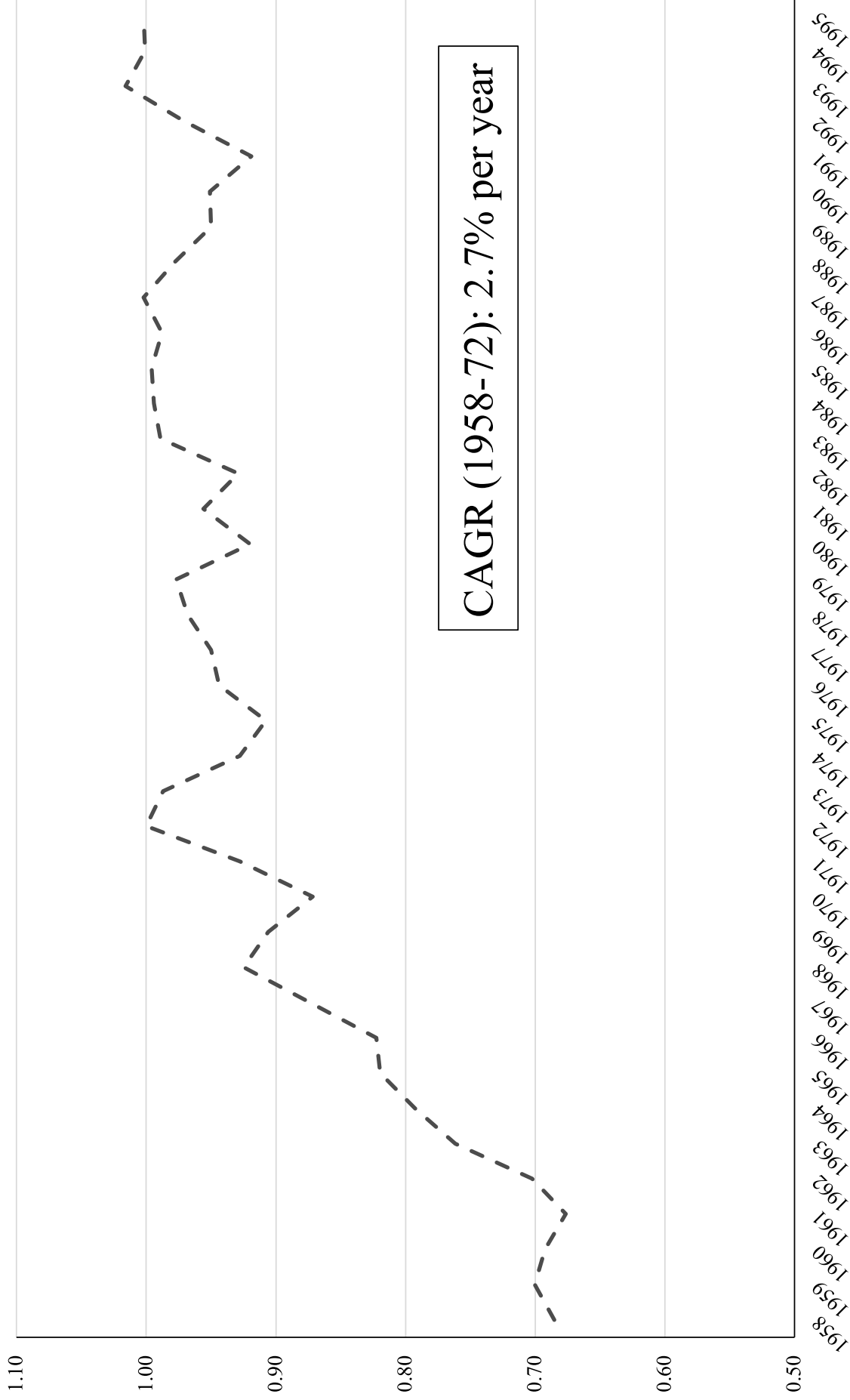
- A new national building code, HUD-code, developed with National Association of Home Builders (NAHB) preempts state-level codes developed by MHMA

Outline

- Next 4 slides: Outcomes of mass production (productivity gains, price declines)
- 2 following slides: Sources of productivity gains, price declines
- Following slides: HUD code? Monopolies?

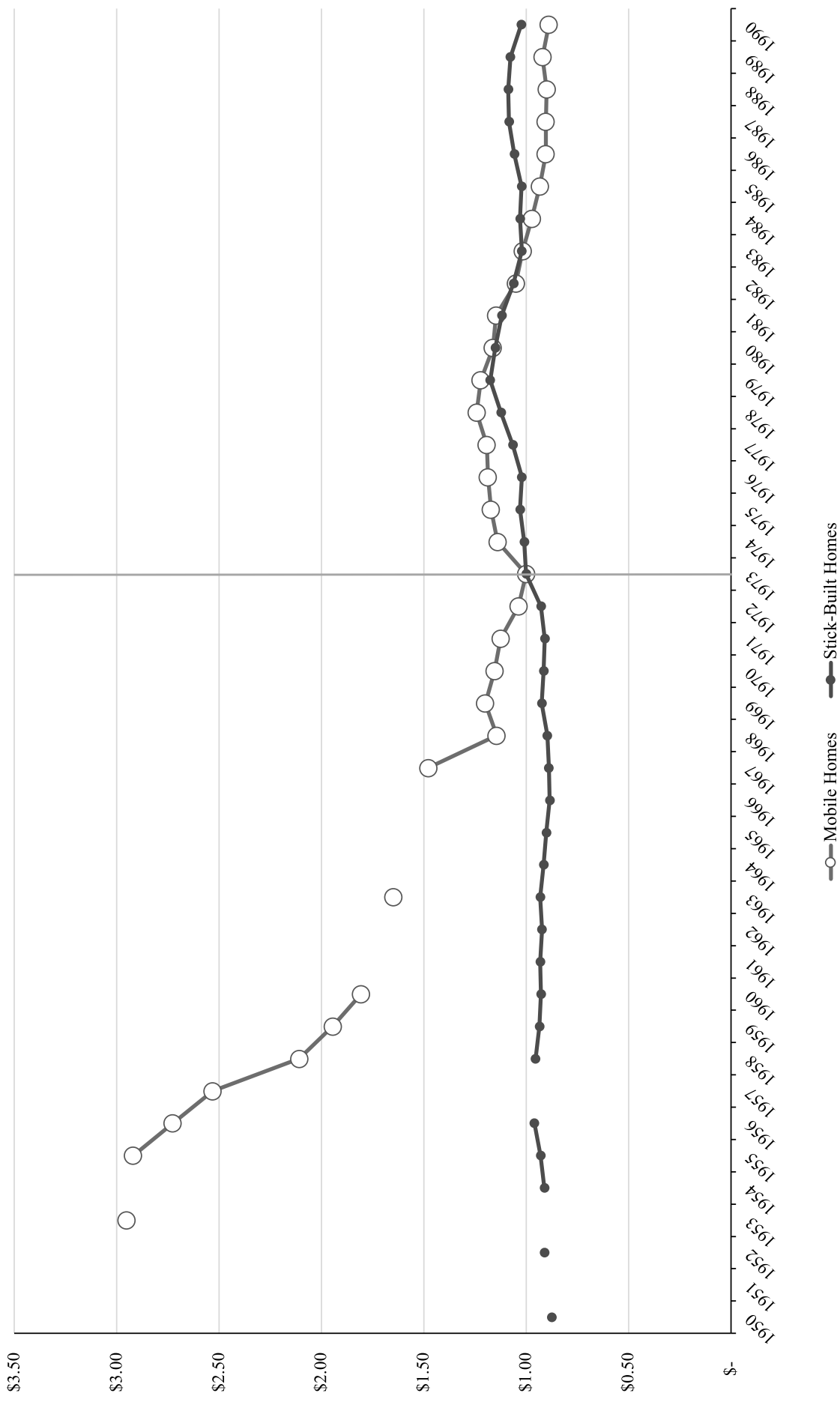
Great Success I: Rapidly Increasing TFP

Mobile Homes: Total Factory Productivity, TFP 4
1972 = 1



Great Success II: Rapidly Decreasing Mobile Home Prices

Mobile Homes vs. Stick-Built Homes: Price per Square Foot, Deflated (1960\$), 1973=1



Prices for stick-built homes until 1968 are for homes that qualified for FHA Section 203(b) loans; from 1969 onward, values are sourced from the U.S. Bureau of the Census, Construction Report C25 Series.

Great Success III: Rapidly Increasing Output: 1960-1972

- Shipments increase from 100K to 600K (and still climbing fast)
- Mobile Home share of single family production 10% – 33%, still climbing
- Today, shipments <100K, Share about 8%

Mobile Home Share of SFP, by States, Avg over 1971-1973

Alabama 60.4	Montana 74.8
Arkansas 58.4	North Dakota 57.1
Mississippi 57.9	Idaho 52.5
Kentucky 55.8	Kansas 46.1

Types of Productivity Gains: Factory-level and Industry Sources

- Factory: With such codes, incentives to invest in specialized machinery to produce simple, standardized products
- Industry sources:
 - External effects: With many factories producing houses built to the same code, and using a similar process, organizations developed that “built industry infrastructure” and “produced industry information” that were both very useful to existing firms (and firms considering entry) and were free of charge.
 - Gains from directed technical change

External Effects

- MHMA – Developed identical building codes (Big TFP gains here)
- MHMA – Developed survey of financial institutions on Mobile Home lending
- Agricultural extension services – In role supporting Ag communities
- Academic research? No, industry ignored (no Thurman Arnold, Henry Simons, ...)

End of Mass Production: HUD's National Building Code for Mobile Home Industry

- Stick-built industry in dire straights.
- National Association of Home Builders (NAHB) turns to HUD for help funding off Mobile Homes. Actually, HUD=NAHB
- HUD introduces national code, preempts state codes.

HUD code: Complete Break with Past Practice

- HUD-sponsored legislation in 1974 was the beginning of the end
- HUD developed its code on its own, ignored model-code groups
- For example, develops own fire safety, energy efficiency rules
- Model code groups challenge HUD; HUD ignores them

HUD Code: Permanent Chassis

- Mobile Homes were typically delivered to their housing site on a chassis, fitted with axels and wheels.
- When home arrived, the chassis was typically removed, and the home placed on a permanent foundation (often with basement).
- 1974-legislation: A Mobile Home's chassis is now permanent — cannot be taken off. Greatly reduces desirability of the Mobile Home.
- “Want affordable housing? Take the chassis off manufactured houses. And don't call them mobile homes.”
The Washington Post, By Lee E. Ohanian and James A. Schmitz, May 21, 2024.

The Words Opponents and Incumbents Have Been Used: “Monopolies” More Helpful

- National Association of Home Builders (NAHB) is not a monopoly in today’s usage — “a firm that is a single seller with no close substitutes ...”
- But it’s a monopoly in usage of our forebears (Smith,, Fetter, Viner, Knight, Robbins, Simons, Arnold,)
- These forebears, and many others, through detailed studies of industries, recognized many organizations became monopolies, and take many harmful actions
- Stick-builders, as a group, as NAHB, are a single seller. No firm has control over price, yet group blocks close substitutes (leading to much higher prices)

To Solve Housing Crisis (and Other Ones), We Need to Deepen Our Understanding of Monopoly

- Monopolies Inflict Great Harm on Low- and Middle-Income Americans (Minneapolis Staff Report, May 2020)
- How to Define Monopoly?
 - Thurman Arnold has great definition