

Solving the housing crisis will require fighting monopolies in construction

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- Motivation
- Outline

(Large part of) Most housing problems are due to high prices

- Large group paying 50% + on housing
- Evictions
- Homelessness
- I focus on problems of low/middle income but ...

High prices largely due
to failure to adopt new
technology

Construction has mostly failed to adopt factory methods

- Factory replaces craft in autos, clothes,...
- Factory methods much more productive than craft (imagine making autos in driveways)
- Yet vast majority of homes not factory-made

Failure to adopt factory methods leads to

- Significantly higher construction costs
- Higher land prices (by influencing WHERE people live)
- Mention decompositions

Why has construction failed to adopt? Monopolies have blocked factory technology in construction for last 100 years

Solving the housing crisis
will require fighting
monopolies in construction

Outline

1. How to define monopoly?
2. Our forebears decried technology laggardness of construction and the sabotage of technology by monopolies
3. Monopoly sabotage of factory production, 1960s/1970s (MANUFACTURED HOMES)
4. What can we do today?
 - Research, Policy, Education

Monopolies need to be defined

- I'm not using today's definition:

“A monopoly is a firm that is sole seller of product with no close substitutes”

- Obviously, no firm today in housing construction satisfies this definition.

My research with colleagues has found

- Many organizations can be monopolies (trade associations, professional associations, ...)
- Monopolies take many actions besides choice of price, like killing substitutes (e.g. factory-built homes)
- Housing industry is only one of many...

Defining monopoly as Thurman Arnold did

- What we have found our forebears knew long ago
- We should define monopoly as they did
- See my paper “How should we define monopoly?”

Thurman Arnold's definition

- For Arnold, an organization is a monopoly if it ...
 1. "Prevent[s] new enterprise from entering the field."
 2. "Seeks to consolidate .. [its] power by destroying existing independent enterprise."
 3. "Having accomplished these objectives, they restrict production and raise prices;" and MORE
- Note-1 : Definitions are abstractions based on his experiences (e.g., fighting for factory-homes)
- Note-2 : Monopoly choice of price secondary concern

Forebears decry laggardness

- “we have the anachronism that the oldest and one of the largest of our industries, concerned with the production of one of the three essentials of life, is highly resistant to progress, follows practices developed in the days of handwork, [...] is unable to benefit by advancing productive techniques in other fields. [...] Unlike other widely used commodities, shelter is not made in a factory or plant organized for its production” (A.C. Shire, 1937, the chief engineer of the Federal Housing Administration)

There have been some advances since WW2

- Levitt-style mass production methods
- These lead to great savings (in areas where 100 houses can be simultaneously constructed)
- But savings don't compare to factory-production. They are not "enough"

For decent, affordable homes for low income, must produce in factory

- “The labor time in a factory-built dwelling unit is only a fraction of what is required to construct a similar unit on-site. That’s why we must look at factory-built housing. That’s why factory-built housing must succeed, or we will never be able to produce the homes and apartments needed to house our expanding population and our underprivileged citizens in a comfortable, dignified, decent way” (Levitt and Sons, United States Senate 1969, 16)

What Levitt and Sons said was widely understood

- Conceptually even worse now
 - Manufacturing productivity grows at around 3.5% per year, construction at little more than 0.5%.

Forebears decry sabotage of factory-technology

Arnold's experience at DOJ

- “A first step in the protection of the prefabricator was taken in September 1940 by an indictment which charges a conspiracy to prevent the sale of prefabricated houses in Belleville, Illinois. Local building materials dealers, contractors, officials of the carpenters’ and building laborers’ union, and the chief of police are charged with a series of efforts to prevent the erection of a prefabricated house by concerted refusals to perform the work and by violence to prevent others from performing it. Before the indictment there had been repeated riots at the construction site; thereafter the work proceeded without further violence.”

Note the lineup of
monopolies above

Arnold's experience after

- “Why can't we have houses like Fords [i.e., automobiles]? For a long time, we have been hearing about mass production of marvelously efficient postwar 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 Henry Ford went into the automobile business, he had only one organization to fight [an organization with a patent] . . . But 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.” (*Why We Have a Housing Mess*, 1947)

Summary thus far

- Our forebears understood factory-built housing must succeed to serve “our underprivileged citizens in a comfortable, dignified, decent way”.
- Our forebears (certainly including the Levitts) understood monopolies were stopping that from happening.

Nothing has changed except

- Everything our forebears knew about need for factory home production, and monopoly sabotage, is forgotten.

Monopoly sabotage of factory-home production, 1960s/1970s

Outline

3.1 Definitions / Time Series

3.2 Who is in monopoly?

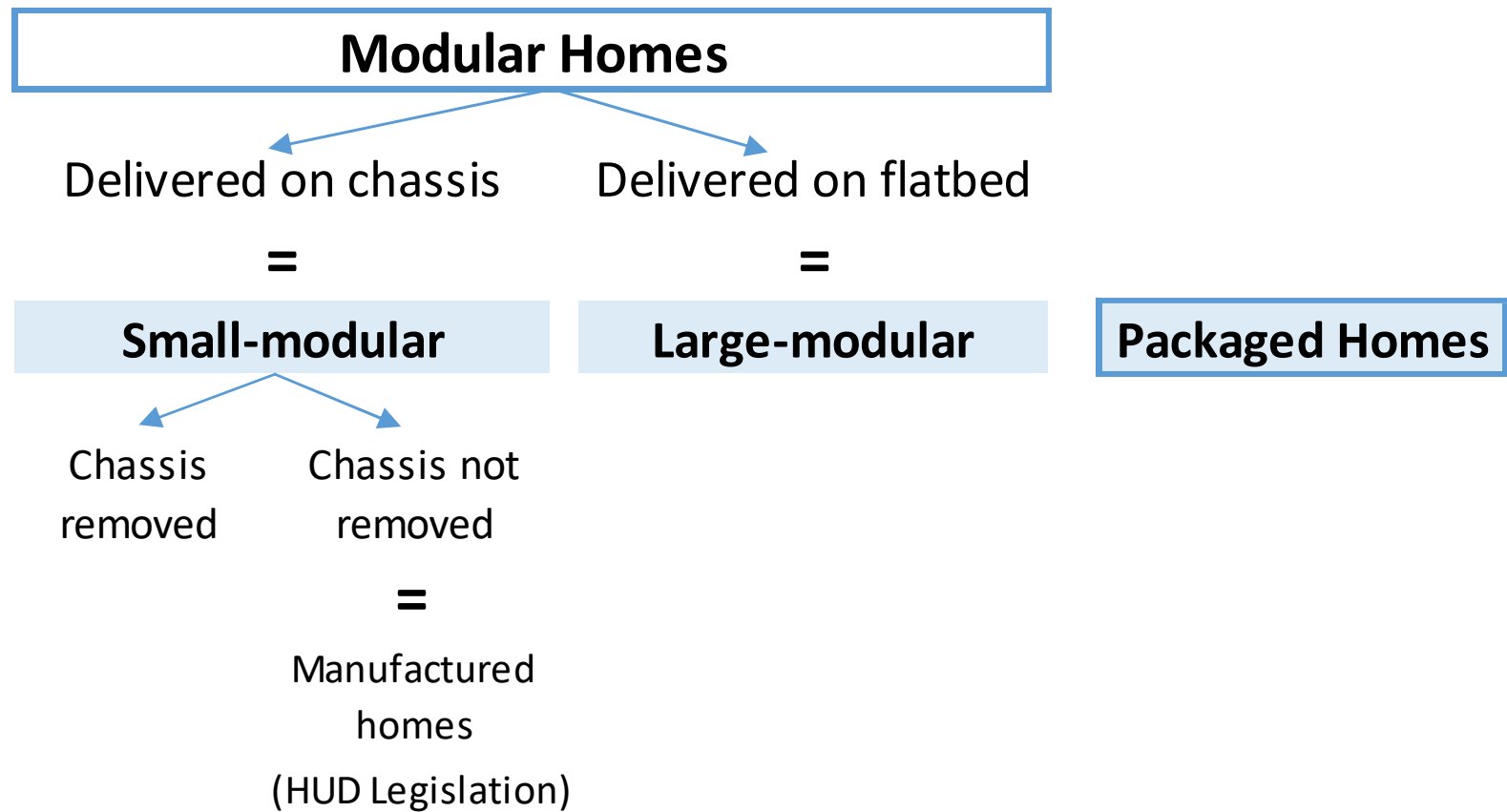
3.3 How was sabotage achieved?

3.4 What are the social costs from monopoly?

Acknowledgement of forebears making manufactured homes

- Monopolies are infinitely complex (Frank Knight).
- It took me years and years to unravel the sabotage I have found.
- Absolutely no way I could have done so without the help of those in construction industry producing factory homes.

Definitions: Factory-built, Stick-built



Definitions:

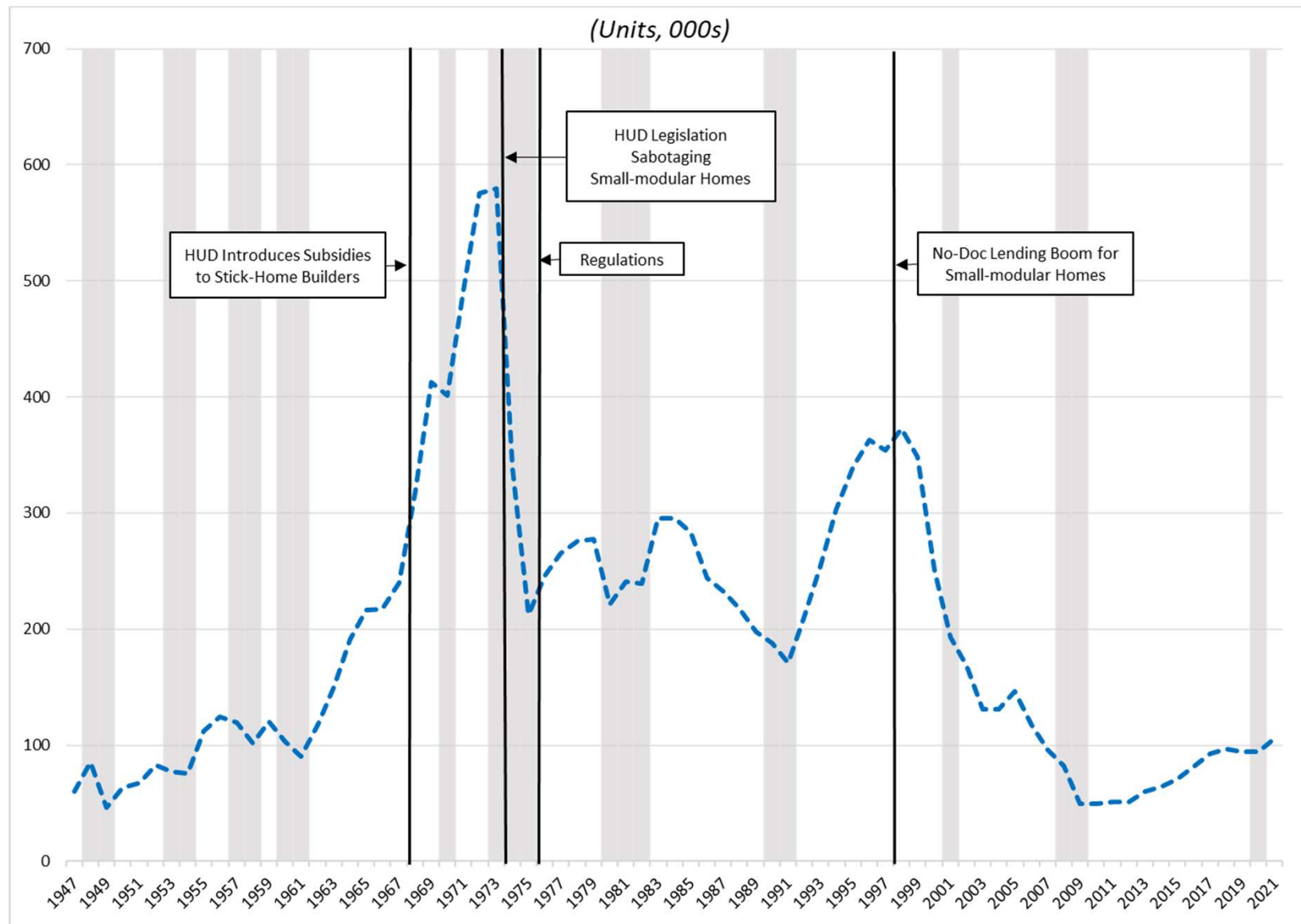
Factory-built, Stick-built (continued)

- Edward C. Prescott: if lose battle over language, lose the war.

Total Factory = Sum of 3 types above

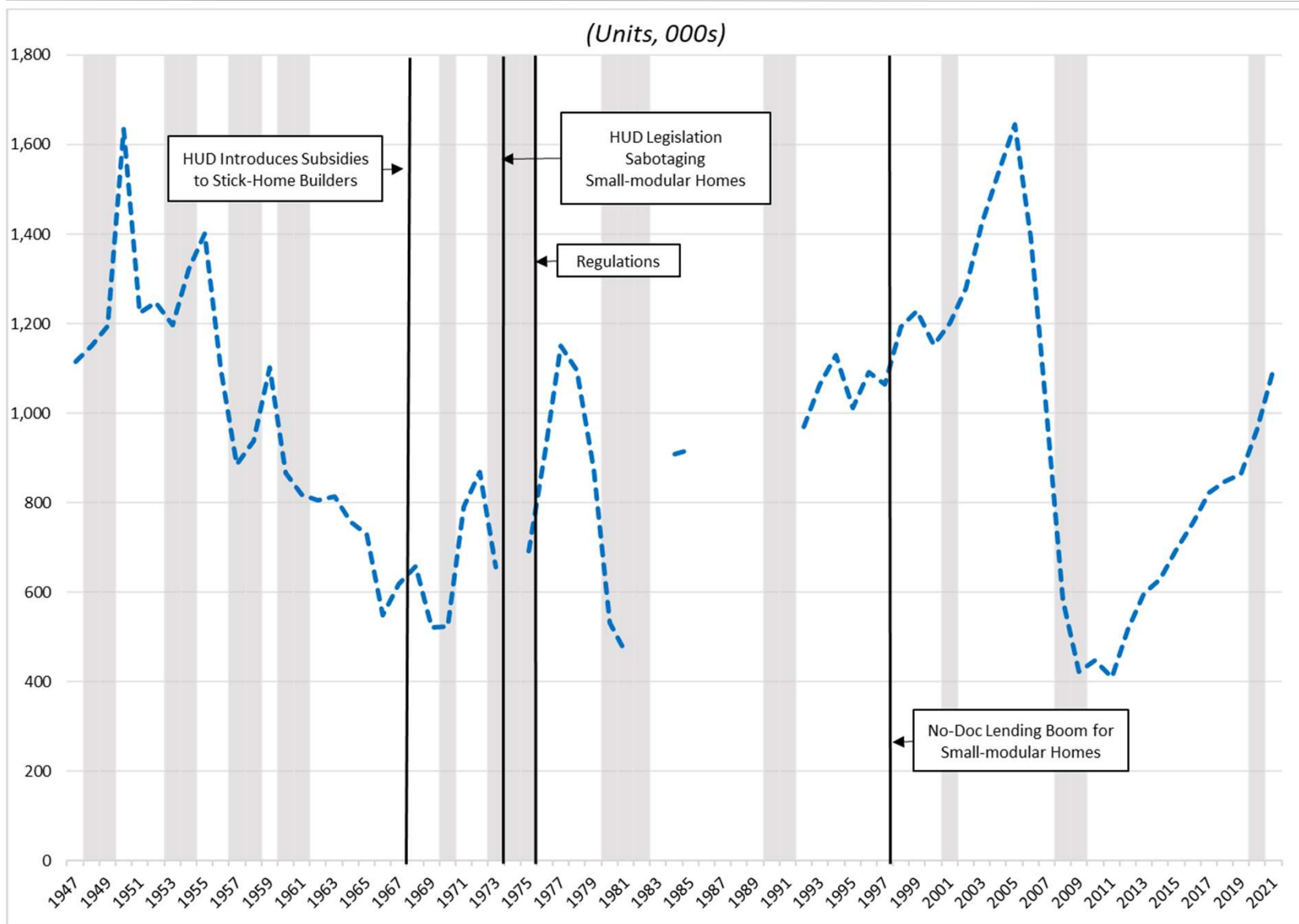
Total Single Family Production = Total Factory + Stick

Shipments of Small-modular Homes

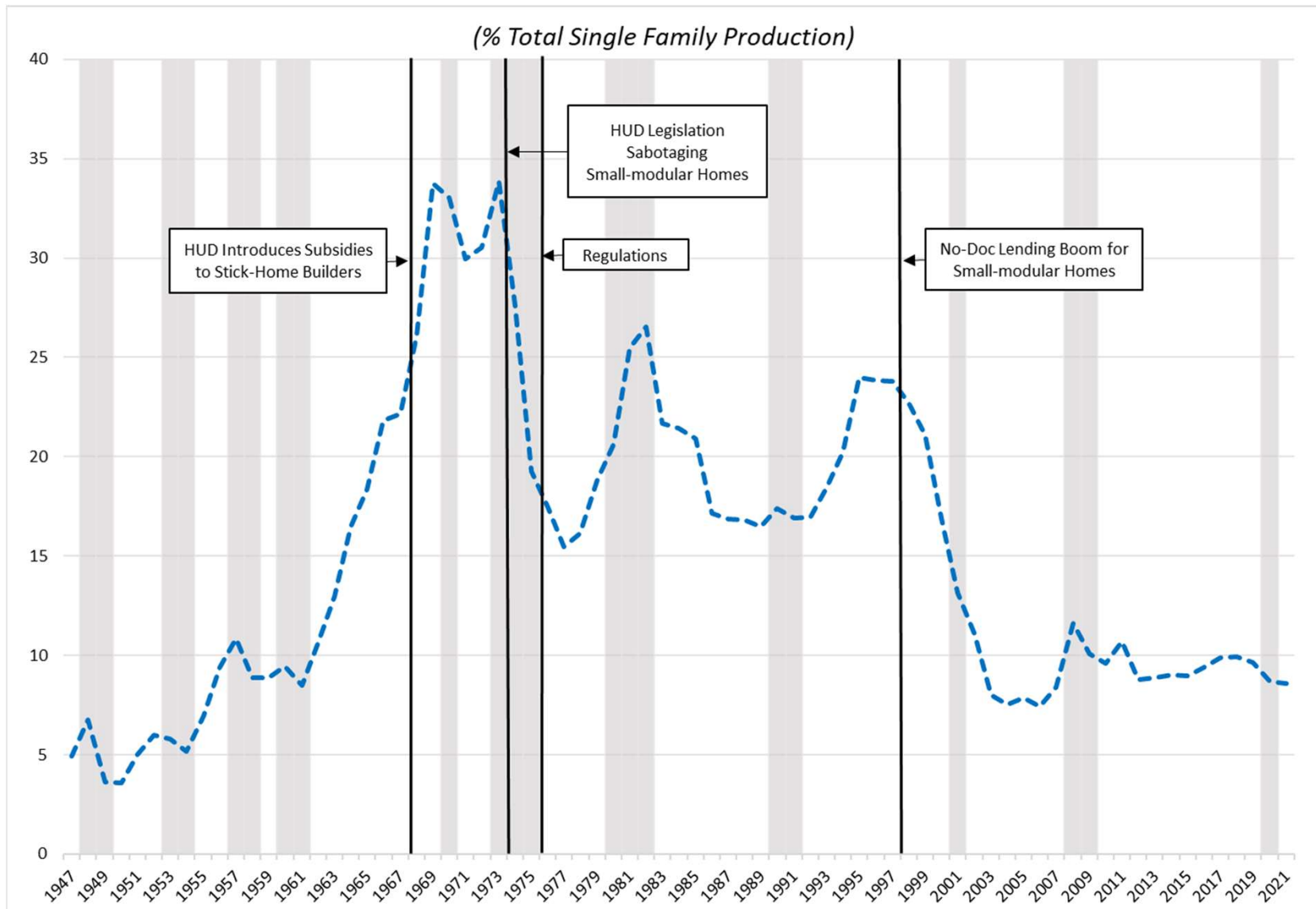


Source: U.S. Census Bureau. Data prior to 1959 from Historical Statistics of United States, Millennial Edition, Part Dc, Series Dc637-352

Stick-Built homes



Small-modular homes as share of Total



Source: U.S. Census Bureau. Data prior to 1959 from Historical Statistics of United States, Millennial Edition, Part Dc, Series Dc637-352

Who is in the
monopoly?

Vast majority of economists say construction is competitive

- How is it possible for there to be monopolies in residential construction when profits are small, prices are close to marginal cost, there is free entry, ...
- There is competition between stick builders.
- But stick builders form powerful monopolies, block factory technology. Residential construction is not competitive.

Who is in monopoly?

- We've already been introduced to some of them by Thurman Arnold.
- Will introduce more as I describe the sabotage.

Preliminary history (1930s)

- During the Great Depression, desperate families moved around the country seeking work.
- Many pulled very primitive shelters behind their cars. No sanitation facilities. Often called trailers.
- Many localities introduced zoning ordinances banning them (e.g. banning sleeping in shelter with chassis)

Preliminary history (1950s)

- After WW2, small-modular homes (mobile homes) were introduced.
- Least expensive method to make a house.
 - Produce in factory; one piece; transport on chassis

Preliminary history (1950s)

- Brand new industry. Lots to be settled.
- Chassis often (almost always?) kept on house.
- Houses initially financed as cars.

Initial sabotage of homes (1950s)

- Local zoning officials use ordinances that block trailers to block these new houses.
- Typically upheld by judges (using many excuses).
- Also, stick builders encouraged stigma...

Local zoning authorities block “mobile homes”

- “The most extreme position excluding mobile homes from single-family districts seems to have been taken by the Massachusetts courts. Their attitude can best be summarized as either ‘once a trailer, always a trailer’ or ‘a trailer is a trailer is a trailer.’ The fact that the mobile homes were purchased without wheels to be brought in on flatbeds, or that the wheels were to be removed and the structures were to be permanently attached to foundations, landscaped, and in every other respect made to comply with the applicable zoning ordinances did not make an impression on the Massachusetts judges.” (Bartke and Gage 1970, 501-502).

Some judges decry sabotage

- In a court case upholding the banning of “mobile homes” from municipalities in Idaho, Justice Bistline dissented, writing: “It is undoubtedly an easy matter for the nation’s elite to decide for the less affluent that they simply should not live in mobile homes. . . . The elite see no appreciable difference between the trailer house of yesteryear and the prefabricated homes of today which are, of course, necessarily mobile until they arrive at their destination. Although times have changed, and ‘mobile homes’ can no longer be equated with trailer houses, the elite do not change” (Berry 1985, 157).
- Another dissenting judge’s opinion: “The structure in the present case is resting on a foundation and in order for it to be moved must be cut in half and have axles and wheels installed. I find it difficult, if not impossible, to hold that such a structure under the restriction in question is a mobile home.” (Albiet v. Orwige, Tennessee Court of Appeals; cited in Milligan 1987, 558)

Local monopolies losing effectiveness over time

- Difference in productivity (prices) growing
- Quality of homes increases
- Chassis are being removed after delivery
 - Stigma being removed
 - New financing methods easier (?)

Chassis removal

- In testimony before Congress, Levitt and Sons stated that “Mobile homes, 90 percent of them, end up on a foundation and are not mobile at all” (United States 1969, 388).
- “The doublewide unit [a type of small modular] is a stranger to wheels except during its journey from factory to site. Two 12-foot wide sections are ‘slid’ onto an already prepared foundation, with or without basement, and permanently joined. The result is a house 24 feet wide, up to 56 or more feet in length, and in most respects indistinguishable from the conventionally built or prefab one-story dwelling.” (Bair (1967, 287))

As situation becomes dire in
late 1960s, sabotage brought
to national level

National sabotage directed by NAHB, HUD

- NAHB and HUD are monopolies in Arnold's definition.
- Who in NAHB is a monopolist?
 - Many (most) members may be unaware
 - Of those aware, some may oppose

Methods of sabotage

- Subsidies
- Legislation
- HUD code
- Some methods complement local sabotage

Subsidies

- Massive subsidies
- Arnold (1940, p. 45): “[Y]ou can’t spend money in a relief market [housing] like that without subsidizing inefficiency and thus raising both prices and taxes.”
- Arnold (1939) made a related point in a speech to the New York Building Congress: “The building industries are unique in that they have frankly given up half of their job. They take for granted that it is impossible, as things are today, for them to build houses without public aid and sell them cheaply enough that the lowest paid half of the population can afford to live in them.”

Legislation (1974)

- National Manufacturing Housing Construction and Safety Standards Act
- “manufactured home means a structure, transportable in one or more sections, which, in the traveling mode, is eight body feet or more in width or forty body feet or more in length, or, when erected on site, is three hundred twenty or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, ”

What is the impact of Legislation (of definition)?

- Note: legislation does not say small modular homes must have a permanent chassis.
- Will examine shortly

HUD regulations: HUD code

- HUD code: National Building Code (NBC)
- NBC always touted as benefit to factory-builders.
- But only under the assumption that all builders face that code.

In areas where stick and small modular compete

- Often no local building code.
- Massive study of housing by Paul Douglas (Cobb-Douglas fame, Senators, ...). 25% of localities have no local building code in late 1960s.
- “Prefabricated builders have simply confined themselves to those areas where restraints are not serious” (Speck, Chicago Law School, 1947)

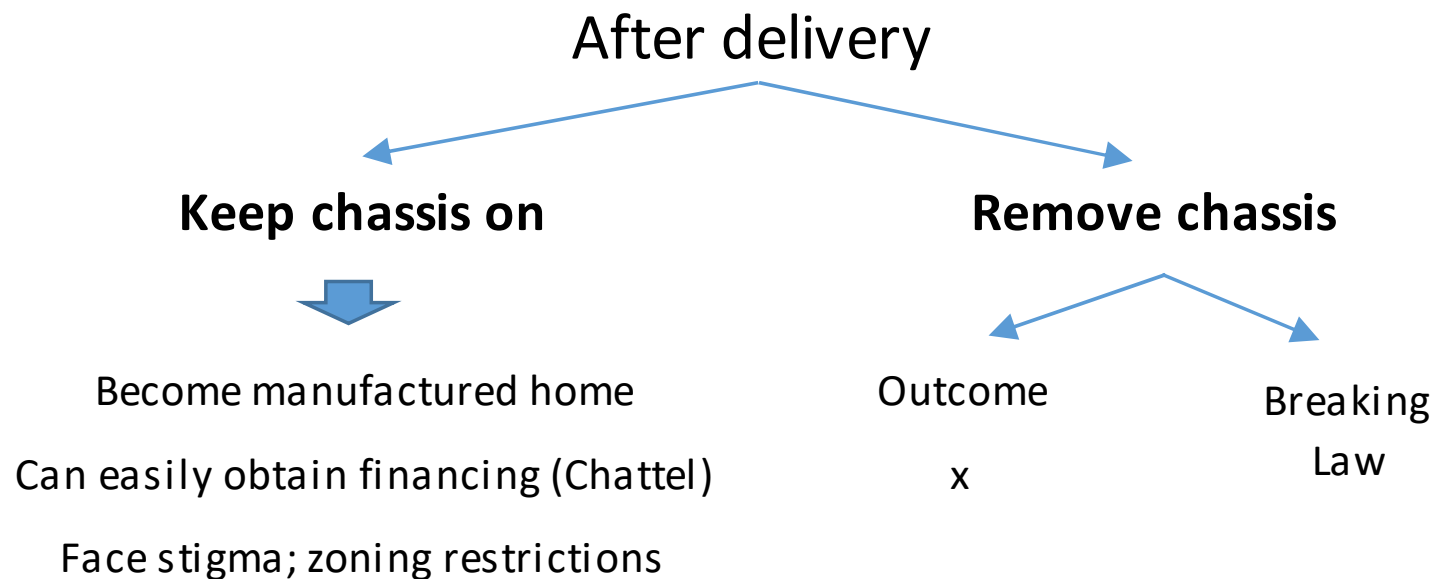
HUD code was also very strict

Summary thus far

- HUD and NAHB stop freefall of stick homes in late 1960s.
- Social losses to society large (hurts low-income)

How about impact
of legislation?

Consider buyers of small modular home



Vast majority of buyers take left fork

- This is true except for brief period in 1980s
- So, choosing manufactured home is seen as better option.
- Some evidence that buyers are confused about law: think small modular home must have chassis

Testimony: Chairwoman of the National Manufactured Housing Federation

- “I can assure you that when a homebuyer buys a home from me and wants to finance it for 30 years and have it installed on a permanent foundation, the homebuyer prefers to have the chassis removed. In many cases homebuyers prefer to have their manufactured homes placed over basements. Because of the presence of a chassis, we must dig the basements deeper and erect more costly and unsightly piers. I could save my homebuyer significant costs, both in factory costs and installation costs, if I could order a home designed to have the chassis removed. When I advise a homebuyer that the chassis cannot be removed because of Federal law, they find it illogical” (Maureen Wagner, the Chairwoman of the National Manufactured Housing Federation, United States Senate 1990, 468-9).

Confusion is encouraged, engineered

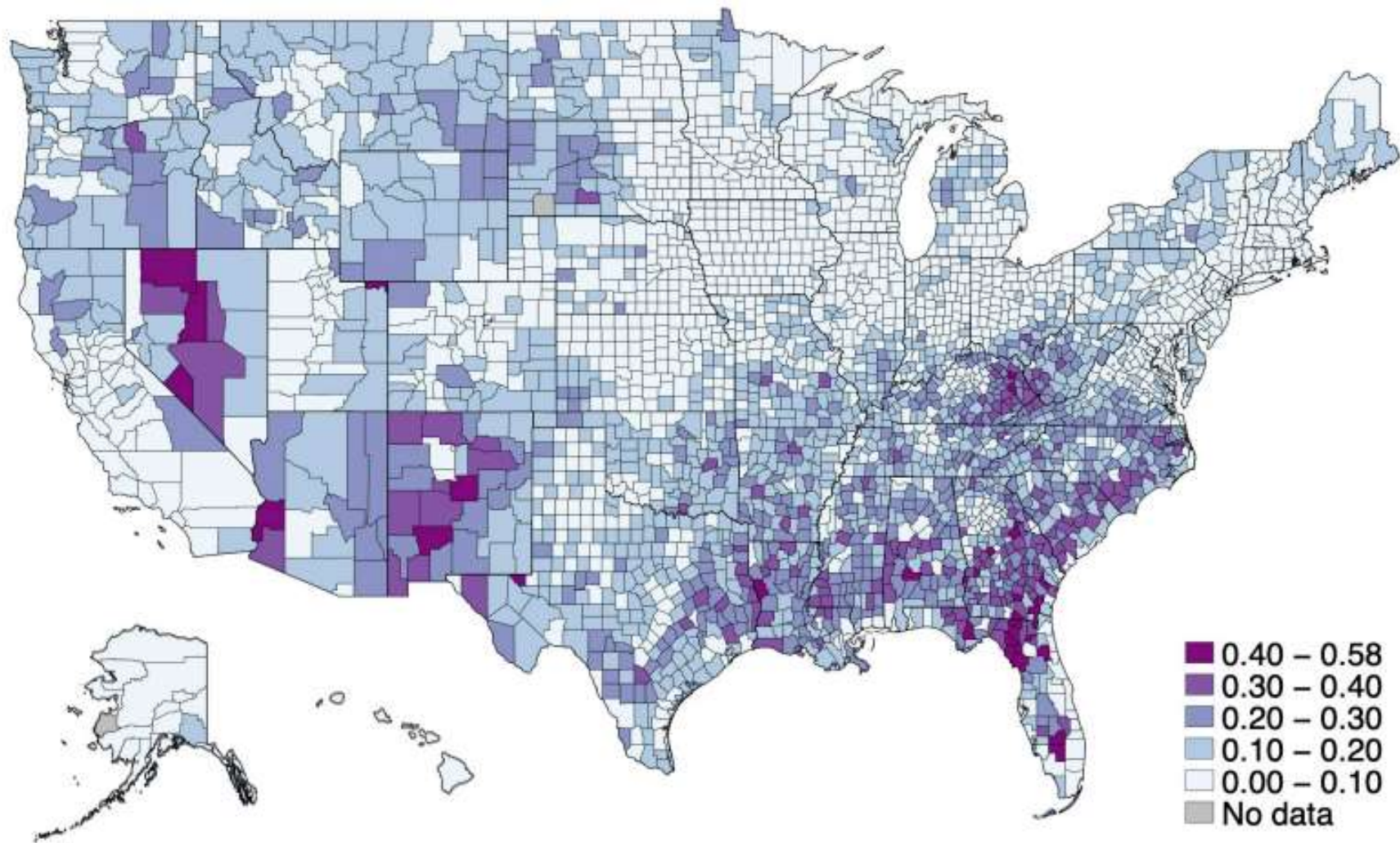
- Groups want to sell these homes as cars.
- This leads to whole new set of monopolies, those in manufactured housing industry itself.

HUD wants chassis to harm industry

- Assistant Secretary of HUD Thomas Demery states: “The proposed amendments include changes on the definition for ‘permanent chassis.’ This change will have the effect of separating the permanent chassis function into its two components (sustaining the house at rest and sustaining it during transportation) and permitting the transportation component to be removed from homes which are permanently sited.” Demery goes on to state what the problem is: “While this legislation may be beneficial for the manufactured/mobile home industry, HUD is concerned about its effects on the modular and site-built housing industries”. Demery’s argument is “if we reform regulations in industry A, this will hurt industry B. So we won’t.”

How about today?

- Production of small modular homes very low, level of mid 1950s.
- Differs by region
- Market a shell of former self



Proportion of housing units that are manufactured homes by county. Source: Banga (2020) “Price regulation and market power: Evidence from manufactured home loans”. Calculations from American Community Survey 2015-2019, accessed through IPUMS NHGIS.

How much is due to monopoly sabotage?

- Policies from late 1960s/1970s still have impact
 - Subsidies
 - HUD - code
 - Legislation - definition?
- Many more sabotage policies have been adopted (I'm not expert on them)

Evidence that legislation still has impact

- Through confusion
- Chassis still kept on homes
- Still chattel financing

Assuming sabotage is the cause, what are costs to society?

- In areas where totally blocked
- In areas where zoned into less desirable areas

Losses: small modular homes much less expensive (2017)

	Average selling price	Average square feet	Avg cost per square foot	Real Estate
New stick home (single family, excluding land)	\$ 293,727	2,645	\$ 111.05	100 %
Small modular home (single section)	\$ 43,000	1,087	\$ 44.43	17 %

Source: U.S. Census Bureau

Caveats

- Quality? (small modular meet HUD code)
- Think of building a 1,087 square foot home in small town or rural area
 - Will be built one at a time (the figure \$ 111.05 above includes production builders)
 - Square footage cost declines with size in stick built technology

Losses: in areas where “allowed”

- Mentioned zoned into bad areas, stigma
- Because of chassis, finance is typically with chattel loans (or cash)
 - Higher interest rates
 - Shorter loans
 - No mortgage interest deduction

Metal chassis in the basement of modular home



Can “estimate” this
cost in a model

Education as policy

- Thurman Arnold believed his policies could be successful only with public support.
- Published in Cosmopolitan, Reader's Digest, Look, ...

Education and action by Ivory Boyer Real Estate Center

- Education: small modular homes are not required by law to have a permanent chassis.
- Action: buy a small modular home, remove chassis, and place it on front lawn. Let there be a raffle for students for free rent. Make sure WSJ is there.
- Crowd source the purchase: should we begin now?