



Manufactured Housing: Past, Present, and Future

Affordable Housing Coalition, January 16, 2024

<https://freakonomics.com/podcast/why-is-it-so-hard-and-expensive-to-build-anything-in-america/>

What is Manufactured Housing?


A type of prefabricated residence that has its standardized parts constructed and assembled in a factory; it's then transported and affixed to a location. In contrast, a traditional home is built from the ground up on your lot.

Manufactured Home vs. Mobile Home

The only difference between the two types of homes is the date they were built. According to HUD, a factory-built home prior to June 15, 1976 is a mobile home and one built after June 15, 1976 is a manufactured home.



Benefits of Modular Production

- Speed of Construction-build in $\frac{1}{2}$ the time
 - Labor Advantage-work is easier, not weather dependent, and more people can work in the industry
 - Less waste and pollution: 40% less emissions than conventional construction
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Comparative Statistics

➤ Only 6% of construction in U.S. is modular

➤ Sweden = 80% of buildings have prefabricated elements

➤ Japan = 15% of buildings have modular components. (Note: Japan has the most manufactured-housing-friendly regulatory environment in the world).

<https://www.karmod.com/en/blog/prefab-homes-in-japan/>

➤ The European Union started in 1975 to think about shifting from a myriad of prescriptive codes to a performance-based code.

--*performance-based codes describe how something should perform rather than giving a specific recipe.*





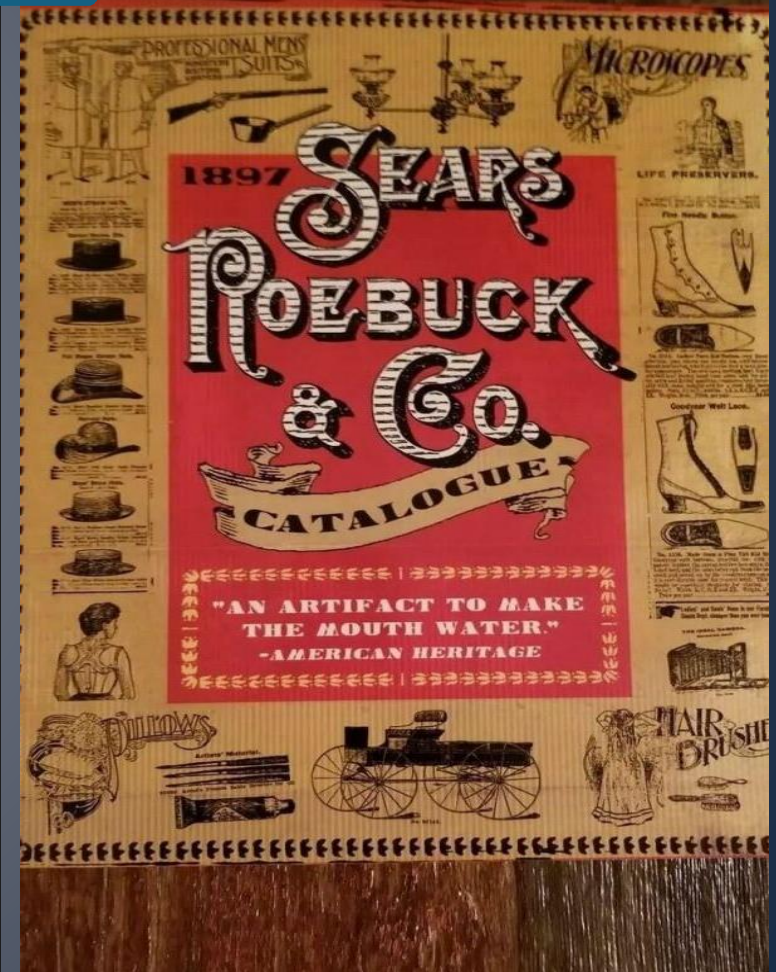
Some History of Modular Housing in the U.S. . . .

'IKEA' for Housing in the U.S.?

Around World War I, there was important innovative industrialized offsite construction happening.

Sears, Roebuck Catalog had around 450 house options: Components shipped by box car with assembly instructions.

<http://www.searsarchives.com/homes/index.htm>



What is a Sears Modern Home?

From 1908-1940, Sears, Roebuck and Co. sold about 70,000 - 75,000 homes through their mail-order Modern Homes program. Over that time Sears designed 447 different housing styles, from the elaborate multistory Ivanhoe, with its elegant French doors and art glass windows, to the simpler Goldenrod, which served as a quaint, three-room and no-bath cottage for summer vacationers. Customers could choose a house to suit their individual tastes and budgets.

Sears was not an innovative home designer. Rather, Sears was a very able follower of popular home designs but with the added advantage of modifying houses and hardware according to buyer tastes. Individuals could even design their own homes and submit the blueprints to Sears, which would then ship off the appropriate precut and fitted materials, putting the homeowner in full creative control. Modern Home customers had the freedom to build their own dream houses, and Sears helped realize these dreams through quality custom design and favorable financing.



The Collingwood (Model No. P3280); (\$1,329 to \$1,960)



The Torrington (Model No. 3355); (\$3,189)



The Alden (Model No. 3366); (\$2,418 to \$2,571)

U.S. Subsequent Attempts at Using Modular Designs Were Not Successful

- In 1969, George Romney — Mitt Romney's father — was the Secretary of Housing and Urban Development, or HUD. He put forward a plan called Operation Breakthrough.
- Operation Breakthrough promoted modular construction as a means of cutting through the regulations and technological stagnation that were already hurting the construction industry.
- HUD worked with private firms to build nearly 3,000 prototype housing units across the country.
- Ultimately, Operation Breakthrough failed: Timing was wrong and funding was removed at a critical time.
- <https://www.huduser.gov/portal/Operation-Breakthrough.html>

**One
Project:
Kalamazoo
National
Homes**



Going Forward . . .

Inherent Paradox in the Nature of the U.S. Housing Market:

The centralization and scale, that could launch a modular boom in the U.S., are at odds with the reality of American construction, which is dominated by really small companies.

Problem: Increase in supply of housing from 'modular' boom would be at expense of small firms.

Trade offs!!!



**What does modular
construction look like?**

MJH Structural Engineers in Dublin—Tallest Modular Tower in the World




Modular/Manufactured Homes in the U.S.

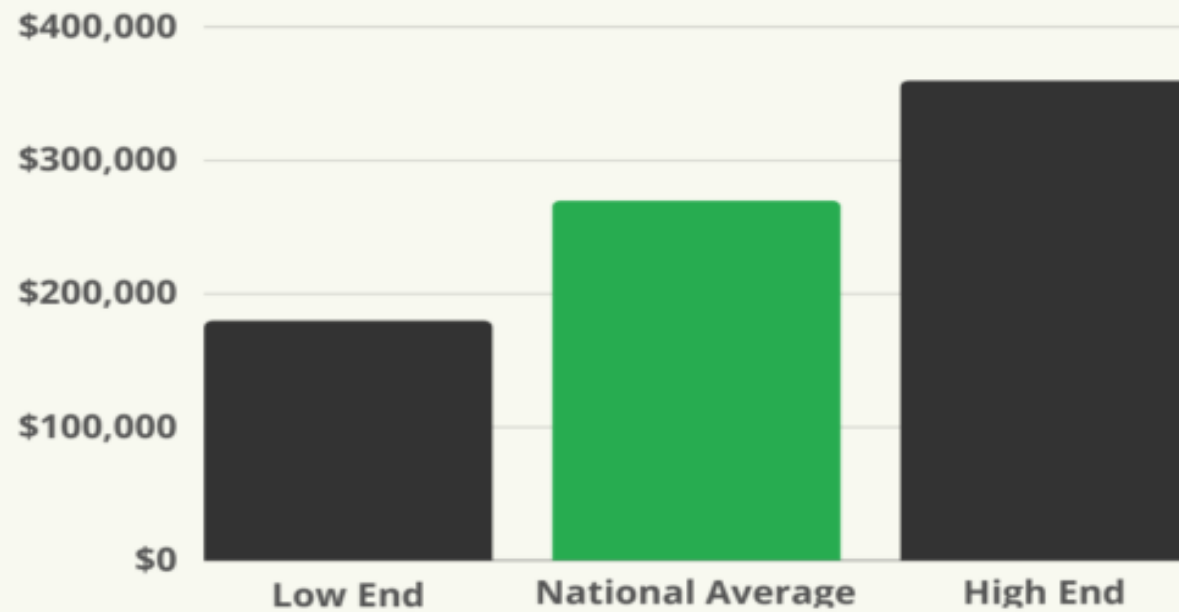




Cost of Modular Homes

- **Modular Home Prices:** The average cost of a 1,500 sq. ft. modular home is \$75,000 to \$150,000 or \$50 to \$100 per square foot for a base model, not including customizations, assembly, or on-site finishing work.
 - <https://blokable.com/>
 - <https://homeguide.com/costs/modular-home-prices>
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Modular Home Prices



- Typical Range: \$180,000 to \$360,000
- National Average: \$270,000



Manufactured Housing: The Ugly Duckling of Affordable Housing

Niskanen Center, Andrew Justus and Alex Armlovich

April 2023

<https://www.niskanencenter.org/manufactured-housing-the-ugly-duckling-of-affordable-housing/>



Drivers of Housing Prices

In most U.S. metro areas, median home prices are within 125% of construction costs:



Implication: Construction costs, not land costs or growth controls, are 'in the driver's seat' for home prices.



Keys to Housing Affordability

- **Construction Costs**

- **Construction Productivity**

1. **Site-Built construction is highly resistant to automation**
2. **Manufactured homes allow for greater efficiency/automation, resulting in increased productivity**



Regulation of Manufactured Homes: Two Codes

- ▶ Building codes: govern the health, safety, and energy efficiency details of the structure
 1. Since manufactured homes travel in interstate commerce, building code is regulated at the federal level by HUD—National Standard

- ▶ Zoning codes: regulate height, floor area, yard size, lot coverage, setbacks, and other aspects of growth-controlling land use.
 1. Subject to state regulation which is delegated to municipalities.

How are manufactured homes excluded from communities?

- ▶ Uniform national standards result in scale economies and automation for manufactured homes.
 1. BUT—these standards make it easy for communities to discriminate against manufactured homes through their zoning codes.
 2. Easy targets for discrimination: steel chassis and low-pitched roofs.



How are manufactured homes excluded from communities? (cont.)

- ▶ Financing and Titling are challenges for manufactured homes.
 1. Manufactured homes treated as 'chattel' property rather than real estate.
 2. Result: Shrinks the financing products available to the homeowner.

Policies to Level the Playing Field

- ▶ **State Government Level:**

1. Allow manufactured housing to be titled as real property.
2. Eliminate other discriminatory practices for manufactured housing.

- ▶ **FHA, FHFA, and GSE financing agencies should accommodate manufactured housing.**



Future of Manufactured Housing Industry

- Encourage use for infill especially to renew aging housing stock.
 - Use where housing is needed faster than site-built construction methods can achieve.
 - Use in areas affected by disasters.
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