14.03/003 Micro Theory & Public Policy, Fall 2025

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Lecture slides 11. Applied competitive analysis continued — The market for residential real estate brokers

David Autor (Prof), MIT Economics and NBER

Salome Aguilar Llanes (TA), Nagisa Tadjfar (TA), Emma Zhu (TA)

Today

- The two roles of prices in a market economy
  1. The 'right' quantity
  2. The 'right' allocation among buyers and sellers

- The concept of 'rent seeking'

- The market for residential real estate brokers

What are economic rents?

- Economic rent is any payment to an owner or factor of production *in excess of the costs needed to bring that factor into production*

- Rents occur at the margin — hence distinct from consumer or producer surpluses

- Existence of rents often leads to 'rent seeking'

- But rent seeking is often costly in itself

The U.S. residential real estate market operates like a cartel
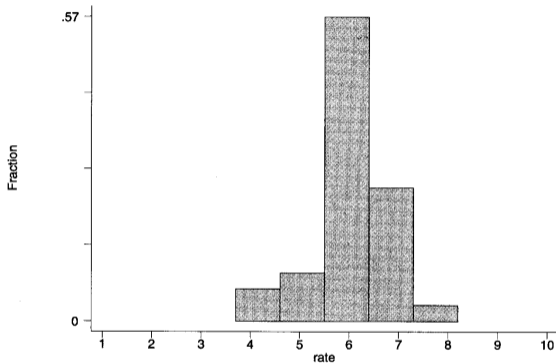
car·tel | kärˈtel |

noun

an association of manufacturers or suppliers with the purpose of maintaining prices at a high level and restricting competition: *the Colombian drug cartels*.

- *mainly historical* a coalition or cooperative arrangement between political parties intended to promote a mutual interest.

Real estate commissions and house prices in 1990
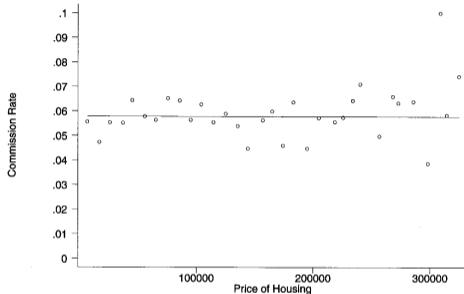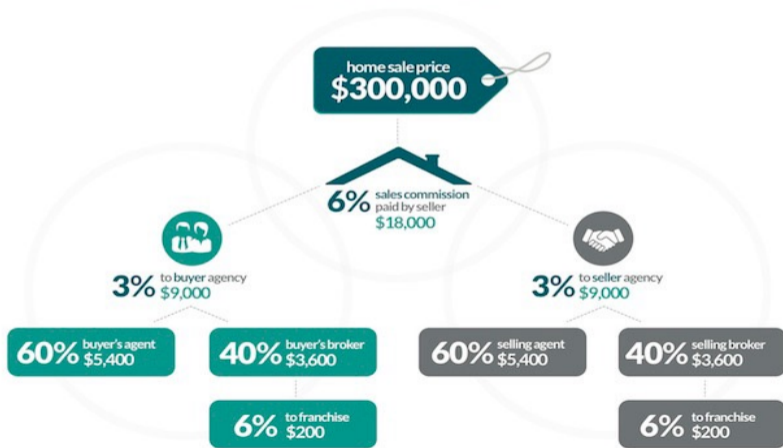

The distribution of real estate commissions (in % pts)

Fɪɢ. 4.—Commission rates and price of housing in the CEX. Each point in the figure is the average commission rate within intervals in housing price $10,000 wide. The superimposed fit is taken from a household-level regression of commission rates on housing prices ($N=406$).

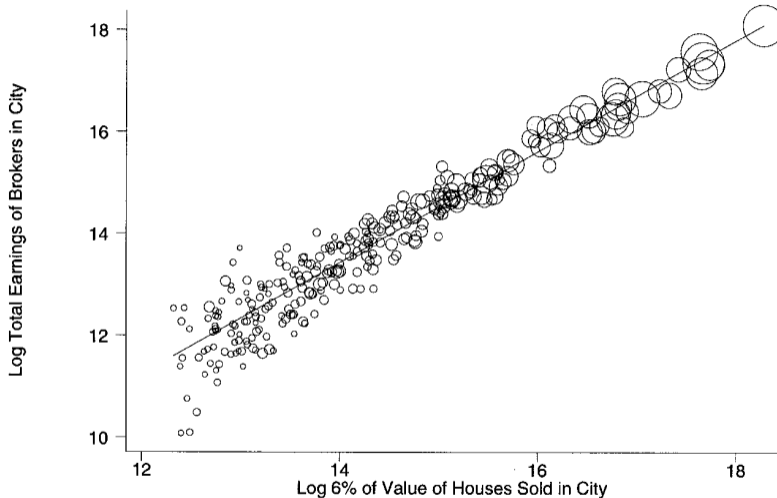Average house prices & average commissions (in % pts)

Hsieh and Moretti '03

Plickers Interlude #1

realtor.com®

THE COMMI$$ION EXPLAINED

home sale price
$300,000

6% sales commission paid by seller
$18,000

3% to buyer agency
$9,000

3% to seller agency
$9,000

60% buyer's agent
$5,400

40% buyer's broker
$3,600

60% selling agent
$5,400

40% selling broker
$3,600

6% to franchise
$200

6% to franchise
$200

Citywide broker earnings in 1990 v. $0.06 \times \Sigma$(House Purchases in $)

The market for real estate brokers:

A simple (but subtle) model

A simple model: Four assumptions

1. There is an upward sloping supply of real estate brokers $Q_R(w)$, where w is the expected wage that a broker will earn if working

A simple model: Four assumptions

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2. Total commissions TC are equal to 6% of all real estate sales:
   $$TC = 0.06 \times \Sigma(\text{House Purchases in \$})$$
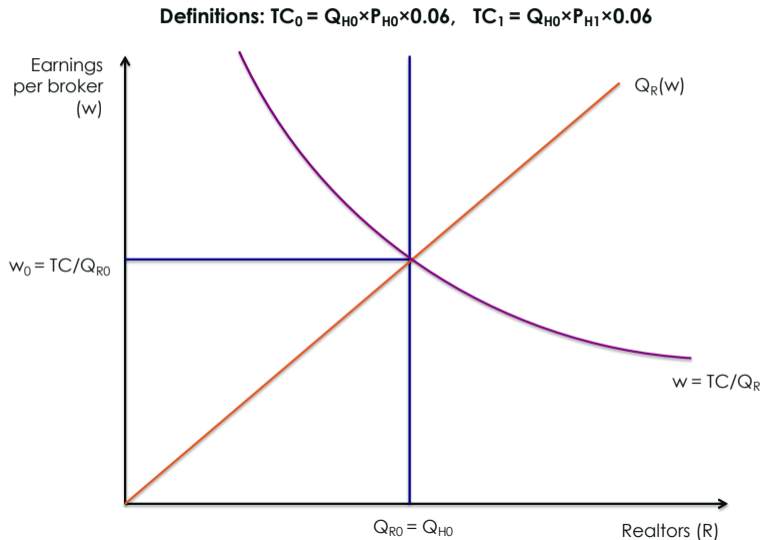
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A simple model: Four assumptions

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4. The expected wage of a broker is equal to total commissions divided by the number of brokers
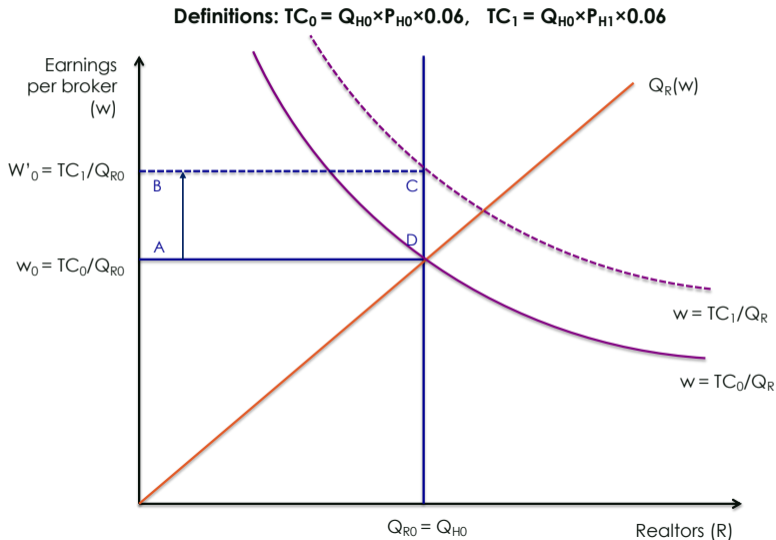
$$E[w] = [0.06 \times \Sigma(\text{House Purchases in \$})]/Q_R(w)$$

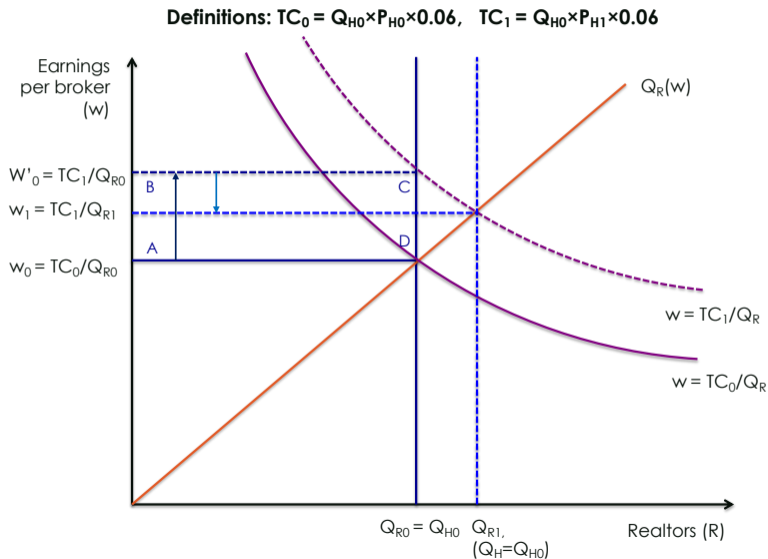# Equilibrium in real estate broker market

Definitions: $TC_0 = Q_{H0} \times P_{H0} \times 0.06$, $TC_1 = Q_{H0} \times P_{H1} \times 0.06$

Earnings per broker (w)

$Q_R(w)$

$w_0 = TC/Q_{R0}$

$w = TC/Q_R$

$Q_{R0} = Q_{H0}$

Realtors (R)

What happens in the broker market when house prices rise?

Effect of house price increase on broker market

Definitions: $TC_0 = Q_{H0} \times P_{H0} \times 0.06$, $TC_1 = Q_{H0} \times P_{H1} \times 0.06$

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Earnings per broker (w)

$Q_R(w)$

$W'_0 = TC_1/Q_{R0}$

$w_1 = TC_1/Q_{R1}$

$w_0 = TC_0/Q_{R0}$

B

C

A

D

$w = TC_1/Q_R$

$w = TC_0/Q_R$

$Q_{R0} = Q_{H0}$ $Q_{R1,}$
$(Q_H = Q_{H0})$

Realtors (R)

Predictions: Effect of ΔP_{houses} on real estate brokers

When house prices rise...

1. **More real estate brokers enter the market**

2. Houses sold per broker falls

3. Earnings of brokers rise less than one-for-one with house prices

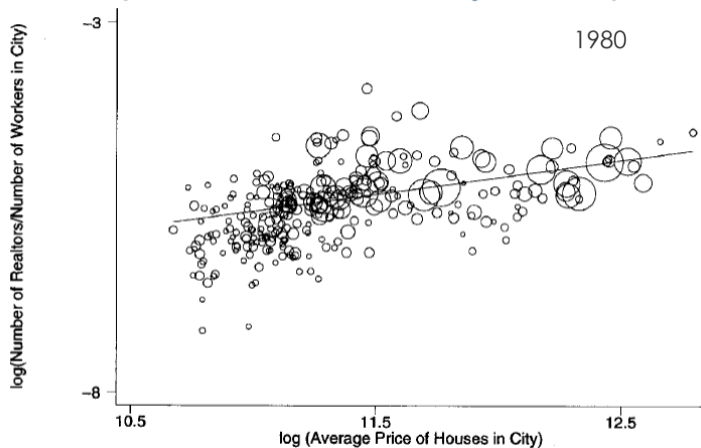# Brokers as % of employed adults v. average house prices in 1980: Cross-city scatter plot

FIG. 5.—Percentage of real estate agents in the labor force and the average cost of housing: *a*, 1990; *b*, 1980. Each bubble represents a metropolitan area. The size of the bubble is proportional to the metropolitan area population. There are 282 metropolitan areas. Data are taken from the Census of Population and Housing.

Brokers as % of employed adults v. average house prices in 1990: Cross-city scatter plot
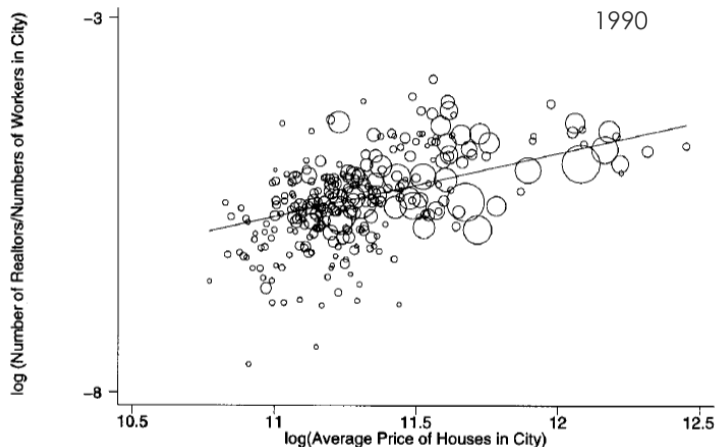

FIG. 5.—Percentage of real estate agents in the labor force and the average cost of housing: *a*, 1990; *b*, 1980. Each bubble represents a metropolitan area. The size of the bubble is proportional to the metropolitan area population. There are 282 metropolitan areas. Data are taken from the Census of Population and Housing.

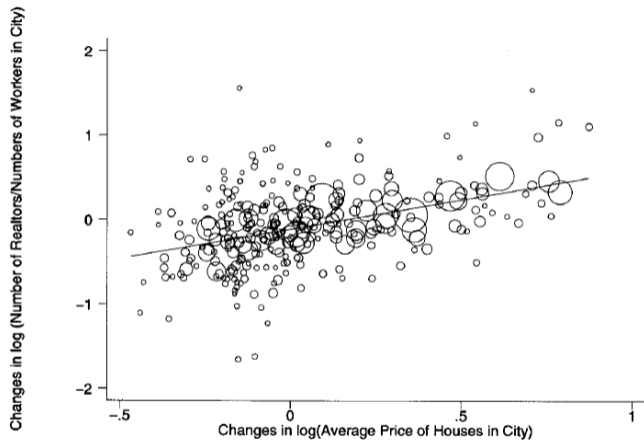# △ Brokers as % of employed adults v. △ average house prices, 1980–1990

Fig. 6.—1980–90 changes in the percentage of real estate agents in the labor force and changes in the average cost of housing. Each bubble represents a metropolitan area. The size of the bubble is proportional to the metropolitan area population. There are 282 metropolitan areas. Data are taken from the 1980 and 1990 Census of Population and Housing.

Predictions: Effect of ΔP_{houses} on real estate brokers

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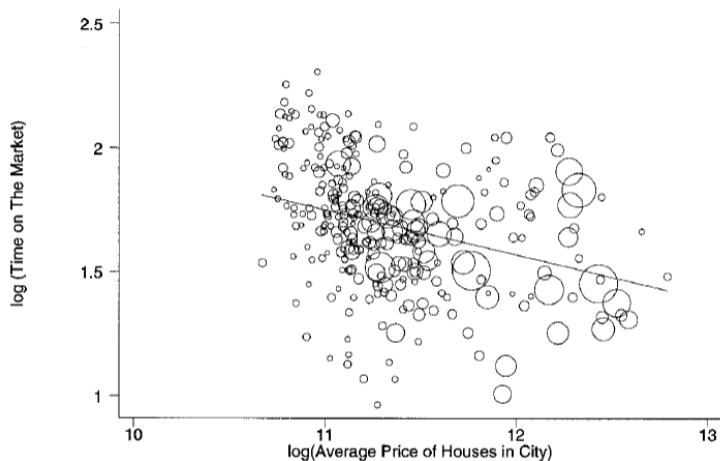# Average Time on the Market vs. Average House Prices (1990)

FIG. 10.—Cost of housing in 282 metropolitan areas and vacancy time. Each bubble represents a metropolitan area. The size of the bubble is proportional to the metropolitan area population. There are 282 metropolitan areas. Data are taken from the 1990 Census of Population and Housing.

Hsieh and Moretti '03

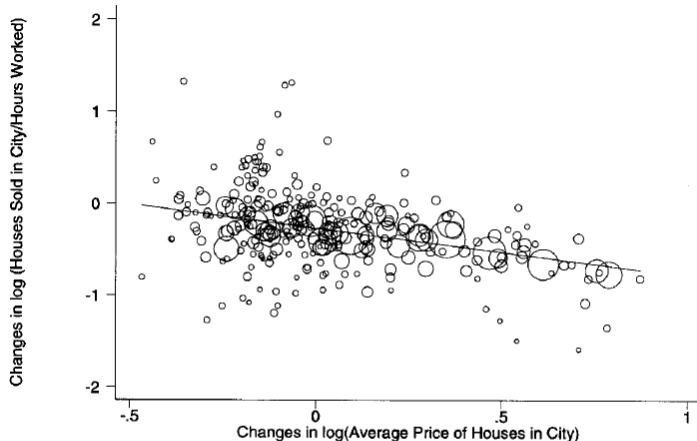# Productivity: Δ[Houses Sold/Broker Hours] vs. Δ House Prices

FIG. 1.—1980–90 changes in the productivity of real estate agents (houses sold in the city/hours worked) and changes in the cost of housing. Each bubble represents a metropolitan area. The size of the bubble is proportional to the metropolitan area population. There are 282 metropolitan areas. Data are taken from the 1980 and 1990 Census of Population and Housing.

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Broker Incomes: Δ[Broker Relative Earnings] vs. Δ House Prices
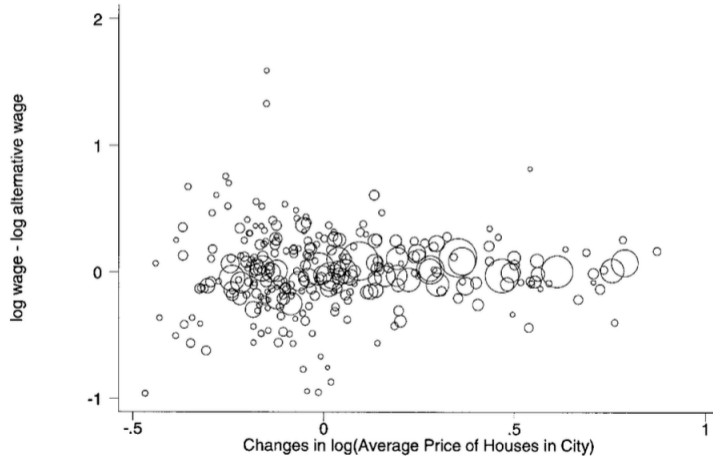
Regression of $\ln$(broker hourly earnings) on $\ln(P_{houses})$ 1980, 1990, 1980-90

Regression of $\ln\Delta$(Broker Relative Earnings)) on ΔP_{houses}

TABLE 4

EFFECT OF AVERAGE PRICE OF HOUSES ON RELATIVE WAGE OF BROKERS

	1990 (1)	1980 (2)	Changes 1980–90 (3)
Cost of houses	.079	.163	.064
	(.019)	(.027)	(.041)
R^2	.05	.10	.01

NOTE.—Standard errors are in parentheses. The dependent variable is the log difference between the average earnings of brokers and brokers' reservation wage. The reservation wage is a weighted average of the wages of workers in non–real estate occupations in the same city; the weights are based on how similar their observable characteristics are to those of brokers. The number of observations is 282.

Correlations between average house prices and demographic attributes of real estate brokers

TABLE 3
CORRELATION BETWEEN HOUSING PRICES AND OBSERVABLE CHARACTERISTICS OF BROKERS

	Mean in 1990 (1)	1990 (2)	1980 (3)	Changes 1980–90 (4)
College or some college	.78	.06 (.01)	.15 (.01)	.00 (.02)
Years of schooling	14.2	.49 (.05)	.70 (.08)	.21 (.10)
Part-time	.14	−.03 (.01)	−.06 (.01)	−.00 (.01)
Female	.53	−.02 (.01)	−.06 (.01)	−.01 (.02)
Black	.03	.01 (.00)	.01 (.00)	.00 (.00)
Age	44.7	−1.51 (.30)	.30 (.42)	−3.40 (.62)

NOTE.—Standard errors are in parentheses. Entries in col. 1 are 1990 averages. Entries in cols. 2–4 are the OLS coefficients on log housing prices. The sample includes only real estate brokers. College or some college is a dummy equal to one if years of schooling is 13 or more. Part-time is a dummy equal to one if the broker works less than 30 hours a week. All models are weighted by city population. The number of observations is 282.

Hsieh and Moretti '03

**Okay – Brokers respond to incentives.
So, what's the economic problem here?**

Plickers Interlude #2

Here's what the REALTOR organization says about Realtors

"The thing about *Realtors*: They wear a lot of different hats. Sure, they're salespeople, but they actually do a whole heck of a lot to earn their commission... They spend their own money on marketing your home... And they're working for you at nearly all hours of the day and night—whether you need more info on a home or just someone to talk to in order to feel at ease with the offer you just put in."

Effect of house price increase: Economic accounting

Definitions: $TC_0 = Q_{H0} \times P_{H0} \times 0.06$, $TC_1 = Q_{H0} \times P_{H1} \times 0.06$
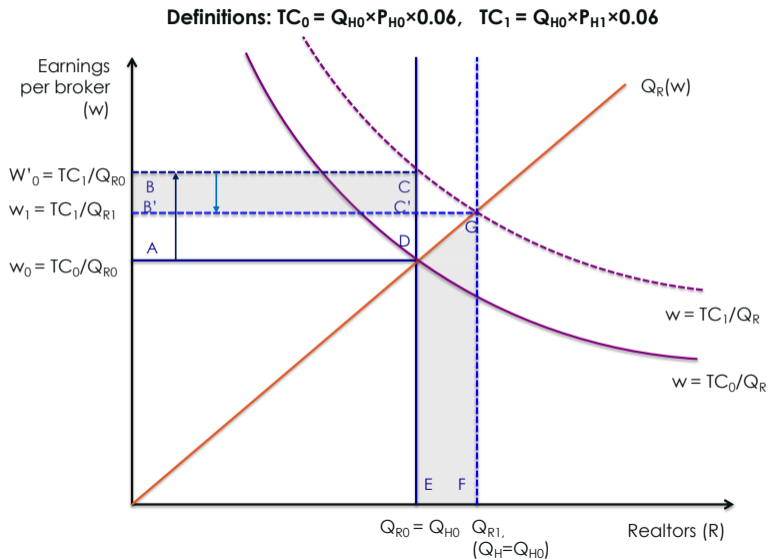
How should broker commissions be structured?

ENFORCING ANTITRUST LAWS IN THE REAL ESTATE INDUSTRY

The Division is protecting consumers through its litigation and investigative efforts. This page describes the Division's enforcement efforts in selected states.

On this page:

Litigation

- U.S. v. National Association of Realtors
- U.S. v. Consolidated Multiple Listing Service, Inc.
- U.S. v. Multiple Listing Service of Hilton Head Island, Inc.
- U.S. v. Kentucky Real Estate Commission

Investigations

- Montana Rebate Ban
- West Virginia Rebate Ban
- South Dakota Rebate Ban

REAL ESTATE

Jury Finds Realtors Conspired to Keep Commissions High, Awards Nearly $1.8 Billion in Damages

The verdict, which hands loss to brokerages and industry trade association, could upend the home-sale industry

By *Laura Kusisto* Follow , *Nicole Friedman* Follow and *Shannon Najmabadi* Follow
Updated Oct. 31, 2023 3:55 pm ET

148   Gift unlocked article   Listen   (3 min)

Powerful Realtor Group Agrees to Slash Commissions to Settle Lawsuits

The National Association of Realtors will pay $418 million in damages and will amend several rules that housing experts say will drive down housing costs.

By Debra Kamin

American homeowners could see a significant drop in the cost of selling their homes after a real estate trade group agreed to a landmark deal that will eliminate a bedrock of the industry, the standard 6 percent sales commission.

In its settlement, the National Association of Realtors (NAR) agreed to several key changes to address antitrust lawsuits related to broker commissions. The primary changes include:

1. **Elimination of mandatory seller-paid buyer agent commissions**: Previously, home sellers were typically responsible for covering the commission for both their agent and the buyer's agent. As of August 17, 2024, this is no longer required. Sellers are no longer obligated to pay the buyer's agent commission.

2. **Requirement for written agreements with buyers**: Real estate agents representing buyers must now have written agreements in place before showing homes. This change increases transparency and ensures that buyers are aware of and agree to compensation terms upfront.

3. **Prohibition of compensation listings on MLS**: Offers of compensation can no longer be displayed on Multiple Listing Services (MLS), the centralized databases where real estate professionals share property information. Instead, compensation must be discussed directly between agents and clients, providing more clarity on who pays what during a transaction.

These changes were designed to improve transparency, empower buyers and sellers to negotiate compensation more openly, and resolve the litigation more quickly without prolonged court battles [1] [2].

U.S. Court of Appeals Confirms Justice Department's Authority to Investigate Potentially Anticompetitive Conduct by the National Association of Realtors

Today, the U.S. Court of Appeals for the District of Columbia Circuit lifted restrictions imposed by a lower court that had prevented the Justice Department from investigating potentially anticompetitive conduct by the National Association of Realtors (NAR). The D.C. Circuit's decision confirms the United States' position that it retains the authority to investigate NAR's Participation Rule and Clear Cooperation Policy to protect competition for the benefit of homebuyers.