

*BF 42*

**Maui Housing**  
**Supply, Demand, Property Taxes, And Affordability**

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**Introduction**

An analysis of the housing market on Maui, or anyplace in Hawaii, should begin with basic economics. Specifically that means supply, demand, and their interplay, which produces prices. So a specific definition of supply and demand should be the starting point of any explanation of the housing market.

- Demand- is buyer willingness to purchase a quantity of something at a given price. It is usually a precise relationship between price and quantity in a market. For Maui that is the relationship between home prices and housing units. As price rises then fewer housing units would be purchased. Demand for housing can shift because of income growth, changes in population, or new entrants into the market. The effect will be more units sold at a price determined by the point where quantity demanded equals supply.
- Supply is the seller's willingness to provide a quantity of something at a given price. It too is usually a precise relationship between price and quantity in a market. As price rises more housing units would be supplied. (Figure 1 below illustrates supply and demand with a shift out in demand).

It's necessary to begin with an Econ 101 explanation because all of the reports on housing in Hawaii claim to be forecasting housing demand but abandon this basic model.

What results is an unfortunate forecast for housing units unrelated to actual demand because their methodology does not forecast prices. Second, while supposedly being about demand their actual policy recommendations focus only on supply. Because they aren't fully specified models they are inherently inaccurate and useless in terms of policy.

The glaring flaw is prices can be reduced, or their increase greatly reduced, by policies focused on demand.

These studies assume demand is driven entirely by growth in resident's income, and population growth. Simply using statistics from the decennial Census indicates how flawed this is. Between 1970 and 2010 the population on Maui grew 234.5 percent, while the number of housing units grew by 405.5 percent. (See table 1 below). Prices on single-family homes rose 144 percent, and condo prices rose 108 percent. (See table below). As the simple economic model above suggests rising home prices and greatly increased housing units demonstrates that increased demand is driving the problem of affordability. The question left unanswered is how a housing market driven by the incomes and population produce unaffordable housing. When prices and quantity both increase that indicates demand is driving the price rise.

Prices ultimately are determined in a market by the incremental buyer, just as in an auction price is determined by the last and highest bidder. And in Hawaii those have been out of state buyers. A study by Kramer and Wilcox, "Fluctuating Fortunes and Hawaiian Home Prices" found that home prices in Hawaii were determined entirely by out of state factors.

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### **Scope of the Problem**

There is also some confusion concerning affordability and who is affected by high home prices. Is the problem of affordability limited to poor people?

I propose a simple test of affordability. Take the median household income, as reported in the American Community Survey, a survey conducted by the U.S. Census. Compare that with the median home price reported in the same survey.

For 2014 the American Community Survey (ACS) reports a median household income for Maui of \$64,916. Using a mortgage calculator and \$64,916 for annual income, a \$250 monthly debt payment, and a \$20,000 down payment, indicates the median household could afford a \$279,000 house.

The ACS combines single family and condo prices into one median price, which is \$510,300 for 2014.

That home prices and rents are largely unaffordable for the bulk of Maui residents is confirmed by other statistics found in the ACS. The proportion of owner occupied homes is only 43 percent of all homes. (And that includes temporary residents who happen to be home at the time of the survey). Those with a mortgage, which would be symptomatic, of local middle class homeownership is only 30 percent. The proportion of homeowners with a mortgage who pay more than 30 percent of their income on housing is 52.4 percent. The proportion of renters who pay more than 30 percent of their income on "gross rent" is 53.1 percent. Thirty percent or less, of income expenditures on housing is considered a healthy proportion

High prices mean very limited home ownership for local residents. And a large proportion of those currently in homes are financially stressed.

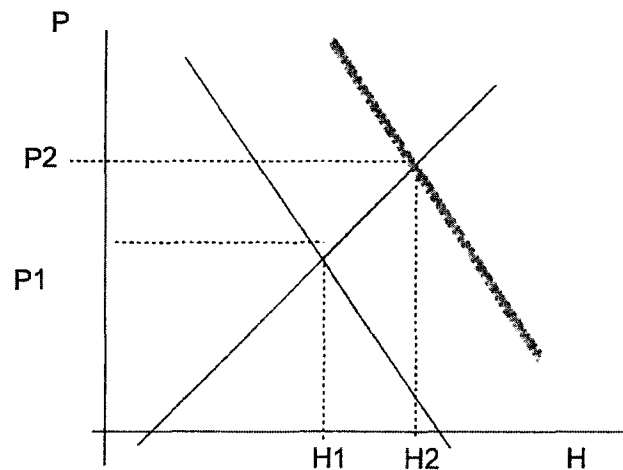
The key point here is that affordability is very much a middle-income class problem. Not one related to lower income levels. It's not a problem confined to low-income workers. Thus it is outside the capabilities of our welfare system to provide a solution.

### **Revisiting Econ 101, and a brief extension to more advanced economics**

Figure 1 below captures a shift in demand out, which could be in response to population or income increases. The shift out traces the supply curve and tells us something about its shape. Note that a shift out means supply intersect demand at a higher price. The higher price in turn limits demand. In fact the only time you would have a "housing shortage" is if the price (The intersection is at a higher point on the demand curve). And that is the basic problem with recent state reports forecasting "demand". They have no estimate of what supply actually looks like. And that means no forecast of what the price would be after a shift. Furthermore, the only time that there would be no price effect is if supply is completely horizontal. There can be no long term "shortage" in a market that achieved equilibrium.

Primarily this demonstrates what happens when offshore investors compete with local residents for housing. A local housing market would have a lower price (P1) and fewer housing units (H1). Out of state demand pushes up prices. What stands out here is how consistent this is with the facts, high prices and lots of housing units.

Figure 1: Housing Supply and Demand



The basic question any report on housing in Hawaii must answer is:

How does a local housing market, where demand and prices are determined by the income of local residents, produce unaffordable outcomes?

Even if supply were fixed the market would not produce an outcome where the price was twice as much as what the median income household could afford. What we actually see is price rises and big increases in the housing stock. Indicating a shift out in demand along an upward sloped supply curve. (Like Figure 1) Further, if richer people were moving in, forcing out lower income residents, then statistically household income would reflect this. And you would see median incomes more in line with prices. That process, sometimes called "gentrification", does not appear to be happening. Statistically, homes are unaffordable at the median income level; and the housing stock has risen at twice the rate of population. Furthermore the statistics on housing units excludes hotel rooms, and visitor accommodations.

The answer is that Maui housing market is no longer a "local" market. A substantial portion of housing on Maui is exported, sold to out of state residents who don't live on Maui.

Figure 1 illustrates these phenomena. The downward sloped lines are demand curves, the upward sloped line is supply. The lower demand curve represents a "local" housing market, where demand is determined primarily by the incomes of local residents, and you have a lower price ( $P_1$ ) and a lower number of housing units ( $H_1$ ). The upper demand curve represents the shift out of demand when outside, wealthy buyers enter the market, driving up the price ( $P_2$ ) and quantity ( $H_2$ ). This simple model actually explains most of statistics. Why housing is largely unaffordable to local residents; why the housing stock has grown so much faster than population; and why housing studies have been deficient in analyzing demand.

There is the additional, and somewhat subtler idea, that housing is a form of wealth and not simply a good or commodity. There is a distinction between wealth and income

- Income is a flow of money that comes from work, the sale of assets, dividends, or interest on savings.
- Wealth is a stock concept; it is the value of assets that someone holds, whether it's stock in companies, property, savings accounts, or 401ks.

For example you can hold twenty shares of Hawaiian Electric stock valued at twenty dollars a share. Each share pays a quarterly dividend of thirty cents a share. The value of the stock is \$400 and is wealth. The quarterly dividend payment, \$6.00, or \$24 annually, represents income.

The distinction is important because people buy real estate as an investment as well as to consume housing services. So there is a component of outside investment by wealthy individuals in local housing that is aimed at increasing wealth or at least preserving it. In Hawaii the value of land and consequently housing, rises in value (appreciates) over time. If one had bought a median priced home on Maui, during 1994 it would have appreciated by 144 percent in 2014. That would be a gross average return of 7.2 percent per year. (A condo would be 5.4%). Expenses for fees, maintenance and annual property taxes represent costs of the investment and affect its return.

So a wealthy individual can invest in real estate on Maui, and expect a long term increase in its value of between 5 percent and seven percent. They don't need to rent it out for income purposes, they can leave it empty and simply accruing in value with no effort and expense. So Maui real estate is an especially attractive investment for the world wide population of exceedingly wealthy individuals.

You can compare this sort of transaction with numbered Swiss bank accounts. An African warlord or Russian Oligarch could hide his wealth in a Swiss bank account without fear that it would be reduced by taxation of confiscation. Rather than receive interest, Swiss banks actually charged them a small fee. Maui real estate, and Hawaiian real estate generally, compares quite favorably with this example. Purchases can be hidden behind corporate entities, there is a growth in the value of the asset, and the main costs of holding the asset are ridiculously small property taxes. No wonder this sort of demand has taken off. Worldwide there low interest rates, increasing pressure on tax havens by authorities, and low capital gains on stocks, it's a great deal. The problem is the Maui housing market is increasingly geared towards this sort of market. Driving up prices, making housing less affordable, limiting jobs and middle class incomes, and driving significant numbers of current residents to move elsewhere. It's a form of investment with terrible consequences for residents.

Using property tax records, whose addresses are out of state, indicates how big this problem is.

Table 1: Proportion of Out of State Home Owners by County and State

	Honolulu	Maui	Hawaii	Kauai	State
Single Family	4.2%	10.5%	11.5%	12.3%	7.3%
Cond	15.4%	62.9%	49.2%	73.5%	27.1%
Total	8.4%	27.6%	17.8%	21.5%	13.7%

Table 7, Hawaii Housing Planning Study, 2011, p. 11

My point is that this a very rational investment. Given growing disparities in wealth or income this situation is likely to continue. It's not a bubble, or cycle, but something new, driven by growing worldwide disparities in income and wealth.

**Some Mostly Interesting Statistics**

Table 2 are relevant statistics from the American Community Survey, conducted by the U.S. Census. As with any survey there are statistical considerations, but broadly speaking they tell the same story as the decennial census. There were approximately 70,000 housing units on Maui. These do not include hotel and visitor accommodations. (Except, possibly, underground vacation rentals). The census also makes distinctions in its surveys for "Group homes"; prisons; barracks; college dorms; and nursing homes.

**Table 2, 2014 American Community Survey, Maui County**

<b>Total Housing Units</b>	70919			
<b>Occupied Housing Units</b>	53131			
<b>Vacant Housing Units</b>	17788	25.1%		
<b>Owner Occupied</b>	30440	43%		
<b>With Mortgage</b>	21065			
<b>Without Mortgage</b>	9373			
<b>Rental Occupied</b>	20417	29%		
<b>Median Home Price</b>	\$510300.00			
<b>Median Monthly Rental</b>	\$1281.00			

Note that, because of the extremely high gross vacancy rate I've calculated ownership and rental rates using total housing units. Usually it would be based on occupied units. The 25 percent vacancy rate to gives an inaccurate picture of the rental market. It seemed to me that the most accurate way to do this, was to divide by the total.

The gross vacancy rate merely means someone is not home at the time of the survey. This could be because the property is being rented or sold, or because it's a second home and the owner isn't in.

In Table 3, below, contains population and housing units from the U.S. Census. The key point here is that since 1970, population has grown by 235 percent while housing units have grown by 405 percent. There is not persistent correlation between population growth and housing units, except that in most decades housing unit growth exceeded population growth. Breaking it down further raises the problem of starting, and end points, which can be arbitrary and confusing. For example, the low growth in housing units between 2000 and 2010 can be directly attributed to the Great Recession

Table 3; Maui Population and Housing Units

	Year	Population	Housing Units
	2010	154384	70379
	2000	128094	56377
	1990	100374	42160
	1980	70847	33033
	1970	46156	13922

**Property Taxes**

Property taxes are the only major tax we have that taxes wealth. All other taxes we have focus on transactions and thus tax income. Extending the example above, if one owns \$400 worth of Hawaiian Electric stock, the \$6 quarterly dividend would be taxed as income. If shares are sold the capital gain would be taxed, again a tax on income. The value of the shares are not taxed. If the value of the shares were taxed, say at \$2 per \$100 value, that means annually you would pay \$4 on your holding, and get \$24.00 in dividends (taxed as income). Meaning your wealth and income are both reduced. You would probably move out of stocks and into something else. One problem with wealth taxes is how difficult they are to administer because of its different forms; capital; art; savings accounts.

Generally it has been found that property taxes affect home valuation. For example it was found, in the wake of Proposition 13 that for every dollar rise/fall in property taxes home valuations rose/fell \$7.00

Table 4, below, contains the relevant property tax rates.

<b>Table 4: Property Tax Rates, Maui, U. S. Per thousand dollar valuation</b>	
<b>Residential</b>	\$5.40
<b>Homeowner</b>	\$2.50
<b>Apartment</b>	\$6.00
<b>Commercial</b>	\$6.60
<b>Hotel</b>	\$8.85
<b>Time Share</b>	14.55
<b>Median Residential U.S. Big cities</b>	\$14.00
<b>Residential Los Angeles</b>	\$11.70

U.S., LA tax rates from "Tax Rates and Tax Burdens 2013" Government of the District of Columbia, Table 4, page 11

For precise comparison purposes I have used rates exactly as reported, dollars per thousand dollar valuation. For that reason I have used the report from the government of D.C reports effective tax rates in dollars per \$100 valuation for the largest city in each state. Most state and city comparisons report property taxes as percents, which tend to obscure actual rates

and the differences between jurisdictions. As the table demonstrates Maui property tax rates, even hotel and commercial tax rates are well below, the median U.S. rate. And because of the study cited above which found Hawaii prices being driven by mainland, especially California demand, the Los Angeles rate is especially relevant.

In terms of "wealth preservation, holding on to a million dollar home in L.A. would cost annually, \$11,700, on Maui it is \$5,400. Furthermore, if the findings of other studies are correct then raising the tax rate on that home to L.A. levels would reduce the valuation by \$26,300.

Property Tax increases on homes owned by off shore residents provide an important option in dealing with Maui's home affordability problems. First of all it reduces future out of state demand pressure on local prices. And this would limit future price increases, and that perception would further reduce off shore demand.

Furthermore it can be done in both a broad and flexible manner. In terms of breadth it could cover vacation rental, condo hotels and other accommodations that are currently geared towards transients. The flexible part would be that current rates apply if the property is rented out in long term rentals to local residents. So these properties could transition to long term local rentals, increasing supply and driving down rates. In this case tax avoidance would be a healthy outcome

As with any tax proposals the questions really revolve around practicality. First of all can these properties be identified? The answer is yes, as the table above identifying property owners by their tax mailing address reveals. The second question is could they avoid taxation through covering up that address. In fact that problem already exists in that a lot of these properties are owned by companies, partnerships, or other entities. I'm sure many of these are in turn shell companies whose ownership is hard to track. The simplest solution would be to classify any business entity as automatically part of the higher rate class unless they can prove they are really owned by a local resident. As far as vacation rentals, and Air B&B compounds this problem, enforcement would amount to surveying ads related to these properties.

Another question would be is it legal and constitutional. An argument concerning discrimination has no weight whatsoever. Both in property taxes and more generally people pay different taxes based on income, residency, and use of the property. Constitutionally, states are not allowed to establish tariffs, or taxes on the import of goods, into a state. This proposal, however taxes, the property within a state based on residency criteria. Essentially, it is a tax on the export of housing services. Export taxes have long been ruled constitutional, common examples are use and severance taxes.

**Summary** The points developed here are the following:

- That current projection by various reports concerning demand are so flawed methodologically that they are unreliable for policies purposes.
- That changes in demand in Hawaii has been, and continues to be driven by offshore demand. Prices for homes are being driven by mainland demand.
- One item that fosters this demand is our low property taxes.
- Raising them to the level of LA, \$11.70 per thousand-dollar valuation dollar valuation, and targeting off shore owners would slow that demand.
- Absent that demand developers would turn toward construction of more affordable housing.
- Taxing vacation rentals and offshore condo owners would increase the supply of rental housing and lower rents.

## Notes and Comment on Sources

Cassidy, Ricky "Maui Rental Market; Affordable Housing Study Update, 2014  
Hawaii Housing Finance and Development Corporation, SMS "Hawaii Housing Planning Study, 2011" (Table 7, page 12 has percentage of out of state residents that own property)  
Government of the District of Columbia, Tax Rates and Tax Burdens" 2014 (Table 4 reports property tax rates by the largest city in each state)  
John Krainer and James Wilcox "Fluctuating Fortunes and Hawaiian House Prices, FRBSF Economic Letter;  
Federal Reserve Bank of San Francisco  
U.S. Census data is the most reliable, and best source, of data on housing That includes both the decennial Census and the American Community Survey. It should be noted that across longer periods of time building permits undercount the growth in the housing stock  
<http://www.census.gov/data.html>  
U.S. Census "Hawaii: 2000; Population and Housing Unit Counts"; June, 2003  
U.S. Census "Hawaii: 2010; Population and Housing Unit Counts"; July, 2012