Ben-Gurion University of the Negev

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Calculating the Housing Wealth Effect of Israeli regional cohorts

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Working Paper Housing Wealth Effect Proposal

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Abstract

Uses pseudo-panel construction to calculate the housing wealth effect for regional cohorts of Isreali households. Combines data from the Central Bureau of Statistics Household Expenditure Survey and the Consumer Price Index.

Keywords: consumption, economics, housing, housing market, liquidity constraints, wealth effect

1 Introduction

1.1 The housing market

The study of housing provides a fascinating topic for the researcher of Israeli society. Several factors have drawn attention to the housing market and made it a topic of much discussion. The price of housing was one of the main issues that drove more than 400,000 demonstrators to the streets in the summer of 2011. Large portions of the Israeli population own a home, or rent one, or live in a multi-family household. Their first-hand experience of the market may be relayed to the researcher as anecdotal evidence of the state of the housing market, as well as causes and solutions for the perceived short-comings of the market.

In a simple economic model of the housing market, house prices are set by the market forces of supply and demand. Various influences on suppliers of housing (current owners who choose to sell, builders of new housing), and those who demand housing (commonly characterized as young couples) will shift the supply and demand curves and affect the market-clearing price level. Consider an interest-rate reduction, this shifts the demand curve to the right, as cheaper credit causes more buyers to enter the market. It also reduces credit-constraints on builders and leads to increased supply, albeit after some lag.

The average house price has risen by an astonishing 80% between the 2008 global financial crisis and 2016. In the minds of many lay observers this indicates a lack of supply, with main bottlenecks limiting supply being cited as the sale of government land or the lengthy permitting process for new construction.

Gruber (Gruber 2016), however, offers copious evidence and cogent reasoning to support his claim that the chief factor in the rise was actually excessive demand. As global capital markets suffered large declines investors moved to other asset classes, including the real estate market. The additional factor of low interest rates lead to a dramatic increase in purchase of additional houses by those who were already owner-occupiers. This shifted the demand curve to the right, increasing the average cost of an apartment and driving out less affluent first-time homebuyers. These would-be first-time homebuyers then entered or remained in the rental market, driving up average rents. The higher

market rental prices and lowered vacancy rate established a feedback loop which further encouraged in the purchase of investment houses as rental property. ## Consumption by Households The expenditure method for calculating National Income (Y), states that Y=GDP=C+I+G+NX. The gross domestic product is equal to Consumption Expenditure (C) plus Investment Expenditure (I) plus Government Expenditure (G) plus Net Exports (NX). Firms and households each engage in both consumption and investment. When a firm buys a copy machine which lasts several years, that is an investment, so is the purchase of owner-occupied housing, in fact it's one of the chief investments made by households. The paper placed in the copy machine and the food on the table are each classified as consumption. Consumption by households makes up a large and important part of GDP. It is a measure tracked closely by businesses, economists and the government. You may have heard the nightly news announce the latest retail-sales data. Household income is either saved or consumed, with the marginal propensity to consume (MPC) and the marginal propensity to save (MPS) summing to 1. Generally household consumption can be understood as household income times the MPC. The MPC can be affected by the interest rate, rising interest rates incentivize additional savings, raising the MPS and lowering the MPC. Falling interest rates decrease the attraction of savings. With a constant MPC a household can increase consumption due to increased income from a salary increase, hourly wage increase or increase in the number of hours worked. Household consumption would fall due a decrease in salary, wages or working hours. A further factor in consumption is expected future income. This posits that the rational consumer increases their consumption now if they know that they will get a raise or some overtime next week. They will also reduce consumption and increase savings now when they expect future unemployment or wage reductions. Another factor affecting consumption is the wealth effect. When the wealth of a household increases (the price of shares held in an investment portfolio, the price of Picasso on the wall or in a vault, the price of the family home or rental property), household consumption increases, in effect spending now some of the expected future gains on the sale of the shares, painting or real estate. Conversely, a decline in household wealth should produce a decline in household consumption and GDP.

1.2 Literature Review

1.2.1 the housing wealth effect

Many households around the world store a majority of their wealth in housing. This, combined with the volatility of swings in house prices, has caused academics and policy to further investigate the housing wealth effect and its implications for GDP.(Gan 2010) Renters and owners should be effected differently by a change in housing prices. Research using Japanese data showed that renters fell into two categories when faced with increased housing prices. Some gave up saving for a housing and instead increased consumption of luxury goods in what was termed the "consumption of despair." The other group decreased consumption, and increased their savings rate, still dreaming of home ownership. These effects on renters were subsequently found in data from Canada and San Francisco.(Sheiner_1995) The data used in the proposed study should allow me to measure the extent to which Israeli renters engaged in consumption of despair over the last fourteen years. The life cycle savings hypothesis suggests that consumption of anticipated increases in wealth will be distributed by consumers over time, and that there would be a single MPC for both housing wealth and stock market wealth. When empirically tested, data showed that 85% of respondents did not increase consumption in response to a change in their shares portfolio. Several reasons were suggested why changes in the value of wealth held in different forms would illicit different consumption effects from households. Some prices changes in some assets may be viewed as transitory, others may be harder to measure than the daily feedback of the stock quote. Tax laws may discourage the sale of certain assets and wealth may be held in separate "mental accounts," one of which may be a rainy-day fund against life's uncertainties. When variable rental rates were used as a proxy for uncertainty, homeownership rates were shown to increase.(Case 2005)

1.2.2 Mechir Lamistaken - The Israeli first-time homebuyers program

Finance Minister Moshe Kahlon has a plan to deal with the excess demand in the housing market cause
The Mechir Lamistaken program sells land to developers at a below market rate if the housing is reserve
However, there is evidence for widespread use by investors of strawbuyers to evade the restriction. Thus,
An important factor that reduces the supply of housing by increasing permitting times for new construc

Rental income up to 5,080 NIS per month is tax exempt, this provides a further incentive to invest in re

Although Gruber's reasoning suggests taxing all rental income and allowing municipalities to set propert

1.3 Methodology

This research is being conducted in the interdisciplinary field of Israel Studies. It lies at the intersection of sociology and economics. It partially adheres to the practices of reproducible research, i.e. methods are fully reported and the process by which raw data is anaylzed is viewable. Unfortunately, while the housing price data is freely distributable, the household level data from the Expenditure Survey was obtained by special liscence with a no-redistribute clause. The data is available for a fee from the Central Bureau of Statistics or for no cost to University partners through the Israel Social Sciences Data Center. Thus, the methodology is fully reproducible after obtaining the listed datasets. Pseudo-panel construction is the methodology by which I propose to combine the available data on household consumption and house prices.

1.4 the wealth effect, or wealth effects?

This study combines household level consumption data with housing price data to estimate test the hypothesis that different age cohorts have different wealth effects. It has been postulated that older households will have a higher wealth effect, or larger proportional change in spending in response to a change in wealth than a younger household. The available consumption data from the Household Expenditure Survey provides us with a means to test this hypothesis.

```
## sample graph of National Average House P.
## gather function changes wide format to tall
#ylong=gather(y)
plot1.5rooms<-ggplot(data=p1.5,aes(x=quarter,
                    y=value,

                    group=variable
                    ))+geom_line(aes(colour=variable))+
                    ggtitle("Average P. 1.5-2.5 bedroom home:2006-2016q3")+theme(legend.title=element
                  panel.grid.major.y = element_blank(),
```

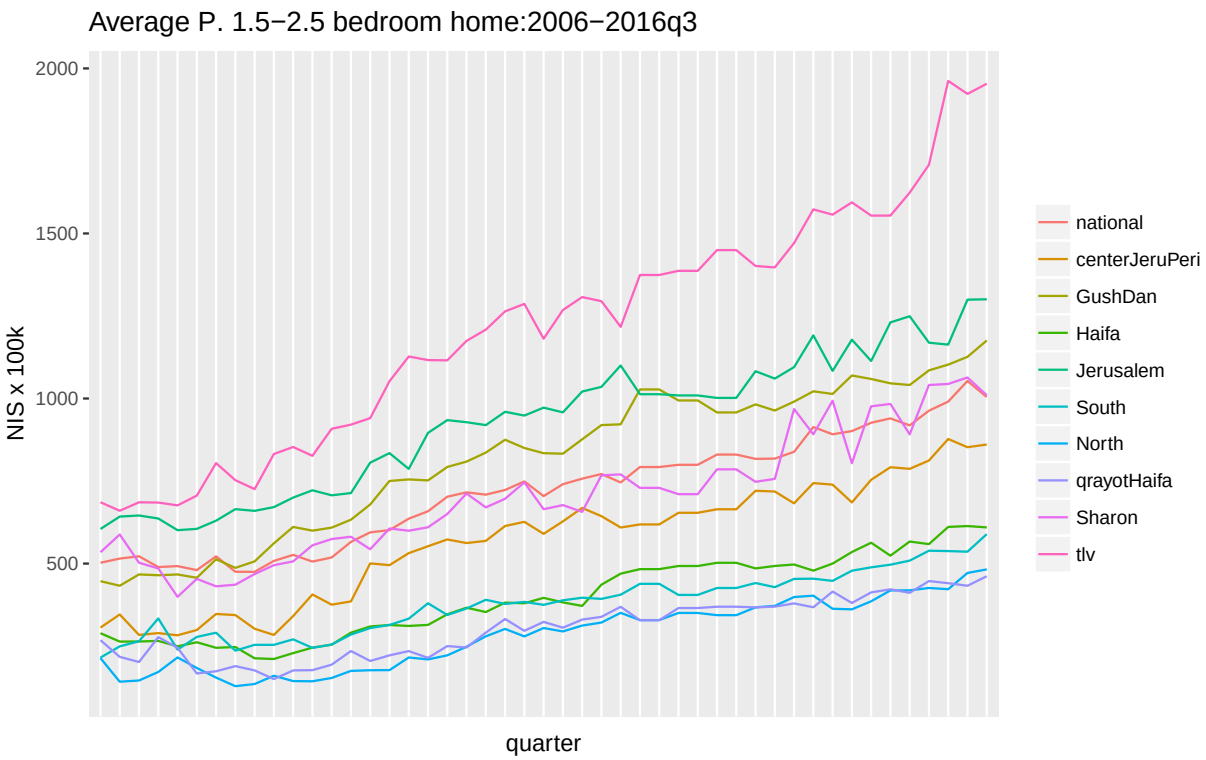
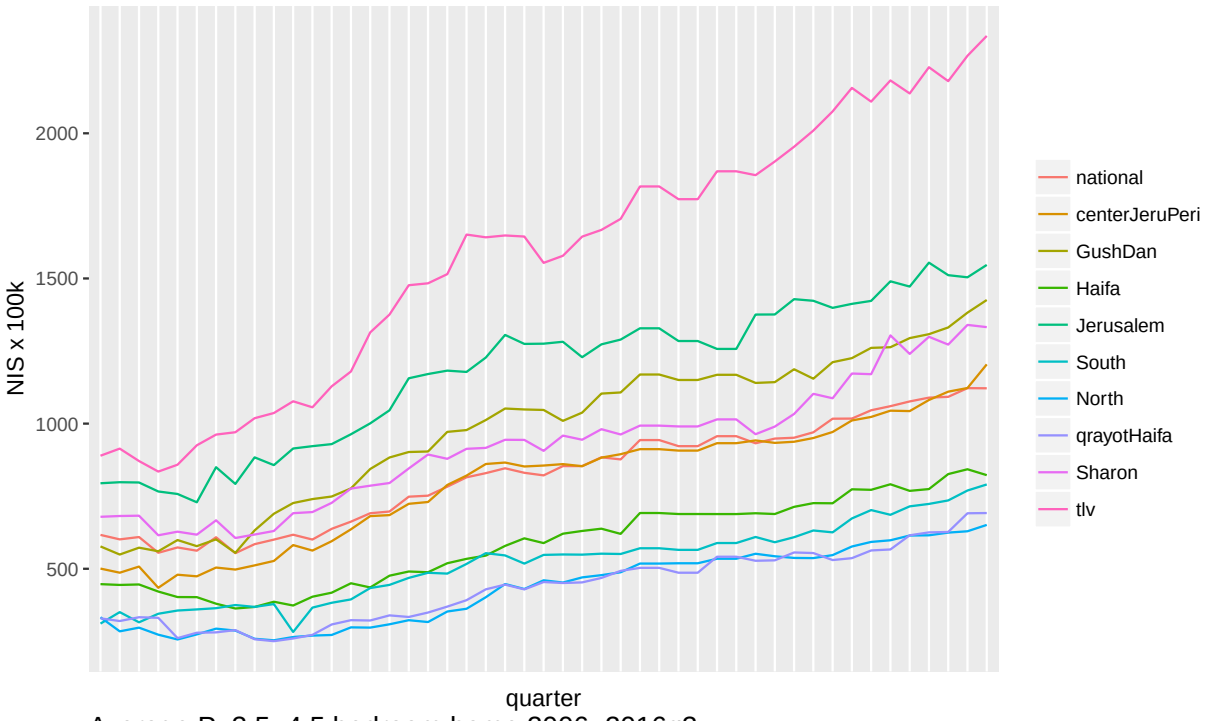


Figure 1: I wrote this.

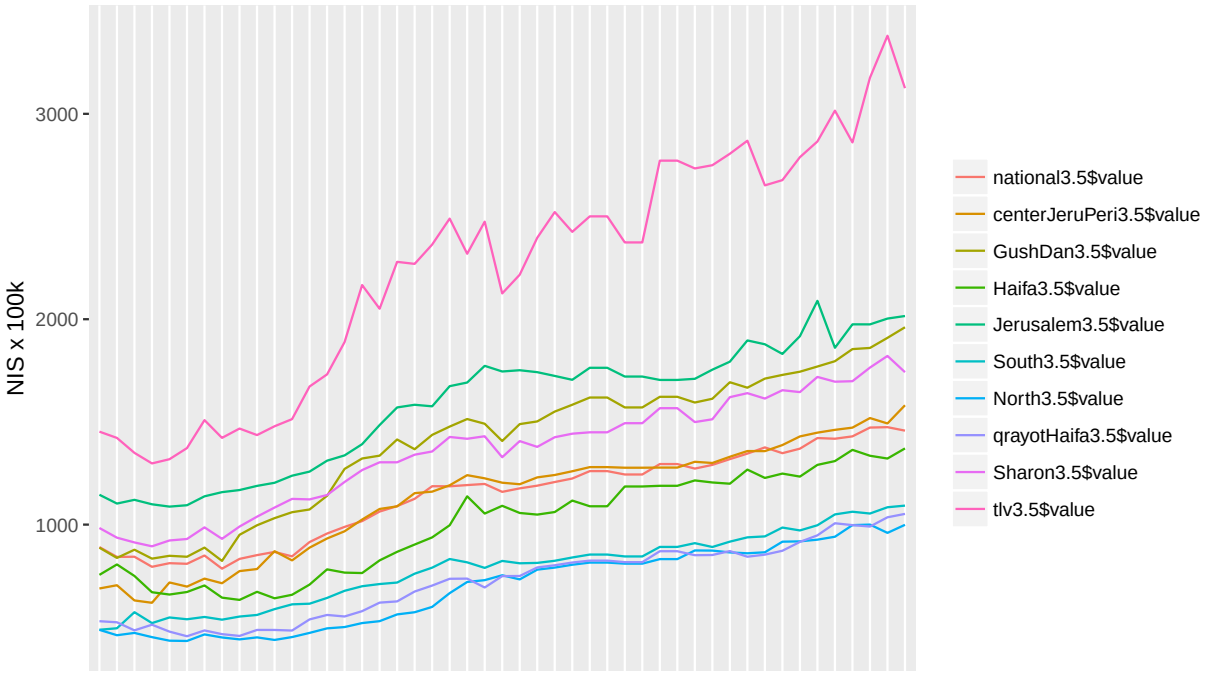
```
                panel.grid.minor = element_blank(),
                axis.ticks.x = element_blank(),
                axis.text.x=element_blank())+ ylab("NIS x 100k")
plot1.5rooms
```

Consider the pretty data plotted in Figure 1.

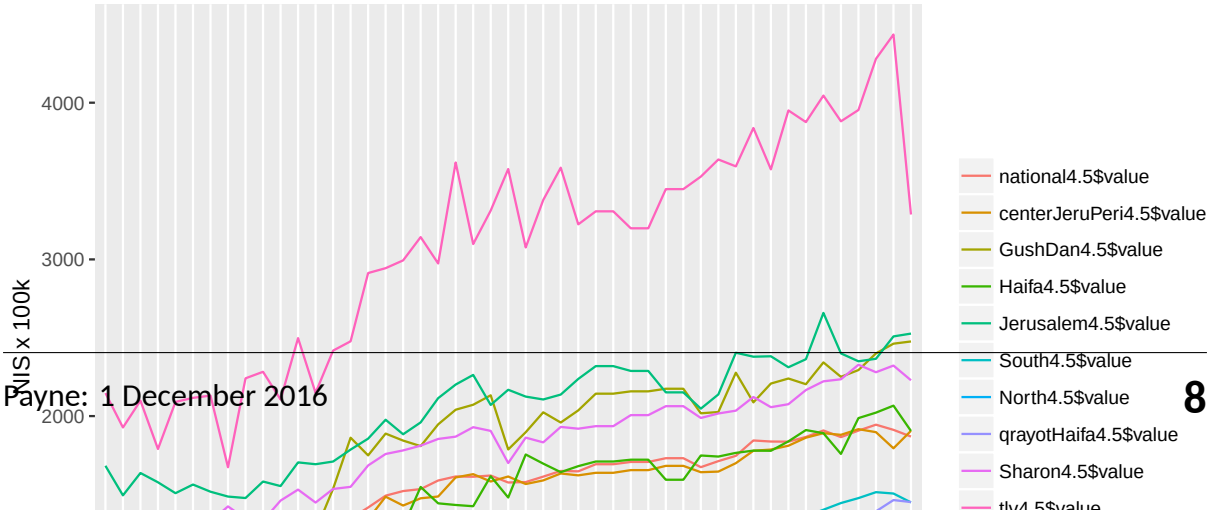
Average P. 2.5−3.5 bedroom home:2006−2016q3



Average P. 3.5−4.5 bedroom home:2006−2016q3



Average P. 4.5+ bedroom home:2006−2016q3



References

Case, K (2005). Comparing Wealth Effects: The Stock Market versus the Housing Market. Advances in Macroeconomics 5(1).

Gan, J (2010). Housing Wealth and Consumption Growth: Evidence from a Large Panel of Households. Review of Financial Studies 23(6), 2229–2267.

Gruber, N (2016). The Israeli Housing Market: Approaching a Turnaround. Shoresh Research Paper. Ed. by D Ben-David, 20.