Housing Wealth, Financial Wealth and Consumption: A Direct Test[*]

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Abstract

The literature has so far showed ambiguous results on the marginal propensity of consumption (MPC) with respect to housing wealth and financial wealth. Using Consumer Expenditure Survey (CES) data from 1988 till 2004, we constructed the housing wealth time series from the detailed survey data. We then study the MPC using both aggregate data and age-grouped data. We further study the heterogeneity across different age group household. We found that housing wealth has statistically significant effect on consumption while financial wealth has none. However, the effect of housing wealth is economically small.

Keywords: Marginal Propensity of Consumption, housing wealth, financial wealth, consumption

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1   Introduction

The stock market booming during 1990s is generally regarded as investors being over-optimistic about the so-called "new economy" and thus pushing the financial market to unreasonable high level. The following correction during 2001-2002 raised a lot of concerns from academics, industrial experts and government organizations. People were afraid that the consumer-investors might reduce their consumption levels because of the "wealth effect". That it didn't materialize led to a lot of discussions. Among them a major argument was the strong housing market over the same period. It was argued that the majority of the households' wealth were tied in their housing. With the strong housing market, consumers were still much wealthier than before, and as a result, the consumption level didn't drop much.

The central logic behind this argument is that the housing wealth, instead of financial wealth, should play much larger role in households' consumption decision. Given that thirty to sixty percent of the households' wealth is in terms of housing wealth[1], it is surprising that only till recently the research efforts put in the study had gained a lot of momentum.

There has been a long and fruitful history of study on the relationship between financial wealth and consumption. Theoretically, the Consumption Capital Asset Pricing model (C-CAPM) is behind much of the modern asset pricing studies[2]. Empirically, using aggregate data (see, for example, Porteba (2000) for a survey) and micro-level data (see for example, Starr-McCluer (1998) , Dynan and Maki (2001)), people have found evidence that indeed financial wealth from stock market does affect the consumption.

The link between housing wealth and consumption is not clear from theoretical point of view. It seems that housing wealth is just another type of wealth that people take into account when making consumption choice. However, there are some unique features about housing wealth that make the relationship more complicated. One is that housing is also a good without easy substitutes. If there is an increasing in a housing price, it is likely that the housing prices around the region are also higher. There is no "real" wealth effect (Sinai and Souleles, 2005). There are other potential explanations provided in the literature such as bequest motives, mental accounting, and uncertainty about the wealth increases etc. (Case, Quigley and Shiller, 2005).

Empirically, earlier work used aggregate data to study the relationship between housing wealth and consumption (Elliott (1980), Peek (1983), Bhatia (1987), Muellbauer and Murphy

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[1]For example, see Bertaut and Starr-McCluer (2002) , Tracy and Schneider (2001) .

[2]This was mostly a result of solving the so-called "equity premium" puzzle pointed out by Mehra and Prescott (1985). See the survey by Campbell (2003).

(1990) , Case (1992), Case, Quigley and Shiller (2005), etc). More recently, there has been growing number of studies using micro-level data. For example, Skinner (1989), Sheiner (1995), Engelhardt (1996) used Panel Survey of Income Dynamics (PSID) data, and attanasio and Weber (1994), Campbell and Cocco (2005) used Family Expenditure Survey (FES) data. PSID data has the benefit of tracking the same household over time. But its limitation in the households it tracks asks for broader data. The survey data used by Campbell and Cocco (2005) is much more convincing but it is for households in UK. In this paper we will use the Consumer Expenditure Survey (CEX) data in US to test directly the relationship between housing wealth and consumption.

CEX data has been used extensively in the study of consumption behavior in US. However, there has been none work done so far to study the marginal propensity of consumption with respect to housing wealth and financial wealth. It is limited by that the financial data in CEX is not so detailed as the consumption data. However, this has not limited people to study the relationship between the financial wealth and consumption (see, for example, Visson-Jorgenson (2002), Brav, Constantinides and Geczy (2002), etc. The literature has been growing almost every week.). Using detailed and comprehensive survey data to study the households' consumption behavior with housing wealth becomes more urgent because it has been shown that housing wealth is very important in households' asset allocation and asset pricing implications (Flavin and Yamashita (2002), Goetzmann (1993), Sheiner (1995), and Skinner (1994), Lustig and Nieuwerburgh (2003, 2004), Cocco (2005) and Yao and Zhang (2005)).

In this paper, we use CEX interview data and its associated detailed mortgage data to test directly the MPC with respect to housing wealth and financial wealth. We found that MPC with respect to financial wealth for home-owners is statistically insignificant while that to housing wealth is significant. However, the economic significance of housing wealth is relatively small. Furthermore the same pattern holds for elasticity of consumption with respect to financial wealth and housing wealth. Namely for financial wealth it is not significantly different from zero and for housing wealth it is significant at 8 percent. This result partly confirms previous findings that financial wealth has relatively small effect on the households' consumption choice while housing wealth does.

The closest research to our work is by Bostic, Gabriel and Painter (2005). They studied the relationship between housing wealth, financial wealth and consumption using CEX and Survey of Consumer Finance (SCF). However, in their paper, they use cross-sectional regression instead of the panel regression method. In doing so, they missed potential time-series relationship along the way, which is critical in the life-cycle models people studied so

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far. In our paper, we form the pseudo-panel similar to Browning, Deaton and Irish (1985) and run the panel regression. This method has also been used in Campbell and Cocco (2005).

Using the pseudo-panel approach, we further discussed the heterogeneity across different groups of households. We found that middle-aged households responds positively to financial wealth and income shocks and negatively to the housing wealth, which is contrary to what Campbell and Cocco (2005) found.

The paper is organized as follows. In the next section we discuss in details the data selection choice and model specification. We then present the results and different robustness tests done. Finally we conclude.

2 Data and Model

We use household quarterly consumption data from Consumer Expenditure Survey data produced by Bureau of Labor Statistics (BLS) in the United States. This dataset has been used extensively in the study of cross-sectional consumption pattern.

There are two survey data sets in CEX: one is the quarterly interview survey (IS) and the other is weekly diary survey (DS). The DS is the done within two weeks of time in a year for each household. In this survey, the household is asked to record down consumptions they made during the two weeks period. The purpose of DS is to obtain consumption data on small frequently purchased items. IS is done quarterly for 5 consecutive quarters for each household. It is designed to obtain data on consumption which the household can recall within the past three months or longer. Either of the two surveys are partial description of households' total consumption. How to correct errors by integrating the two data sets has been discussed in Battistin (2003).

We will concentrate on IS data. Each quarter BLS randomly picks around 5000 households representing the whole population of US. These households are randomly interviewed over three months within the quarter with an average equal number of households in each month. As we mentioned above, each household will be interviewed for 5 consecutive quarters with the first quarter used as a training survey and not included in the final consumption data. After 5 quarters that household is dropped and a new household is picked. This rotational panel structure presents a rich description of household consumption and it covers up to 90 percent of households' total consumption. But it also leads to complications related to how to deal with potential problems with recall data.

The time period we covered is from 1988.1 till 2004.4. The reason is that before 1988 there was no detailed mortgage data such as balance and housing wealth available.

2.1 Data Selection

The first challenge is how to obtain quarterly data. The potential complication associated with the rotational panel structure as in CEX IS data set is the following. A household interviewed in, say April 2003, will recall the consumption from the three months prior to the interview month, namely January, February, March, 2003. If one wants to obtain an average quarterly consumption for the first quarter of 2003, the data may be from households interviewed in February, March, April, May, June, 2003. There is evidence that in one interview households report differently on consumption over the three months prior to the interview, with many items reported more frequently for the most recent month (Silberstein and Jacobs (1989)). So far there are three ways to obtain quarter consumption:

- Use only the monthly consumption preceding the interview month (Attanasio and Weber (1995), Battistin (2003)). In this line of works, they usually care more about the annual consumption and it is easy dealing with the time series property since there is no overlapping.

- Because in each month of every quarter the households interviewed are different, one can form three "tranche" of household interviewed for three months in each quarter. For example, those interviewed in April, July, October, Next January will report their quarterly consumption in Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec; while those interviewed in May, August, November, next Feb will report their quarterly consumption in Feb-Apr, May-Jul, Aug-Oct, Nov-Jan; and so on for those interviewed in June, etc. to report their consumption in Mar-May, etc. We call the respective tranche, Jan, Feb, Mar tranche (Brav, Constantinides and Geczy (2002)).

- The third type is to calculate past quarterly or semi-annual consumption growth and do this month by month. There are of course overlapping(Vissing-Jorgensen (2002)) and one has to deal with the bias.

We will use the second approach because family characteristics might change over different interview quarter and we don't know exactly when that happens. Furthermore we make use of the whole data sample (unlike the first one which only use the more recent month data).

We will adopt the definition of non-durables and services as in Attanasio and Weber (1995). This includes food and non-alcoholic beverage (both at home and away from home), alcoholic beverages, public and private transports (including gasoline), services and semi-durables (clothing and footware), personal care, entertainments and reading (e.g. newspaper

subscription). Those costs used in the normal day-to-day operations of housing are also included. Among those excluded are health, education, mortgage/rent payments, as well as purchase of durables such as vehicle, household appliances and entertainment equipments.

This definition is similar to the definition of non-durables and services as in National Income and Product Accounts (NIPA), which are used in Brav, Constantinides and Geczy (2002) and Vissing-Jorgensen (2002).

The implicit assumption in singling out non-durables and services from the total consumption is that the consumers' utilities of durables and non-durables and services are separable. Furthermore, the services for taking care of durables (repairing and fuel costs for housing and vehicles for example) are separable from the purchasing of durables.

We want study the consumption pattern of the households, especially the relationship between the consumption and housing over time and over different cohorts. We require that the housing data to have (estimated) current market value of the house, as well as the mortgage balance at the beginning of the quarter.

For those household with at least one month of the data in principal, interest, and balance, we interpolate the non-missing value to get the remaining three months of data.

We use the total income before tax. The problem with income is that it is only asked two times, one at the 2nd interview and one in the 5th interview. The income is the past 12 month income and Income data from February is populated to the 3rd and 4th interview.

There are two ways of dealing with the problem of converting nominal terms to real terms.

- The complicated way is for individual households' consumption for each item use CPI of each item. Then form a household-specific price index for each household's non-durables and services using the weights of items within each household. This is adopted as in Attanasio and Weber (1995), Campbell and Cocco (2005). . The advantage of this approach is that it provides a more accurate description of the price index for each household. However, it suffers from the endogeneity problem because of the choices of weights are determined by the household.

- Another simple way is to use CPI of non-durables and services published by BLS.

  - BLS publishes CPI for non-durables and services separately. One approach is to divide the whole non-durables and services consumption by non-durables only. Another way is to divide them separately.

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– In terms of housing, we know that the regional factor is important. However, CEX is not designed as a state level data so we can't use it to get state level panel data. Instead one can separate them into four regions. There are CPI data for four regions as well. So this might be a good way of deflating. Namely instead of using national level CPI we use regional CPI. However, the region is not always there so we might have to cut off more points here. Another problem with regional CPI data is that before (including 1986) the regional CPI are only done in bi-monthly frequency. So we can't use it much.

CEX collects enough demographic data at the household level, such as owner/renter of the house, their spouse, number of children, gender, ethnic origins, education level etc.

Some standard cut on the data is the following:

- living in the rural area.

- residing in student housing.

- total expenditure on food (either at or away from home) is zero.

- not belonging to the cohorts we defined.

- zero non-durable and services consumption.

2.1.1 A Brief Summary

We group all the households into three tranche, which are interviewed in (Jan, Apr, Jul, Oct), (Feb, May, Aug, Nov) and (Mar, Jun, Sep, Dec) respectively. In each tranche, we assemble quarterly consumption before the interview month. The good part about this separation is that within each tranche the consumptions are non-overlapping. Later on we will pool them together to get overlapping monthly data of quarterly consumption.

Furthermore, we separated each tranche into 11 age groups so that in 1988 first quarter, the youngest reference person in the household is 16 years-old and oldest 70. Each age group has five year span. And we use the age group (AG) average as our variables.

2.2　Model Specification

Our baseline model for estimating marginal propensity of consumption (MPC) with respect to housing wealth takes the following format:

$$C_{it} = \beta_{0i} + \beta_{1i}W_{it}^H + \beta_{2i}Y_{it} + \beta_{3i}W_{it}^F + \beta_{4i}Z_{it} + \epsilon_{i,t}, \tag{2.1}$$

where C, W^H, W^F, Y, Z are consumption, housing wealth, financial wealth, income and control variables respectively. The control variables include age, education, family size, race. We also estimate the log value of the above equation:

$$c_{it} = \beta_{0i} + \beta_{1i}w_{it}^H + \beta_{2i}y_{it} + \beta_{3i}w_{it}^F + \beta_{4i}Z_{it} + \epsilon_{i,t}, \tag{2.2}$$

where the small letters indicate the log value.

To further analyze the effect of mortgage, we include in the above equation the mortgage balance at the beginning, and the mortgage payments one-by-one in the regression.

Finally, we study the MPC using the first order difference of the baseline equations

$$\Delta C_{i,t+1} = \beta_{0i} + \beta_{1i}\Delta W_{i,t+1}^H + \beta_{2i}\Delta Y_{i,t+1} + \beta_{3i}\Delta W_{i,t+1}^F + \beta_{4i}Z_{i,t+1} + \epsilon_{i,t+1}, \tag{2.3}$$

as well as its log version:

$$\Delta c_{i,t+1} = \beta_{0i} + \beta_{1i}\Delta w_{i,t+1}^H + \beta_{2i}\Delta y_{i,t+1} + \beta_{3i}\Delta w_{i,t+1}^F + \beta_{4i}Z_{i,t+1} + \epsilon_{i,t+1}. \tag{2.4}$$

The parameter we are interested in is β_1. We study both the aggregate equations as well as panel regressions with the cohorts formed using age. Furthermore we estimated the parameters for each age cohorts to see the differences.

3　Results

3.1　Aggregate Result for Housing Owners

Table 1 shows the summary statistics for house owners whom we will study in this paper. The first observation is that over the three tranches the values are pretty much the same. This means that we can concentrate on one tranche without loss of generality. This is done as in Brav, Constantinides, and Geczy (2002). The downside of doing so is that we might

loss some power because we will take the simple average of estimated values or simply using the results from one tranche. Further work needs to be done to make the full use of the three tranches effectively.

We can see from the table that over 16 years (64 quarters) period, average household has financial wealth a little over 19 thousand dollars and housing wealth more than 92 thousand dollars. Each quarter an average household has before tax earnings seven thousand dollars and it spends 24 hundred dollars in their non-durable consumption and services.

The reference person of an household is 50 years old (roughly goes from 42 to 58 years over 16 years). Seventy percent are married and eighty seven percent are white. This is a bit high but we are considering house owners. So it is not surprising that it is higher than US population.

In terms of regional location, 30 percent of the households in our sample live in the South, compared with a little less than 20 percent living in the Northeast. Again this is not surprising given the high housing price in the Northeast. So the home ownership in the Northeast is a bit low.

In terms of education, we can see that the distribution of house owners are right skewed with almost 80 percent having at least a high school diploma. Again, this fits our intuition that higher education do contribute to the wealth level of each household, thus higher home ownership.

Figure 1 plot the financial wealth, income before tax, consumption and housing wealth over this 16 years. This is only for the first tranche. One can see that average household's income and consumption are more or less stable over this period even though there are economic booming and mild recession over this 16 period. Housing wealth and financial wealth however, exhibit strong cyclical pattern.

The most significant point of this figure is the sharp increase of housing wealth and financial wealth starting from 1995. Then from 1998 on financial wealth fluctuates a lot with minor recession at the end of 1998 and 2001. At the same time, housing wealth keeps increasing. Some argues that it is this phenomenon that supports the whole economy from going into deep recession. And one of the main motivation of our paper is to study the MPC with respect to housing wealth and financial wealth. We will show that the former is very significant while the later almost show no significance.

3.2 Summary Statistics over Age Group

From now on we concentrated on the first tranche and the results of other two tranches are similar. Table 2 shows the summary statistics over the eleven age groups.

As we can see from the table, all the values exhibit a very nice life-cycle pattern. This has been documented extensively bfore in the literature. The financial wealth starts with a little less than $4,000 for AG1 and peaks at $31, 194 for AG9, then reduces to $22, 910 for AG11. The average age of AG1 is 26 (from 18 to 34) and the average age of AG9 is 60 (from 52 to 68).

Similarly, income before tax, consumption as well as housing wealth. peaks at AG5 and AG6. Those are the people with average age 45 (37 to 53) and 50 (42 to 58). Comparing with financial wealth, income, consumption and housing wealth peaks earlier. These reflect that wage earnings and consumption peak at the middle age, that senior people generally reduce their housing equity. Furthermore, the family size synchronize with this with the largest family at AG4.

Looking at the mortgage part, we can see that younger household tends to borrow more while older household have much less mortgage balance and payments. A somewhat surprising result is that the young households borrow heavily comparing to their financial wealth. This is mainly due to their relatively high income, which is not far below the middle aged group. One should note, again, that this sample is for those home owners. So the households are somewhat wealthier than the general population.

3.3 Housing Wealth and Financial Wealth: Panel Regression

Table 5, 6, 7 represent the first major result of our paper. We use the pseudo-panel formed by 11 age groups and run fixed group panel regression. We run the regression without mortgage, with mortgage balance, and with both mortgage balance and mortgage payment.

As we can see, the regression coefficients on the housing wealth is significant while those on the financial wealth is almost none. So this provides further evidence that financial wealth is almost irrelevant to the consumption choice.

Economically, we can see from Figure one that from 1995 to 2004, average housing wealth increases by more than 40 thousand dollars. With the regression coefficient of 0.002, that implies an increase of 80 dollars quarterly consumption. This is relatively small comparing with an average of more than two thousand dollars quarterly consumption (an increase of 4 percent is not large with almost ten years of time period). So our first conclusion here is that

while housing wealth does have significant effect on the consumption level, economically it is small. The asset pricing implication is thus much less than people expected.

Of course, we are still using age groups as our study candidate. So it is not the micro-level consumption data one would want to examine. Further analysis are required to see exactly how large this effect will be at the individual household level.

Some other points we can get from these regressions are the following. First of all the consumption is quite sensitive to the income with regression coefficients are more than ten percent. Secondly, higher mortgage balance is associated with higher consumption. But this effect is reduced if one accounts for other demographic variables such as marital status, race, location and education levels. Overall, the appearance of mortgage is not so much related to the consumption level.

Furthermore, when people gets older, they reduce their consumption. And with larger family size, the household consumption increases: one more people leads to over 380 dollars increase of quarterly consumption. Getting married actually reduces consumption but this is not significant. White family tends to have more consumption and services. In terms of location, people living in all other areas have less consumption and services comparing with those in the west.

Our regression using dollar value does show the significance of sensitivity of consumption with respect to housing wealth. Yet the number is way off those obtained in the literature through other data and methodology. Researchers generally believe an MPC of 3 percent to 8 percent as reasonable, while we obtain only 20 basis point. To comparing our result with the literature, we run the same regression using the log value, which is shown in Table 5. Here the number is much more comfortable. They are all around seven to eight percent.

So a brief summary about our result so far. We showed that MPC with respect to housing wealth is statistically significant but financial wealth is not. However, the economic significance of housing wealth is small.

3.4   Heterogeneity Across Age Groups

We have studied the effects of financial wealth and housing wealth using panel regression. Next we want to see the result within each age group to further study the actual heterogeneity over different groups. Table 6A, 6B, 6C and Table 7A, 7B, 7C show the results.

In Table 6A (B, C) we run the regression using dollar amount with all the controls as in the panel regression. To save the space we didn't show the estimates for location and education. Table 6A shows the result without mortgage, 6B with mortgage balance, and

6C with both mortgage balance and mortgage payments. Table 7 runs the same regression except now we use log values.

The first thing we notice is the enormous heterogeneity across age groups if we allow all the parameter estimates to change over groups. There are no simple monotonicity or life-cycle pattern in the parameter estimations. This might be because indeed different age groups have different time series consumption path, which is not likely. It also might be because we haven't found the right variables determining the consumption path of households. Given the panel regression results, this seems not likely to be the case either. A more plausible explanation might be that there are some nonlinearities in terms of both independent variables and time-varying possibilities.

Still, we are able to get some patterns across different age groups. First let's look at the MPC with respect to housing wealth and financial wealth, our main topic of the paper. In terms of financial wealth, we can see that AG4, 5, 6, 11 are marginally significant with 5, 6, 7 are positive and 11 are negative. This says that middle-aged households tend to respond positively to the financial wealth while old households respond negatively. For housing wealth, AG2, 5, 6, 9 are significant with AG5 and 6 negative. Furthermore, the regression coefficients on income for AG5, 8, 9, 11 are significantly positive. Putting all these together, we observe that middle aged households will consume more when their financial wealth and income increase, but consume less when housing wealth increases. For them housing might be more of an investment tool instead of consumption source.

There is no clear pattern for other variables except in general age has negative effect on consumption and services.

This pattern is more significant for log value regression. With middle aged households respond positively to financial wealth and income and negatively to housing wealth.

A brief summary is in order. We observe that group by group, there are much heterogeneity if we allow the parameter estimates to vary across groups. The general pattern is that middle-aged households tend to respond positively to financial wealth and income, but negatively to housing wealth shock.

4   Conclusion

We studied the effects of financial wealth and housing wealth on households' non-durable consumption and services. We found that housing wealth has statistically significant effect while financial wealth has none. However, the effect of housing wealth on consumption

and services is economically insignificant. When we allow the parameters to change over different household, there are enough heterogeneity. Middle-aged households tend to respond positively to financial wealth and income shocks, but negatively to housing wealth shocks.

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Table 1

Summary Statistics for The Three Tranches

This table gives the quarterly summary statistics of the three tranches. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. Married is the percentage of married. Race is the percentage of white reference person. Regions are the percentages of households living in that region. Educations are the percentages of reference person's education level. The last four rows give the log value of the dollar amount showing in the beginning.

	Tranche One		Tranche Two		Tranche Three	
	Mean	Std. Dev	Mean	Std. Dev.	Mean	Std. Dev
Count	982.73	247.48	983.59	249.60	970.80	241.25
Financial Wealth	19,218.98	7,820.86	18,701.78	6,610.35	19,385.47	7,764.87
Income	7,031.40	425.52	7,074.61	407.46	7,119.31	393.00
Consumption	2,490.06	148.79	2,478.60	163.63	2,471.26	141.99
Housing Wealth	92,515.36	11,313.66	93,561.41	10,757.69	94,055.37	9,907.99
Family Size	2.84	0.10	2.83	0.08	2.83	0.09
Age	49.98	2.16	50.03	2.05	49.75	2.32
Married	70.36	2.24	69.75	2.46	69.46	2.56
White	87.78	1.58	87.87	1.57	87.36	1.18
Northeast	19.91	1.81	19.72	2.33	20.54	1.76
Midwest	26.64	2.27	26.63	1.96	26.14	1.38
South	30.33	2.52	31.09	1.62	30.55	2.27
West	23.12	1.86	22.56	2.13	22.77	1.16
Ed: none	1.45	2.34	0.86	1.67	1.32	2.16
Ed: 8th	5.84	1.88	5.57	1.24	5.73	1.85
Ed: 12th	13.17	10.19	10.83	7.30	12.27	8.79
Ed: HS	28.54	3.80	29.17	2.80	28.36	2.64
Ed: college	23.33	4.70	24.48	3.26	24.38	4.60
Ed: Bachelor	17.32	2.90	17.38	2.86	17.46	2.97
Ed: Post Grad.	10.36	5.91	11.71	4.78	10.47	5.76
log con	7.82	0.06	7.81	0.07	7.81	0.06
log finw	9.78	0.42	9.78	0.35	9.79	0.41
log inc	8.86	0.06	8.86	0.06	8.87	0.06
log hous	11.43	0.12	11.44	0.11	11.45	0.10

Table 2
Summary Statistics Over the Age Groups (First Tranche)

This table gives the quarterly summary statistics over the eleven age groups (age 15-70 in 1988). The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc, mortprnp, mortintp, mortpmt are the mortgage balance, principal payment, interest payment and total payment respectively.

	finw	incbtax	consum	housw	FAMSIZE
AG1	3,923.33	5,694.50	2,031.05	62,233.81	2.75
AG2	8,234.26	7,373.05	2,376.68	79,562.40	3.12
AG3	11,184.85	7,662.16	2,541.09	88,330.86	3.35
AG4	13,374.83	8,284.34	2,768.53	94,941.26	3.39
AG5	20,794.44	8,276.72	2,847.67	96,806.07	3.16
AG6	21,472.40	8,546.27	2,844.92	101,795.05	2.90
AG7	25,116.12	7,217.70	2,628.18	98,367.68	2.62
AG8	26,069.28	6,049.45	2,330.33	95,421.40	2.38
AG9	31,194.81	5,037.71	2,130.89	92,067.90	2.16
AG10	28,262.68	4,184.18	1,865.08	88,653.95	1.99
AG11	22,910.71	3,496.73	1,620.76	80,696.22	1.81

	mortblnc	mortprnp	mortintp	mortpmt	AGEREF
AG1	46,180.33	230.47	906.33	1,136.79	26.13
AG2	56,187.26	247.29	1,134.49	1,381.79	30.87
AG3	56,731.36	291.10	1,164.45	1,455.55	35.57
AG4	56,069.23	334.29	1,157.74	1,492.03	40.49
AG5	50,576.76	364.20	1,049.98	1,414.18	45.51
AG6	48,577.69	402.92	1,029.94	1,432.86	50.36
AG7	43,320.08	391.23	888.44	1,279.68	55.39
AG8	40,715.61	385.09	851.59	1,236.68	60.49
AG9	37,226.34	341.07	757.18	1,098.26	65.53
AG10	30,824.27	290.74	635.35	926.09	70.41
AG11	23,337.27	273.66	537.82	811.49	75.29

Table 3

Panel Regression with Fixed Group Effect (First Tranche)

This table gives the panel regression with fixed age group effects for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc, mortpmt are the mortgage balance, and total payment respectively.

Variable	Estimate	Std Error	Estimate	Std Error	Estimate	Std Error
CS1	-1,292.55	105.30	-1,505.16	119.10	-1,560.06	129.00
CS2	-1,141.63	100.60	-1,354.27	115.30	-1,401.75	123.00
CS3	-966.27	94.51	-1,160.10	107.10	-1,197.64	112.20
CS4	-704.74	87.09	-874.18	97.29	-902.81	100.60
CS5	-442.19	79.53	-578.52	86.73	-600.18	88.87
CS6	-292.01	71.79	-402.23	76.96	-415.35	77.84
CS7	-154.96	61.43	-246.02	65.31	-258.69	66.28
CS8	-127.59	51.20	-207.16	54.50	-215.38	54.99
CS9	-22.91	43.46	-88.09	45.81	-97.38	46.55
CS10	-20.03	35.81	-57.85	36.37	-65.29	36.98
Intercept	2,525.95	163.40	2,724.26	177.50	2,825.60	199.50
housw	0.00182	0.00069	0.00084	0.00075	0.00080	0.00075
incbtax	0.11066	0.00814	0.10403	0.00833	0.10350	0.00834
finw	0.00021	0.00071	0.00042	0.00071	0.00048	0.00072
mortblnc			0.00371	0.00095	0.00532	0.00173
mortpmt					-0.07058	0.06350
AGEREF	-25.44	2.41	-27.84	2.55	-28.80	2.69
FAMSIZE	260.91	24.91	262.72	25.37	259.22	25.56

Table 4

Panel Regression with Fixed Effect and Controls (First Tranche)

This table gives the panel regression with fixed age group effects and demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc, mortpmt are the mortgage balance, and total payment respectively.

Variable	Estimate	Std Error	Estimate	Std Error	Estimate	Std Error
CS1	-1,414.54	133.10	-1,524.28	146.40	-1,524.18	153.20
CS2	-1,252.60	123.40	-1,357.03	136.40	-1,356.95	141.70
CS3	-1,075.29	114.80	-1,169.99	126.30	-1,169.93	129.60
CS4	-814.37	104.10	-897.36	113.90	-897.32	115.90
CS5	-522.42	96.04	-589.62	103.00	-589.59	104.20
CS6	-338.45	84.89	-395.02	90.49	-395.00	90.89
CS7	-154.51	72.62	-201.13	77.06	-201.11	77.53
CS8	-132.25	58.90	-171.27	62.74	-171.26	62.97
CS9	-37.01	46.94	-66.14	49.63	-66.12	50.17
CS10	-39.39	35.57	-52.94	36.31	-52.93	36.84
Intercept	1,403.78	424.00	1,494.39	426.30	1,494.21	435.40
housw	0.00201	0.00074	0.00152	0.00079	0.00152	0.00079
incbtax	0.09405	0.00924	0.09342	0.00923	0.09342	0.00924
finw	0.00010	0.00070	0.00024	0.00070	0.00024	0.00071
mortblnc			0.00182	0.00102	0.00182	0.00181
mortpmt					0.00013	0.06440
AGEREF	-22.54	3.06	-23.80	3.14	-23.80	3.23
FAMSIZE	385.78	33.43	382.18	33.43	382.18	33.52
marital	-1.03	1.54	-0.90	1.54	-0.90	1.55
race	4.82	2.04	4.80	2.04	4.80	2.04
reg1	-4.00	1.91	-3.81	1.91	-3.81	1.91
reg2	-2.08	1.95	-1.92	1.94	-1.92	1.95
reg3	-3.47	1.83	-3.10	1.84	-3.10	1.84
edu1	3.09	3.11	2.89	3.11	2.89	3.12
edu2	5.93	3.02	5.81	3.01	5.81	3.02
edu3	5.44	1.83	5.27	1.83	5.27	1.83
edu4	5.46	2.53	5.25	2.53	5.25	2.54
edu5	12.15	3.14	11.84	3.14	11.84	3.15
edu6	6.79	2.94	6.48	2.94	6.48	2.94

Table 5

Panel Regression (log value) with Fixed Group Effects and Control (First Tranche)

This table gives the panel regression with fixed age group effects for the first tranche using log value. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc, mortpmt are the mortgage balance, and total payment respectively.

Variable	Estimate	Std Error	Estimate	Std Error	Estimate	Std Error
CS1	-0.5964	0.0562	-0.6245	0.0604	-0.6126	0.0624
CS2	-0.5245	0.0527	-0.5524	0.0570	-0.5420	0.0587
CS3	-0.4519	0.0491	-0.4782	0.0532	-0.4699	0.0544
CS4	-0.3411	0.0443	-0.3650	0.0481	-0.3584	0.0489
CS5	-0.2285	0.0410	-0.2494	0.0442	-0.2441	0.0447
CS6	-0.1528	0.0361	-0.1715	0.0390	-0.1680	0.0393
CS7	-0.0762	0.0310	-0.0923	0.0335	-0.0890	0.0338
CS8	-0.0600	0.0254	-0.0741	0.0277	-0.0718	0.0278
CS9	-0.0118	0.0201	-0.0226	0.0219	-0.0199	0.0222
CS10	-0.0077	0.0152	-0.0133	0.0158	-0.0110	0.0161
Intercept	4.4362	0.2885	4.3775	0.2920	4.3958	0.2931
logfinw	0.0077	0.0082	0.0086	0.0083	0.0081	0.0083
loginc	0.2588	0.0240	0.2599	0.0240	0.2595	0.0240
loghous	0.0849	0.0292	0.0720	0.0309	0.0724	0.0309
logmortbl			0.0196	0.0154	0.0010	0.0291
logmortbl					0.0237	0.0313
AGEREF	-0.0104	0.0015	-0.0106	0.0015	-0.0105	0.0015
FAMSIZE	0.1395	0.0140	0.1391	0.0140	0.1393	0.0140
marital	0.0004	0.0007	0.0005	0.0007	0.0005	0.0007
race	0.0016	0.0009	0.0016	0.0009	0.0016	0.0009
reg1	-0.0018	0.0008	-0.0017	0.0008	-0.0017	0.0008
reg2	-0.0006	0.0008	-0.0005	0.0008	-0.0006	0.0008
reg3	-0.0013	0.0008	-0.0012	0.0008	-0.0012	0.0008
edu1	0.0013	0.0014	0.0013	0.0014	0.0012	0.0014
edu2	0.0027	0.0013	0.0027	0.0013	0.0026	0.0013
edu3	0.0024	0.0008	0.0024	0.0008	0.0024	0.0008
edu4	0.0026	0.0011	0.0025	0.0011	0.0025	0.0011
edu5	0.0055	0.0014	0.0055	0.0014	0.0055	0.0014
edu6	0.0030	0.0013	0.0029	0.0013	0.0029	0.0013

Table 6A
Regression by groups with Controls (First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. Within each group, the first row is the estimated value and the second row is the standard error.

Variable	Intercept	finw	incbtax	housw	FAMSIZE	AGEREF	marital	race
AG1	-23,244.00	-0.0047	0.0674	-0.0038	-117.54	-63.86	20.55	-13.12
	27,085.00	0.0484	0.0806	0.0069	614.23	59.49	22.40	28.23
AG2	3,506.62	-0.0034	0.0647	0.0062	131.25	-47.79	-0.14	-3.36
	1,436.44	0.0075	0.0479	0.0038	174.61	34.38	4.77	8.59
AG3	-596.60	-0.0045	-0.0112	0.0019	114.35	24.61	2.11	13.89
	1,713.78	0.0045	0.0435	0.0039	176.63	15.93	6.83	6.78
AG4	2,042.08	0.0064	-0.0360	0.0026	151.70	-0.99	-3.56	6.26
	1,565.62	0.0039	0.0422	0.0035	173.78	12.06	7.23	7.56
AG5	7,192.16	0.0073	0.0897	-0.0089	-87.31	-29.55	8.29	-1.08
	2,948.12	0.0045	0.0434	0.0034	294.99	31.39	9.89	10.99
AG6	675.47	0.0086	0.0439	-0.0048	427.82	-27.07	11.92	9.44
	2,193.60	0.0045	0.0340	0.0025	187.03	18.51	9.11	11.59
AG7	6,118.18	0.0027	0.0302	-0.0005	175.03	-70.21	6.28	-22.60
	1,447.49	0.0021	0.0287	0.0022	150.38	13.74	5.56	6.91
AG8	1,467.68	-0.0017	0.0661	0.0026	159.46	-41.60	6.75	14.78
	1,515.03	0.0020	0.0405	0.0023	237.10	14.20	4.64	5.47
AG9	2,125.21	0.0027	0.0712	0.0059	566.70	-42.92	-4.77	5.30
	2,281.67	0.0017	0.0326	0.0024	197.61	13.98	4.90	7.07
AG10	1,883.21	0.0024	-0.0149	0.0016	457.42	-46.14	-8.46	4.80
	1,683.28	0.0013	0.0337	0.0018	220.60	10.73	3.82	4.82
AG11	-534.53	-0.0057	0.0863	0.0023	249.06	-21.51	11.26	33.63
	1,838.81	0.0027	0.0452	0.0029	202.87	9.68	3.56	8.09

Table 6B

Regression by groups with Controls (First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc are the mortgage balance. Within each group, the first row is the estimated value and the second row is the standard error.

Variable	Intercept	finw	incbtax	housw	mtblnc	FAMSIZE	AGEREF	marital	race
AG1	-37,399.00	-0.0121	0.0587	-0.0008	-0.0097	-156.17	-40.21	19.81	-10.78
	37,086.00	0.0523	0.0859	0.0088	0.0163	648.00	74.04	23.55	29.90
AG2	3,401.87	-0.0041	0.0709	0.0069	-0.0020	158.26	-50.96	-0.27	-2.97
	1,517.70	0.0080	0.0543	0.0047	0.0075	205.72	37.08	4.89	8.89
AG3	-741.61	-0.0044	-0.0070	0.0007	0.0033	108.17	23.07	2.42	14.17
	1,784.71	0.0045	0.0458	0.0053	0.0099	179.46	16.74	6.96	6.91
AG4	2,628.95	0.0077	-0.0673	0.0032	0.0138	211.67	-21.29	-6.74	2.46
	1,522.45	0.0038	0.0428	0.0033	0.0061	168.61	14.64	7.07	7.44
AG5	6,533.32	0.0074	0.0908	-0.0088	-0.0052	-1.07	-16.99	8.61	0.39
	3,119.99	0.0045	0.0437	0.0035	0.0076	322.61	36.54	9.97	11.27
AG6	396.45	0.0087	0.0482	-0.0039	-0.0068	459.43	-22.28	8.21	13.09
	2,192.13	0.0045	0.0339	0.0026	0.0055	187.66	18.80	9.54	11.89
AG7	6,196.76	0.0021	0.0192	-0.0005	0.0045	135.08	-75.42	7.68	-22.09
	1,443.40	0.0022	0.0301	0.0022	0.0038	153.63	14.39	5.66	6.90
AG8	1,491.40	-0.0017	0.0680	0.0029	-0.0008	139.79	-42.65	6.85	14.90
	1,534.82	0.0021	0.0419	0.0027	0.0040	257.13	15.18	4.71	5.55
AG9	1,943.11	0.0029	0.0733	0.0054	0.0009	578.00	-41.73	-4.28	5.39
	2,362.01	0.0018	0.0335	0.0028	0.0027	202.12	14.52	5.14	7.14
AG10	1,879.80	0.0024	-0.0148	0.0016	-0.0001	455.92	-46.13	-8.49	4.78
	1,704.39	0.0013	0.0344	0.0018	0.0022	227.26	10.85	3.94	4.93
AG11	-615.86	-0.0052	0.0860	0.0019	0.0017	242.12	-22.62	11.42	33.50
	1,846.71	0.0028	0.0454	0.0030	0.0020	203.63	9.79	3.58	8.12

Table 6C
Regression by groups with Controls (First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. mortblnc, mortpmt are the mortgage balance, and total payment respectively. Within each group, the first row is the estimated value and the second row is the standard error.

	Intcpt.	finw	incbtax	housw	mtblnc	mtpmt	FAMSIZE	AGEREF	marital	race
AG1	-43,488.00	-0.0186	0.0878	-0.0025	-0.0202	0.5594	-45.99	-43.93	13.03	2.22
	40,953.00	0.0568	0.1055	0.0099	0.0257	1.0130	717.44	79.03	27.89	39.56
AG2	3,350.87	-0.0042	0.0719	0.0070	-0.0032	0.0553	160.57	-50.63	-0.09	-2.93
	1,628.10	0.0083	0.0563	0.0049	0.0146	0.5404	211.31	38.01	5.29	9.08
AG3	-666.07	-0.0040	-0.0135	0.0007	-0.0012	0.2007	110.70	26.78	3.14	13.62
	1,809.41	0.0046	0.0483	0.0053	0.0140	0.4333	181.29	18.70	7.20	7.07
AG4	2,507.70	0.0076	-0.0696	0.0032	0.0124	0.0745	201.86	-19.92	-6.09	2.84
	1,751.11	0.0039	0.0461	0.0034	0.0111	0.5132	183.38	17.53	8.45	7.96
AG5	7,037.98	0.0079	0.0915	-0.0084	-0.0186	0.5784	-30.69	-18.65	5.42	0.31
	3,099.77	0.0045	0.0432	0.0034	0.0120	0.4036	319.11	36.09	10.09	11.12
AG6	928.04	0.0082	0.0377	-0.0040	0.0015	-0.3591	394.02	-26.70	10.36	13.22
	2,232.53	0.0045	0.0350	0.0026	0.0090	0.3127	195.45	19.12	9.68	11.85
AG7	6,166.44	0.0022	0.0166	-0.0004	0.0023	0.1217	127.31	-75.45	6.91	-21.00
	1,452.62	0.0022	0.0306	0.0022	0.0050	0.1794	154.97	14.47	5.81	7.12
AG8	1,382.58	-0.0013	0.0693	0.0019	-0.0048	0.2300	171.74	-41.77	5.73	16.33
	1,534.83	0.0021	0.0418	0.0028	0.0054	0.2105	258.25	15.17	4.81	5.70
AG9	2,017.11	0.0020	0.0708	0.0053	-0.0028	0.1501	511.18	-40.83	-2.44	4.70
	2,370.73	0.0021	0.0337	0.0028	0.0052	0.1764	217.41	14.60	5.59	7.21
AG10	2,046.05	0.0021	-0.0202	0.0022	0.0051	-0.2320	415.02	-49.39	-8.97	4.89
	1,672.82	0.0013	0.0339	0.0018	0.0038	0.1359	223.95	10.80	3.87	4.84
AG11	-704.82	-0.0054	0.0848	0.0020	0.0003	0.0444	237.64	-21.95	11.66	33.85
	1,883.73	0.0028	0.0460	0.0030	0.0043	0.1208	206.35	10.07	3.67	8.27

Table 7A
Regression by groups with Controls using Log values(First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. Within each group, the first row is the estimated value and the second row is the standard error.

Variable	Intercept	logfinw	loginc	loghous	FAMSIZE	AGEREF	marital	race
AG1	-3.2690	-0.0233	0.2651	-0.1568	-0.0698	-0.0293	0.0098	-0.0071
	9.0928	0.0988	0.2480	0.2464	0.2520	0.0248	0.0089	0.0120
AG2	5.1617	-0.0172	0.2297	0.1211	0.0161	-0.0096	0.0004	-0.0026
	1.9707	0.0343	0.1404	0.1528	0.0678	0.0140	0.0019	0.0036
AG3	6.8935	-0.0251	-0.0199	0.0085	0.0419	0.0119	0.0013	0.0052
	1.3750	0.0242	0.1282	0.1401	0.0668	0.0063	0.0026	0.0026
AG4	7.4401	0.0604	-0.1572	0.1078	0.0398	-0.0023	-0.0015	0.0020
	1.0365	0.0245	0.1243	0.1212	0.0599	0.0043	0.0025	0.0027
AG5	10.1237	0.0776	0.2745	-0.3192	-0.0343	-0.0140	0.0027	-0.0012
	1.3809	0.0329	0.1205	0.1150	0.0948	0.0102	0.0034	0.0037
AG6	7.3624	0.1215	0.1259	-0.1949	0.1765	-0.0138	0.0035	0.0025
	1.2211	0.0397	0.0994	0.0916	0.0650	0.0063	0.0031	0.0039
AG7	8.6841	0.0435	0.0571	-0.0287	0.0814	-0.0283	0.0038	-0.0082
	0.9849	0.0281	0.0823	0.0759	0.0568	0.0050	0.0020	0.0025
AG8	5.4561	-0.0318	0.1751	0.0926	0.0258	-0.0170	0.0035	0.0059
	1.3586	0.0244	0.0927	0.0915	0.0921	0.0061	0.0019	0.0022
AG9	4.0955	0.0485	0.1463	0.2170	0.2753	-0.0208	-0.0029	0.0024
	1.3656	0.0257	0.0715	0.0907	0.0835	0.0059	0.0021	0.0029
AG10	6.6202	0.0337	-0.0359	0.0820	0.2424	-0.0234	-0.0046	0.0039
	1.1397	0.0233	0.0810	0.0895	0.1218	0.0059	0.0023	0.0028
AG11	4.6519	-0.1208	0.2031	0.0856	0.1293	-0.0123	0.0078	0.0207
	1.6909	0.0442	0.0939	0.1266	0.1144	0.0057	0.0021	0.0045

Table 7B

Regression by groups with Controls using Log values(First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. logmtbl is the log value of mortgage balance. Within each group, the first row is the estimated value and the second row is the standard error.

Variable	Intercept	logfinw	loginc	loghous	logmtbl	FAMSIZE	AGEREF	marital	race
AG1	-5.7458	-0.0252	0.2320	-0.0556	-0.2013	-0.0863	-0.0201	0.0099	-0.0071
	10.8510	0.1047	0.2709	0.3315	0.4068	0.2689	0.0321	0.0095	0.0127
AG2	5.1644	-0.0175	0.2349	0.1318	-0.0161	0.0199	-0.0101	0.0003	-0.0025
	2.0112	0.0351	0.1535	0.1925	0.1698	0.0799	0.0154	0.0020	0.0038
AG3	6.2963	-0.0236	-0.0048	-0.0431	0.0917	0.0387	0.0110	0.0015	0.0054
	1.9872	0.0247	0.1343	0.1874	0.2183	0.0679	0.0067	0.0027	0.0027
AG4	5.3638	0.0601	-0.2509	0.1317	0.2848	0.0551	-0.0095	-0.0026	0.0007
	1.2898	0.0232	0.1237	0.1153	0.1146	0.0571	0.0050	0.0024	0.0026
AG5	10.4768	0.0760	0.2761	-0.3142	-0.0568	-0.0155	-0.0112	0.0028	-0.0009
	1.6057	0.0335	0.1217	0.1167	0.1281	0.1047	0.0121	0.0034	0.0038
AG6	7.9007	0.1216	0.1430	-0.1632	-0.1129	0.1868	-0.0122	0.0022	0.0039
	1.2896	0.0395	0.0998	0.0946	0.0913	0.0652	0.0064	0.0033	0.0041
AG7	8.4539	0.0384	0.0364	-0.0343	0.0555	0.0677	-0.0297	0.0042	-0.0081
	1.0138	0.0287	0.0851	0.0762	0.0573	0.0585	0.0052	0.0020	0.0025
AG8	5.4538	-0.0321	0.1768	0.0965	-0.0050	0.0231	-0.0171	0.0035	0.0060
	1.3735	0.0249	0.0964	0.1062	0.0657	0.0999	0.0064	0.0019	0.0022
AG9	4.0954	0.0485	0.1463	0.2170	0.0000	0.2753	-0.0208	-0.0029	0.0024
	1.3849	0.0265	0.0731	0.1063	0.0415	0.0845	0.0060	0.0022	0.0030
AG10	6.6590	0.0345	-0.0360	0.0875	-0.0131	0.2356	-0.0235	-0.0048	0.0038
	1.1591	0.0237	0.0818	0.0925	0.0461	0.1253	0.0060	0.0023	0.0028
AG11	4.4813	-0.1133	0.2078	0.0477	0.0360	0.1251	-0.0125	0.0081	0.0205
	1.6834	0.0443	0.0932	0.1292	0.0284	0.1136	0.0057	0.0021	0.0045

Table 7C
Regression by groups with Controls using Log values(First Tranche)

This table gives the consumption regression for each group with demographic controls for the first tranche. The Financial wealth, Income, Consumption, and Housing wealth are in dollar amount. finw, incbtax, consum, housw are financial wealth, income before tax, non-durable consumption and services, housing wealth respectively. FAMSIZE, AGEREF are average family size and the average age of the reference person in the household. logmtbl and logmtpm are the log value of mortgage balance and payments respectively. Within each group, the first row is the estimated value and the second row is the standard error.

	Intcpt	logfinw	loginc	loghous	logmtbl	logmtpm	FAMSIZE	AGEREF	marital	race
AG1	-9.5175	-0.0667	0.3789	-0.0924	-0.7369	0.4950	-0.0243	-0.0186	0.0053	0.0002
	11.9053	0.1171	0.3245	0.3412	0.7444	0.5708	0.2838	0.0329	0.0111	0.0155
AG2	5.3306	-0.0191	0.2403	0.1349	-0.1286	0.1295	0.0215	-0.0089	0.0005	-0.0025
	2.0920	0.0360	0.1569	0.1961	0.3373	0.3334	0.0815	0.0159	0.0021	0.0039
AG3	6.6288	-0.0223	-0.0170	-0.0462	0.0216	0.0812	0.0392	0.0121	0.0017	0.0052
	2.2467	0.0253	0.1407	0.1897	0.3061	0.2455	0.0686	0.0075	0.0028	0.0028
AG4	5.3934	0.0599	-0.2556	0.1299	0.2663	0.0288	0.0531	-0.0092	-0.0024	0.0008
	1.3321	0.0236	0.1323	0.1178	0.2056	0.2632	0.0607	0.0059	0.0029	0.0027
AG5	10.9548	0.0709	0.2725	-0.3051	-0.2529	0.2387	-0.0185	-0.0103	0.0020	-0.0009
	1.6425	0.0335	0.1210	0.1162	0.2043	0.1945	0.1041	0.0120	0.0034	0.0038
AG6	8.2011	0.1126	0.1113	-0.1683	0.0374	-0.1919	0.1593	-0.0136	0.0031	0.0041
	1.3049	0.0399	0.1025	0.0941	0.1521	0.1558	0.0685	0.0065	0.0034	0.0040
AG7	8.3947	0.0370	0.0351	-0.0310	0.0375	0.0336	0.0646	-0.0296	0.0040	-0.0079
	1.0329	0.0291	0.0859	0.0773	0.0724	0.0809	0.0595	0.0053	0.0021	0.0026
AG8	5.8097	-0.0261	0.1751	0.0330	-0.1198	0.2101	0.0515	-0.0166	0.0026	0.0070
	1.3404	0.0243	0.0933	0.1074	0.0850	0.1033	0.0977	0.0062	0.0019	0.0022
AG9	4.4225	0.0298	0.1383	0.2210	-0.0842	0.0995	0.2427	-0.0198	-0.0018	0.0022
	1.4248	0.0326	0.0736	0.1064	0.0952	0.1012	0.0908	0.0061	0.0025	0.0030
AG10	6.5038	0.0307	-0.0443	0.1169	0.0627	-0.1064	0.2090	-0.0254	-0.0051	0.0039
	1.1555	0.0236	0.0813	0.0944	0.0731	0.0801	0.1259	0.0061	0.0023	0.0028
AG11	4.4815	-0.1201	0.2009	0.0642	0.0038	0.0345	0.1207	-0.0120	0.0082	0.0207
	1.6987	0.0463	0.0949	0.1336	0.0638	0.0612	0.1149	0.0058	0.0021	0.0046

Figure 1: **: Time Series Pattern of Tranche 1**

This figure plot the time series result of financial wealth, income before tax, housing wealth and consumption over 16 years for tranche 1.