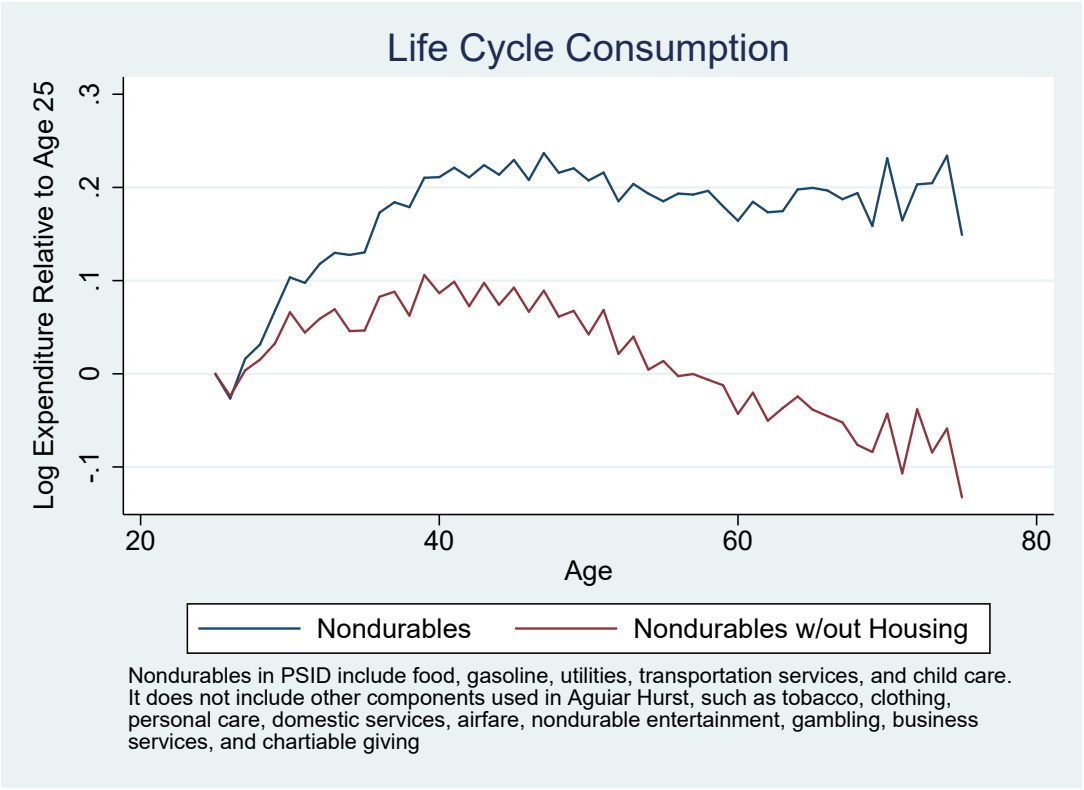
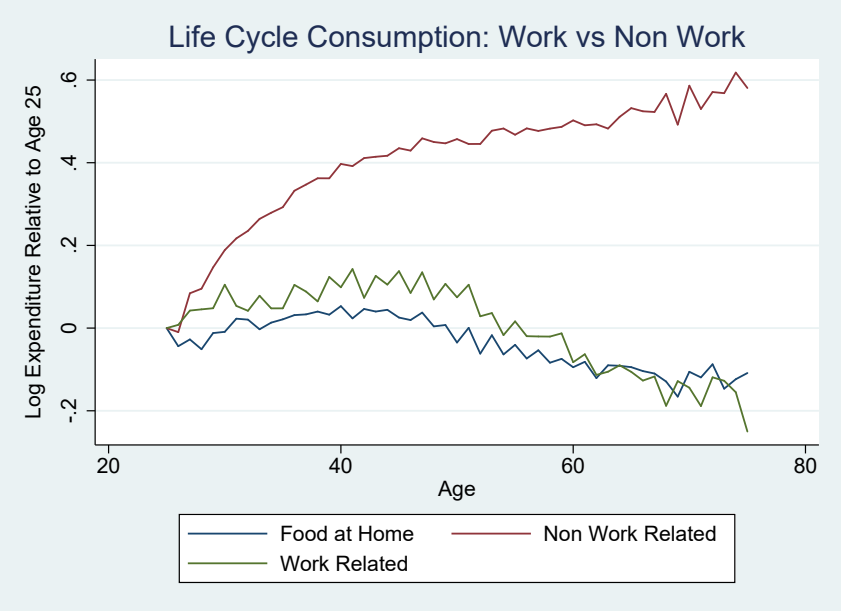
Household spending, leisure and well-being in retirement

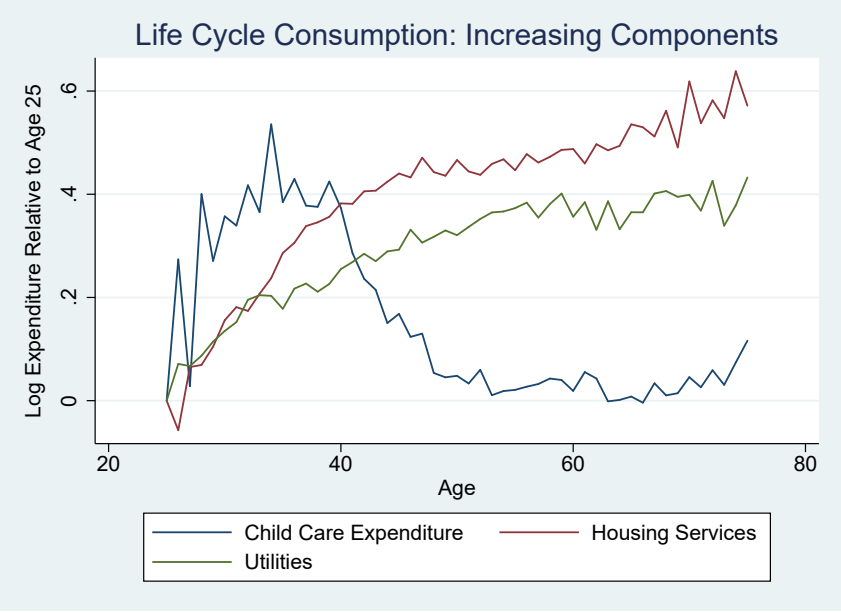
A big area of controversy in economics is how households adjust their consumption and leisure decisions as they approach and enter into retirement. Previous research has documented significant drops in households' spending at retirement, which potentially indicates that they have under-saved in preparation for old age and therefore suffer a fall in living standards. However, other papers have suggested that, as the opportunity cost of leisure falls at retirement, households optimally switch leisure for consumption and therefore falls in spending do not reflect drops in living standards. This project aims to document the extent to which these changes in spending and time use differ across different types of households, and ultimately, to understand what drives these difference.

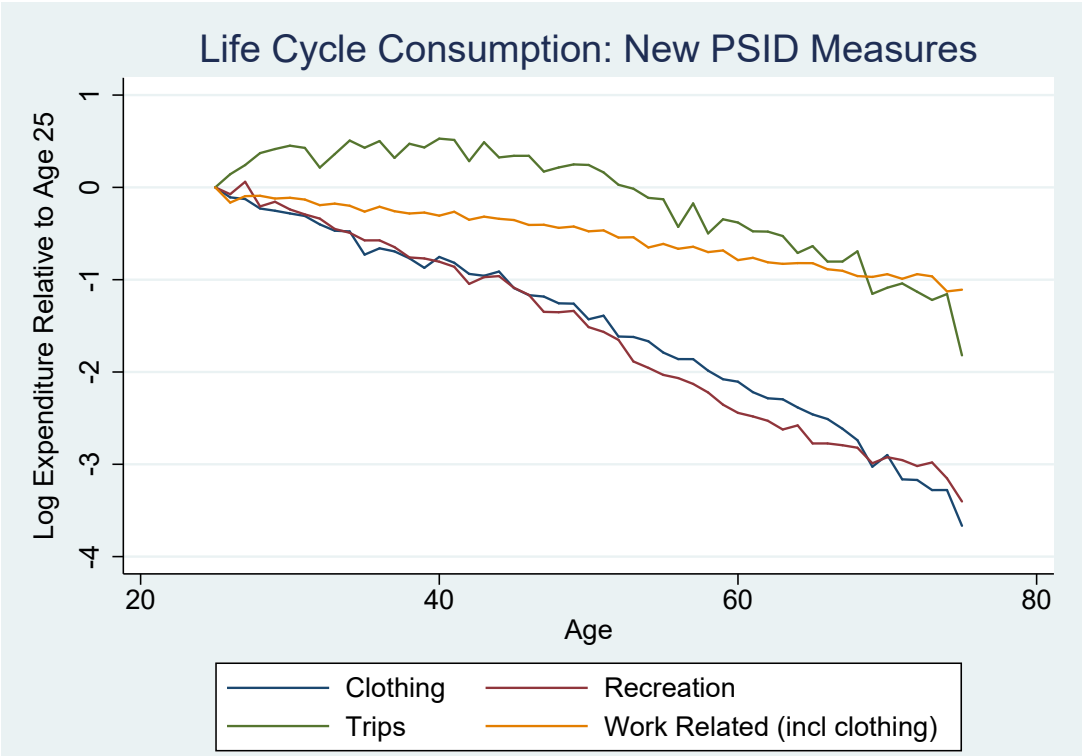
1 Life Cycle Consumption Dynamics (APC)

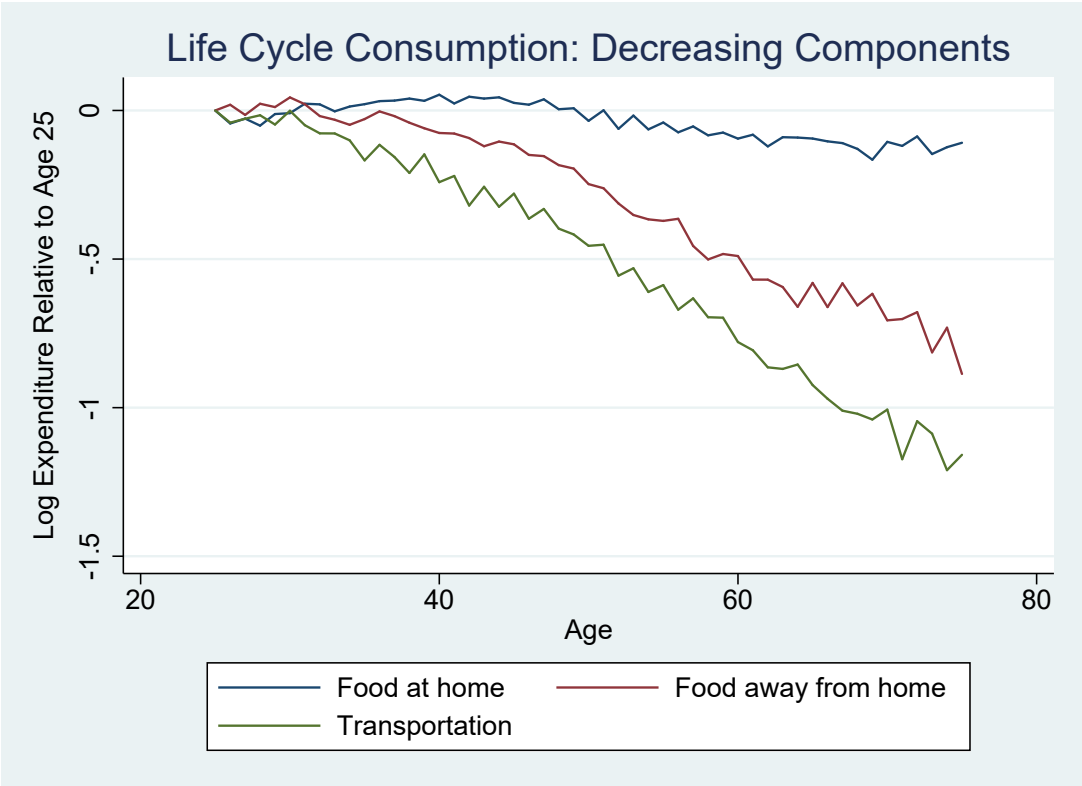


We replicate the method of Aguiar and Hurst (2013) to compute consumption dynamics over the life cycle. We use the Panel Study of Income Dynamics, whereas they use the CEX. These authors study the hump-shaped profile of nondurable expenditures and ask why nondurable expenditure declines during the second half of the life cycle, as seen in the red line of the first figure. The authors find that much of the decline is attributable to a decline in work related expenditures. This can be seen in the green line of the second figure.



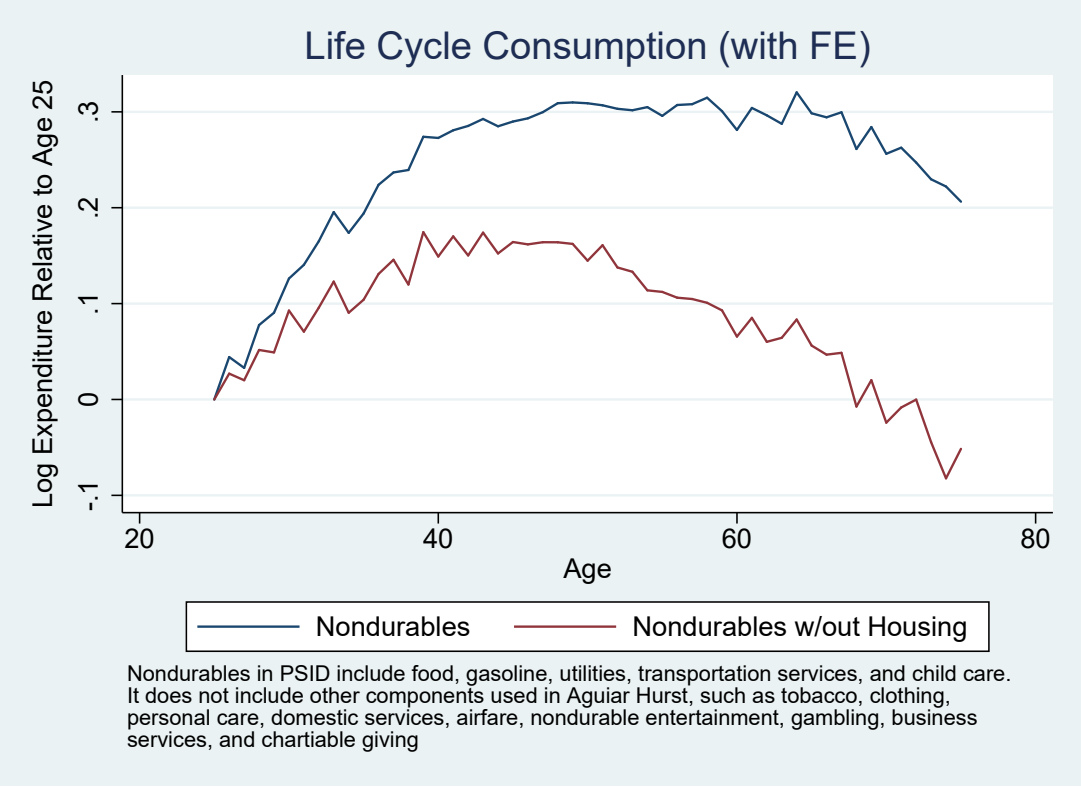


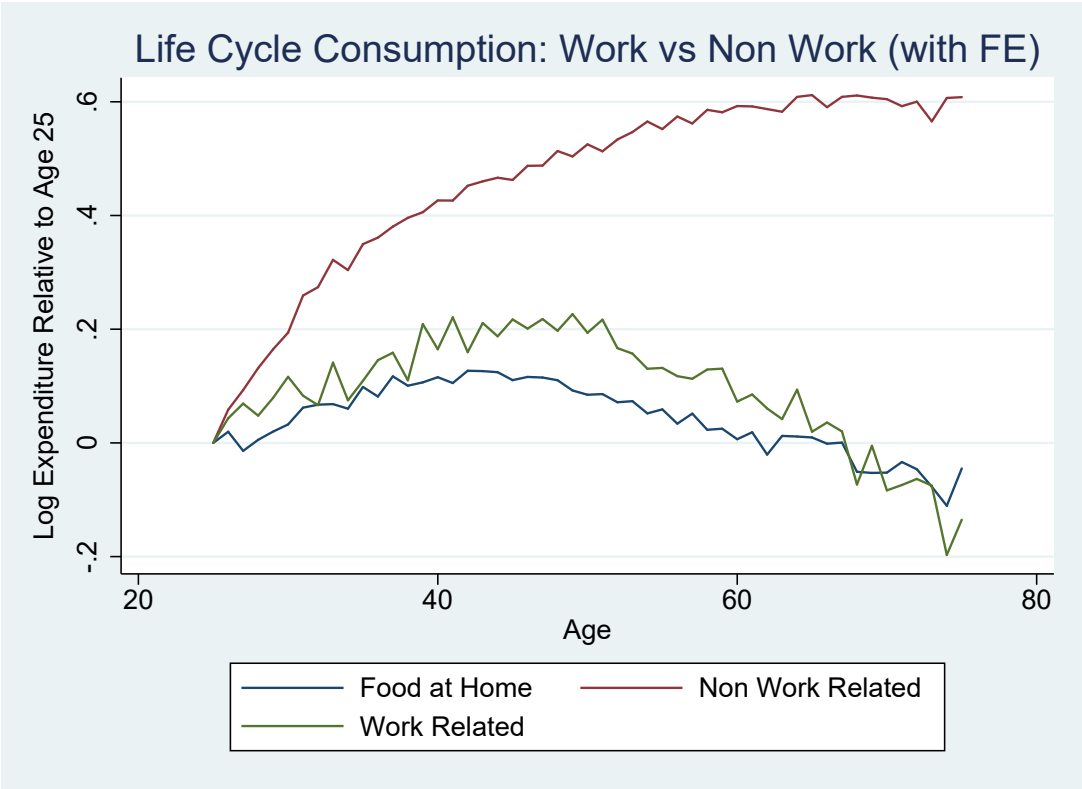

Life Cycle Consumption: New PSID Measures
Log Expenditure Relative to Age 25
1
0
-1
-2
-3
-4
20
40
60
80
Age
Clothing
Recreation
Trips
Work Related (incl clothing)

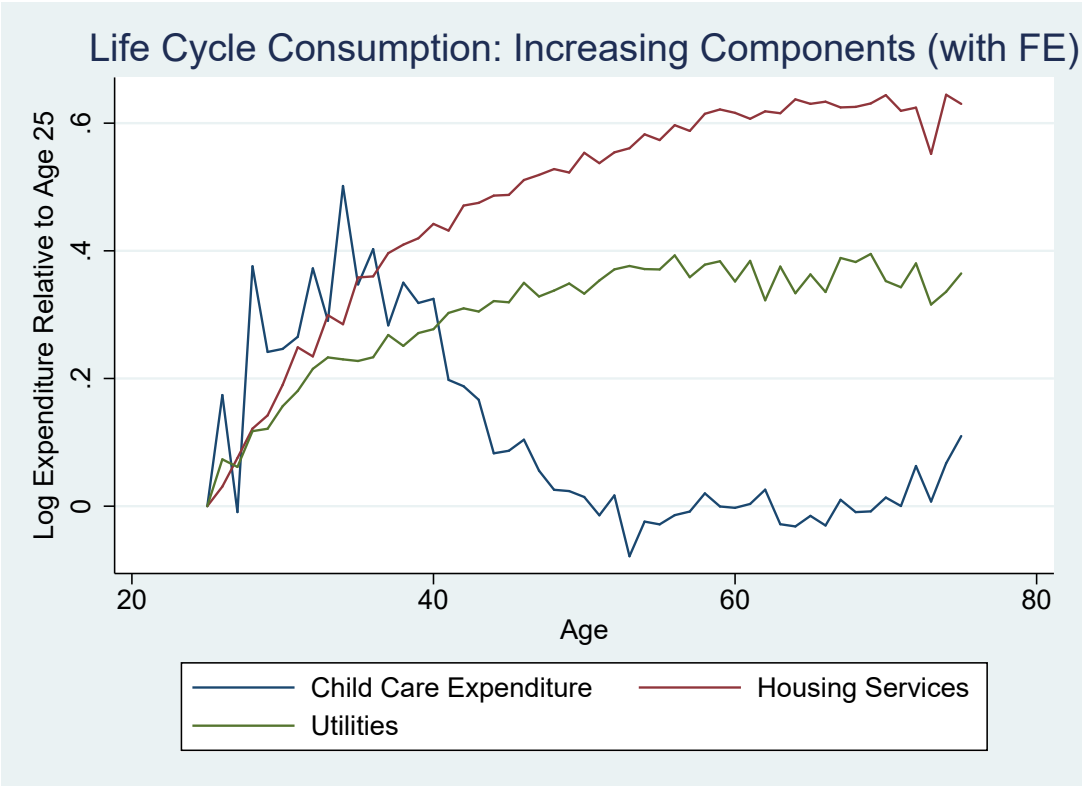

Life Cycle Consumption: Decreasing Components
Log Expenditure Relative to Age 25
0
-.5
-1
-1.5
20
40
60
80
Age
Food at home
Food away from home
Transportation

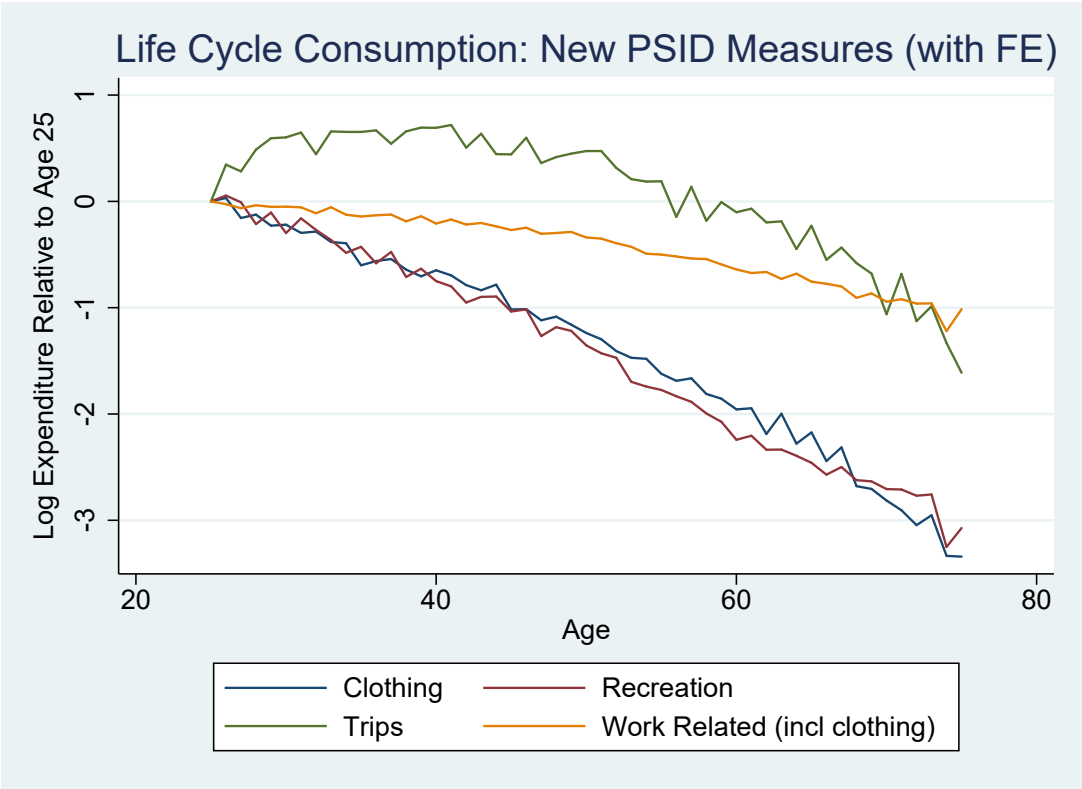
2 Life Cycle Consumption Dynamics (with HH FE)

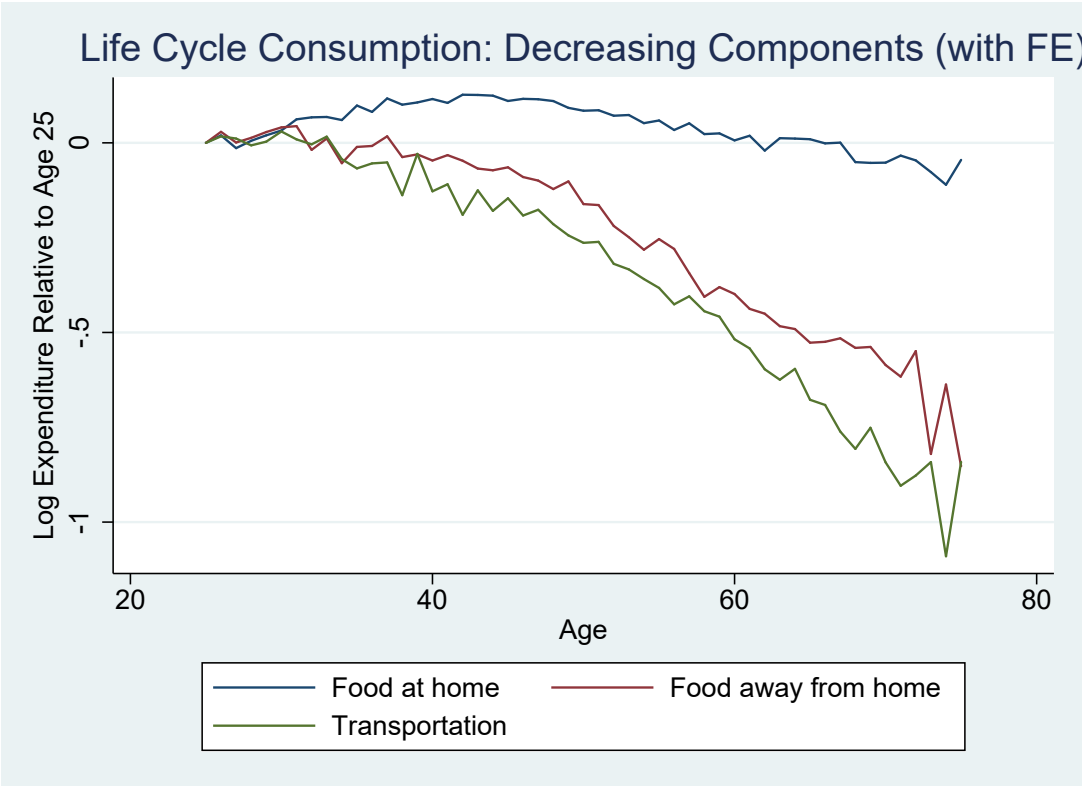
We extend the above analysis to take advantage of the longitudinal nature of the PSID. We add a household fixed effect to the age-period-cohort regression and take out the cohort effect.




Life Cycle Consumption: Work vs Non Work (with FE)
Log Expenditure Relative to Age 25
-.2
0
.2
.4
.6
20
40
60
80
Age
Food at Home
Non Work Related
Work Related


Life Cycle Consumption: Increasing Components (with FE)
Log Expenditure Relative to Age 25
0
.2
.4
.6
20
40
60
80
Age
Child Care Expenditure
Housing Services
Utilities

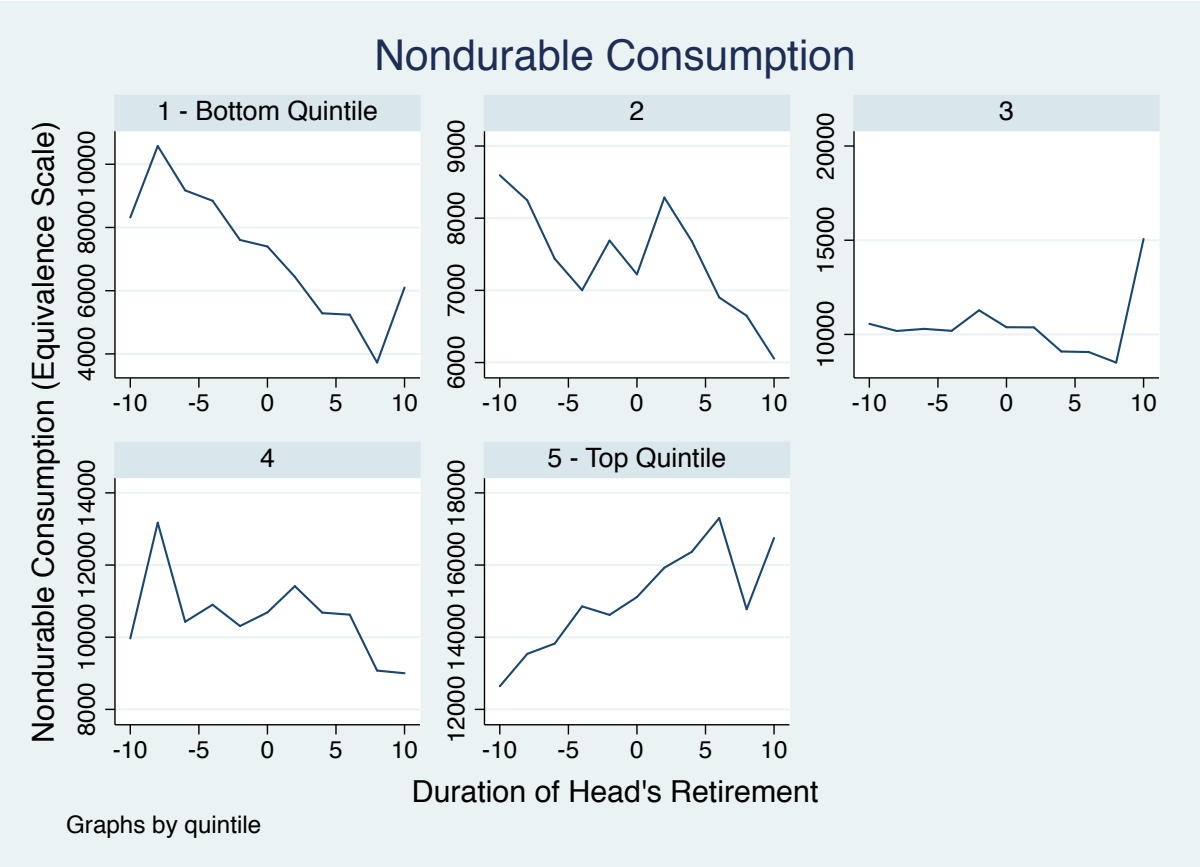

Life Cycle Consumption: New PSID Measures (with FE)
Log Expenditure Relative to Age 25
1
0
-1
-2
-3
20
40
60
80
Age
Clothing
Recreation
Trips
Work Related (incl clothing)


Life Cycle Consumption: Decreasing Components (with FE)
Log Expenditure Relative to Age 25
0
-.5
-1
20
40
60
80
Age
Food at home
Food away from home
Transportation

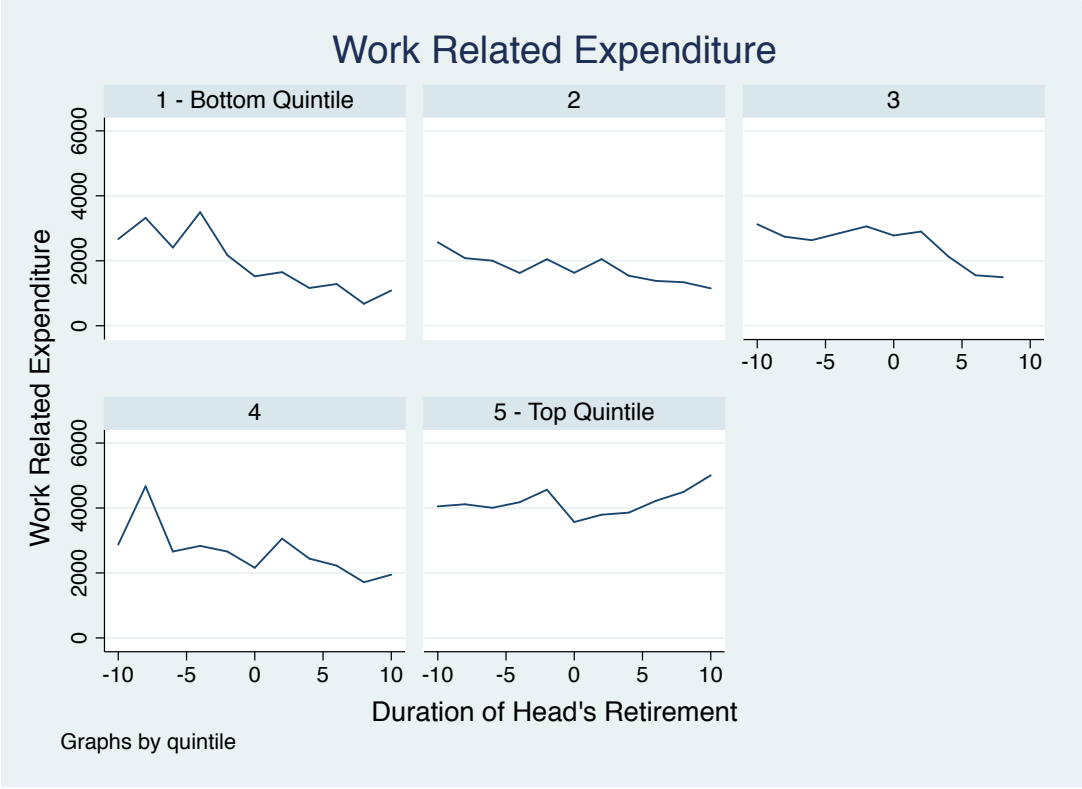
3 Consumption around Retirement

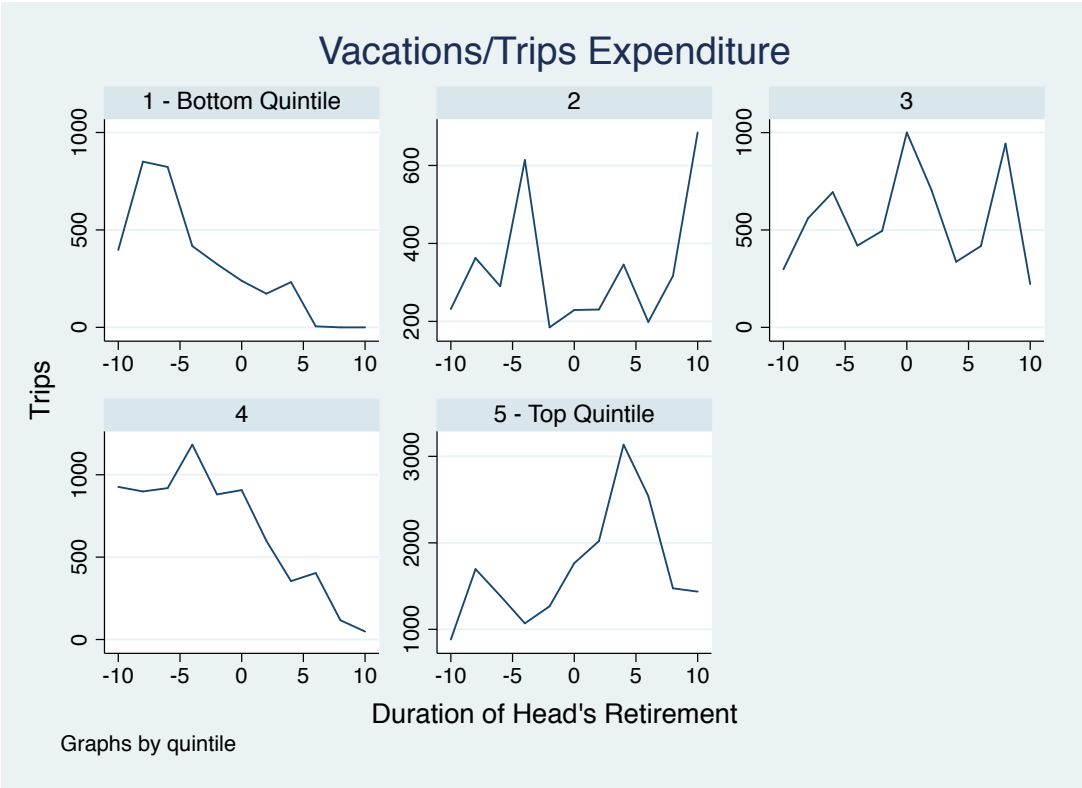
To explore the impact of retirement, we compute mean consumption based on the retirement duration of the head of household (where the head retires at time zero). We explore the heterogeneous impact of retirement by quintiles based on social security income.

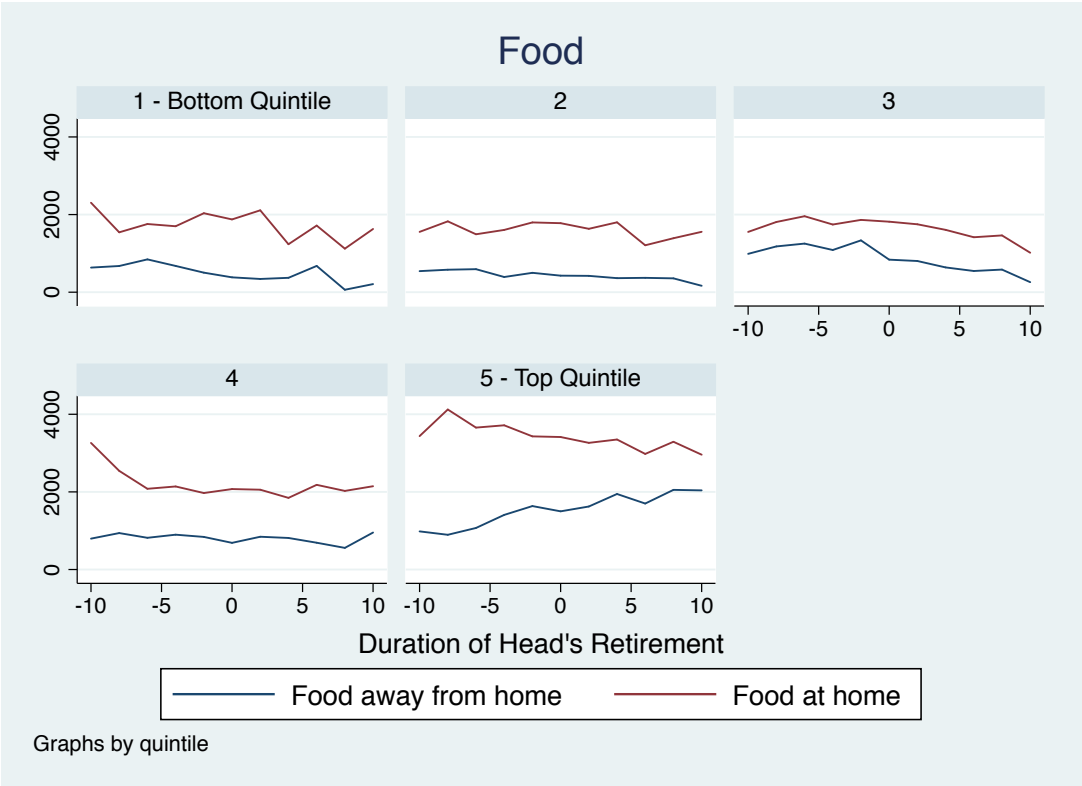
While nondurable consumption (scaled for family size) declines for most of the population, we actually observe an increase in consumption for those in the top quintile. Similar behavior is apparent for the category of work related expenditure (in this case, gasoline/transportation/food away from home) where a decline is observed for the bottom four quintiles, but not the top quintile. Much of this can be attributed to food away from home, which declines for the bottom four quintiles, but not the top quintile. Finally, when we look at expenditure on trips/vacations, we observe a similarly large increase for households in the top quintile.



Of course, these are just simple averages for now. The next step will be to integrate this analysis with the method of Aguiar and Hurst. Then we can look at the impact of retirement on consumption while controlling for age, period, cohort, marital status, and family size effects. This will hopefully allow us to get a better picture of the heterogeneous impact of retirement.

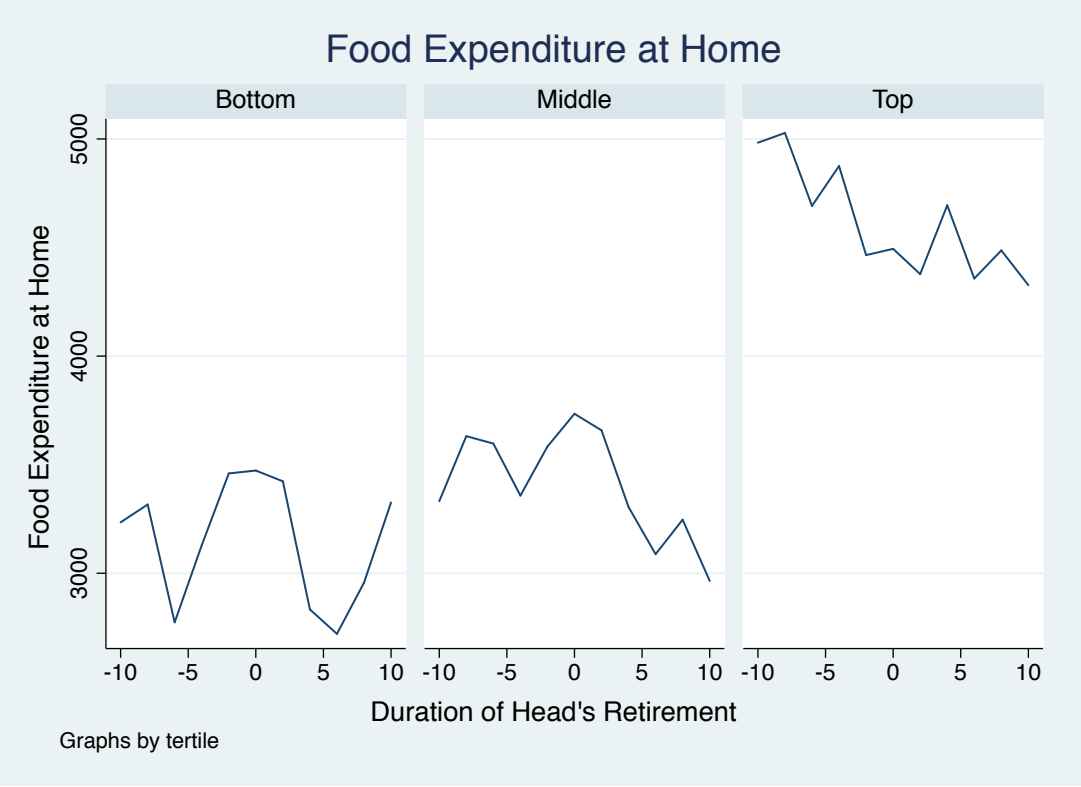

Work Related Expenditure
1 - Bottom Quintile
2
3
4
5 - Top Quintile
Work Related Expenditure
0
2000
4000
6000
-10
-5
0
5
10
Duration of Head's Retirement
Graphs by quintile


Vacations/Trips Expenditure
1 - Bottom Quintile
2
3
4
5 - Top Quintile
Trips
0
500
1000
200
400
600
1000
2000
3000
-10
-5
0
5
10
Duration of Head's Retirement
Graphs by quintile


Food
1 - Bottom Quintile
2
3
4
5 - Top Quintile
0
2000
4000
-10
-5
0
5
10
Duration of Head's Retirement
Food away from home
Food at home
Graphs by quintile

4 Consumption around Retirement by Tertile Pre-2005

To further explore the impact of retirement, we compute the mean consumption based on tertile for different nondurable categories.



5 Imputed Expenditure versus Sum of Categorical

Figure 1: For categories before 2005

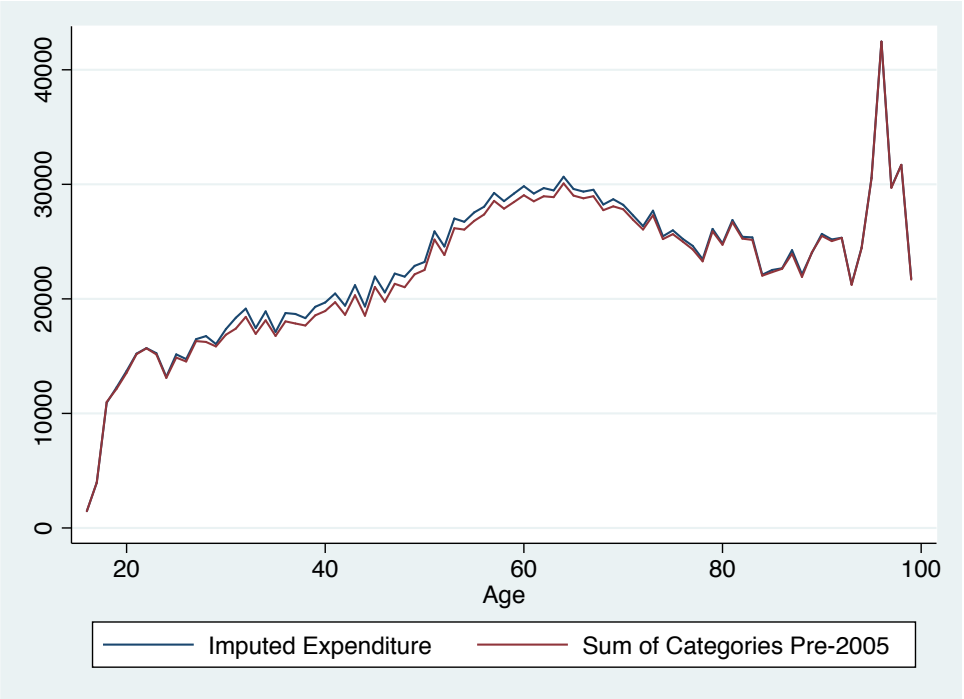
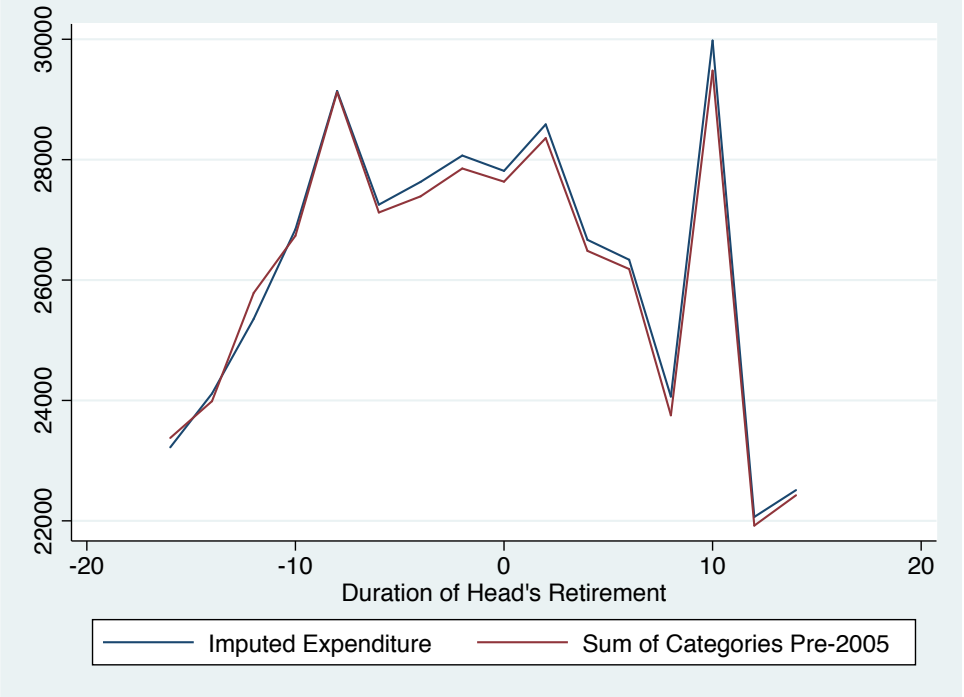


Figure 2: For categories before 2005



6 Imputed Expenditure versus Sum of Categorical

Figure 3: For categories before 2005

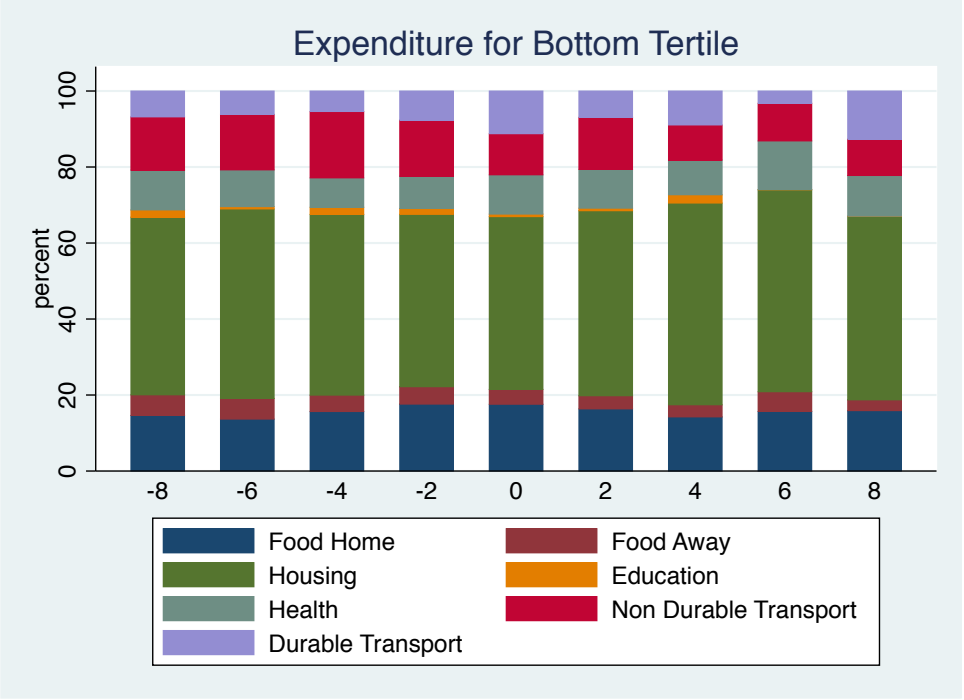


Figure 4: For categories before 2005

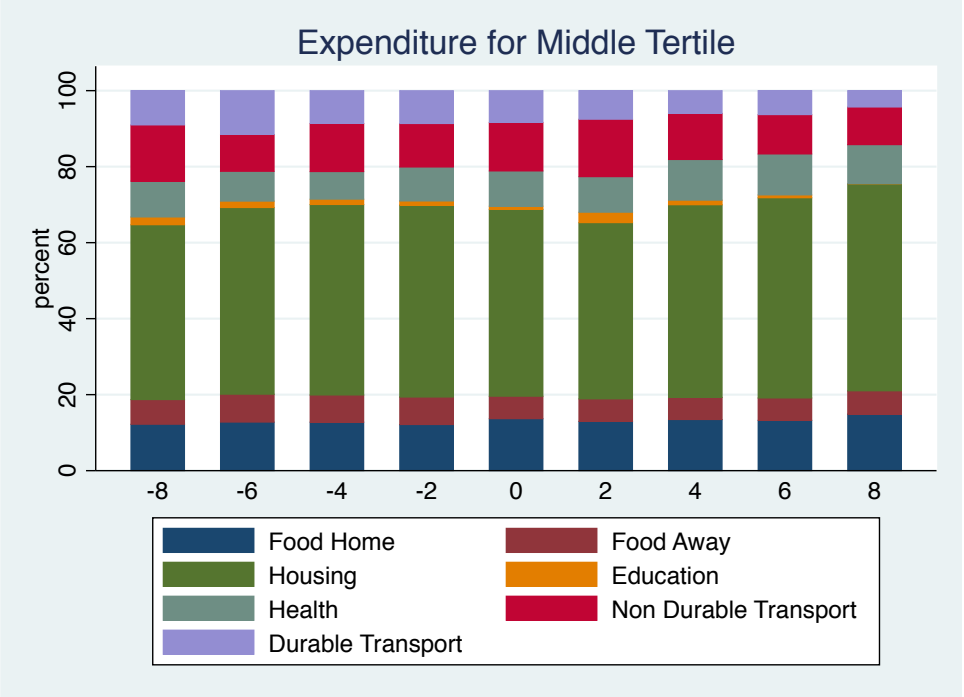
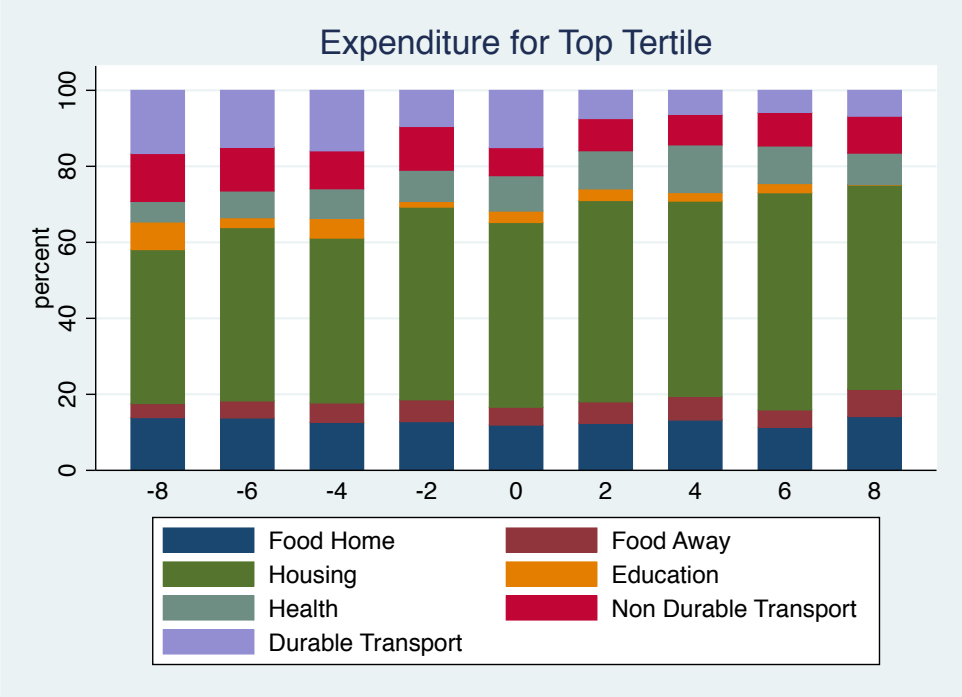


Figure 5: For categories before 2005



7 Bar Graphs for Categorical Expenditure

Figure 6: 1 - Spouse never works

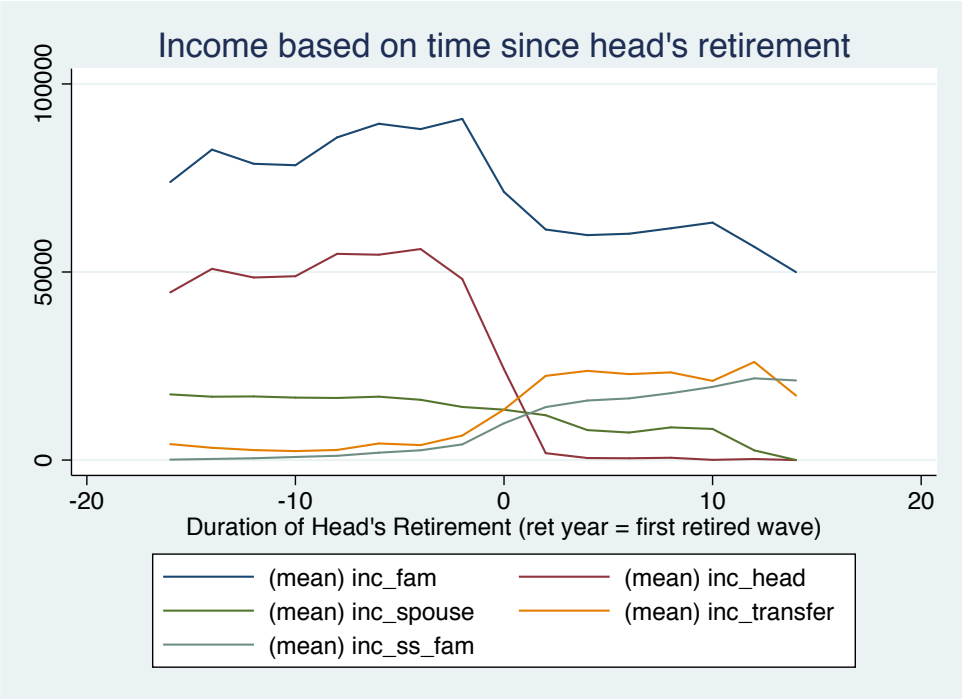


Figure 7: 2 - Spouse always works

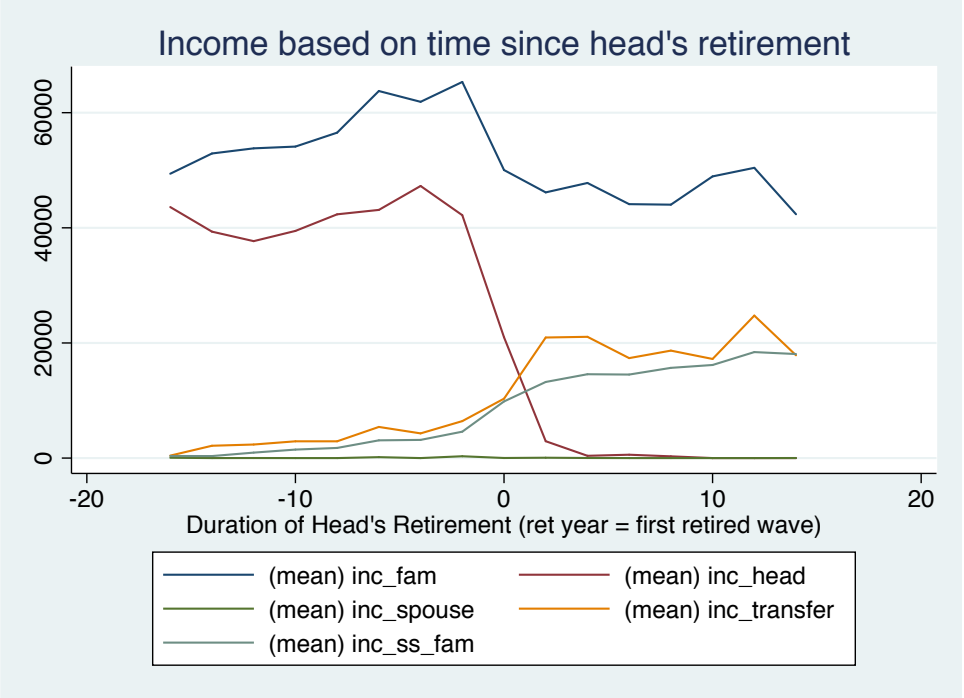


Figure 8: 3 - Spouse has same retirement transition +/- wave

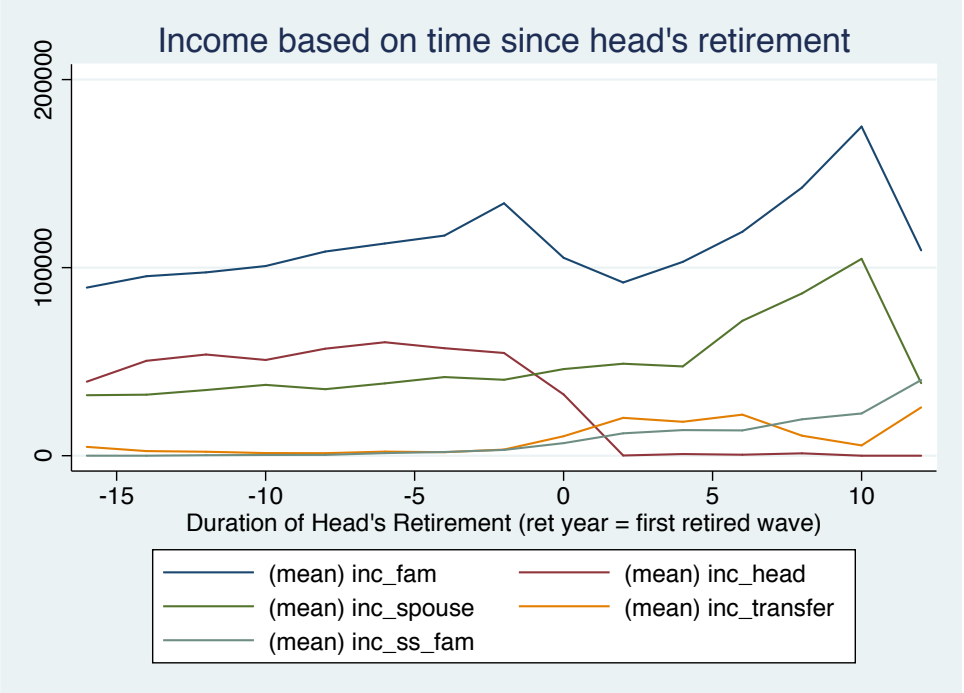


Figure 9: 4 - Spouse has a different retirement transition

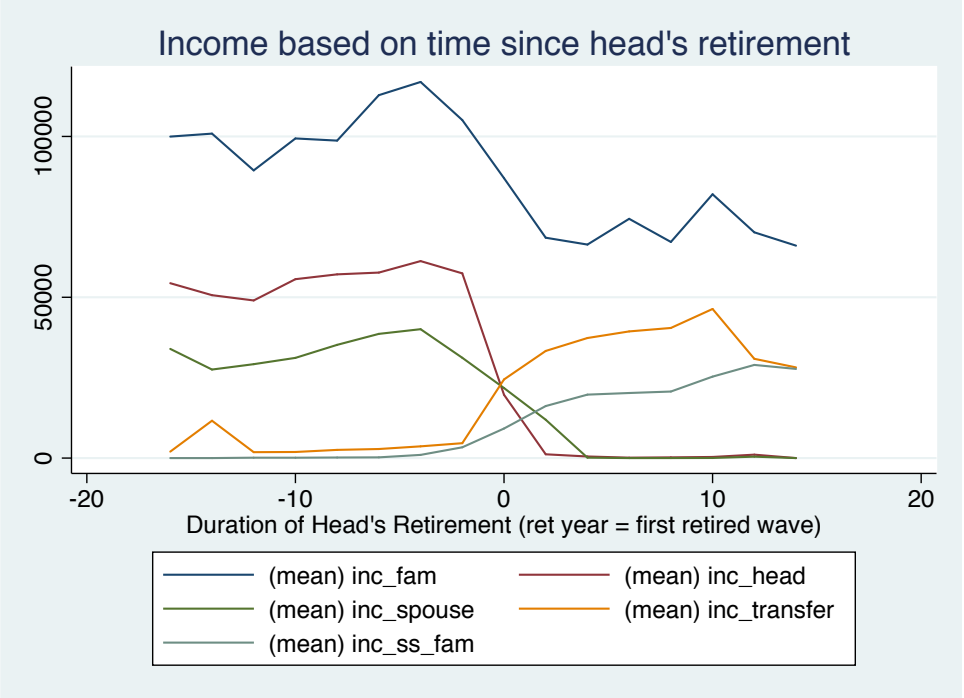
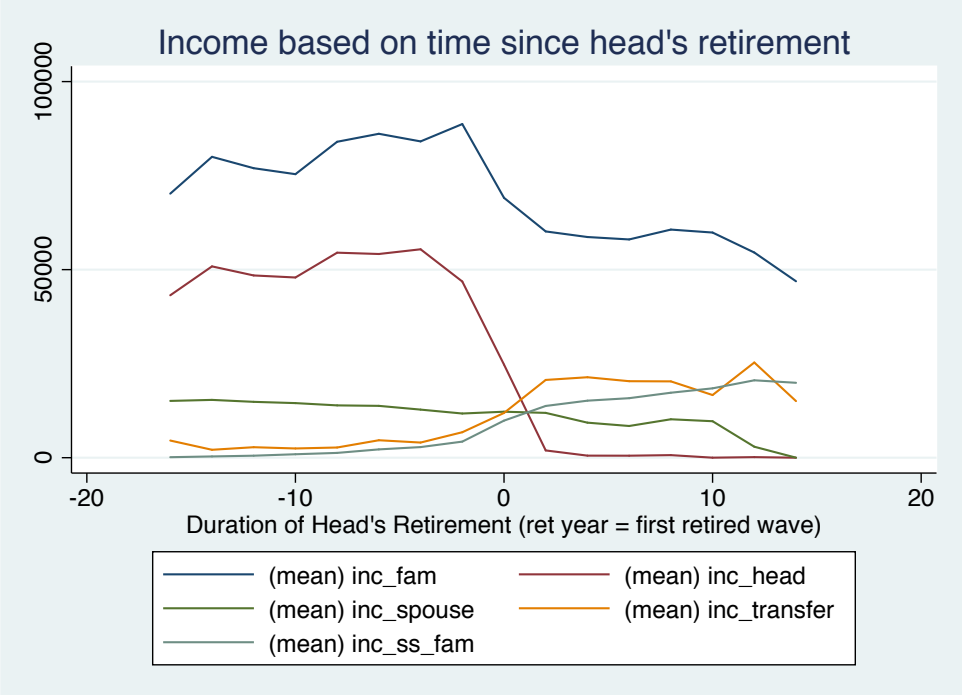


Figure 10: 5 - Ignoring the spouse



8 Expenditure based on tertiles for spouse retirement

8.1 Spouse Never Works

Figure 11: 1 - Spouse never works(Smoothed)

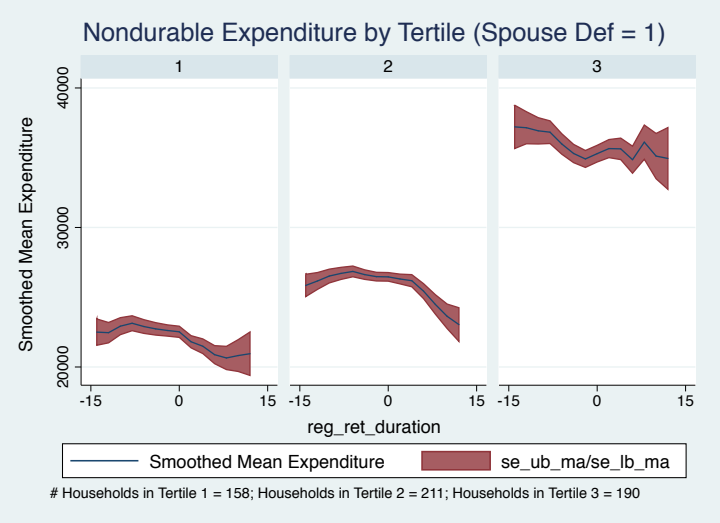
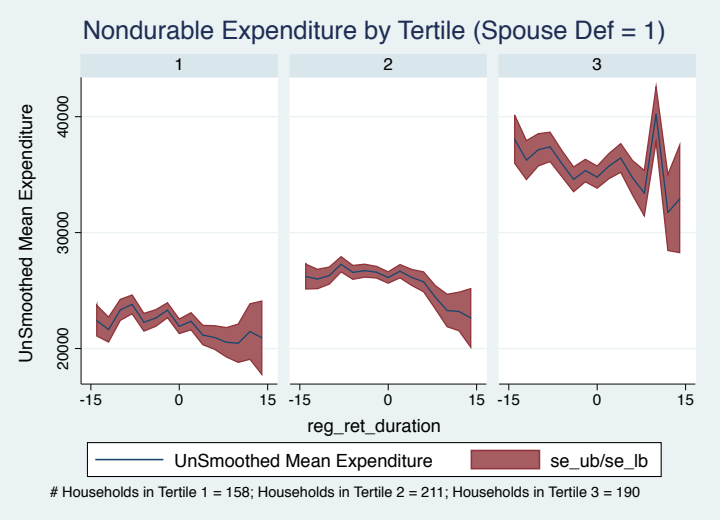


Figure 12: 1 - Spouse never works(Unsmoothed)



8.2 Spouse always works

Figure 13: 2 - Spouse always works(Smoothed)

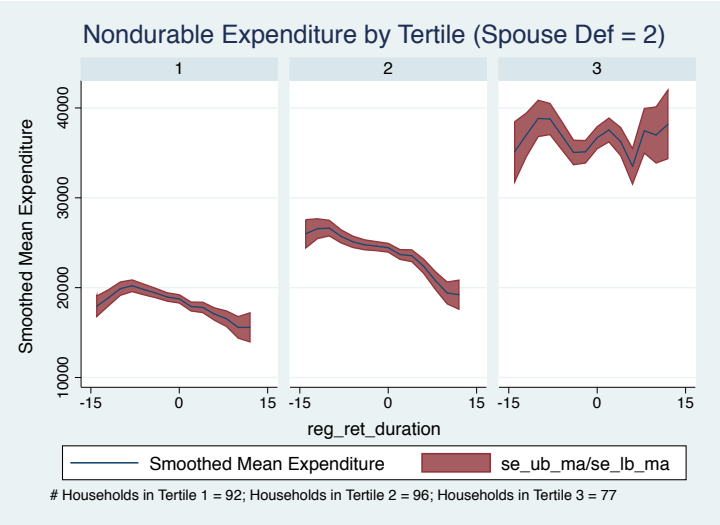
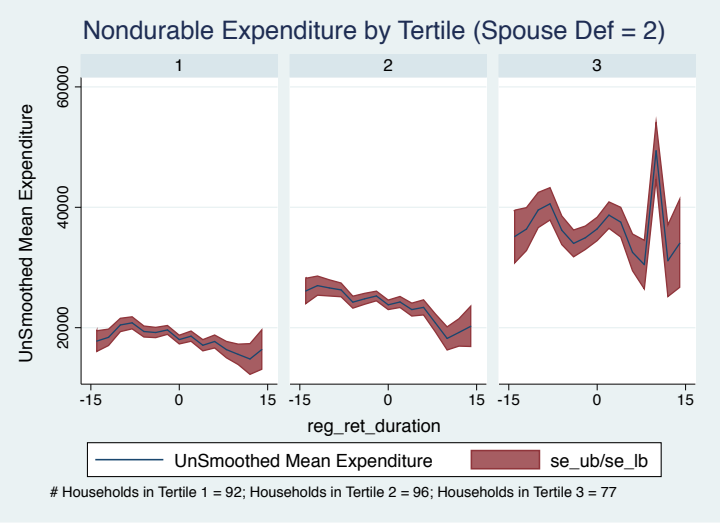


Figure 14: 2 - Spouse always works(Unsmoothed)



8.3 Same retirement transition +/- wave

Figure 15: 3 - Spouse has same retirement transition +/- wave (Smoothed)

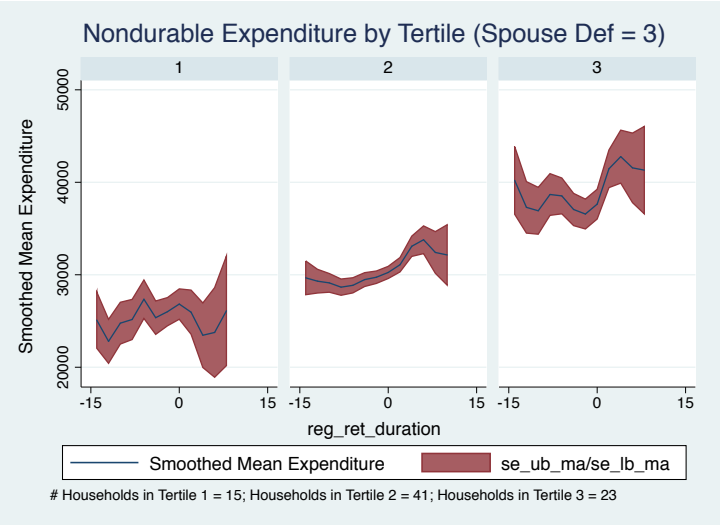
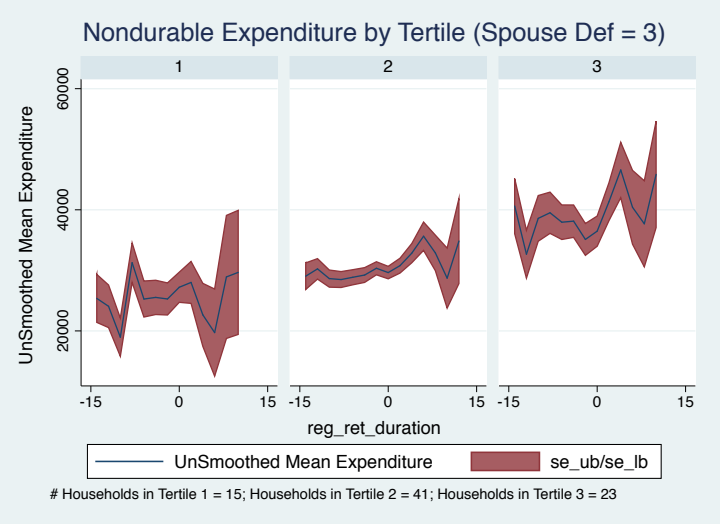


Figure 16: 3 - Spouse has same retirement transition +/- wave(Unsmoothed)



8.4 Different retirement transition

Figure 17: 4 - Spouse has a different retirement transition(Smoothed)

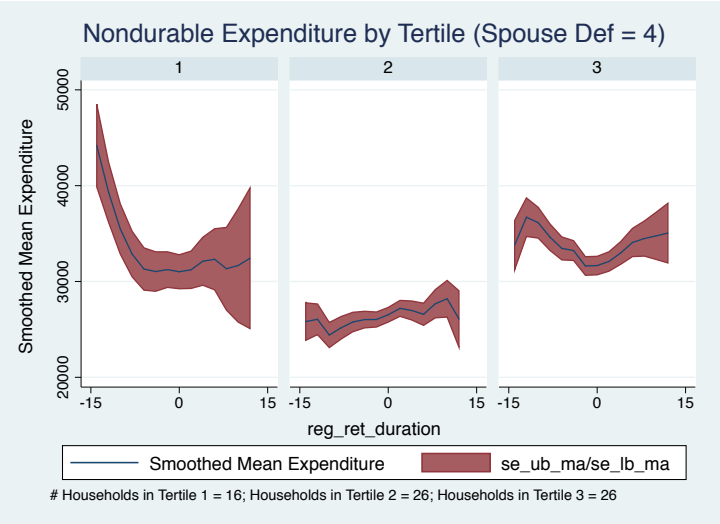
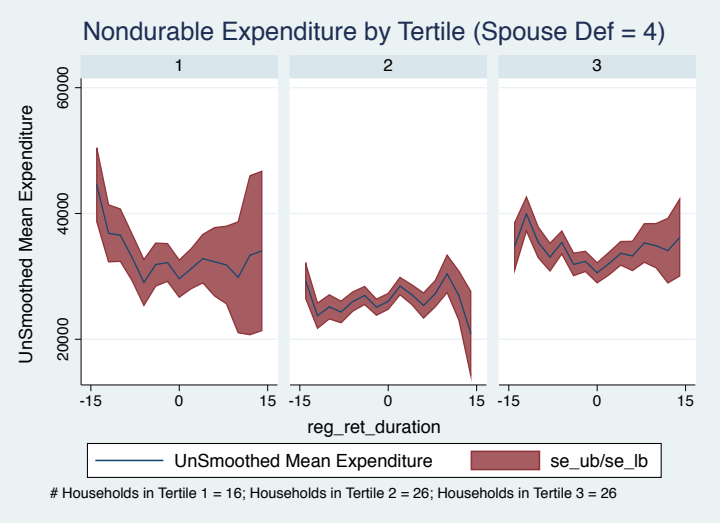


Figure 18: 4 - Spouse has a different retirement transition(Unsmoothed)



8.5 Ignoring the spouse

Figure 19: 5 - Ignoring the spouse (Smoothed)

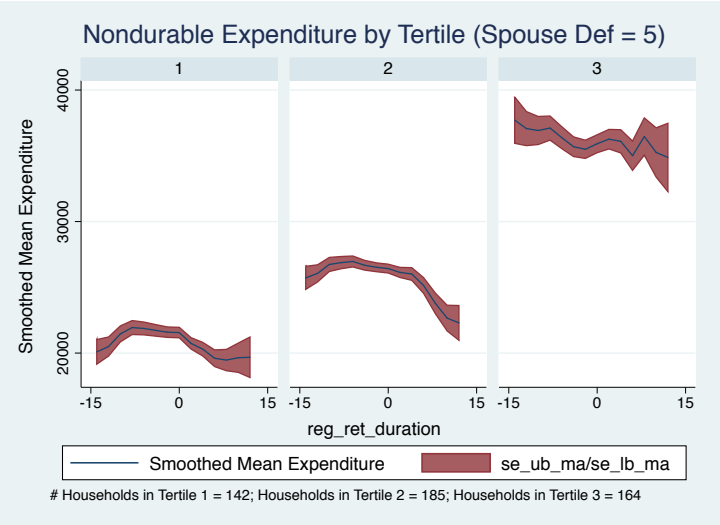
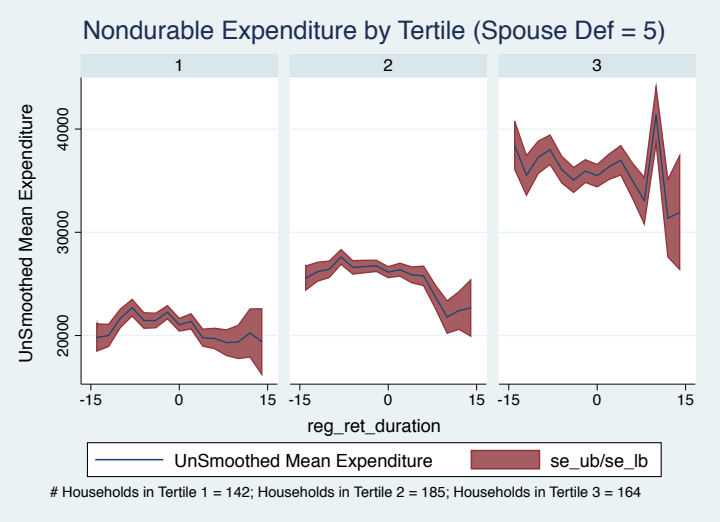


Figure 20: 5 - Ignoring the spouse(Unsmoothed)



9 Categorical Expenditure Based on Spouse Defination

9.1 1- Spouse Never Works

Figure 21: Food Expenditure at Home

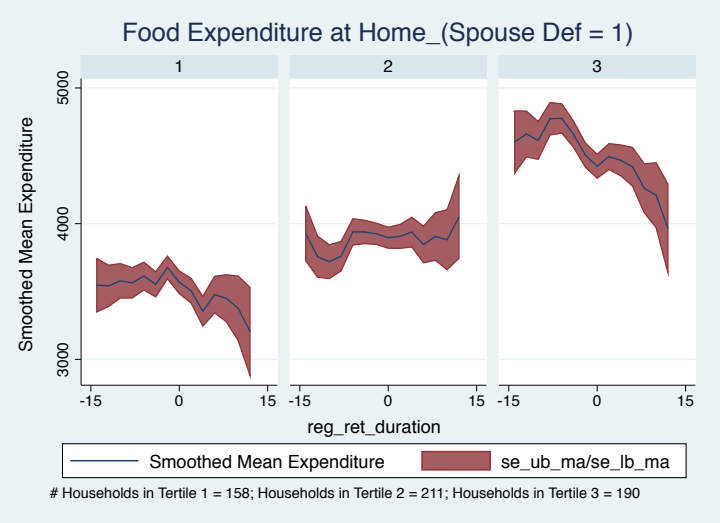


Figure 22: Food Expenditure Away from Home

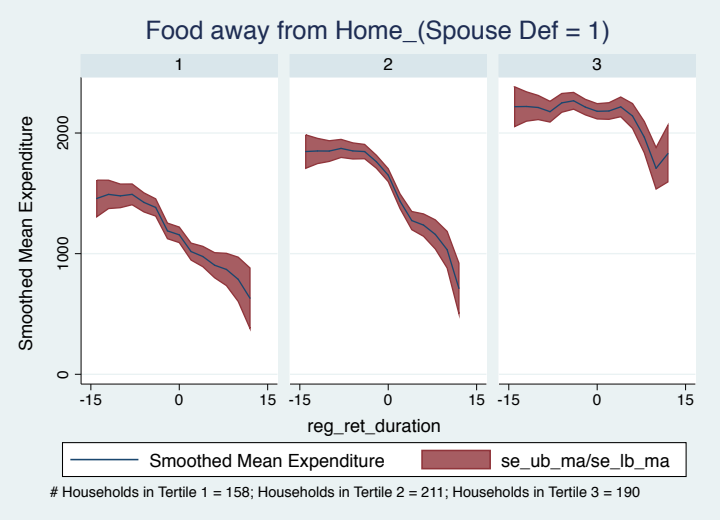


Figure 23: Expenditure on Housing

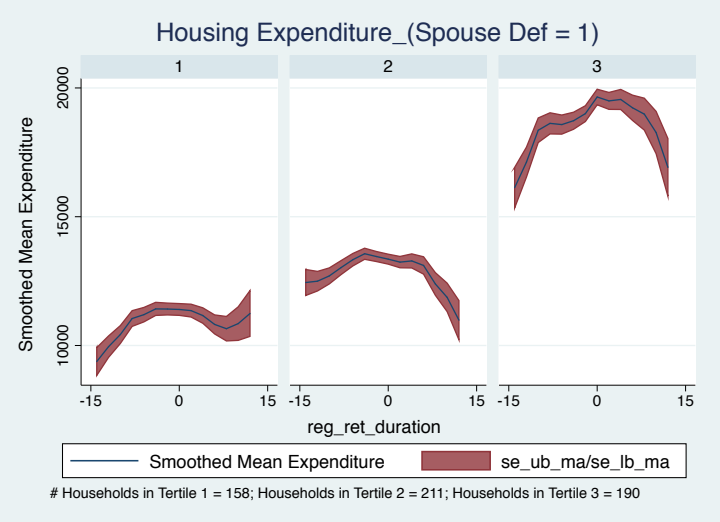


Figure 24: Expenditure on Education

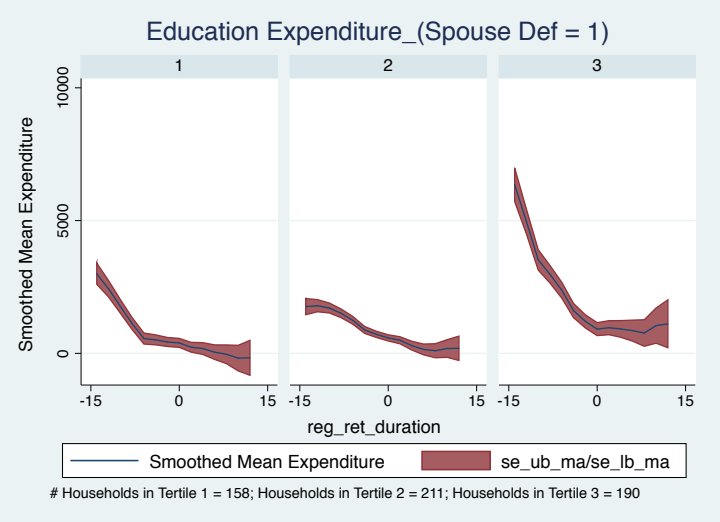


Figure 25: Expenditure on Health

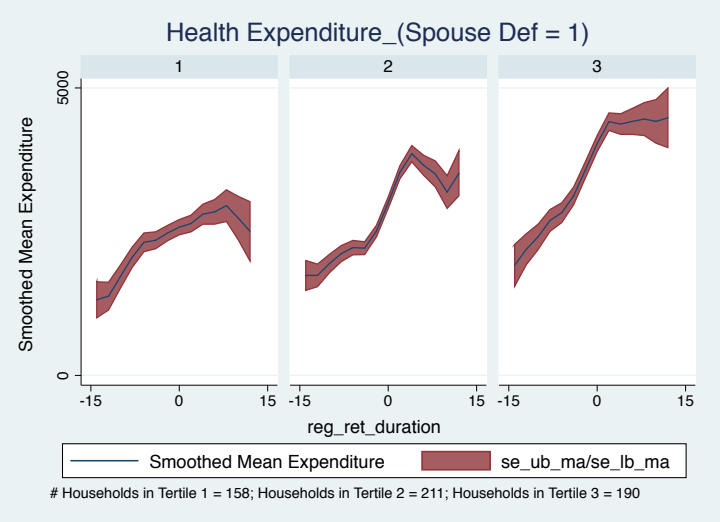
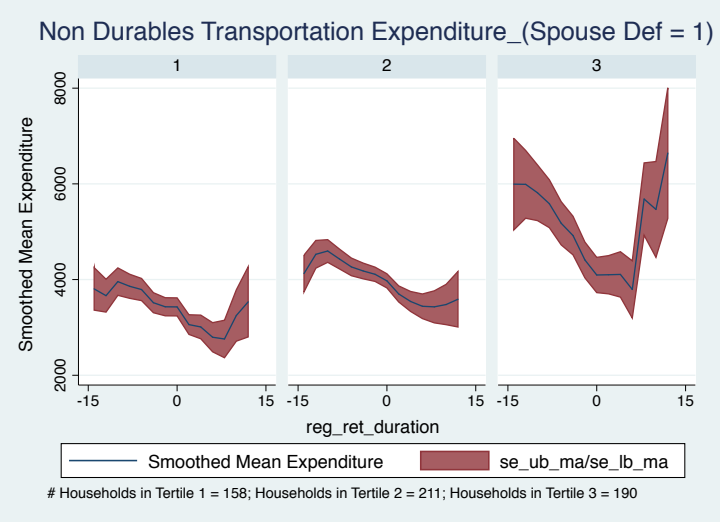


Figure 26: Expenditure on Non-Durable Transport



9.2 2- Spouse Always Works

Figure 27: Food Expenditure at Home

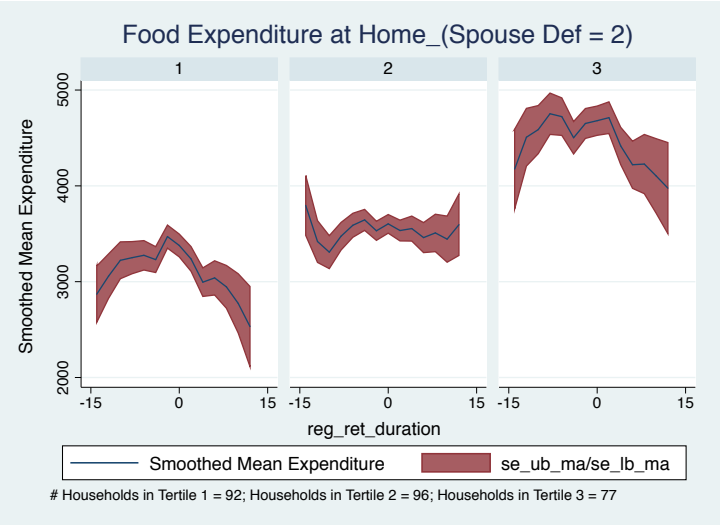


Figure 28: Food Expenditure Away from Home

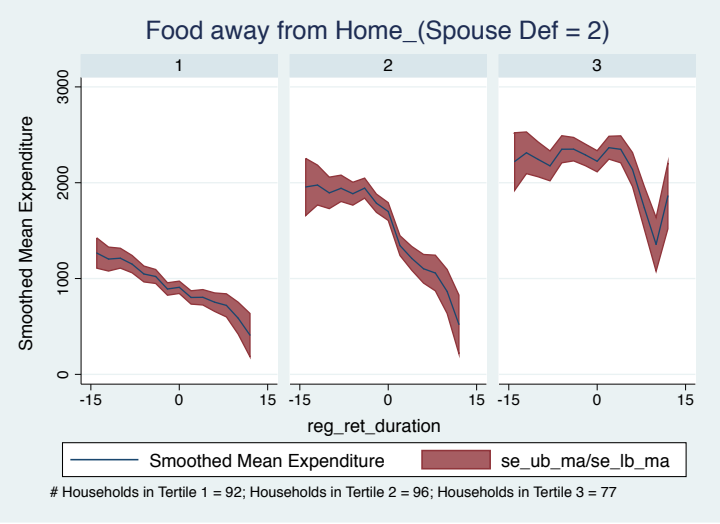


Figure 29: Expenditure on Housing

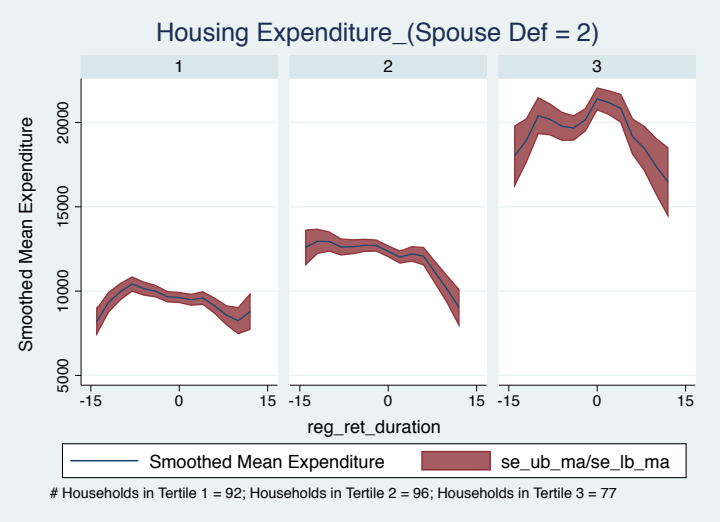


Figure 30: Expenditure on Education

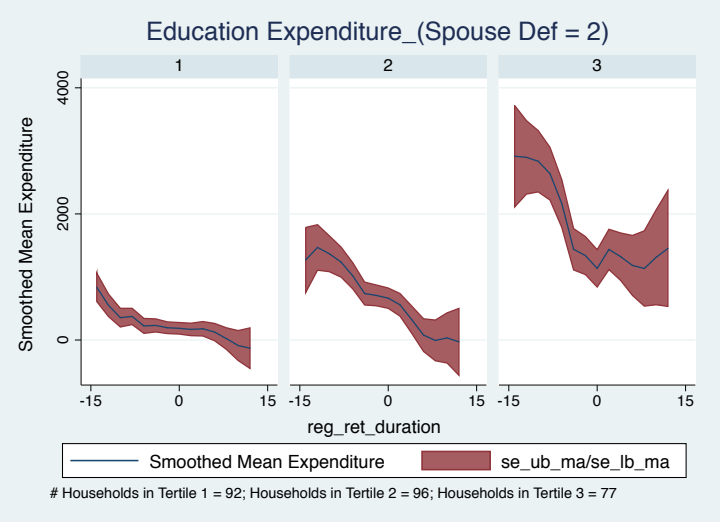


Figure 31: Expenditure on Health

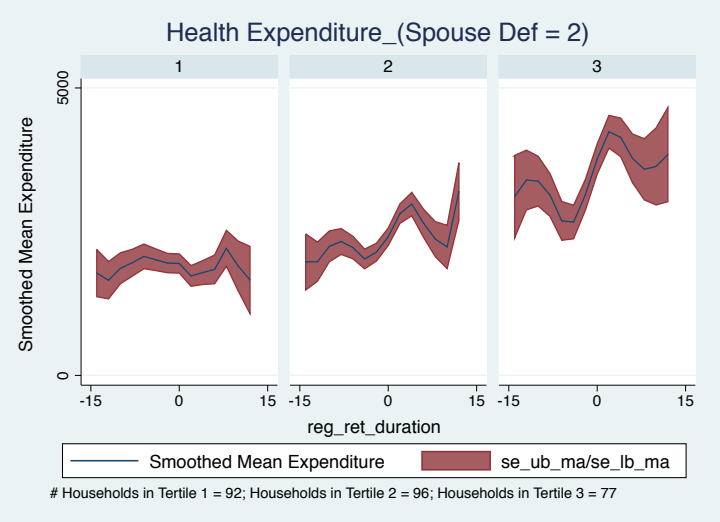
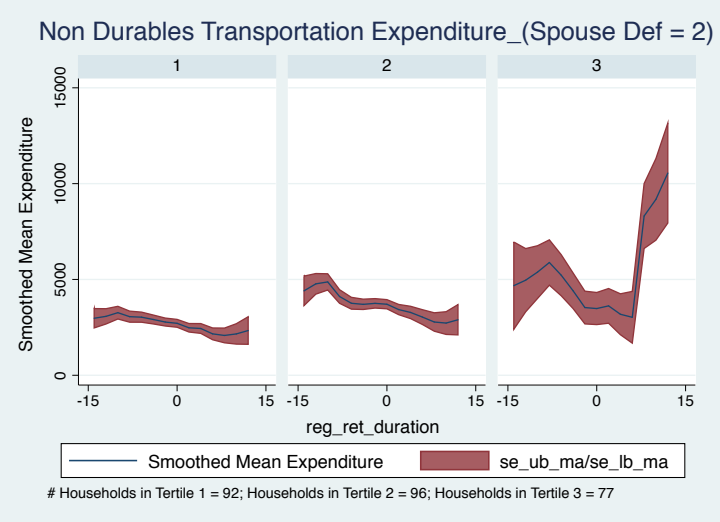


Figure 32: Expenditure on Non-Durable Transport



9.3 3- Spouse has same retirement transition +/- wave

Figure 33: Food Expenditure at Home

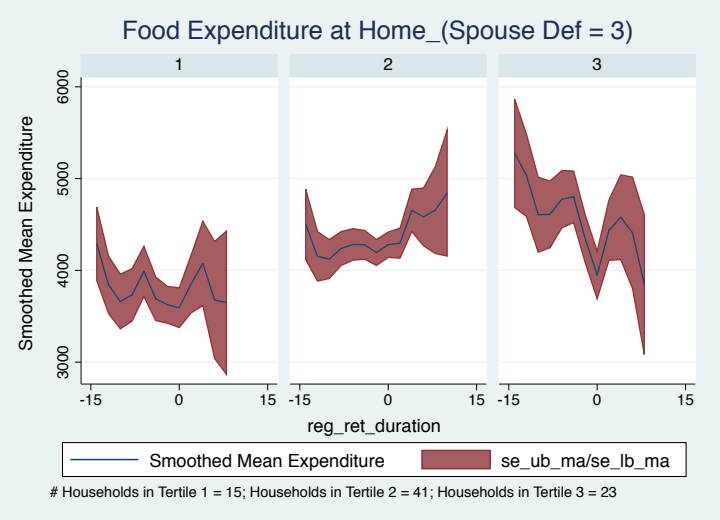


Figure 34: Food Expenditure Away from Home

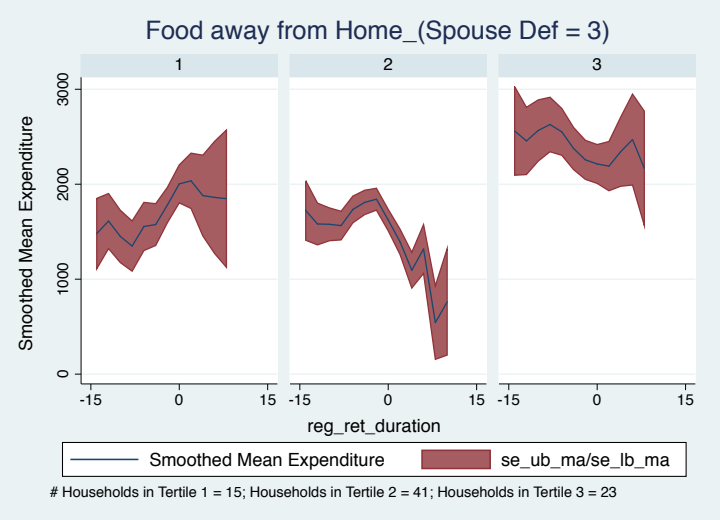


Figure 35: Expenditure on Housing

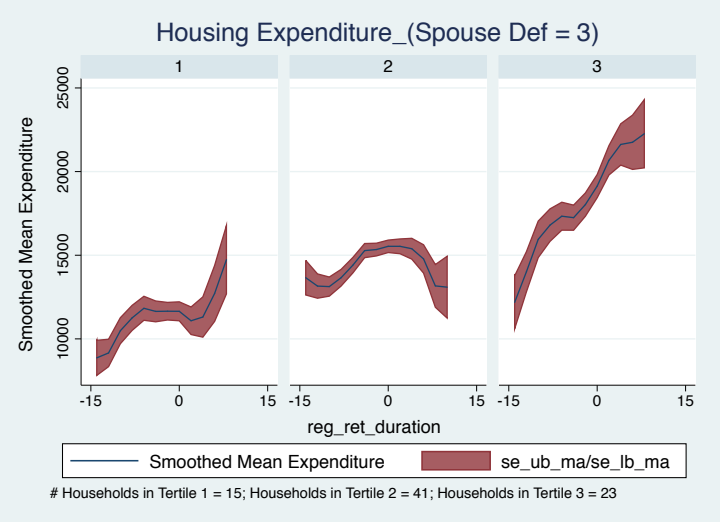


Figure 36: Expenditure on Education

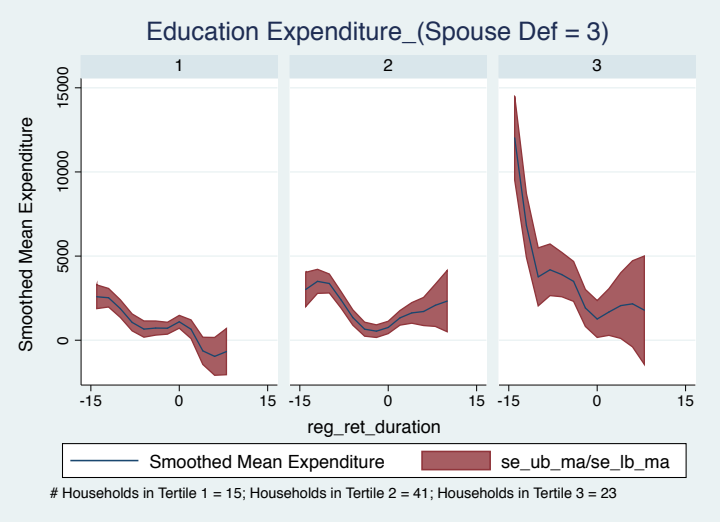


Figure 37: Expenditure on Health

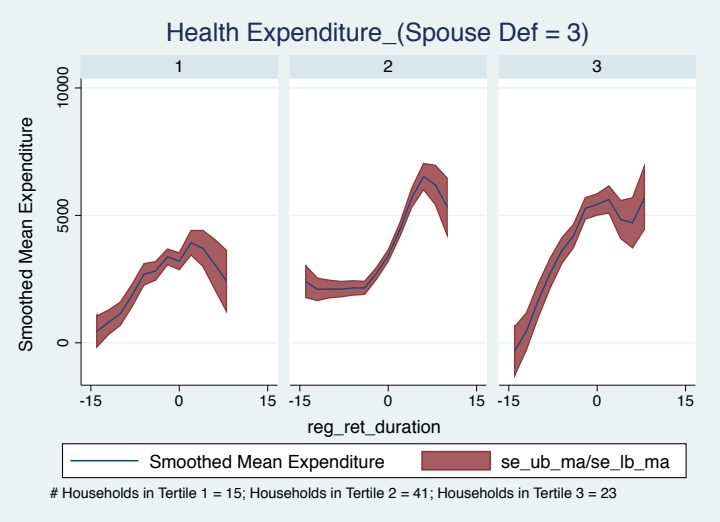
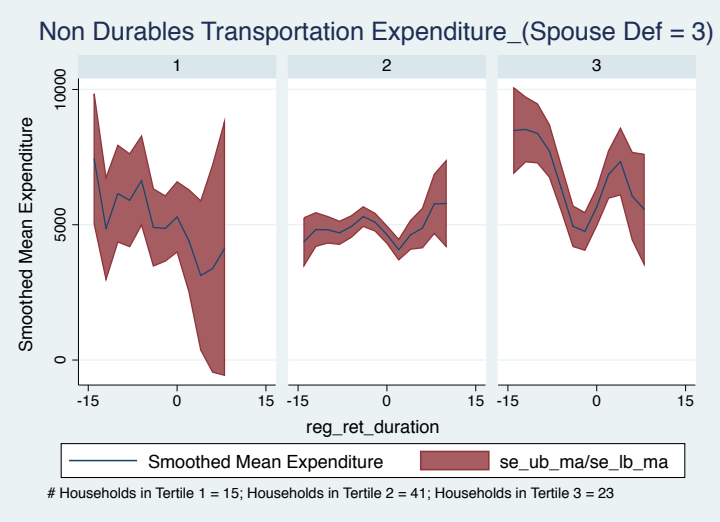


Figure 38: Expenditure on Non-Durable Transport



9.4 4-Spouse has Different Retirement Transition

Figure 39: Food Expenditure at Home

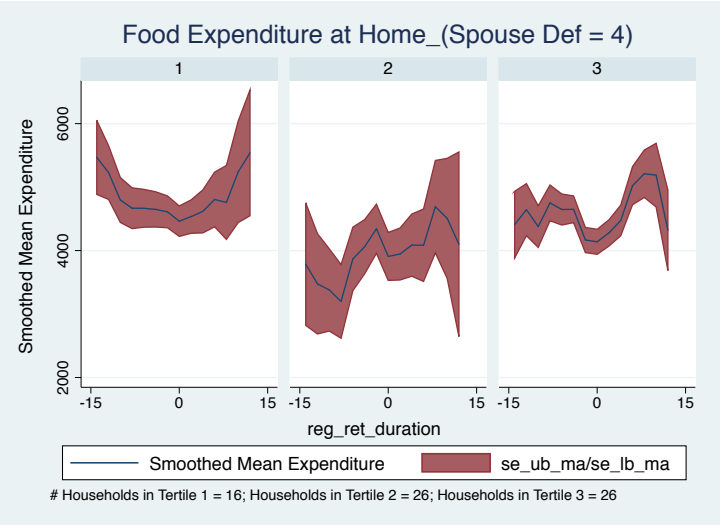


Figure 40: Food Expenditure Away from Home

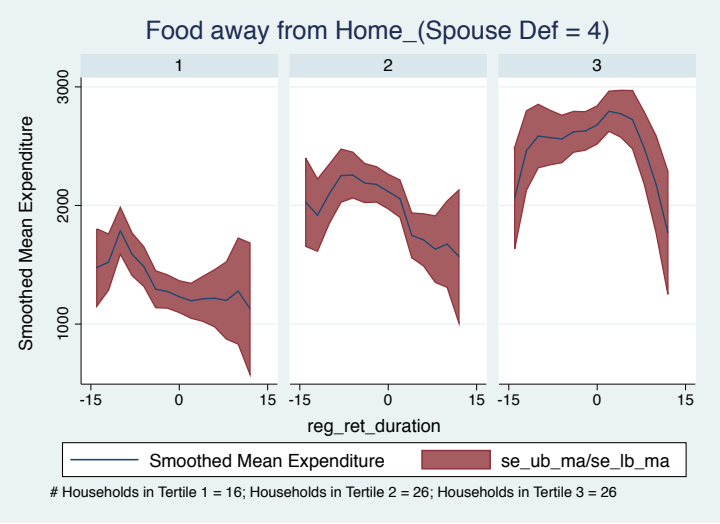


Figure 41: Expenditure on Housing

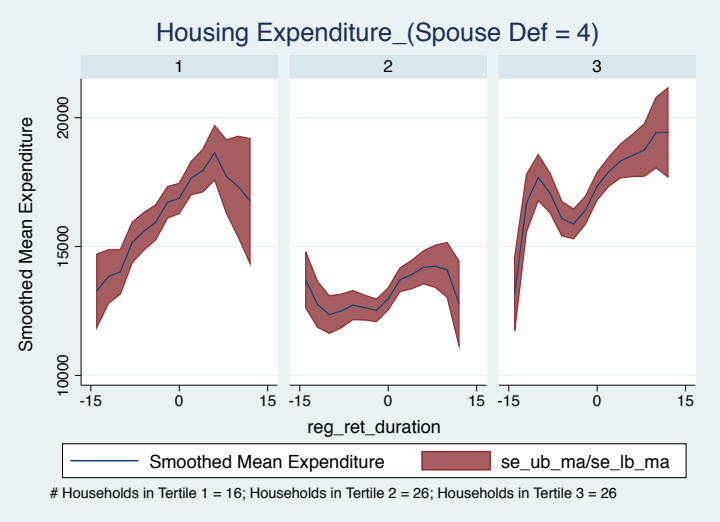


Figure 42: Expenditure on Education

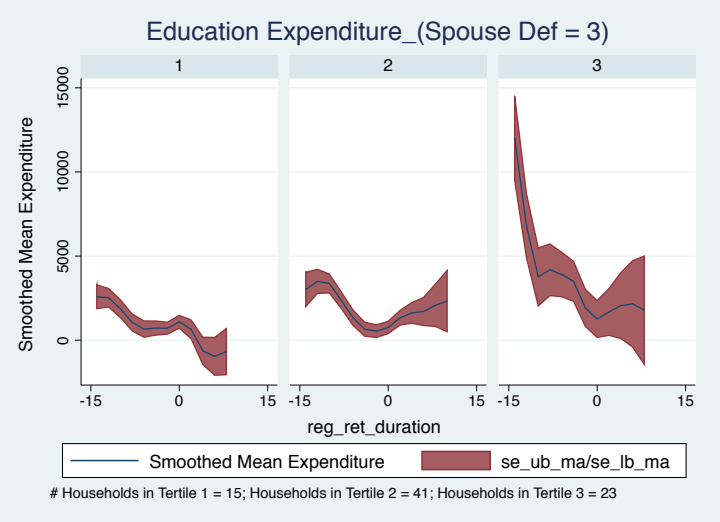


Figure 43: Expenditure on Health

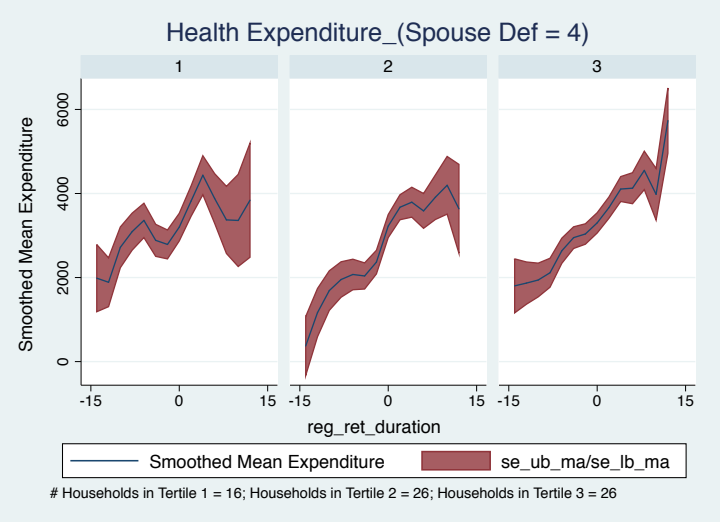
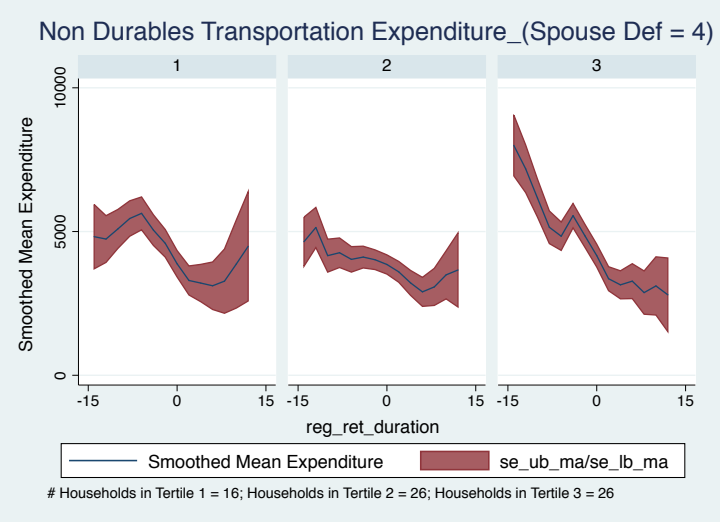


Figure 44: Expenditure on Non-Durable Transport



9.5 5-Ignoring the spouse

Figure 45: Food Expenditure at Home

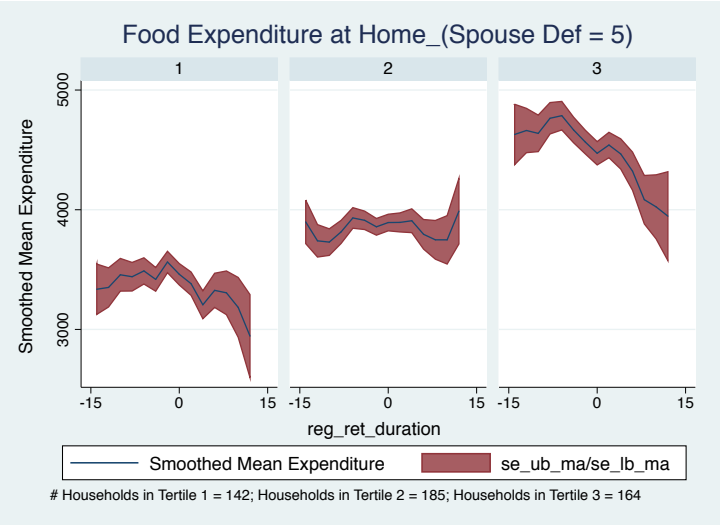


Figure 46: Food Expenditure Away from Home

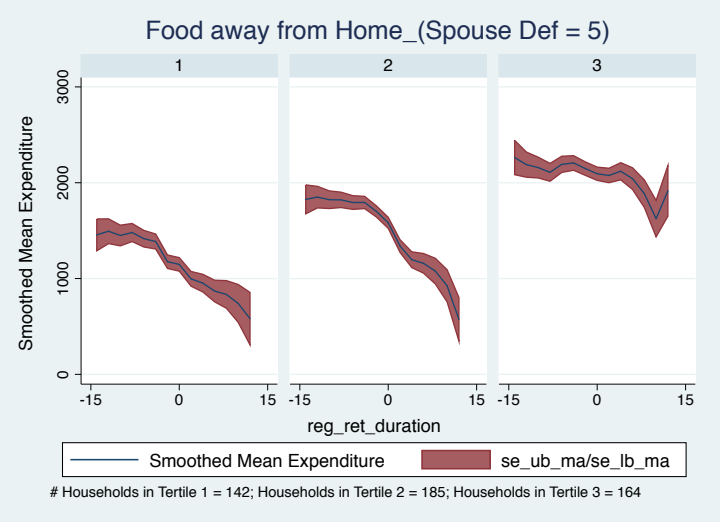


Figure 47: Expenditure on Housing

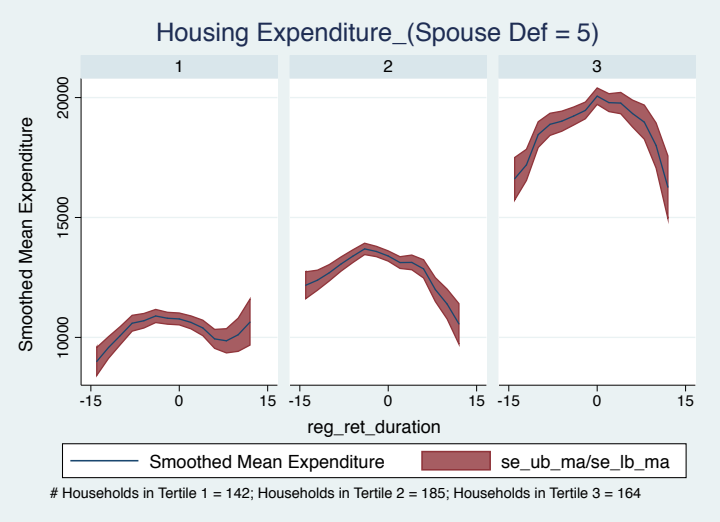


Figure 48: Expenditure on Education

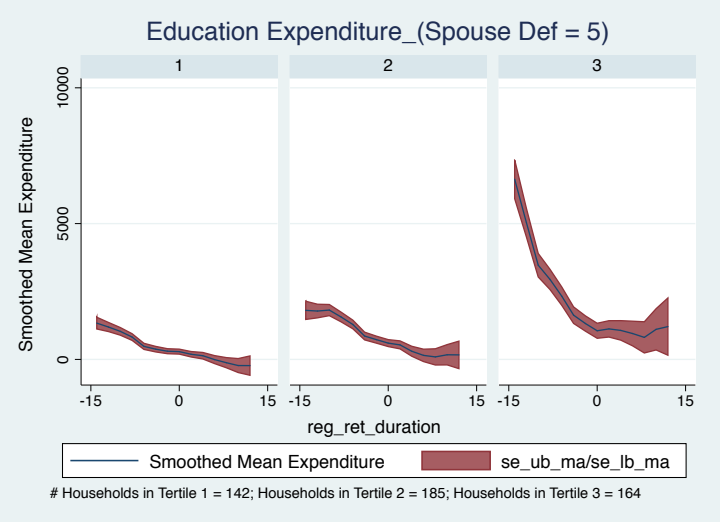


Figure 49: Expenditure on Health

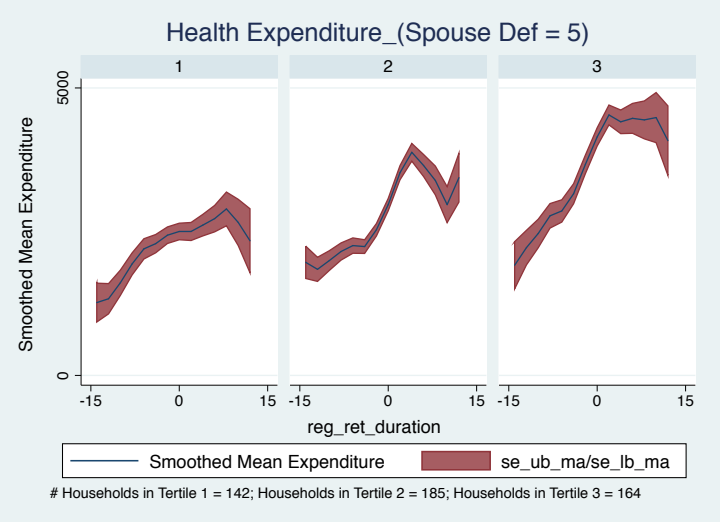
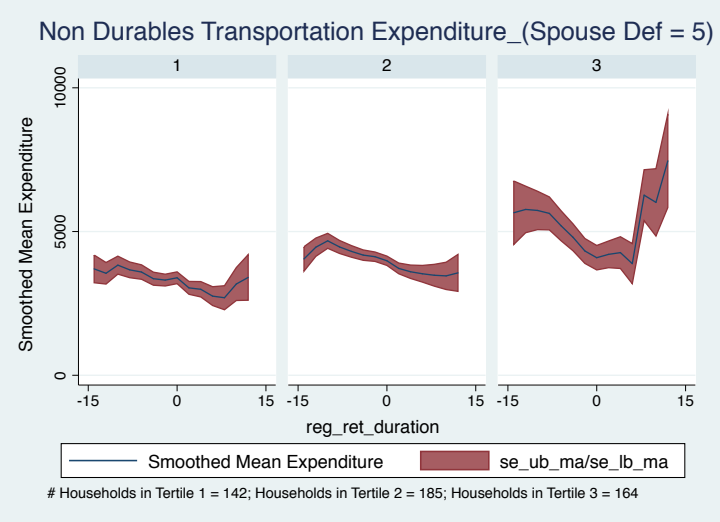


Figure 50: Expenditure on Non-Durable Transport



10 testing

	(1)	(2)	(3)	(4)
VARIABLES	test3	test3	test3	test 3
59.age	-360.1	47.80	252.4	252.4
	(677.1)	(1,183)	(794.1)	(794.1)
60.age	-462.1	-566.5	-477.9	-477.9
	(353.4)	(399.0)	(372.1)	(372.1)
61.age	-449.3		26.01	26.01
	(675.1)		(781.3)	(781.3)
62.age	-876.0**			
	(400.6)			
1.retired	-1,771**	610.6	-754.7	-754.7
	(853.0)	(2,166)	(1,337)	(1,337)
Constant	23,619***	23,261***	23,181***	23,181***
	(333.5)	(452.4)	(415.3)	(415.3)
Observations	4,671	2,967	3,856	3,856
R-squared	0.005	0.003	0.002	0.002
Number of pid	2,344	2,135	2,245	2,245
HH FE	Yes	Yes	Yes	Yes
Age Dummies	Yes	Yes	Yes	Yes
Retire Dummies	Yes	Yes	Yes	Yes
Dummy Children	No	No	No	No
Time	No	No	No	No

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1