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Development Economics

Homework 3

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Question 1 - Consumption Insurance Tests

1- As can be seen from Figure I & Figure 2, the mean and median of beta is close to zero. (Mean = 0.046 and Median = 0.042). So, we can say that there is a risk sharing. However, it seems that there is no “full” risk sharing in that case. For phi, it is little bit different. We have the mean of -1.24 and the median of -5.91. When we look at the Figure II, it doesn't look like symmetric.

Coefficient	Mean	Median
Beta	0.046	0.042
Phi	-1.24	-5.91

Table I: Beta Mean and Median Values

2- (a) It seems that the median value of beta is increasing, as income increases but this pattern is not that clear. For the mean, it is clear that the ones that are in the middle of income distribution are the ones that are more insured.

Quintile	Mean	Median
1	-0.17	0.02
2	0.037	0.038
3	0.799	0.045
4	0.060	0.050
5	-0.189	0.049

Table II: Beta Mean and Median Values for Each Income Quintiles

(b) No data available as of now.

(c) It is kind of similar to the previous case that we have found in part (a). There is no clear pattern in terms of mean and median values as can be seen in Table II.

Quintile	Mean	Median
1	7.36	7.60
2	7.05	7.40
3	7.20	7.51
4	7.44	7.61
5	7.13	7.62

Table III: Income Mean and Median Values for Each Beta Quintiles

3) Here we assume that the coefficients are the same across households, so when we look at the figure below, beta seems significant at 0.001 (t value 30.15) and phi is also statistically significant at 0.00 (t value is -9.22). Therefore from this figure below, we can conclude that there is some insurance but it is not a full insurance.

D.res_ci	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
res_inci						
D1.	.0553765	.0018368	30.15	0.000	.0517762	.0589768
agg_c						
D1.	-1.93e-06	2.09e-07	-9.22	0.000	-2.34e-06	-1.52e-06

4.1 Intuitively We would expect more insurance in rural areas, so let's see the descriptive statistics below Table IV:

Coefficient	Urban Mean	Urban Median	Rural Mean	Rural Median
Beta	0.035	0.025	.043	-1.09e-06
Phi	1.56e-07	0	.041	-1.56e-19

Table IV: Beta Mean and Median Values for Urban and Rural.

We can see that mean of the beta value is higher in rural areas than in urban areas. From figure 3 & figure 4 & figure 5 & figure 6, the distribution looks similar across urban & rural dimensions.

4.2) (a) As can be seen in Table V below, It seems that the median value of beta has no clear pattern for the urban area. For the mean of urban , it is clear that the ones that are in the middle of income distribution are the ones that are more insured. For the rural area, median is increasing as income increases. Excluding the middle of income distribution, mean of the rural is higher than mean of the urban implying that in general rural households are more insured.

Quintile	Mean Urban	Median Urban	Mean Rural	Median Rural
1	-0.59	0.027	0.056	0.02
2	0.001	0.025	0.039	0.028
3	0.069	0.033	0.033	0.04
4	0.058	0.019	0.069	0.055
5	-0.13	0.02	0.049	0.60

Table V: Beta Mean and Median Values for Urban & Rural Areas for Each Income Quintiles

(b) No data available as of now.

(c) It is kind of similar to the previous case that we have found in part (a). There is no clear pattern in terms of mean and median values as can be seen in Table VI. For lowest and highest quintile of the urban, we see high mean income.

Quintile	Mean Urban	Median Urban	Mean Rural	Median Rural
1	7.78	7.91	7.28	7.59
2	7.27	7.53	7.00	7.30
3	7.00	7.39	7.17	7.52
4	7.51	7.61	7.36	7.60
5	7.75	7.38	7.09	7.60

Table VI: Income Mean and Median Values for Each Beta Quintiles

4.3) **Urban:** Here we assume that the coefficients are the same across households, so when we look at the figure below, beta seems significant at 0.001 (t value 8.69) and phi is also statistically significant at 0.001 (t value is -4.43). Therefore from this figure below, we can conclude that there is some insurance but it is not a full insurance. Because beta is 0.0301568

D.res_ci	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
res_inci						
D1.	.0301568	.0034698	8.69	0.000	.0233535	.0369602
agg_c						
D1.	-8.06e-06	1.82e-06	-4.43	0.000	-.0000116	-4.50e-06

Rural: Here we assume that the coefficients are the same across households, so when we look at the figure below, beta seems significant at 0.001 (t value 24.74) and phi is also statistically significant at 0.001 (t value is -7.94). Therefore from this figure below, we can conclude that there is some insurance but it is not a full insurance. Because beta is 0.046.

D.res_ci	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
res_inci						
D1.	.0467194	.0018882	24.74	0.000	.0430182	.0504206
agg_c						
D1.	-2.24e-06	2.82e-07	-7.94	0.000	-2.79e-06	-1.69e-06

Figure I: Beta For Each HH Agg

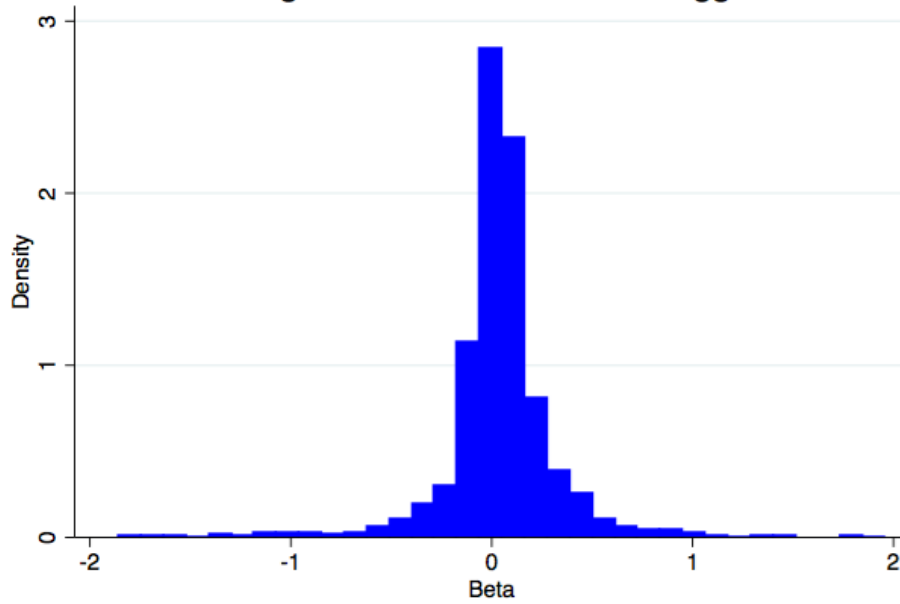


Figure II: Phi For Each HH Agg

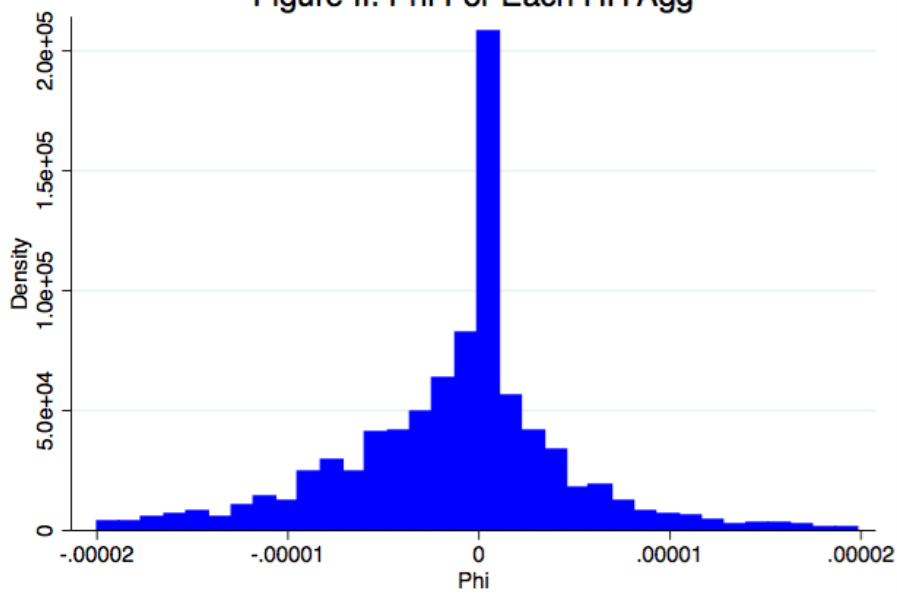


Figure III: Beta for Each HHs Urban

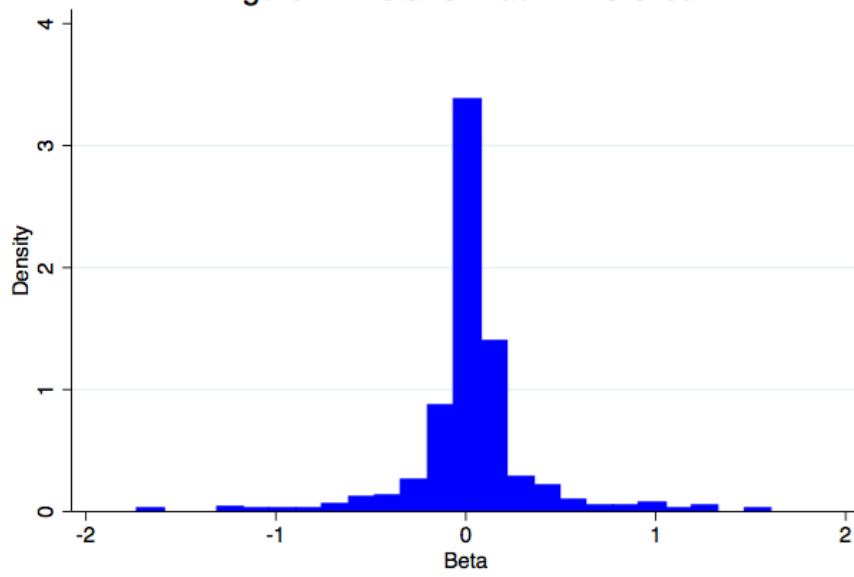


Figure IV: Phi For Each HH Urban

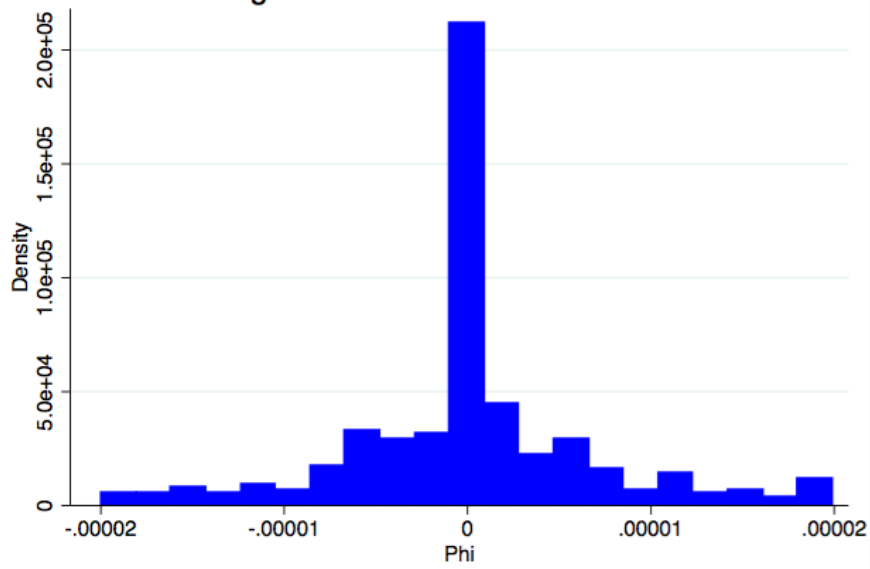


Figure V: Beta For Each HH Rural

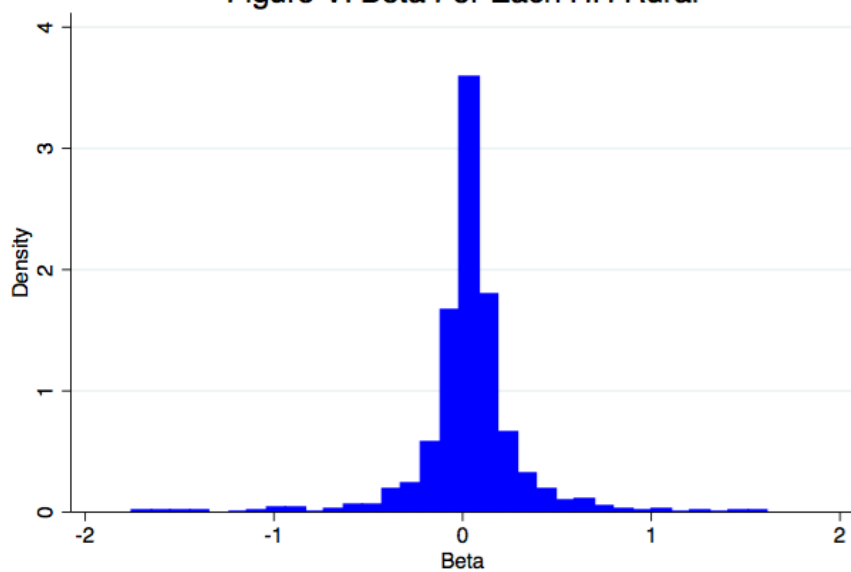


Figure VI: Phi For Each HH Rural

