Development: Homework 1

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1. Question 1:

   I calculate consumption, income and wealth variables using Uganda 2013-2014 data. There are some things I should mentionFirst, there are some consumption variables from aggregate data. I use the definition of consumption to construct my consumption variables, and the difference between them are very small. And because in the table they did not include education consumption, I will use the variable I get. Second, income variables have negative value, but it is reasonable since we control the cost. Third, for having a better distribution, I drop 64 observations with very extreme low income (negative).

   First, the table 1 reports the average household level CIW. From the table, 1) households in urban area have a better condition since they are higher in CIW. 2) In rural area, income is smaller than consumption, which may be due to the missing product price. For agriculture parts, it is hard to have products prices (Agriculture, livestock and related products.), so it is possible to underestimate income.

   Second, the Figure 1 shows the distribution of CIW in rural and urban area. The density for wealth are flatter than those for income and the densities for income are less concentrated that those of income in both rural and urban areas. These results are similar to the Malawi case we discuss in the class.

   Third, I also check the correlations and variances (Table 2 and Table3). This part is little bit different from the Malawi case, the difference of variances between consumption and income are not so huge.

   All in all, at least from the first two parts, using Uganda data can get similar results as Malawi case. That is to say, wealth inequality is larger than income inequality and income inequality is larger than consumption inequality. And inequality in urban area is higher than inequality in rural area.

   For the life cycle part, I am sorry that I do not how to realize it in STATA. And for the top-bottom part, I have no time to analyze it. I will try to learn how to do them next time.

   Second, the figure 1 and table 2 report the distributions and variances of CIW (in log).

2. Question 2:
   I use 3 variables to measure labor supply: "Whether you worked last week", "Whether you worked

	Rural	Urban	Full
obs	2296	813	3109
Consumption	5544808	1.12e+07	7018260
Income	4395285	1.25e+07	6509814
Wealth	7598361	2.58e+07	1.23e+07

Table 1: Inequality: average CIW in rural and urban Uganda

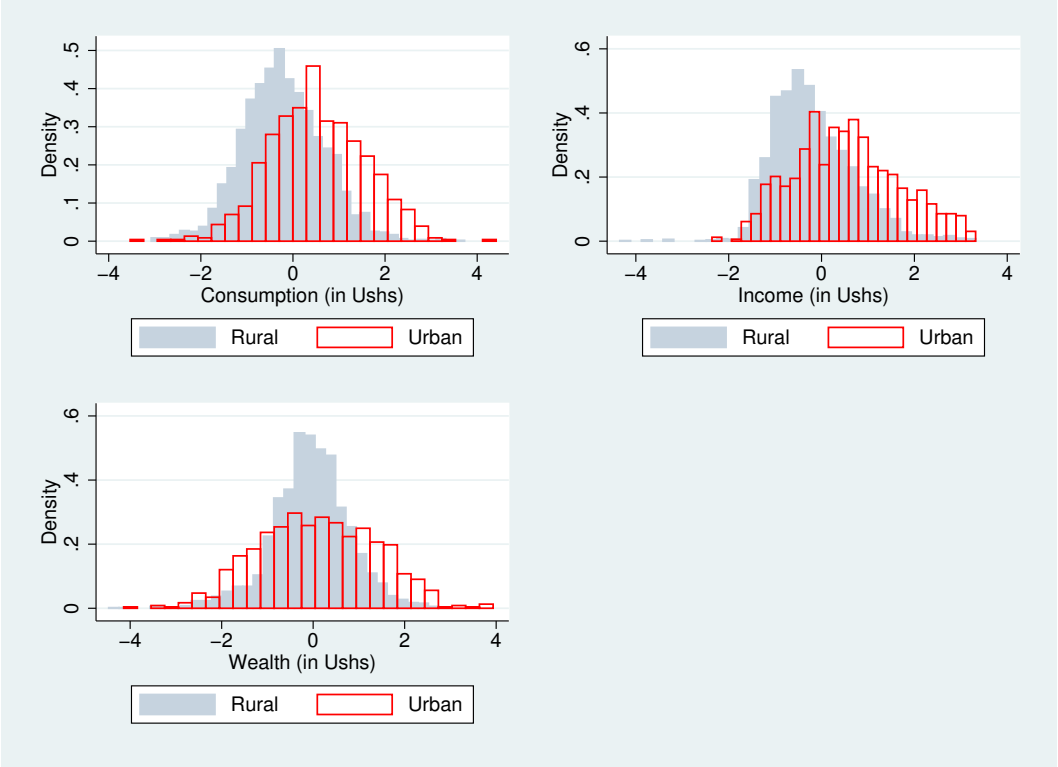

Figure 1: Inequality: Density of CIW in rural and urban Uganda

	Rural	Urban	Full
Consumption	0.70	0.82	0.77
Income	0.69	0.90	0.80
Wealth	1.35	1.99	1.54

Table 2: Inequality: variance of logs CIW in rural and urban Uganda

	C	I	W		C	I	W
Rural				Urban			
C	1.00			C	1.00		
I	0.48	1.00		I	0.53	1.00	
W	0.50	0.33	1.00	W	0.49	0.21	1.00
Full							
C	1.00						
I	0.55	1.00					
W	0.47	0.24	1.00				

Table 3: Correlation matrix of CIW in rural and urban Uganda

	Rural	Urban	Full
obs	6754	2475	9229
7 days employment	0.75	0.48	0.71
12 months employment	0.80	0.47	0.75
average hours per week	22	27	23.6

Table 4: Inequality: average labor supply in rural and urban Uganda

	Rural		Urban	
	Male	Female	Male	Female
7 days employment	0.76	0.73	0.66	0.59
12 months employment	0.80	0.78	0.70	0.63

Table 5: Employment rates in rural and urban Uganda

last 12 months" and "total work hours last week". The first two measure intensive labor supply and the rest one measures extensive labor supply.

Table 4 show the average level of the three variables in rural and urban areas. And Table 5 and Figure 2 consider the difference between male and female beside of urban and rural areas. (Note that the first plot in figure 2 will have zero average work hours per week.)

The conclusions are as followed: 1) the employment rate is higher in rural area. Since people in rural area will have more chance to work for household in agriculture, it will be higher. 2) And there are difference between employment rate of male and female, and this equality is more higher in urban area.

3. Question 3:
   This problem is trying to analyze data in districts level.
   From figure 3, it is hard to see the relationship between income level and other variables. Possible problem may be the out layer. So I drop the district which income level is smaller than -5 and then get figure 4.

   From figure 4, districts with higher income levels have higher consumption level. However, the relationship between wealth and income is not so strong. And consider the labor force supply, although different districts vary in income level, the employment rate and working hour are similar. So we can see that income can not accumulate to contribute to wealth.

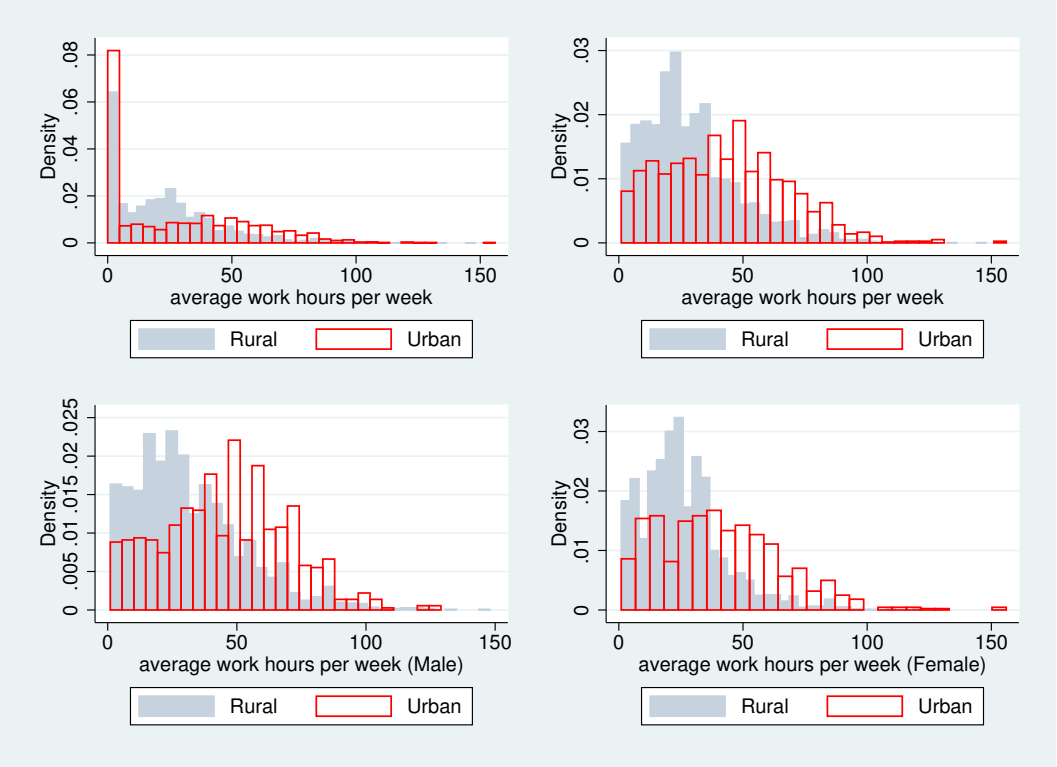

Figure 2: Average work hours per week in rural and urban Uganda

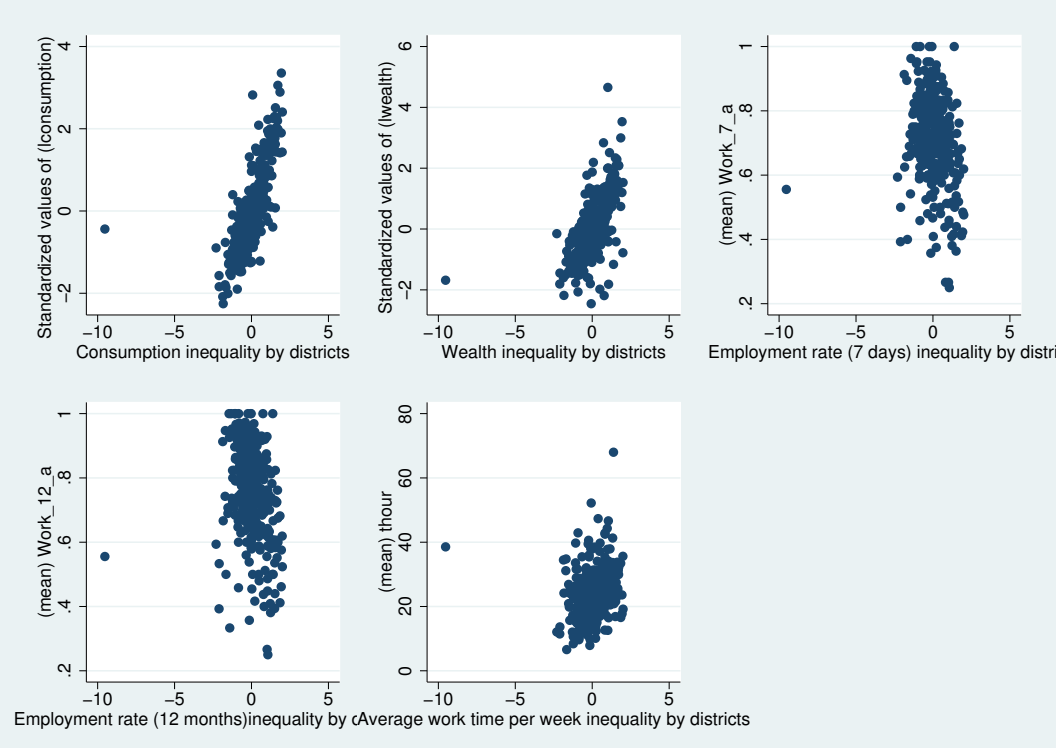

Figure 3: Inequality in different areas in Uganda

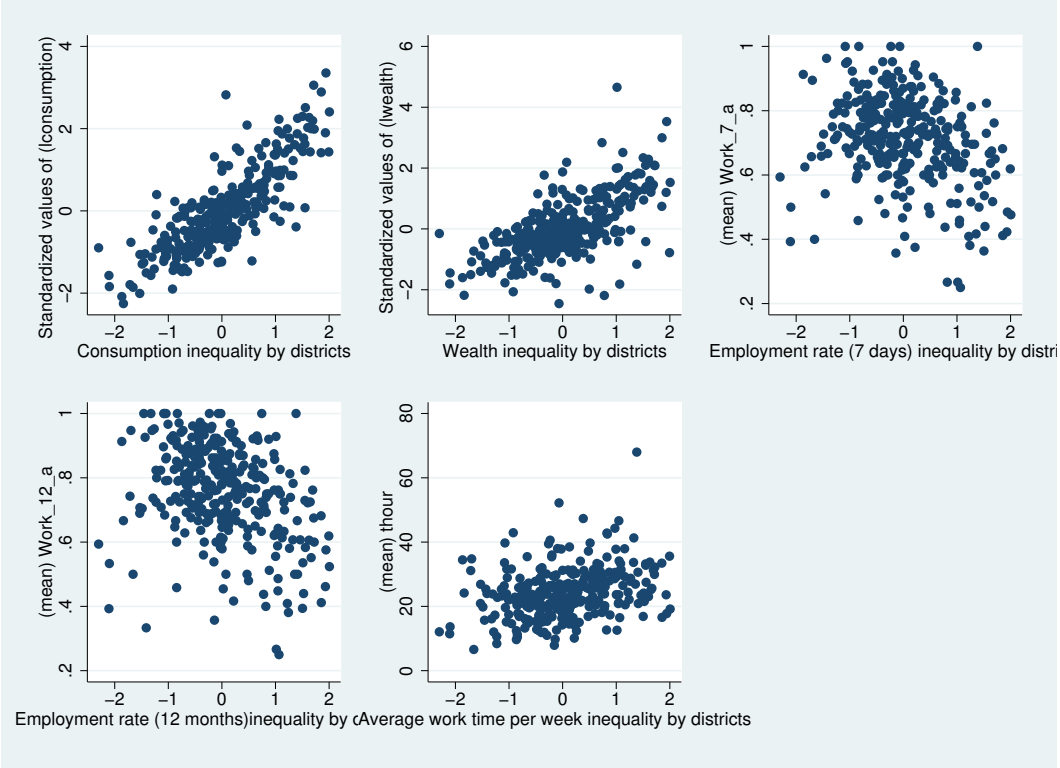

Figure 4: Inequality in different areas in Uganda (omitted extreme value)