Development Economics HWK 1

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Question 1

As Table 1 has shown, Urban areas have higher consumption, income and wealth in absolute values. In terms of logarithms, urban areas have higher consumption and income, but the mean of log wealth has only small differences. The variances of three are also relatively higher in urban areas. Especially the variance of logw in urban areas is twice as high as the variance in rural aereas. The distributions of Uganda exhibit similar characteristics with those of Malawi.

Table 3 shows the inequality ratio C/I and W/I. Here the statistics are a bit weird as both ratios are higher in rural areas, but in general they are very similar. If the statistics are to some extent correctly calculated, then there might be less inequality in Uganda.

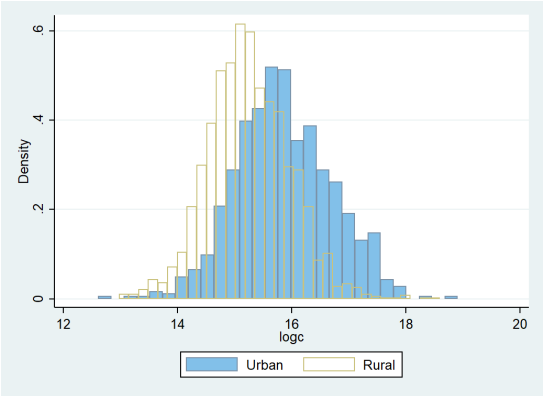
Figure 2 summarizes the joint cross-sectional behavior of CIW. The correlation between income and consumption is significantly higher in urban (0.6799) than in rural areas(0.5721). In general CIW are more correlated in urban ares.

Fig 3 and 4 are the wealth and consumption distributions given the income quantiles. Looking at the equally divided quantiles in Fig 3, we conclude that the top 20 percent of people with highest income also account for 40.8 percent of the total consumption and 53.2 percent of the total wealth. The situation is more extreme in the urban areas, where 20 percent of the high income population own half of the

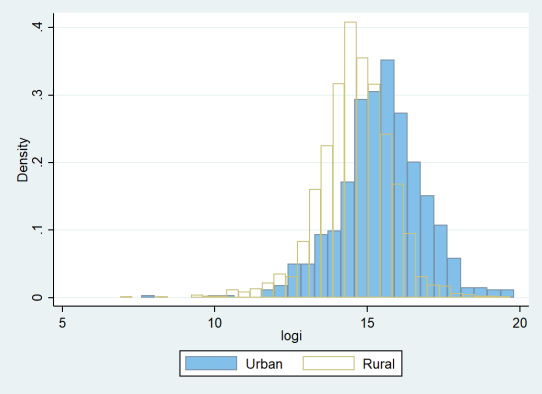
Table 1: Mean of CIW by Urban/Rural

Summary statistics: mean
by categories of: urban (Urban/Rural Identifier)

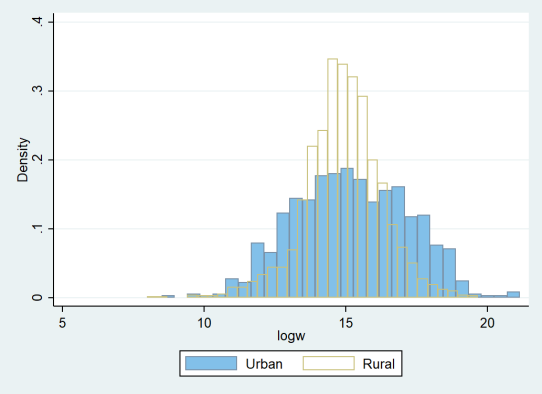
	c	i	w
Rural —	5533132	4384565	7595157
Urban —	1.12e+07	1.24e+07	2.57e+07
Total —	7003545	6491435	1.23e+07



(a) Consumption



(b) Income



(c) Wealth

Figure 1: CIW by Urban/Rural

Table 2: Variance of log(CIW) by Urban/Rural

Summary statistics: variance
by categories of: urban (Urban/Rural Identifier)

	logc	logi	logw
Rural —	.5025717	1.440108	1.845136
Urban —	.7030699	1.886725	4.089458
Total —	.628583	1.702189	2.44795

Table 3: Mean of Inequality Ratio by Urban/Rural

Summary statistics: mean
by categories of: urban (Urban/Rural Identifier)

Inequality Ratio	c/i	w/i
Rural	1.049872	1.024914
Urban	1.03045	.9841885
Total	1.044813	1.014305

```
*results
*all:
*      logc     logi     logw
*logc  1.0000
*logi  0.6143   1.0000
*logw  0.5673   0.4267   1.0000

*urban
*        logc     logi     logw
*logc  1.0000
*logi  0.6799   1.0000
*logw  0.6201   0.5088   1.0000

*rural
*        logc     logi     logw
*logc  1.0000
*logi  0.5207   1.0000
*logw  0.5516   0.3761   1.0000
```

Figure 2: Joint cross-sectional behavior of CIW

	ALL:		RURAL:		URBAN:	
	c	w	c	w	c	w
0-20	0.115	0.0811	0.126	0.117	0.100	0.0505
20-40	0.110	0.0601	0.133	0.0975	0.107	0.125
40-60	0.156	0.135	0.179	0.135	0.181	0.146
60-80	0.211	0.191	0.207	0.197	0.205	0.171
80-100	0.408	0.532	0.354	0.454	0.406	0.508

Figure 3: Distribution of C and W given income quantiles

Table 4: Mean of ex/intensive margin

Summary statistics: mean
by categories of: urban (Urban/Rural Identifier)

	intensive	extensive
Rural —	16.67301	.8056966
Urban —	24.01288	.705758
Total —	18.59328	.7795504

total wealth of the society. Although the income interval is equally divided into five blocks, the share of consumption and wealth is gradually decreasing with income quantiles.

Fig 4 shows a more detailed division of income shares. In Uganda people with the top 1 percent of income take up 6.48 percent of the total wealth, which is lower than Malawi (12) and the U.S.(26). It could be an evidence of a less-extremely distributed wealth. However, wealth accumulation still occurs more effectively in high income divisions. The consumption pattern is similar in Malawi and Uganda, where the bottom 1 percent also consumes 1 percent.

Question 2

Table 4, 5 and 6, Figure 5 and 6 belong to question 2.
On average, urban workers work longer hours but more rural workers are hired. Urban workers have larger variance in working hours and employment. Both urban and rural workers work less if their wealth or consumption increases. For consumption it is not straightforward to see why the correlation is negative.

	RURAL:		URBAN:		ALL:	
	c	w	c	w	c	w
0-1	0.0143	0.0218	0.0180	0.0196	0.0181	0.0209
1-5	0.0266	0.0240	0.0274	0.0117	0.0244	0.0169
5-10	0.0280	0.0234	0.0180	0.00563	0.0236	0.0134
10-20	0.0574	0.0478	0.0367	0.0136	0.0483	0.0300
20-30	0.0640	0.0464	0.0487	0.0329	0.0513	0.0276
30-40	0.0687	0.0511	0.0587	0.0917	0.0591	0.0324
40-50	0.0793	0.0665	0.0865	0.0403	0.0757	0.0515
50-60	0.1000	0.0687	0.0948	0.106	0.0804	0.0835
60-70	0.0982	0.0833	0.0909	0.0490	0.0952	0.0711
70-80	0.109	0.113	0.114	0.122	0.116	0.120
80-90	0.136	0.150	0.166	0.181	0.145	0.142
90-95	0.0888	0.115	0.105	0.166	0.102	0.133
95-99	0.0904	0.116	0.104	0.120	0.118	0.192
99-100	0.0390	0.0726	0.0317	0.0406	0.0431	0.0648

Figure 4: Top and bottom distribution of C and W given income quantiles

Table 5: Variance of ex/intensive margin

Summary statistics: variance by categories of: urban (Urban/Rural Identifier)	Identifier) linmar	lexmar
Rural —	.5722528	.1183852
Urban —	.703483	.1957287
Total —	.6291637	.1433893

Table 6: Correlation of average hours worked and CIW

	logc	logi	logw
ALL	0.0116	0.2006	-0.0941
URBAN	-0.1022	0.1189	-0.1842
RURAL	-0.0487	0.1628	-0.0801

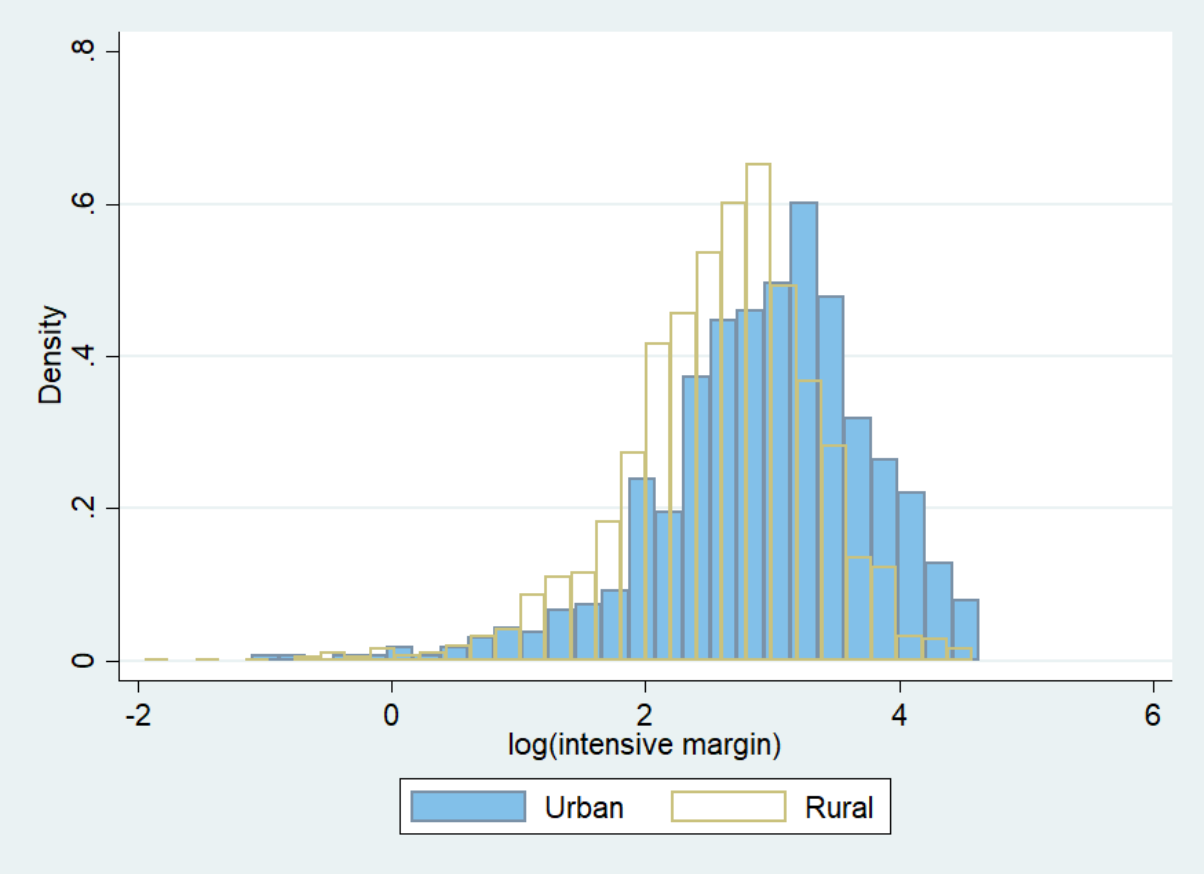


Figure 5: Distribution of average hours worked per household member

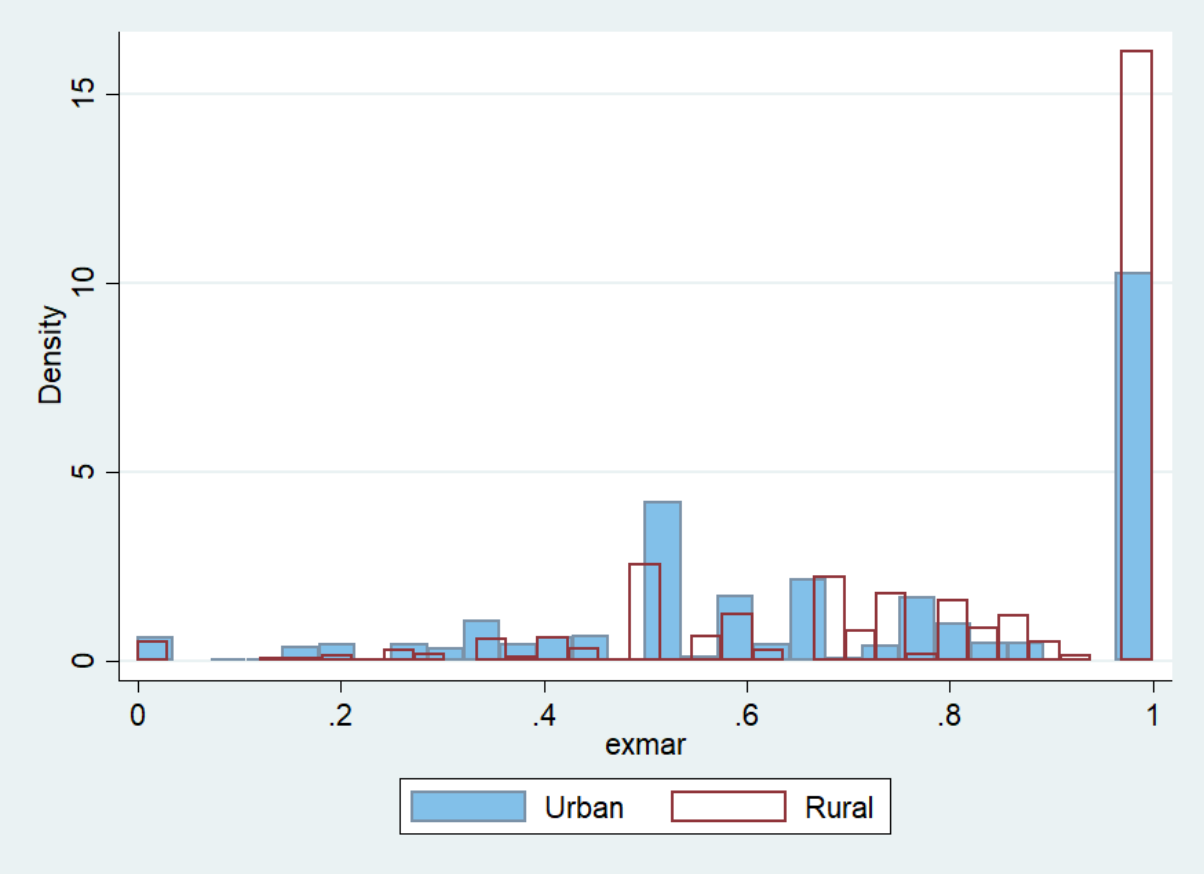


Figure 6: Distribution of Household employment rate

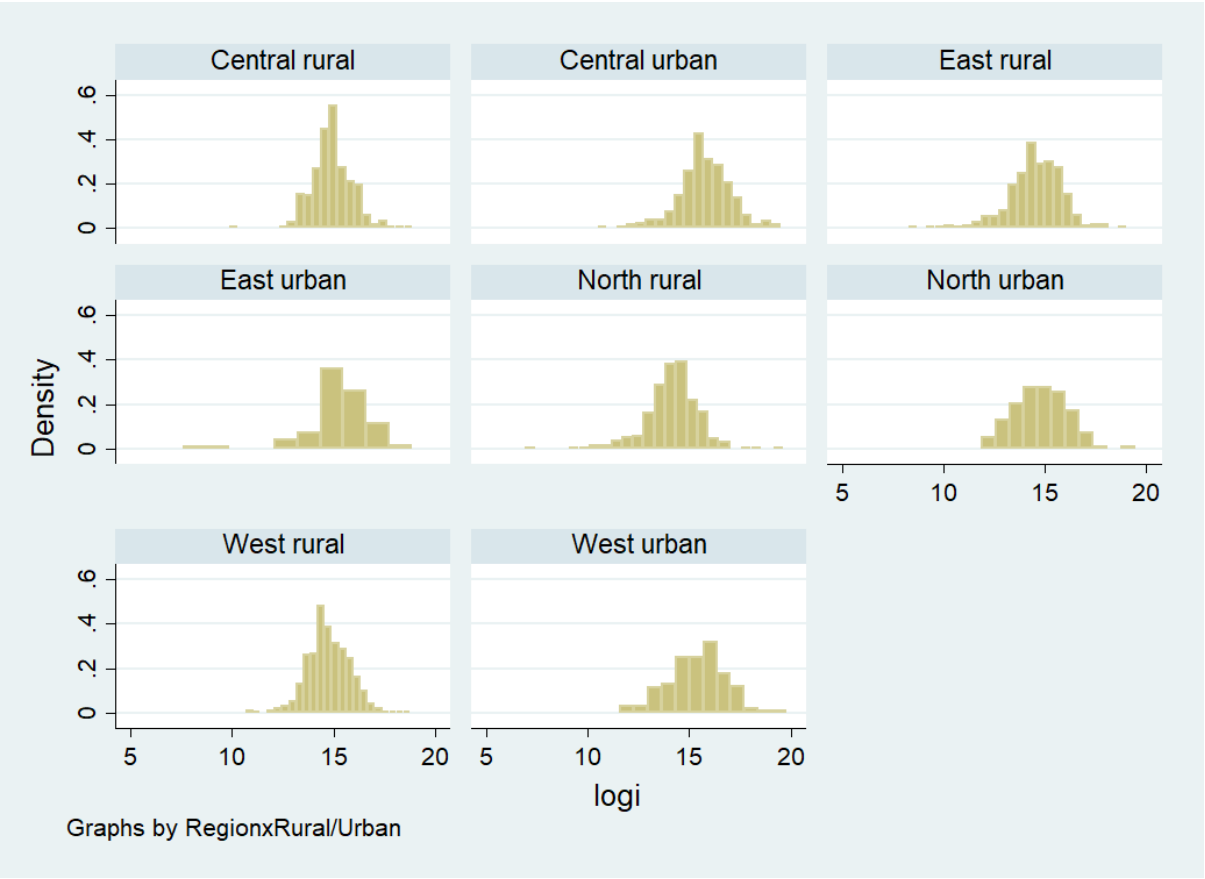


Figure 7: Income by region-urban/rural

Question 3

Fig 5 to 12 belong to Question 3.

Among the 8 zones, the highest mean income occurs in the central urban zone. The central rural zone has the smallest variance in income. If we look into the broader areas including central, eastern, northern and western regions, the slop of the central region in Fig 6 is the steepest, indicating that the consumption reacts in a larger scale to the change in income. Similarly, we could also conclude that the wealth accumulation is also larger in this area if there is an increase in income. A more detailed segregation of rural and urban shows that in general the slop is steeper in urban areas, and that the rural zones have more sample points and thus more population.

Fig 10 and 11 describe the relationship between inequality ratio and income. Generally, the increase in income is not fully absorbed in either consumption or wealth. Consumption and wealth only rise less than the increase in income given the downward sloping fitness lines. But in central region the ratio is almost constant for wealth, suggesting that the change income is almost fully transferred to wealth.

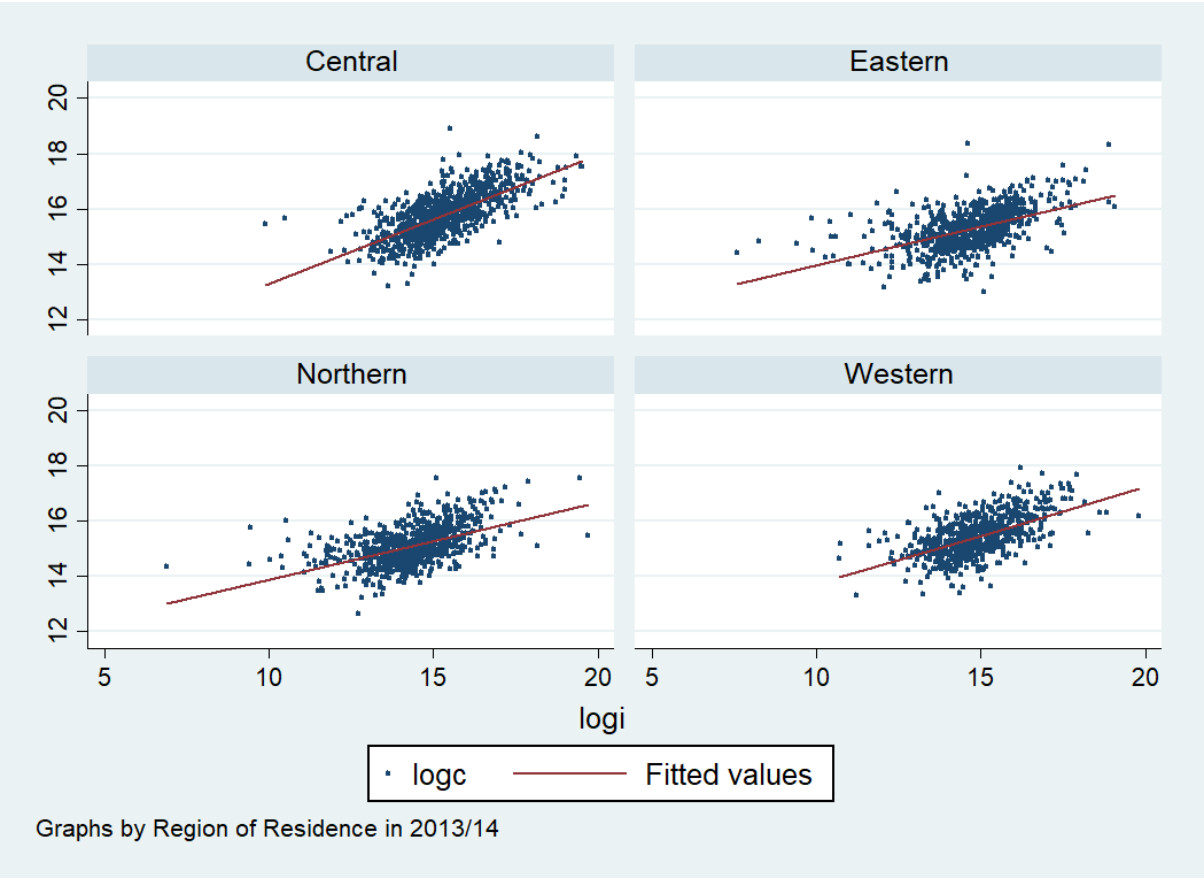


Figure 8: Logc and logi by regions

Figure 9: logw and logi by regions

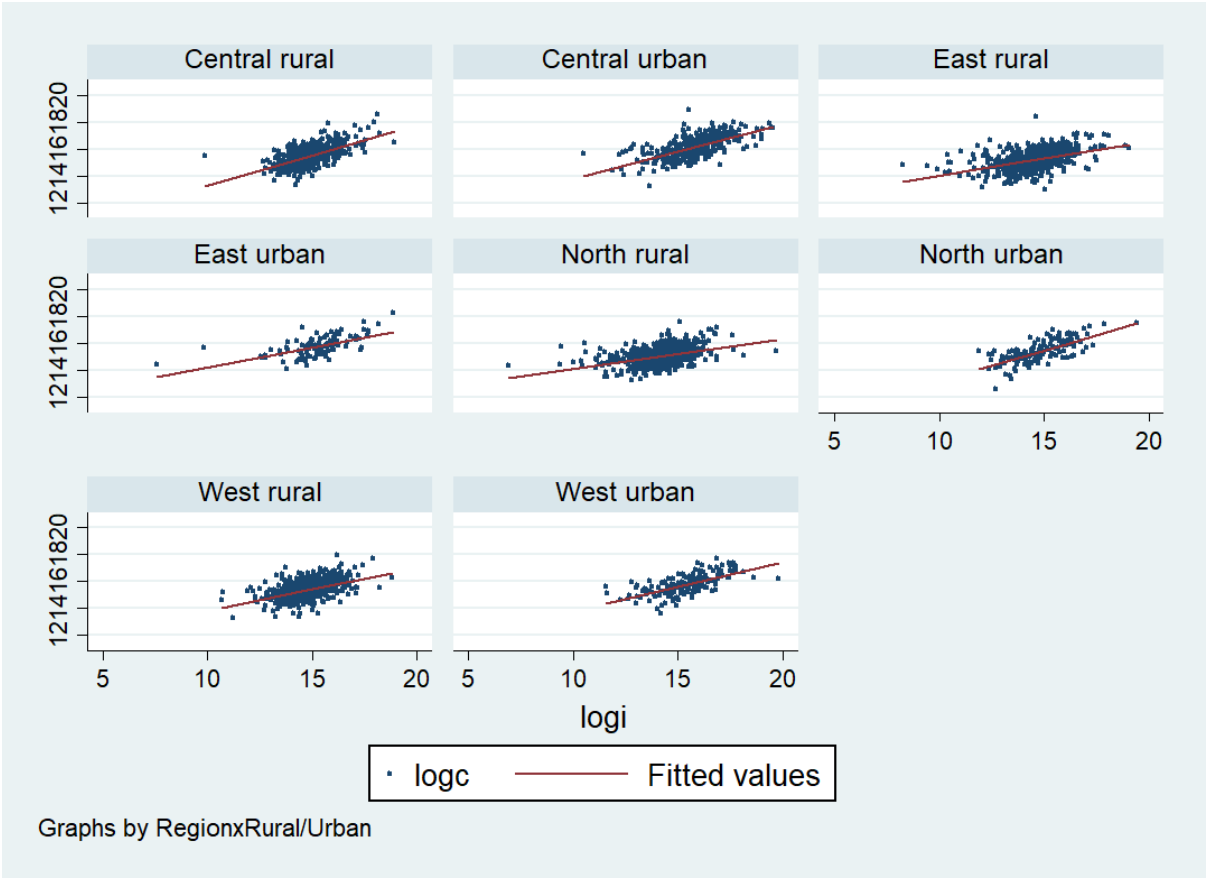


Figure 10: Logc and logi by regions-urban/rural

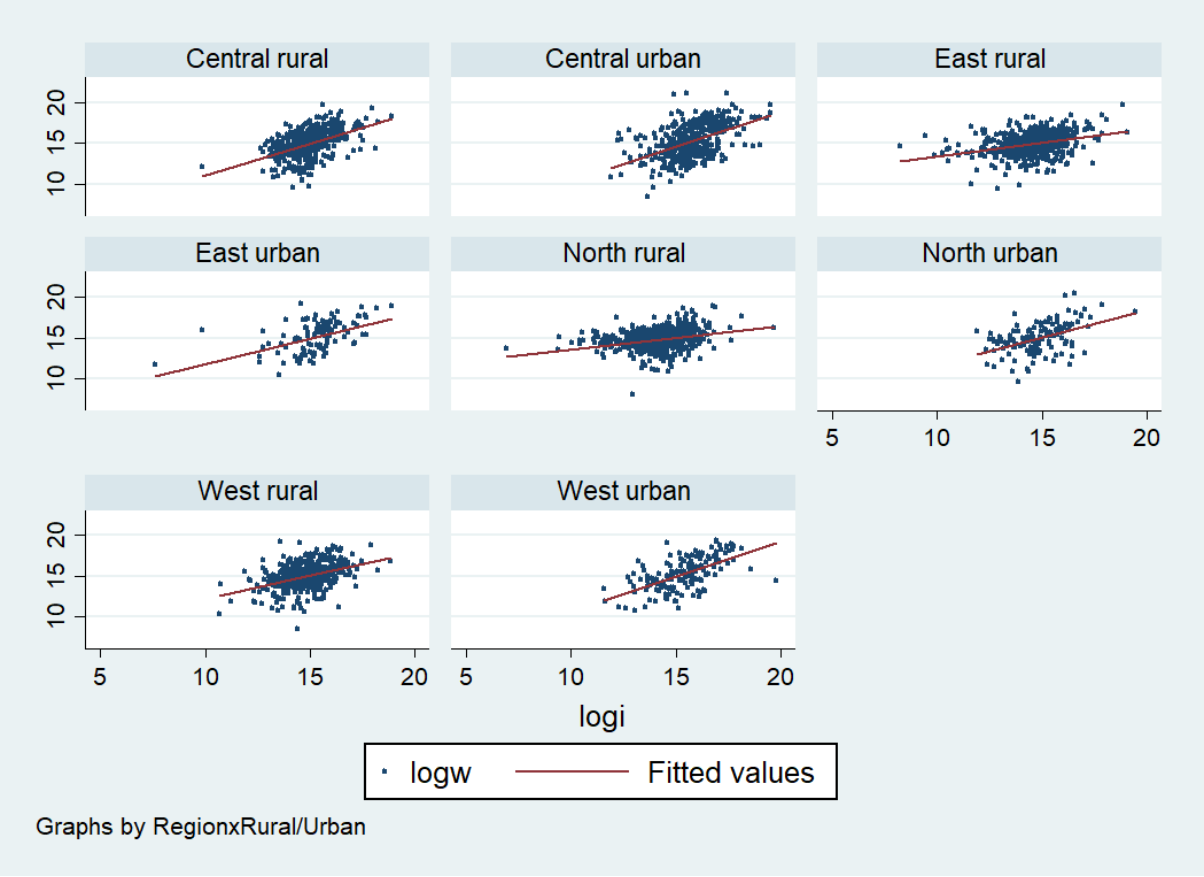


Figure 11: logw and logi by regions-urban/rural

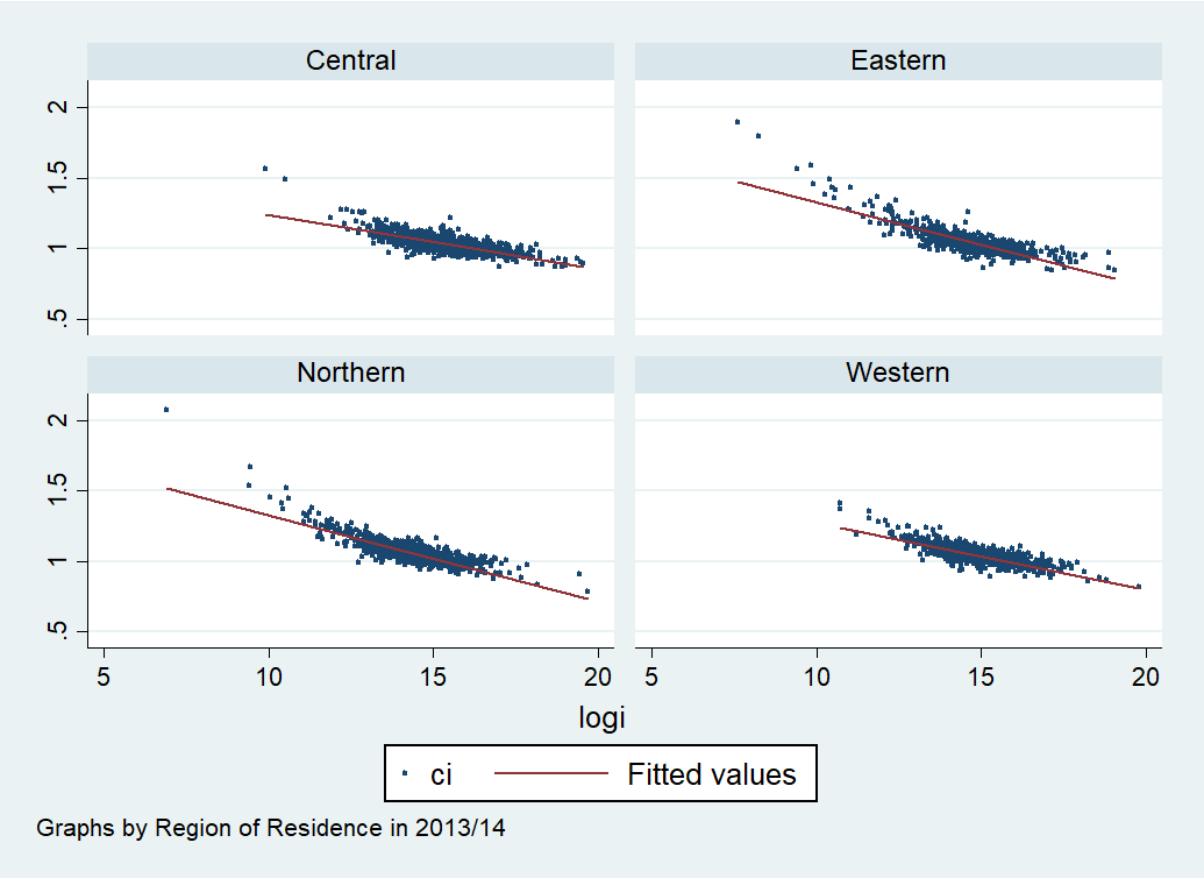


Figure 12: C/I and logi by regions

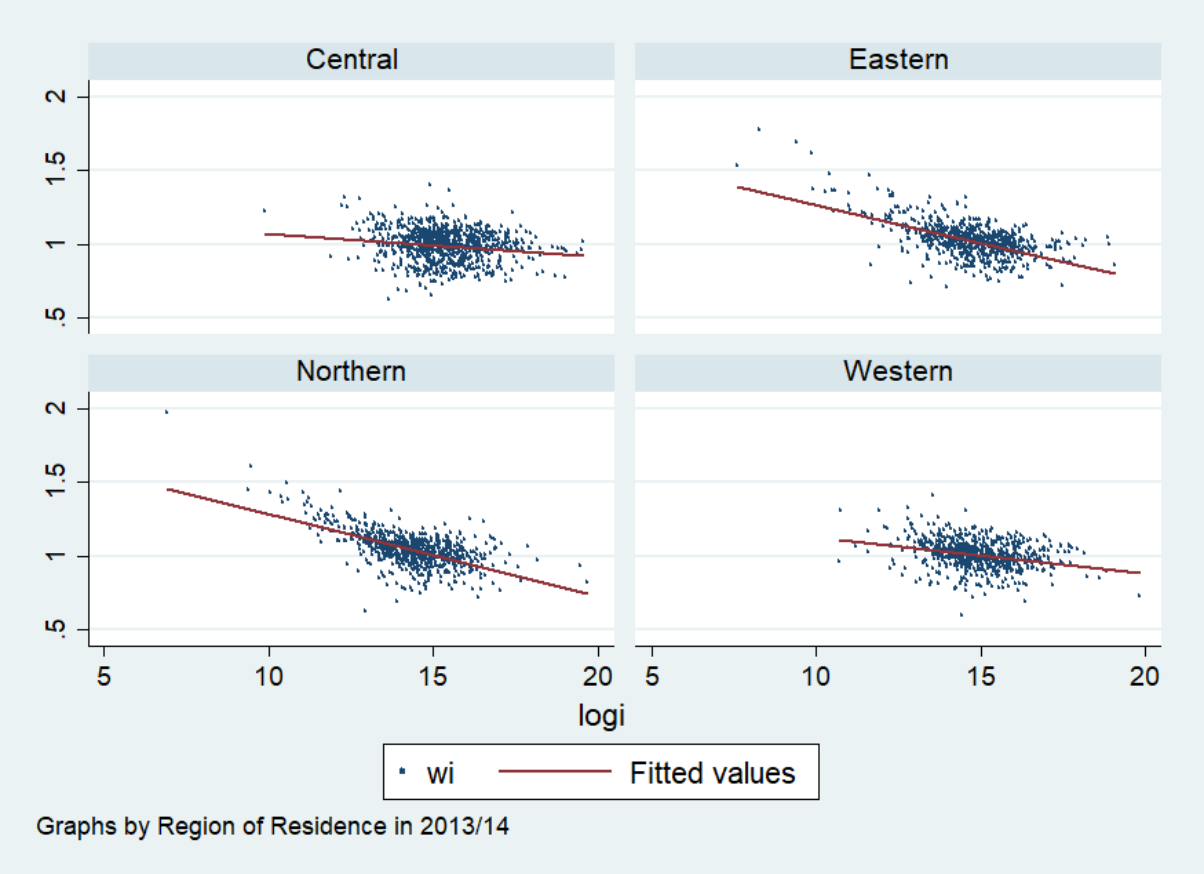


Figure 13: W/I and logi by regions

Central (obs=879)

	logc	logi	logw
logc	1.0000		
logi	0.6795	1.0000	
logw	0.5995	0.4880	1.0000

.
Eastern (obs=703)

	logc	logi	logw
logc	1.0000		
logi	0.5176	1.0000	
logw	0.5439	0.3830	1.0000

.
Northern (obs=737)

	logc	logi	logw
logc	1.0000		
logi	0.5141	1.0000	
logw	0.5394	0.3345	1.0000

.
Western (obs=702)

	logc	logi	logw
logc	1.0000		
logi	0.5712	1.0000	
logw	0.6080	0.4937	1.0000

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Figure 14: Correlation among CIW by regions