Development Economics - Uganda LSMS-ISA (2013/2014)

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February 2, 2019

Abstract

This is a survey explaning and analyzing the data set I created from LSMS-ISA wave (2013/2014) for Uganda. I follow the instructions presented on Problem Set 1. The study is about consumption, income and wealth (CIW), as well as labor supply (extensive and intensive margins) on Uganda. [1].

[1] Any errors are exclusively my responsibility.

1 Introduction

This database is constructed following the *Uganda - National Panel Survey 2013-2014* produced by the Uganda Bureau of Statistics[2]

The data set is on Household level. There are in total 2478 observations. All variables are expressed in 2013 US Dollars and deflated by the inlfation level of 2013.[3].

Outliers are also accounted for: I trimmed each data set at the bottom 5% and top 10%.

My database is constructed by first gathering information and aggregate levels for each variable separately (consumption, income, wealth and labor supply). Then, I compile all aggregate-level variable per Household.

The database contains the following files:

- Consumption
- Income
- Wealth
- Labor
- Agricultural
- Sociodemographics characteristics
- CWI Data: gathers all information
- UG PS1 and PS1 b: solutions for the problem set

[2]Please refer to the World Bank website as the source of all microdata sets and surveys: http://microdata.worldbank.org/index.php/catalog/2663/datafile/F116

[3]Unless categorical variables, such as sex, region, education group, etc.

Part I
Consumption, Income and Wealth (CIW)

2 Inequality in CIW

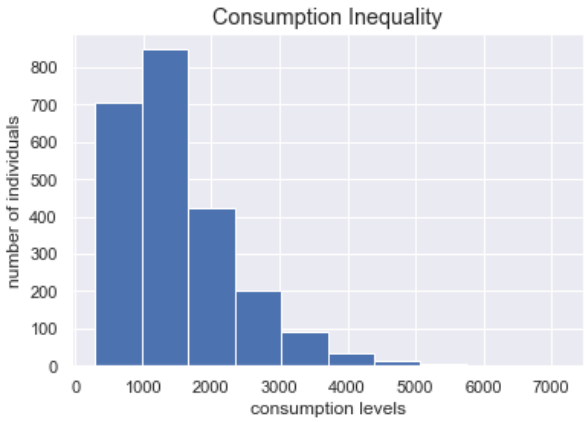
A) Data Summary

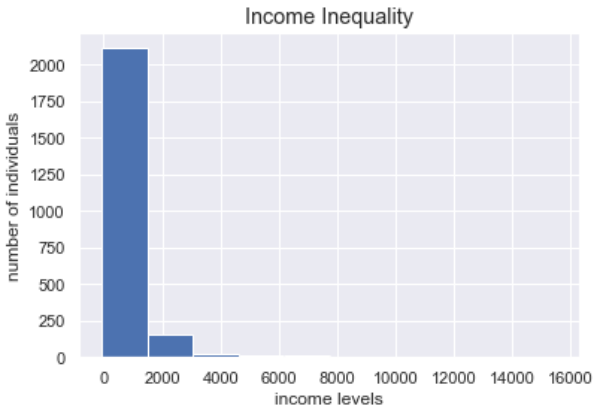
	consumption	income	wealth
mean	1503.70	557.90	2388.19
log variance	0.29	1.84	2.67
std	840.49	996.35	6,290.00
min	295.22	-55.03	4.21
25%	885.40	95.85	182.87
50%	1,296.68	256.17	506.12
75%	1,903.34	589.72	1,748.26
max	7,125.18	15,513.38	70,699.53
obs	2478		

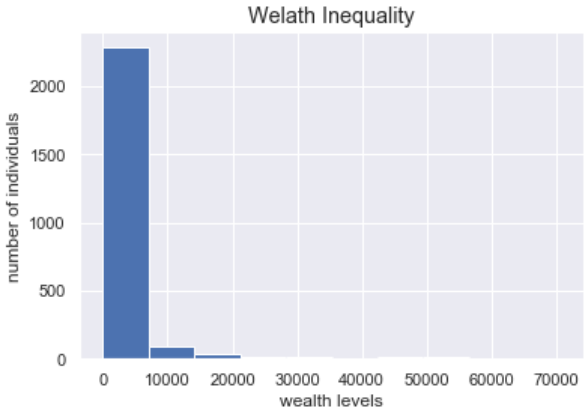
Table 1: Data Statistics

B) Inequality

Gini coefficients, on the full sample, for CIW (respectively): 0.342, 0.601, 0.771.




Income Inequality
number of individuals
2000
1750
1500
1250
1000
750
500
250
0
0
2000
4000
6000
8000
10000
12000
14000
16000
income levels


Welath Inequality
number of individuals
2000
1500
1000
500
0
0
10000
20000
30000
40000
50000
60000
70000
wealth levels

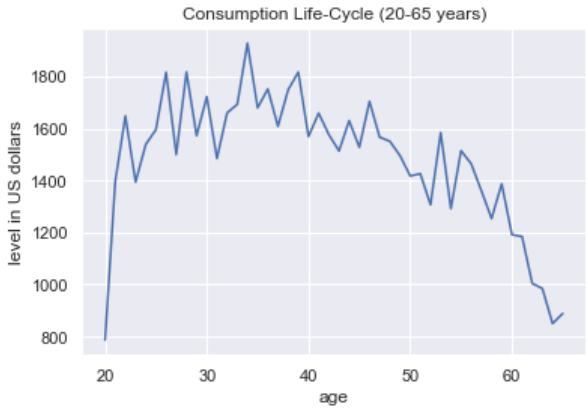
C) Cross-Sectional Behavior

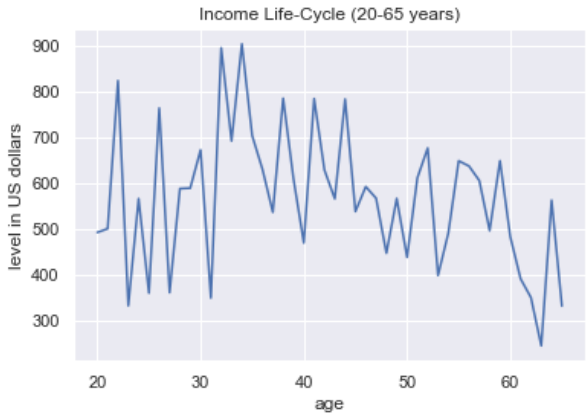
	C	W
W	0.43	-
I	0.29	0.24

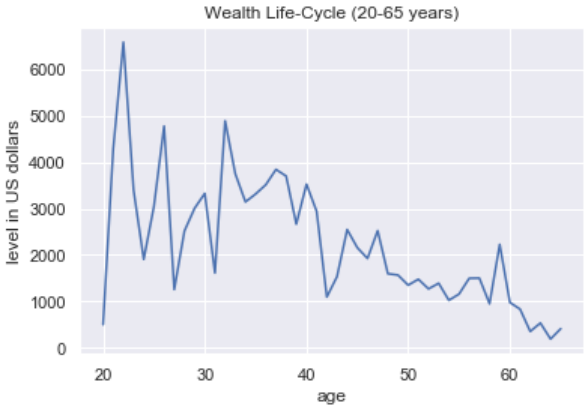
Table 2: Correlation

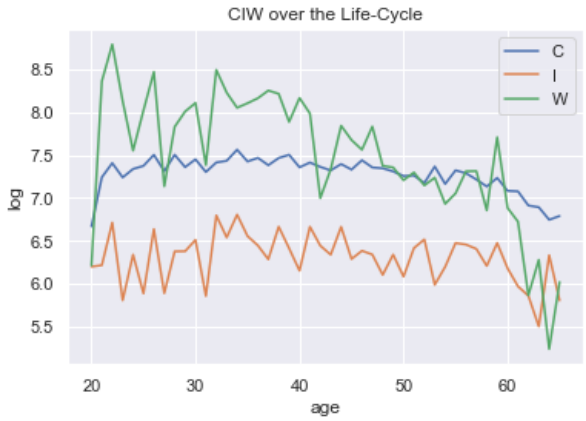
D) Lifecycle Behavior

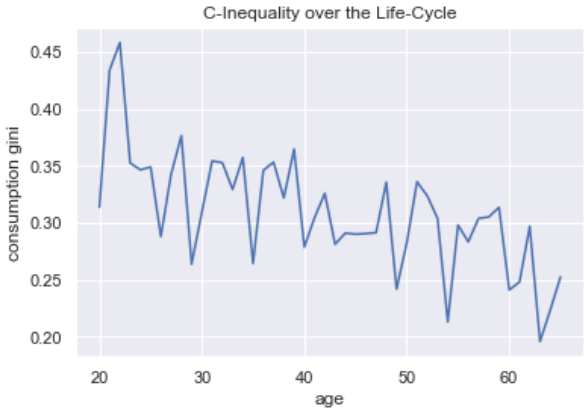
The average age is 46.90. The maximum is 102 and minimum 15. 4. Describe the CIW level, inequality, and covariances over the lifecycle.

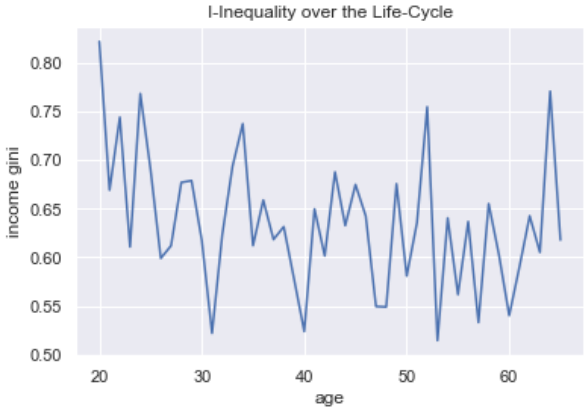


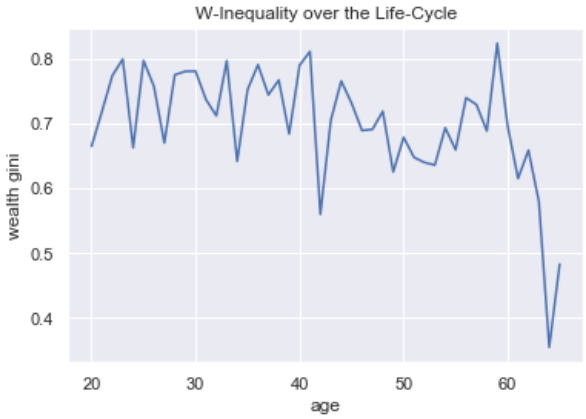


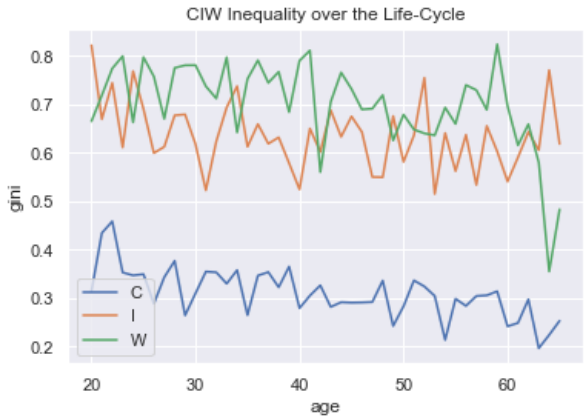

Wealth Life-Cycle (20-65 years)
level in US dollars
0
1000
2000
3000
4000
5000
6000
20
30
40
50
60
age

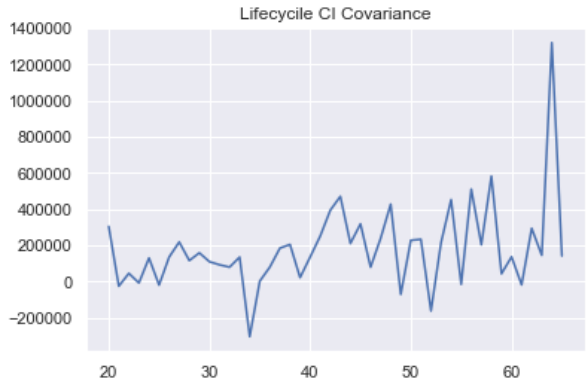

CIW over the Life-Cycle
log
5.5
6.0
6.5
7.0
7.5
8.0
8.5
C
I
W
20
30
40
50
60
age

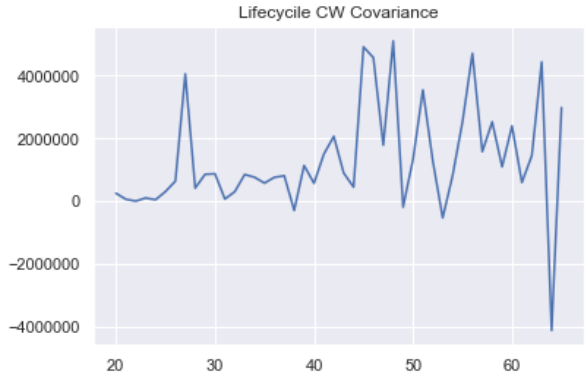

C-Inequality over the Life-Cycle
consumption gini
0.20
0.25
0.30
0.35
0.40
0.45
20
30
40
50
60
age

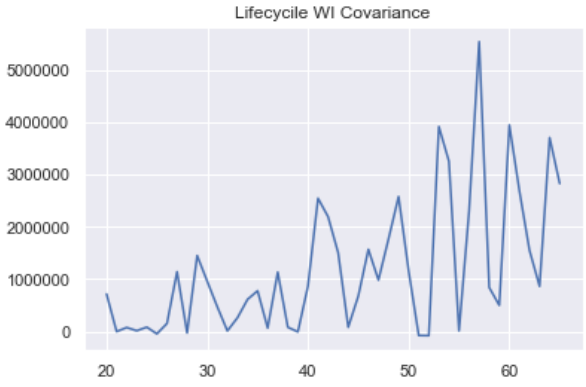

I-Inequality over the Life-Cycle
income gini
0.50
0.55
0.60
0.65
0.70
0.75
0.80
20
30
40
50
60
age


W-Inequality over the Life-Cycle
wealth gini
0.8
0.7
0.6
0.5
0.4
20
30
40
50
60
age


CIW Inequality over the Life-Cycle
gini
0.8
0.7
0.6
0.5
0.4
0.3
0.2
C
I
W
20
30
40
50
60
age


Lifecycile CI Covariance
1400000
1200000
1000000
800000
600000
400000
200000
0
−200000
20
30
40
50
60


Lifecycile CW Covariance
4000000
2000000
0
−2000000
−4000000
20
30
40
50
60


Lifecycile WI Covariance
5000000
4000000
3000000
2000000
1000000
0
20
30
40
50
60

E) Top/bottom Behavior

	Bottom (%)			Quantiles					Top (%)		
	0-1	1-5	5-10	Q1	Q2	Q3	Q4	Q5	10-5	5-1	1
C	0.923	2.583	3.352	14.521	15.849	19.479	20.631	23.964	6.372	5.009	1.6608
W	1.707	2.254	2.482	11.786	10.282	16.153	16.553	36.612	6.832	14.411	3.2746

Table 3: Ranking by Income (as income share)

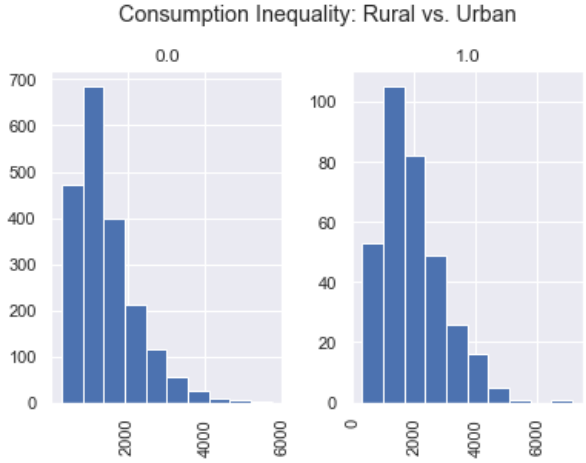
3 Rural vs. Urban areas

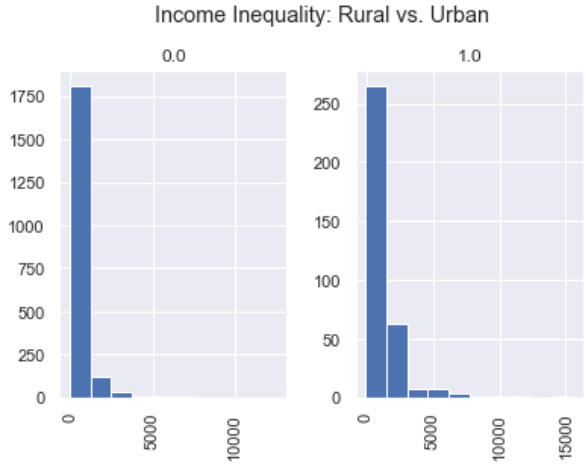
A) Data Summary

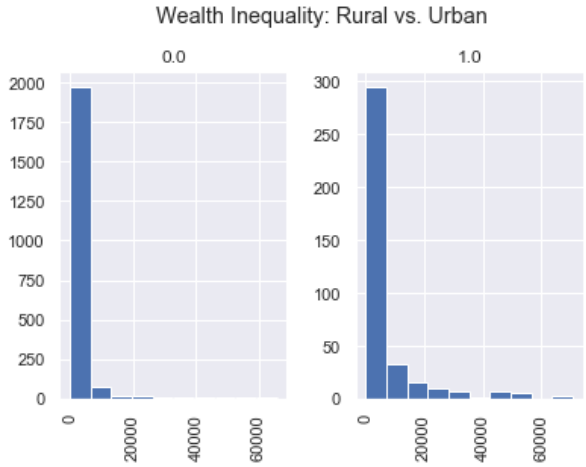
	Urban			Rural		
	consumption	income	wealth	consumption	income	wealth
mean	1,727.58	948.37	5,715.15	1,349.91	447.71	1,779.43
log variance	0.31	2.47	3.63	0.28	1.69	2.36
std	1,131.64	1,628.99	11,057.33	830.23	779.75	4,719.85
min	0.00	-55.03	0.00	0.00	-28.97	0.00
25%	992.94	86.43	287.17	796.95	71.97	170.48
50%	1,594.04	298.69	1,394.14	1,199.81	215.66	427.90
75%	2,384.65	1,227.96	5,692.90	1,768.26	504.24	1,423.96
max	7,125.18	15,513.38	70,699.53	5,717.53	12,559.71	65,568.38
obs	376			2,102		

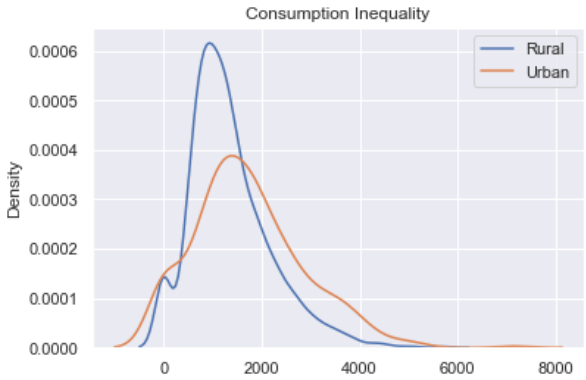
Table 4: Data Statistics

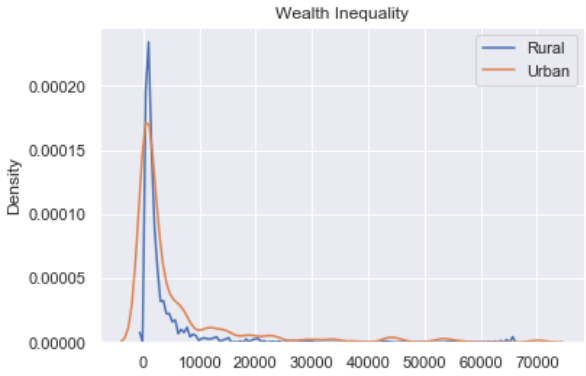
B) Inequality











C) Cross-section Behavior

	Rural		Urban	
	C	W	C	W
W	0.23	-	0.22	-
I	0.21	0.17	0.18	0.19

Table 5: Correlation

Part II

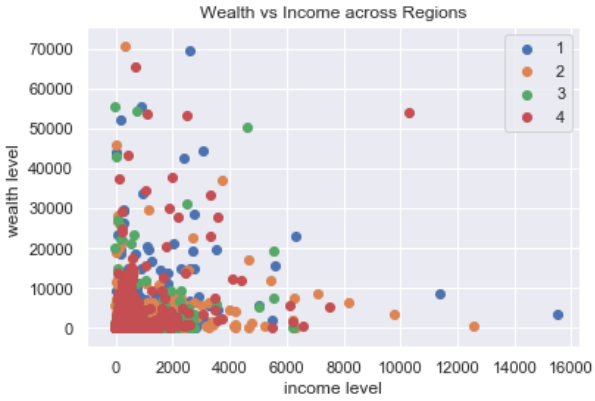
Inequality Across Space - CIW

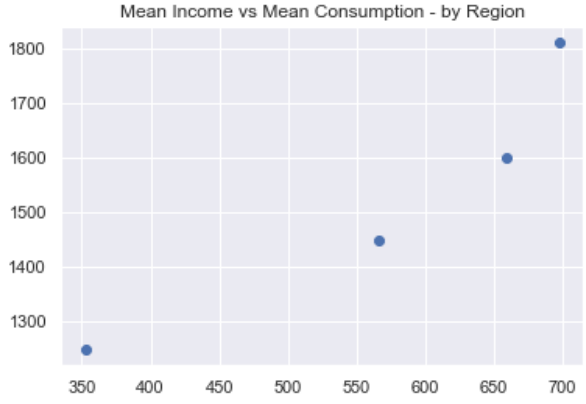
4 In Levels

Rank of regions: 3, 2, 4, 1


Wealth vs Income - Region 4
wealth level
income level
0
10000
20000
30000
40000
50000
60000
0
2000
4000
6000
8000
10000


Consumption vs Income across Regions
consumption level
income level
1
2
3
4
0
1000
2000
3000
4000
5000
6000
7000
0
2000
4000
6000
8000
10000
12000


Wealth vs Income across Regions
wealth level
income level
1
2
3
4
0
10000
20000
30000
40000
50000
60000
70000
0
2000
4000
6000
8000
10000
12000
14000
16000


Mean Income vs Mean Consumption - by Region
1300
1400
1500
1600
1700
1800
350
400
450
500
550
600
650
700

5 In Inequality

Gini			
region	C	I	W
1	0.341	0.574	0.723
2	0.327	0.699	0.726
3	0.337	0.663	0.824
4	0.326	0.535	0.766

Table 6: Gini Coefficient by Region

6 In Correlation

	Reg1		Reg2		Reg3		Reg4	
	C	W	C	W	C	W	C	W
W	0.22	-	0.22	-	0.32	-	0.18	-
I	0.16	0.19	0.24	0.13	0.29	0.25	0.14	0.26

Table 7: Correlation by Region

Part III
Labor Supply

7 Data Summary

I extensive margin as a binary variable: if the Household work (= 1) or not (= 0). Note that there is potentially more than one person in a given Household working (for eg. the spouse, children, etc.). However, I treat the Household as a unit and do not take into account how many people in a house are working.

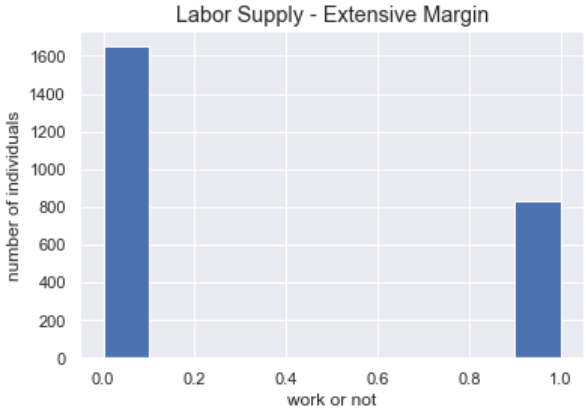
For the intensive margin, I define it as hours worked per week for the Household unit. By the same reasons above, I get the average hours per Household: that is, the total number of hours worked by its all members divided by how many people work.

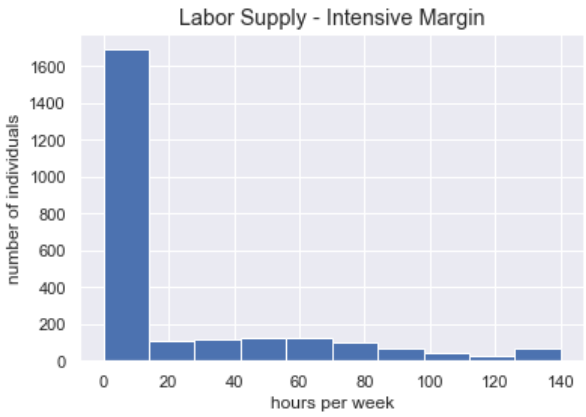
Moreover, I find that some units work more than possible (for eg. 280 hours per week; which is greater than $24 \times 7 = 168$). For this reason, I fix the maximum hours worked at 140, and any unit working more than that get its value replaced by the maximum.

At the extensive margin, the total number of HH units that works in the sample is 828, mean 0.33 and variance is 0.22.

For the intensive margin, the total hours per week worked is 51554.317, mean 20.80 and log - variance 0.5.

Gini coefficients intensive and extensive margins (respectively): 0.779, 0.666.




Labor Supply - Intensive Margin
number of individuals
0
200
400
600
800
1000
1200
1400
1600
0
20
40
60
80
100
120
140
hours per week

8 Cross-Section Behavior

	Extensive Margin	Intensive Margin
extensive margin	-	0.82
intensive margin	0.82	-
C	0.22	0.11
I	0.41	0.43
W	0.16	0.10

Table 8: Labor Supply Correlation

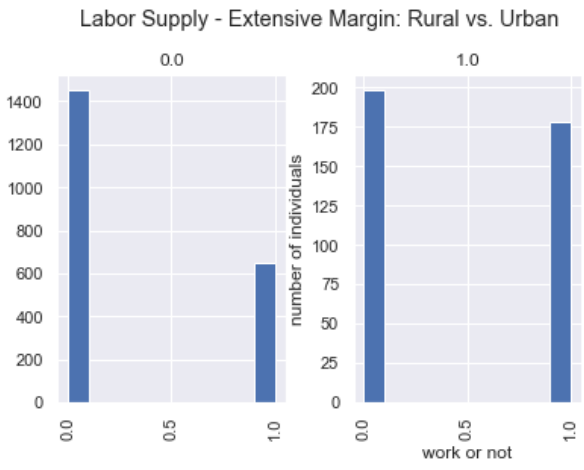
9 Urban vs Rural Areas

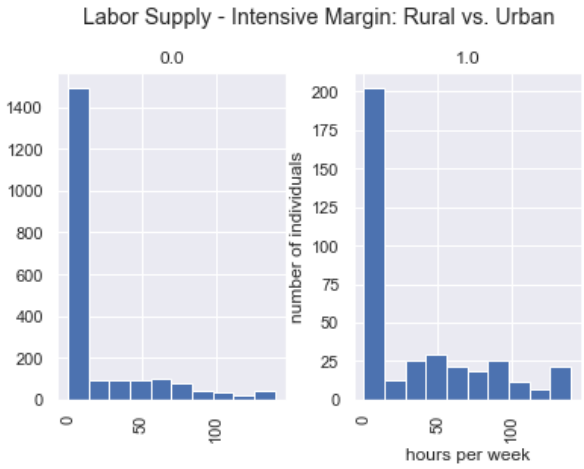
A) Summary

Area	Extensive Margin				Intensive Margin			
	total	proportion (%)	mean	variance	total	proportion (%)	mean	log-variance
Urban	178	21.50	0.473	0.25	12762.6	33.94	24.76	0.37
Rural	650	78.50	0.309	0.21	38791.72	18.46	75.24	0.53

Table 9: Labor Supply by Region

B) Inequality




Labor Supply - Intensive Margin: Rural vs. Urban
0.0
1.0
number of individuals
hours per week


Extensive Labor Supply Inequality
Rural
Urban
Density

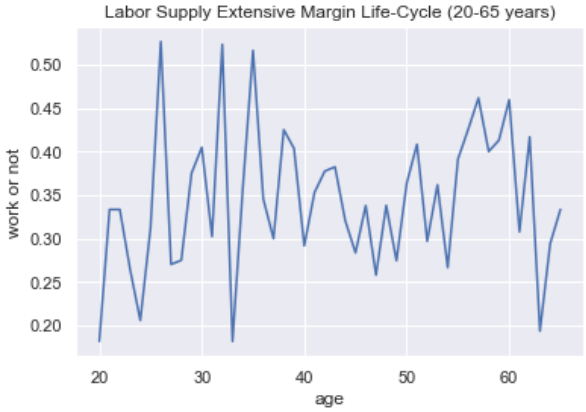

Intensive Labor Supply Inequality
Rural
Urban
Density

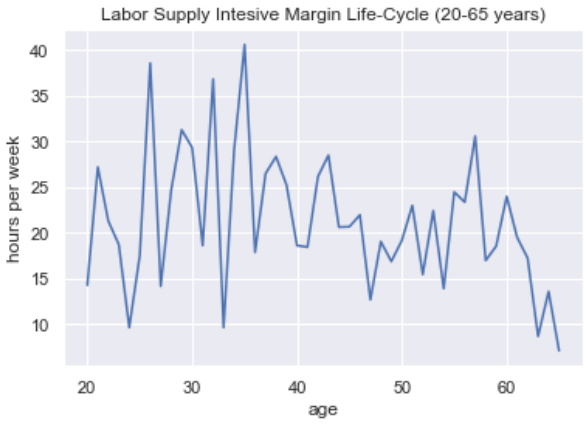
C) Cross-Section Behavior

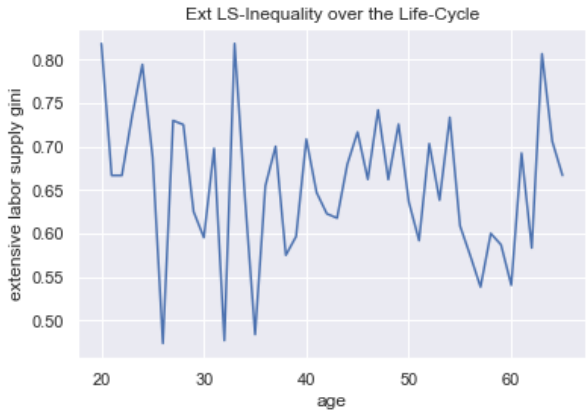
	Rural		Urban	
	Intensive Margin	Extensive Margin	Intensive Margin	Extensive Margin
intensive margin	-	0.82	-	0.82
extensive margin	0.82	-	-	0.82
C	0.13	0.05	0.29	0. 23
I	0.42	0.43	0.38	0.48
W	0.08	0.04	0.23	0.17

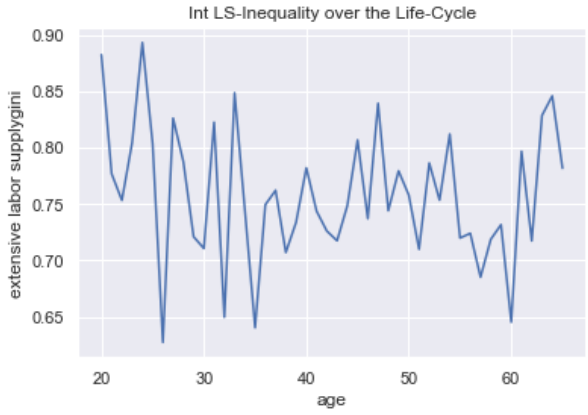
Table 10: Labor Supply Correlation

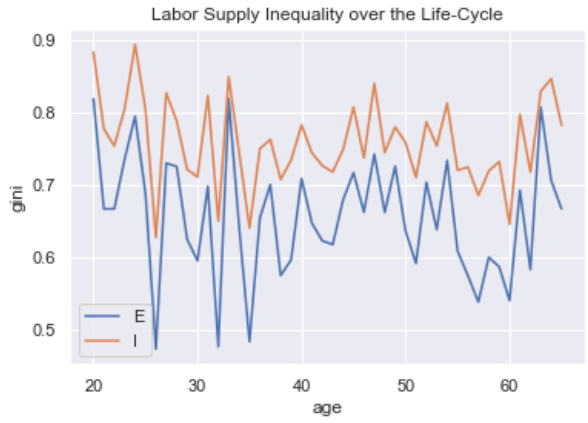
10 Lifecycle Behavior

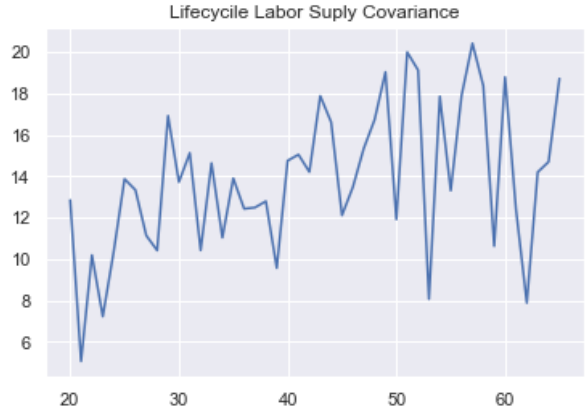





Ext LS-Inequality over the Life-Cycle
extensive labor supply gini
0.80
0.75
0.70
0.65
0.60
0.55
0.50
20
30
40
50
60
age


Int LS-Inequality over the Life-Cycle
extensive labor supplygini
0.90
0.85
0.80
0.75
0.70
0.65
20
30
40
50
60
age


Labor Supply Inequality over the Life-Cycle
gini
0.9
0.8
0.7
0.6
0.5
E
I
20
30
40
50
60
age


Lifecycile Labor Suply Covariance
20
18
16
14
12
10
8
6
20
30
40
50
60

11 Top/Bottom Behavior

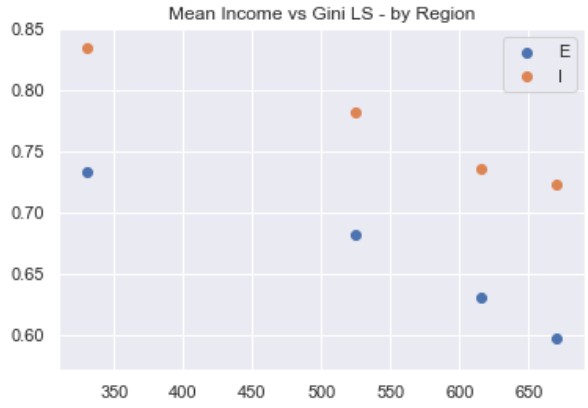
	Bottom (%)			Quantiles					Top (%)		
	0-1	1-5	5-10	Q1	Q2	Q3	Q4	Q5	10-5	5-1	1
Extensive	0.005	0.0065	0.011	0.013	0.019	0.027	0.049	0.103	0.114	0.117	0.116
Intensive	0.0009	0.008	0.005	0.010	0.013	0.024	0.050	0.113	0.132	0.135	0.123

Table 11: Ranking by Income (as income share)

Part IV
Labor Supply by groups

12 By Region

Regions Ranking: 1,2,4,3



	Reg1		Reg2		Reg3		Reg4	
	Extensive LS	Intesive LS	Extensive LS	Intesive LS	Extensive LS	Intesive LS	Extensive LS	Intesive LS
mean	0.40	25.58	0.32	19.84	0.27	13.82	0.37	25.68
std	0.49	38.50	0.47	35.08	0.44	29.34	0.48	39.72
min	no	0	no	0	no	0	no	0
25%	no	0	no	0	no	0	no	0
50%	no	0	no	0	no	0	no	0
75%	yes	46.50	yes	29	yes	9	yes	49
max	yes	140	yes	140	yes	140	yes	140
obs	525		653		690		609	

Table 12: Labor Supply by Region

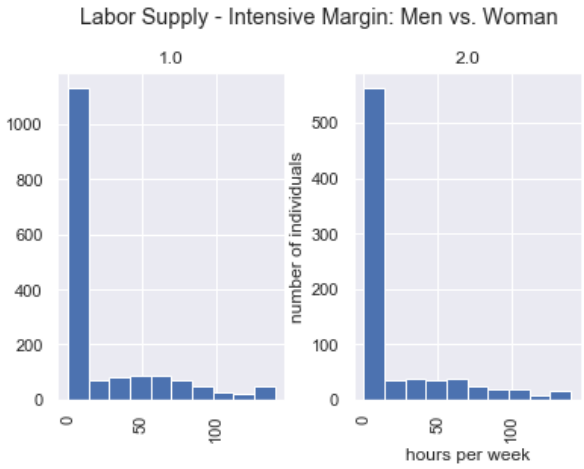
Reg1	Reg2	Reg3	Reg4
15.33	13.54	10.15	16.22

Table 13: LS Covariances by Region

13 by Sex

Area	Extensive Margin			Intensive Margin		
	total	proportion (%)	mean	total	proportion (%)	mean
Men	580	70.05	0.345	36704.8	71.19	21.81
Woman	248	29.952	0.312	14849.517	18.702	28.803

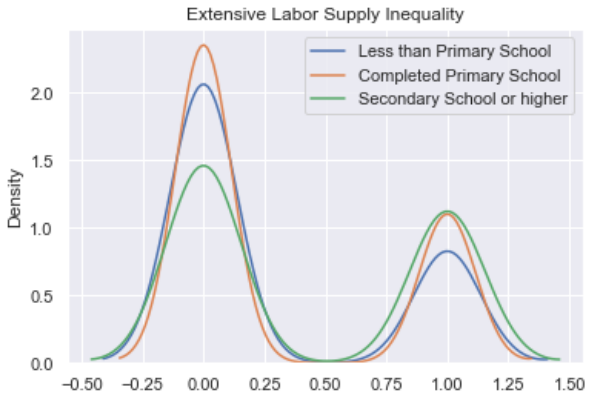
Table 14: Labor Supply by Sex

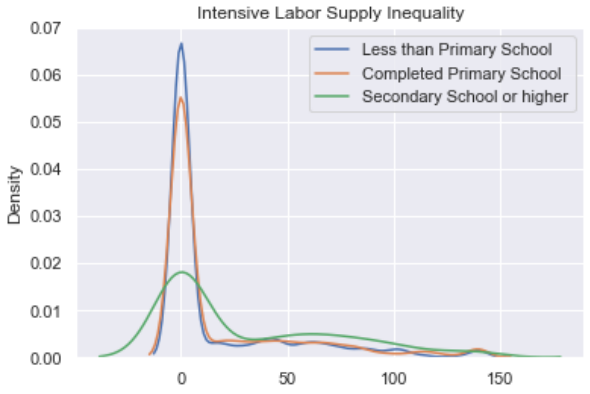


14 Education Group

Educ	Extensive Margin		Intensive Margin		
	total	proportion (%)	total	proportion (%)	mean
Less than Primary	6	0.724	170.5	0.331	11.36
Primary Completed	472	57	28131.5	54.567	19.007
Secondary or higher	216	26.08	15317.4	29.711	30.758

Table 15: Labor Supply by Edcuation





Less than Primary	Primary Completed	Secondary or higher
12.05	12.95	17.44

Table 16: LS Covariances by Education