



Heterogeneity in Human Capital Accumulation and Educational Returns in Urban and Rural China

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Background

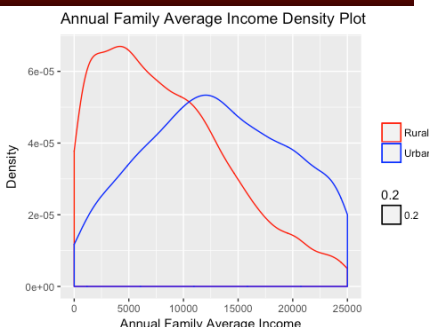
•After the start of the opening up policy, income inequality has been increasing significantly in China. The role of human capital has been playing an increasingly important role in wage setting (Qin, 2014). But the rural urban dichotomy is usually studied separately with no integration.

•This paper studies the determinants of educational attainment and educational returns in rural and urban area respectively using two stage least square. Specifically this paper answers how financial constraint and intergenerational human capital transfer affect educational attainment in urban and rural area differently and by how much does educational return in these two regions differ.

Hypothesis

1. Financial constraint is the major determinant of educational attainment in rural area.
2. Intergenerational mobility is the major determinants of educational attainment in urban area.
3. Educational return is lower for people with rural identity.

Annual Family Average Income Density Plot



Methods

The theoretical model follows the three-period overlapping generations model. The econometric specification is the standard simultaneous equation model. The approach adopted in the paper is the two stage least square approach. The first-stage regression is in the following form:

$$\begin{aligned} Education^c &= \beta_1 Education^p + \beta_2 Income^p \\ &+ \beta_3 Asset^p + \beta_4 X + \epsilon \end{aligned}$$

The instrumental variable chosen here is

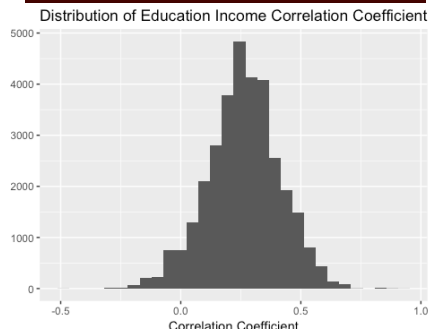
- 1) parent's education level;
- 2) correlation between education and income in the interviewee's community.

The second-stage regression adopted here is the simple Mincer regression:

$$\begin{aligned} Income^p &= \beta_1 Education^c + \beta_2 Exp + \beta_3 Exp^2 \\ &+ \beta_4 X + \epsilon \end{aligned}$$

The regression is conducted in the rural and urban samples separately.

Distribution of Instrumental Variable



First Stage Result

Table 1: First Stage Regression Results

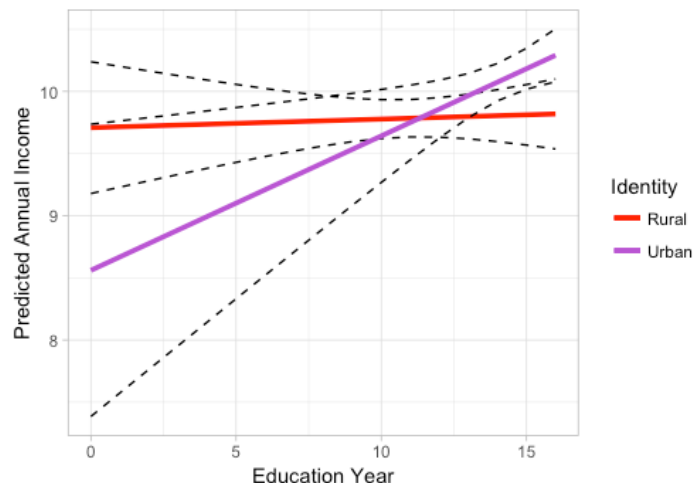
	Dependent variable: Educational Attainment				
	Rural		Urban		
	(1)	(2)	(3)	(4)	(5)
Father Education	0.169*** (0.017)	0.156*** (0.017)	0.190*** (0.018)	0.216*** (0.027)	0.179*** (0.029)
Mother Education	0.140*** (0.016)	0.153*** (0.017)	0.151*** (0.017)	0.047** (0.023)	0.062*** (0.024)
Log(Parents Income)	0.268*** (0.051)	0.290*** (0.053)	0.524*** (0.098)	0.200*** (0.075)	0.190** (0.075)
Num Migrants in Comm			0.063*** (0.018)		
Log(P Income) * Num Migrant			-0.007*** (0.002)		
Log(Parent Asset)	0.379*** (0.067)	0.327*** (0.069)	0.258*** (0.073)	0.039 (0.065)	0.029 (0.070)
Gender	-0.668*** (0.137)	-0.559*** (0.142)	-0.616*** (0.145)	-0.455** (0.194)	-0.514** (0.202)
Age	-0.257*** (0.027)	-0.274*** (0.028)	-0.262*** (0.029)	-0.001 (0.040)	-0.007 (0.041)
Parents Savings Rate	0.00002 (0.00001)	0.00002* (0.00001)		0.00001 (0.00003)	0.00001 (0.00003)
Education Income Correlation		5.224*** (0.475)	4.979*** (0.488)		1.446** (0.667)
Constant	8.536*** (1.064)	8.095*** (1.090)	6.216*** (1.296)	9.250*** (1.327)	9.510*** (1.386)
Observations	3,117	2,792	2,722	938	834
R ²	0.161	0.198	0.204	0.129	0.131
Adjusted R ²	0.159	0.196	0.201	0.123	0.123

Note:

*p<0.1; **p<0.05; ***p<0.01

Second Stage Result

Second Stage Regression Plot



Conclusion

In general, people from urban and rural area demonstrates different features in income and education. We have the following conclusions:

- 1) financial constraint is the major determinant of educational attainment in rural area;
- 2) Intergenerational human capital transfer is important for both urban and rural area;
- 3) Educational return for people with rural identity is insignificant, while it is significantly higher in urban area;
- 4) low educational return hampers educational investment in rural area. But the key constraint is not labor mobility, instead consistent labor market bias.

Limitations

1. Lack of proxies for expected educational returns;
2. Lack of discussion on the effect of educational attainment on occupation choice, which may be an indicator for the effect of labor market conditions on education investment decision.

References

Qin, Xuezheng, Tianyu Wang, and Castiel Chen Zhuang. "Intergenerational transfer of human capital and its impact on income mobility: Evidence from China." *China Economic Review* 38 (2016): 306-321.