

Urban Dibao: Targeting and Effect

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- **Does the urban dibao program really help the urban poor to escape from poverty?**
- **How efficient is the targeting of the urban dibao program?**
- **What are the factors influence on the efficiency of dibao targeting?**
- **Effect of dibao program on poor household expenditure?**

Data in analysis

- **China's Urban Employment and Social Protection Survey 2009.**
- **The cities include Shanghai, Wuhan, Shenyang, Fuzhou, Xian and Guangzhou.**

I Does the urban dibao program really help the urban poor to escape from poverty?

Dibao standards

- **Dibao Household: per capita household income falls below a locally determined minimum living standard can enjoy this assistance**
- **Dibao Income of a Household = household size \times (*dibao* standard per capita – household income)**

Table 1 Characteristics of *Dibao* in Six Cities

City	Household Number	<i>Dibao</i> Number	Coverage Rate in Sample (%)	<i>Dibao</i> Standards in Survey Date
Total	4273	121	2.83	—
Shanghai	700	16	2.29	450
Wuhan	700	46	6.57	360
Shenyang	716	11	1.54	340
Fuzhou	728	4	0.55	290
Xi'an	729	35	4.80	260
Guangzhou	700	9	1.29	398

Table2. Poverty Rate before and after *dibao* program by Household Level (%)

City	Poverty Rate Before <i>dibao</i> Program	Poverty Rate After <i>dibao</i> Program
Shanghai	3.57	3.12
Wuhan	5.41	3.83
Shenyang	8.26	8.14
Fuzhou	9.60	9.27
Xi'an	4.58	3.71
Guangzhou	5.75	5.46
Total	5.38	4.79

Table3. Poverty Rate before and after *dibao* program by Individual Level (%)

City	Poverty Rate Before <i>dibao</i> Program	Poverty Rate After <i>dibao</i> Program
Shanghai	3.59	3.20
Wuhan	5.40	3.60
Shenyang	8.40	8.32
Fuzhou	8.54	8.33
Xi'an	4.29	3.54
Guangzhou	4.81	4.58
Total	5.17	4.59

II Targeting Outcomes of Dibao Program

Error Of Target: “Who is poor”

- **Error of Exclusion: mistakenly identify poor people as nonpoor, and thus deny them access to the program.**
- **Error of Inclusion: mistakenly identify nonpoor peoples as poor, and therefore admit them to the program.**

Table 5 Targeting Outcomes of Dibao Program

	Poor Households	Non-poor households	Total
Have dibao	Success	Inclusion error (Error 2)	
	54	67	121
Have no dibao	Exclusion error (Error 1)	Success	
	211	3941	4152
Total	265	4008	4273

“Success rate” = $(54+3941)/4273 \times 100=93.49\%$

“Error rate” = $(211+67)/4273 \times 100=6.51\%$

“Undercoverage” = $211/265 \times 100=79.62\%$ Error1

“Leakage” = $67/121 \times 100=55.37\%$ Error2

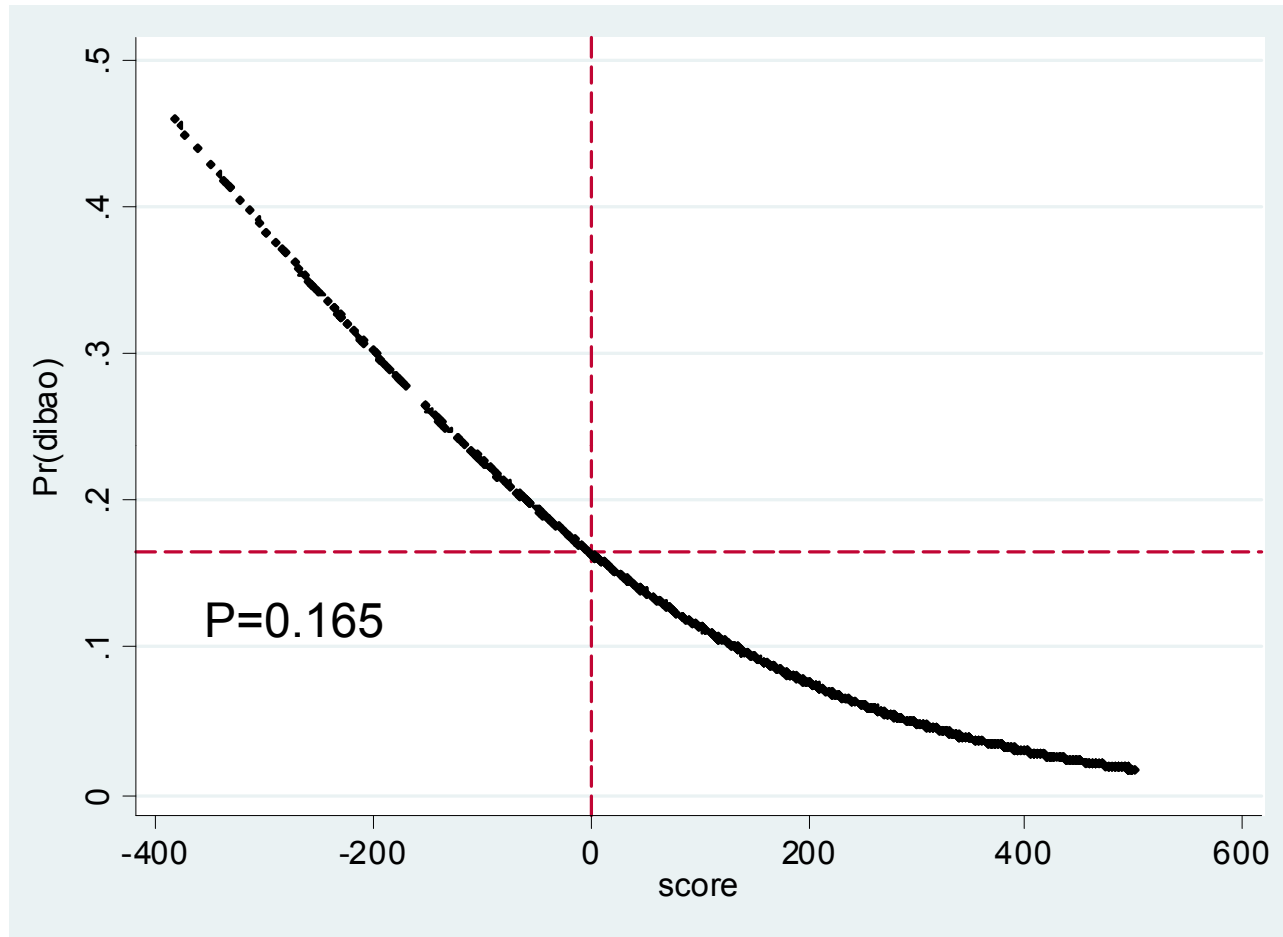


Fig1. Income and the possibility of assess to dibao

III The Factors Influence on the Efficiency of dibao Targeting

Multinomial Logit Model:

$$**L_1 = X'b + e**$$

$$**L_2 = X'b + e**$$

L_{1,2}=1 if targeting is not correct,

include error1 and error2;

L=0 if targeting is correct

Variable X includes:

(1) Per Capita Income

(2) Basic Human Capital Characteristics

(3) Employment Status

(4) Demographic Compositions

(5) Healthy condition

(6) Living Standards

Table 9 Mistargeting Analysis: Based on MLM Analysis(I)

Variable	Type1		Type2	
	Coef.	Z Value	Coef.	Z Value
Constant	1.758*	1.720	-1.539*	-2.560
Original per Income	- 0.008***	-8.560	- 0.001***	-5.550
Household size	0.012	0.110	0.177	1.490
Household head educational years	0.020	0.710	- 0.010	-0.410
Partner's educational years	- 0.006	-0.190	- 0.004	-0.240
Proportion of employed	0.010	0.020	0.015	0.050
Proportion of unemployed	0.428	0.680	- 1.344	-1.380
Proportion of age 0-15	- 0.487	-0.670	- 0.209	-0.450
Proportion of women 55+	- 0.386	-0.580	- 0.919*	-2.020
Proportion of men 60+	0.725	1.010	1.284***	2.610

Table 9 Mistargeting Analysis: Based on MLM Analysis(II)

Dependent Variable Variable	Type1		Type2	
	Coef.	Z Value	Coef.	Z Value
Healthy	0.171*	1.830	- 0.229***	-2.920
Household head's brothers and sisters	0.092	1.460	- 0.048	-1.060
Partner's brothers and sisters	- 0.010	-0.140	- 0.012	-0.250
Per living area	0.007**	2.200	- 0.019**	-2.370
Toilet (1=Yes; 0=Not)	0.837*	1.740	- 0.243	-1.110
Gas tubing (1=Yes; 0=Not)	0.056	0.250	- 0.038	-0.250
House property right (1=Yes; 0=Not)	- 0.403*	-1.890	- 0.307*	-1.810
Durable commodity (1=Yes; 0=Not)	- 0.147	-0.460	- 0.086	-0.230
Fit up house (1=Yes; 0=Not)	- 0.364	-0.960	- 4.917***	-19.610
City dummy	Yes	Yes	Yes	Yes
Observations	3315			
Probability>chi2	0.000		0.0009	

IV Effect of Dibao Cash Transfer on Poor Household Consumption

- **Goal (Evaluate the dibao program)**

Target transfer to poorest households

- **Method (Regression Discontinuity)**

construct poverty index from -100 to 100 RMB

Households with a score < 0 are poor

Households with a score ≥ 0 are non-poor

- **Evaluation**

Effect of Dibao on household consumption before and after cash transfer, comparing households just above and below the cut-off point.

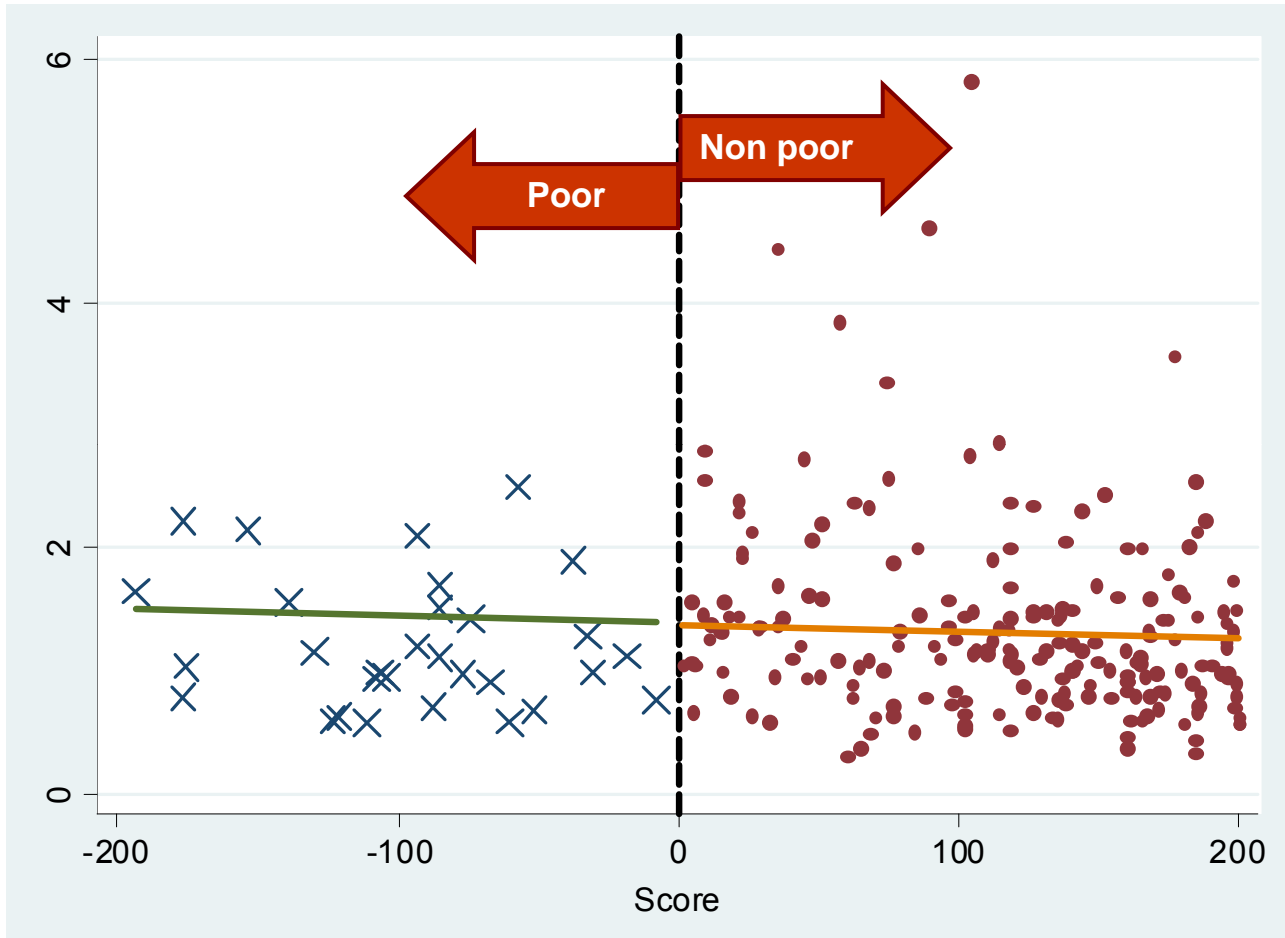


Fig2. the relationship between income and expenditure rate in baseline

Band from -200 to 200 Yuan RMB

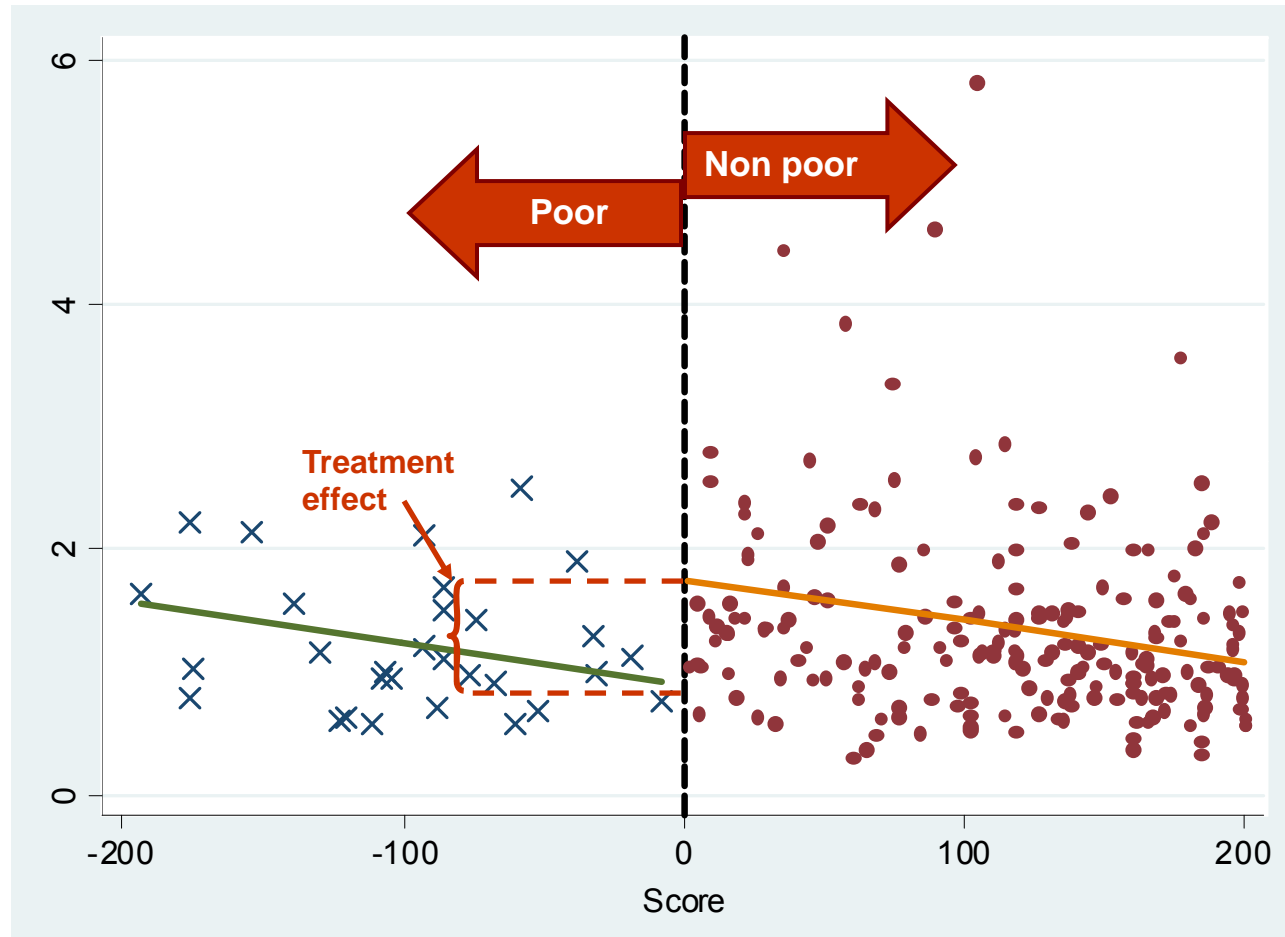


Fig3. the relationship between income and expenditure rate in the treatment year

Band from -100 to 100 Yuan RMB

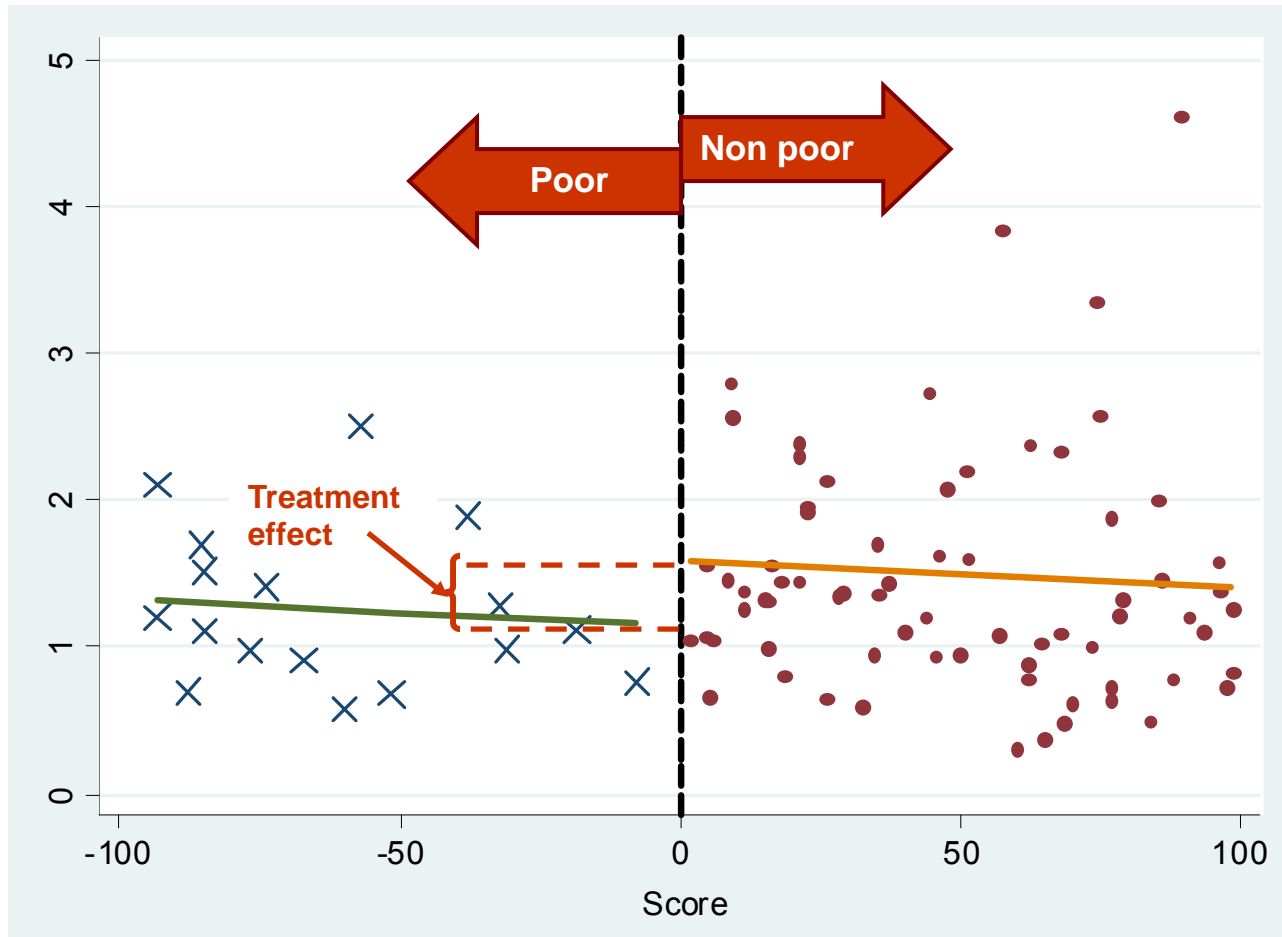


Fig4. the relationship between income and expenditure rate in the treatment year

Poor Household	Dibao=1 Correct Targeting
	Dibao=0 Mis-targeting

Aim: Compare Income-expenditure relationship between the two groups.

Results: expenditure line of correct targeting household vs. expenditure line of mis-targeting poor household.

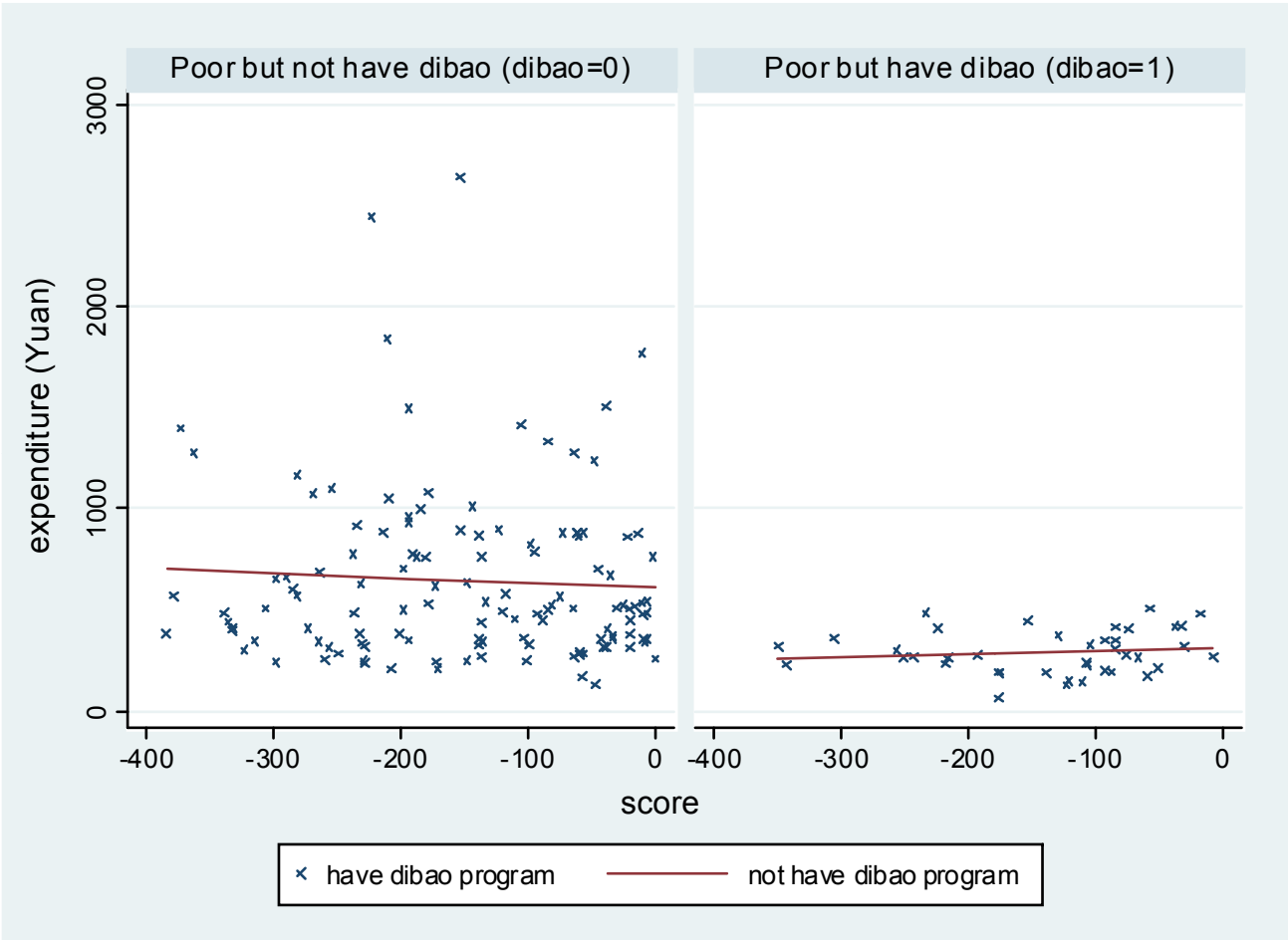


Fig5. Effect of dibao program on consumption curve

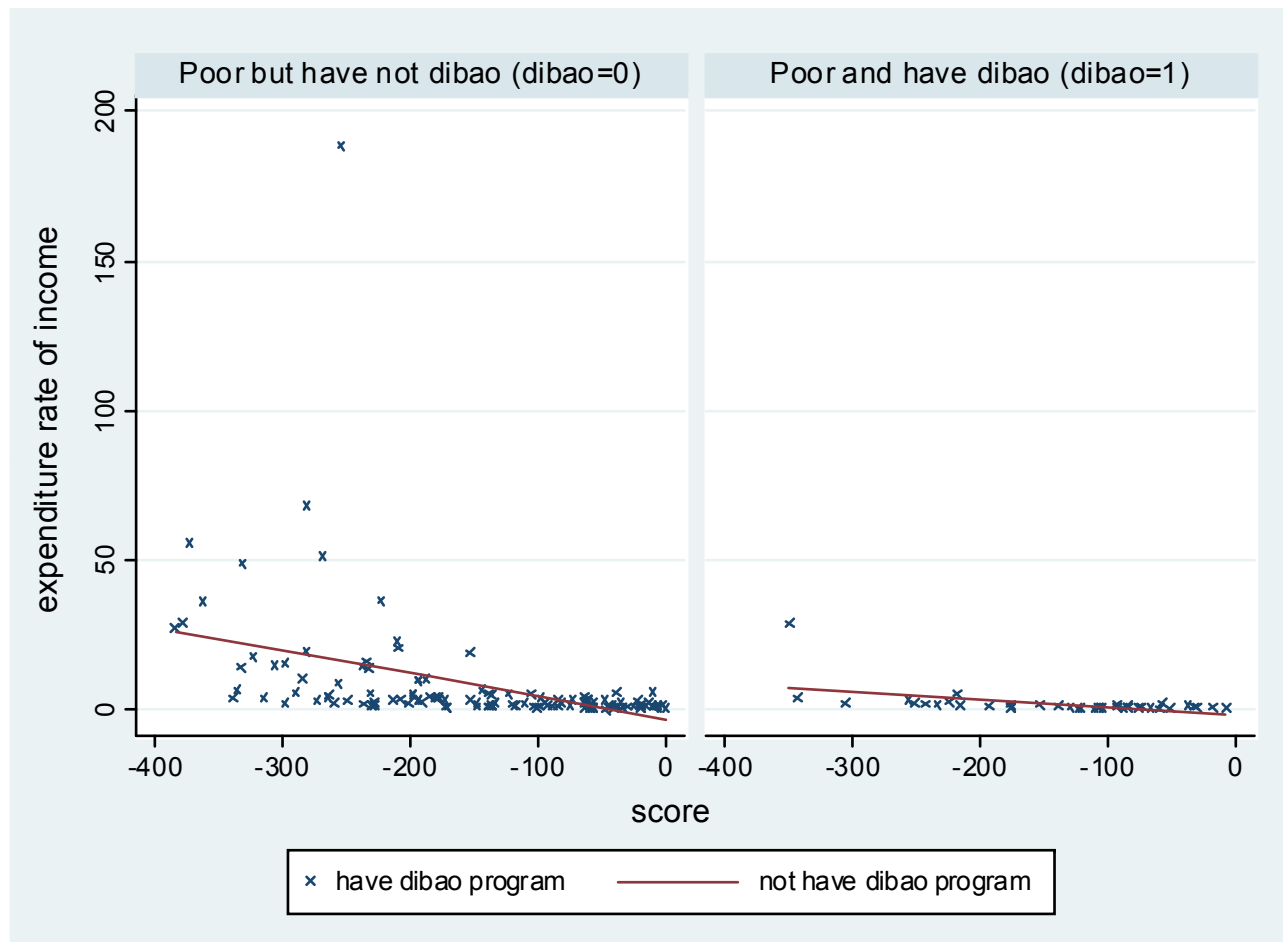


Fig6. Effect of dibao program on expenditure rate

Conclusion

- (1) *dibao* program has limited effects on alleviating poverty in China;
- (2) Undercoverage Rate and Leakage Rate are higher than CULS2.
- (3) Healthy condition and living condition of a household are the factors affecting *dibao* targeting.
- (4) *dibao* program may change the expenditure behavior.

Thanks!