

Written Exam for the M.Sc. in Economics Summer 2010

**Advanced Development Economics: Micro Aspects**

Re-exam

Date 17 August 2010

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language of the title for which you registered during exam registration. I.e. if you registered for the English title of the course, you must write your exam paper in English. Likewise, if you registered for the Danish title of the course or if you registered for the English title which was followed by “eksamen på dansk” in brackets, you must write your exam paper in Danish.

If you are in doubt about which title you registered for, please see the print of your exam registration from the students’ self-service system.

Question 1:

- (a) Describe and illustrate the 3 main points that can be deduced from the Preston Curves (relationship between life expectancy and income).

Luo, Mu and Zhang (2006) studied the effect of the great Chinese famine of 1959-62 on body mass. The famine killed between 20-30 million people – mainly in rural areas and unevenly distributed across provinces.

- (b) Based on the below table describe the identification strategy pursued and outline the main results.

**Table 2. Proportion of women overweight by cohort and severity of famine**

	Level of Famine Severity		
	Severe (1)	Less Severe (2)	Difference (1)-(2)
Panel A: Comparison of interest (rural)			
Cohort born during 1959-62	0.208 (0.033)	0.183 (0.015)	0.025 (0.035)
Cohort born during 1963-6	0.097 (0.018)	0.158 (0.013)	-0.061 (0.025)**
Difference of the above two rows	0.111 (0.035)**	0.025 (0.019)	0.086 (0.042)**
Panel B: Control comparison I (rural)			
Cohort born during 1963-6	0.097 (0.018)	0.158 (0.013)	-0.061 (0.025)**
Cohort born during 1967-70	0.056 (0.015)	0.124 (0.013)	-0.068 (0.023)**
Difference of the above two rows	0.040 (0.024)*	0.033 (0.019)*	0.007 (0.034)
Panel B: Control comparison II (urban)			
Cohort born during 1959-62	0.262 (0.037)	0.183 (0.022)	0.079 (0.041)*
Cohort born during 1963-6	0.179 (0.032)	0.128 (0.017)	0.051 (0.034)
Difference of the above two rows	0.083 (0.049)*	0.056 (0.027)**	0.028 (0.053)

Note: Standard errors are in parentheses. The symbols \*\* and \* represent significance levels of 5% and 10%, respectively. The severe famine provinces are Guizhou and Henan; and the less severe provinces are Guangxi, Hubei, Hunan, and Jiangsu.

- (c) Explain the three main (bias related) problems in the analysis carried out in Luo, Mu and Zhang (2006)?

Question 2:

Consider a household that is jointly engaged in production and consumption. Household utility depends on consumption ( $c$ ) and leisure ( $l$ ). Let  $p$  be the price of output,  $w$  the wage of labor and  $r$  the price of one unit of land. The household can produce the good on its farm according to the concave production function  $F(L, A)$ , where  $A$  is the area cultivated by the household and  $L$  is the amount of labor used on the farm. Let  $E^L$  be the household endowment of time and  $E^A$  the household endowment of land.

- (a) Assume complete markets and set up the household maximization problem. Show and describe the so-called “separation property” of the agricultural household model (AHM).
- (b) Assume now that there is no land market combined with a binding constraint on the time spent by the household working for a wage in the labor market (involuntary unemployment). Describe graphically what happens to the “separation property”.
- (c) Discuss the relationship between farm size and land productivity.

Question 3:

Microfinance institutions need to reduce their reliance on subsidies. One suggestion has to increase interest rates given the assumption that poor people are rate insensitive. Karlan and Zinman (2008) test this assumption of price inelastic demand.

- (a) Explain the identification problem in Karlan and Zinman (2008) and the way they address this.
- (b) Based on the below table; outline the main results reached in Karlan and Zinman (2008).

TABLE 3—THE EXTENSIVE MARGIN: PRICE SENSITIVITIES OF LOAN TAKE-UP

Dependent variable: Mean (dependent variable)	1 = Applied			1 = (Take-up with outside lender, not with our Lender)			1 = (Take-up with Lender after deadline, not before deadline)		
	0.08	0.08	0.07	0.22	0.22	0.28	0.15	0.15	0.18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Interest rate in pp terms (e.g., 8.2)	-0.00289*** (0.00047)		-0.01723*** (0.00160)	0.00106 (0.00083)		-0.00958 (0.00660)	0.00042 (0.00064)		-0.01239** (0.00622)
1 = (rate > standard for client's risk category)		-0.02996*** (0.00398)			0.00539 (0.00512)			-0.03630*** (0.00869)	
Pseudo R-squared	0.045	0.044	0.055	0.002	0.002	0.003	0.048	0.049	0.056
Sample:	Offer4 ≤ standard	Full	Offer4 > standard	Offer4 ≤ standard	Full	Offer4 > standard	Offer4 ≤ standard	Full	Offer4 > standard
Number of observations	53,178	53,810	632	53,178	53,810	632	53,178	53,810	632

Notes: Each column presents marginal effects from a single probit of a measure of loan take-up on the interest rate offered to the client, and risk category and mailer wave (not shown in table). Robust standard errors reported in parentheses and are clustered within branch. Interest rate coefficients show the change in the proportion taking up from a 100-basis-point increase in the monthly interest rate.

- \*\*\* Significant at, or below, 1 percent.
- \*\* Significant at, or below, 5 percent.
- \* Significant at, or below, 10 percent.

- (c) The slope of the demand curve steepens in the region of higher rates (KINK). Discuss the three possible “KINK” explanations outlined in Karlan and Zinman (2008) and highlight the preferred explanation.