Written Exam for the M.Sc. in Economics summer 2013

Advanced Development Economics: Micro Aspects

Final Exam

29 May 2013

(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.

This exam question consists of 5 pages in total including this page.

Question 1: Risk and Insurance

High income risk is part of life in developing economies. Climatic risks, economic fluctuations, and a large number of individual-specific shocks leave households vulnerable to severe hardship. (Dercon, 2002, p. 141)

a) Describe three different strategies households use to manage and cope with such risk and explain the main weaknesses of each strategy.

b) Explain the special problems of self-insurance through asset holdings.

c) Explain the theory of full-insurance (through informal risk sharing) and the hypothesis tested in Table 2 from Townsend, given below.

d) Is the hypothesis of informal risk sharing rejected or not rejected? Explain.

Table 2
Thai SES: Four tests for full risk sharing

Dependent Variable in regression 1, 2, 3 and 4: Change in average log amphoe consumption

	Kingdom	North	Northeast	Central	South	Bangkok
1) Independent Variables: Measured changes in region and community type average log consumption (see parenthetical caveat in the text) and change in average log amphoe income						
β (coefficient on average consumption)	.7366[a] (.07749)	.5288[a] (.15501)	.8223[a] (1.1162)	.7063[a] .25647)	.4140 (.30968)	.8468[a] (.22570)
$\emptyset$ (marginal propensity to consume income)	.3443[a] (.1722)	.3507[a] (.03519)	.3553[a] (.03572)	.3324[a] (.03399)	.3455[a] (.03726)	.3715[a] (.08502)
F-test for region and community type effects	.0001	.0008	.0001	.0063	.1827	.0004

Question 2: Migration

Table 6 from Mendola (2008) is given on the next page, it shows regression results for the probability of adopting High Yield Variety (HYV) rice and the probability of migrating; either (i) temporary domestic, (ii) permanent domestic or (iii) international migration. The four equations are linear probability models.

a) Based on a migration model formulated in Bardhan and Udry (1999), explain why you think it is reasonable that "Family chain migration", % temporary migration in the village", "% permanent migration in the village" and "% international migration" are all significant determinants of the three types of migration, respectively.

b) Based on the results in Table 6 on the next page, discuss the relationship between wealth and migration.

c) Based on the results in Table 6 on the next page, explain the relationship between wealth and the adoption of HYV rice.

d) Based on a model of technological progress and learning formulated in Bardhan and Udry (1999) and in Foster and Rosenzweig (1995), can you think of omitted variables in the model for adoption of HYV rice? If so, would you think the omitted variables are related to the migration patterns in some way?

Table 6
3SLS estimate of the impact of different typologies of migration on HYVs adoption

	Dependent variables			
	Adoption of HYVs	Temporary migration	Permanent migration	International migration
Temporary migration	−0.444**			
	(2.04)			
Permanent migration	−0.25**			
	(2.11)			
International migration	0.718***			
	(2.69)			
Number of males in the HH	0.013	0.016***	0.031***	0.02***
	(1.07)	(2.71)	(5.23)	(5.28)
Number of females in the HH	−0.01	−0.009	0.004	0.024***
	(0.76)	(1.23)	(0.55)	(5.17)
Number of children in the HH	0.005	−0.007**	−0.011***	0.006***
	(0.93)	(2.23)	(3.30)	(2.69)
Average years of schooling in the HH	−0.002			
	(0.32)			
Religion (1 if Muslim)	0.053	0.182***	−0.03	0.04***
	(0.92)	(9.36)	(1.53)	(3.33)
% of temple land	−0.026**			
	(2.08)			
% of cash-in land	−0.006			
	(0.09)			
% of mortgaged-out land	−0.07***			
	(3.16)			
Farm equipment owned	0.016			
	(1.46)			
Means of ploughing (1 if power)	0.049***			
	(2.90)			
Self-poor assessment	−0.074***	0.029**	−0.008	−0.037***
	(3.67)	(2.57)	(0.73)	(5.22)
Regional dummy (1 if Madhupur)	0.069	−0.086***	0.053	0.031***
	(1.25)	(3.20)	(1.33)	(2.70)
% of irrigated land	0.273***			
	(11.48)			
Land owned (pae)	0.029	−0.139***	−0.132***	0.058***
	(0.8)	(4.41)	(4.07)	(2.94)
[Land owned (pae)]²		0.046***	0.028**	−0.021***
		(3.64)	(2.12)	(2.66)
Cattle owned (pae)	0.16***	−0.065**	−0.099***	−0.056***
	(5.65)	(2.25)	(3.27)	(3.08)
[Cattle owned (pae)]²		0.037**	0.053***	0.015
		(1.96)	(2.66)	(1.31)
Constant	0.129***	0.021	−0.097**	−0.15***
	(2.63)	(0.57)	(2.05)	(7.90)
Instruments:				
Highest education level in the HH		−0.061***	0.048***	0.015***
		(7.67)	(5.96)	(3.10)
Family chain migration		0.001	0.312***	0.091***
		(0.04)	(12.10)	(5.72)
% temporary migrants in the village		0.768***		
		(5.53)		
% permanent migrants in the village			1.018***	
			(5.62)	
% international migrants in the village				1.029***
				(8.73)
Observations	3404	3404	3404	3404

Sargan test:	$\chi^2(2)=3.145$ [p-value=0.21];	
First-stage	F-test (5, 3383)	P-value
Temporary migration:	10.27	0.0000
Permanent migration:	38.21	0.0000
International migration:	19.21	0.0000

Absolute value of z-statistics in parentheses.
*Significant at 10%.
**Significant at 5%.
***Significant at 1%.

Question 3: Civil War

a) Based on Table 2 from Humphreys and Weinstein (2008) given below, describe the hypotheses formulated and tested in Humphreys and Weinstein (2008) explaining the roots of individual participation in armed groups.

b) What do Humphreys and Weinstein (2008) have to say about voluntary vs. forcible recruitment?

c) What could be the problem with the result regarding voluntary vs. forcible recruitment?

TABLE 2   Determinants of Participation in Rebellion

Model	I: RUF Logit — All	II: RUF Multinomial Probit — Abductees	II: RUF Multinomial Probit — Volunteers	II: CDF Logit — Volunteers
GRIEVANCES				
H_1 Mud Walls	0.92 [0.41]**	0.50 [0.22]**	0.57 [0.26]**	1.61 [0.56]***
H_1 Lack of Access to Education: (More than primary 0, Primary 1, No primary 2)	1.09 [0.30]***	0.61 [0.15]***	0.40 [0.18]**	0.80 [0.30]***
H_2 Supports the SLPP	−0.49 [0.67]	−0.23 [0.33]	−0.90 [0.30]***	−0.58 [0.58]
H_2 Mende	2.16 [0.88]**	1.09 [0.42]***	0.60 [0.450]	0.58 [0.65]
H_3 Does Not Support Any Party	1.29 [0.57]**	0.50 [0.25]**	0.62 [0.24]**	1.62 [0.51]***
SELECTIVE INCENTIVES				
H_4 Offered Money to Join	1.77 [0.58]***	1.01 [0.43]**	0.78 [0.46]*	3.19 [0.65]***
H_5 Felt Safer Inside Group	−0.56 [0.37]	−0.51 [0.15]***	0.99 [0.212]***	2.34 [0.30]***
COMMUNITY COHESION				
H_6 Friends as Members of Group	0.25 [0.90]	−3.10 [0.68]***	3.09 [0.44]***	0.60 [0.50]
H_7 Villages Accessible by Foot or Boat Only	−0.01 [0.02]	−0.002 [0.01]	0.003 [0.01]	0.03 [0.01]**
CONTROLS				
Farmer	0.32 [0.56]	0.26 [0.34]	−0.64 [0.39]*	1.39 [0.47]***
Student	0.83 [0.55]	0.38 [0.27]	0.44 [0.28]	1.26 [0.56]**
Male	2.44 [0.64]***	1.05 [0.31]***	1.26 [0.32]***	4.06 [0.90]***
Age	1.03 [1.21]	0.03 [0.57]	2.57 [0.68]***	3.52 [1.22]***
Age-squared	−0.2 [0.16]	−0.047 [0.07]	−0.30 [0.09]***	−0.46 [0.15]***
Freetown	−0.16 [0.73]	−0.052 [0.35]	−0.87 [0.38]**	0.55 [0.83]
Infant Mortality	13.52 [6.75]*	5.125 [5.14]	9.82 [4.12]**	16.85 [6.07]***
Constant	−12.48 [3.16]***	−5.50 [1.64]***	−15.29 [1.60]***	−26.74 [3.45]***
Observations	515	515		689

Notes: Standard errors in brackets. *Significant at 10%; **significant at 5%; ***significant at 1%.