EC4041 Development Economics

Problem set 3

Question 1 (Ray (1998), chapter 12)

1. Show that in an economy with extensive possibilities for perfect crop insurance, fixed-rent tenancy must be dominant irrespective of whether potential tenants are risk-averse or risk-neutral

2. Show that in an economy where risk is a major factor, where tenants are risk-averse, and where the inputs of the tenant can be costlessly monitored by the landlord (and verified in court), sharecropping will be preferred to fixed-rent tenancy.

3. In this question, why did we add the extra-quilification that inputs can be verifiable? what happens if we drop this assumption?

Question 2 (Ray (1998), chapter 12)

It is not uncommon to observe that in sharecropping contractys with cost sharing, the cost share borne by the tenant is equal to the output share accruing to him. Explain why this might be the case.

Question 3

Comment on table 5 from the paper by Collier and Hoeffler (2004) "Greed and Grievance in Civil War".

Question 4

Comment on the following tables, taken from the paper by Miguel, Satyanah and Sergenti (2004) "Economic Shocks and Civil Conflict: An Instrumental Variables Approach".

TABLE 2
RAINFALL AND ECONOMIC GROWTH (First-Stage)
Dependent Variable: Economic Growth Rate, t

EXPLANATORY VARIABLE	ORDINARY LEAST SQUARES				
	(1)	(2)	(3)	(4)	(5)
Growth in rainfall, t	.055***	.053***	.049***	.049***	.053***
	(.016)	(.017)	(.017)	(.018)	(.018)
Growth in rainfall, $t-1$	.034**	.032**	.028**	.028*	.037**
	(.013)	(.014)	(.014)	(.014)	(.015)
Growth in rainfall, $t+1$				.001	
				(.019)	
Growth in terms of trade, t					−.002
					(.023)
Log(GDP per capita), 1979		−.011			
		(.007)			
Democracy (Polity IV), $t-1$		.0000			
		(.0007)			
Ethnolinguistic fractionalization		.006			
		(.044)			
Religious fractionalization		.045			
		(.044)			
Oil-exporting country		.007			
		(.019)			
Log(mountainous)		.001			
		(.005)			
Log(national population), $t-1$		−.009			
		(.009)			
Country fixed effects	no	no	yes	yes	yes
Country-specific time trends	no	yes	yes	yes	yes
R^2	.02	.08	.13	.13	.16
Root mean square error	.07	.07	.07	.07	.06
Observations	743	743	743	743	661

NOTE.—Huber robust standard errors are in parentheses. Regression disturbance terms are clustered at the country level. A country-specific year time trend is included in all specifications (coefficient estimates not reported).
* Significantly different from zero at 90 percent confidence.
** Significantly different from zero at 95 percent confidence.
*** Significantly different from zero at 99 percent confidence.

TABLE 4
ECONOMIC GROWTH AND CIVIL CONFLICT

	Dependent Variable: Civil Conflict ≥25 Deaths						Dependent Variable: Civil Conflict ≥1,000 Deaths
Explanatory Variable	Probit (1)	OLS (2)	OLS (3)	OLS (4)	IV-2SLS (5)	IV-2SLS (6)	IV-2SLS (7)
Economic growth rate, t	−.37	−.33	−.21	−.21	−.41	−1.13	−1.48*
	(.26)	(.26)	(.20)	(.16)	(1.48)	(1.40)	(.82)
Economic growth rate, $t-1$	−.14	−.08	.01	.07	−2.25**	−2.55**	−.77
	(.23)	(.24)	(.20)	(.16)	(1.07)	(1.10)	(.70)
Log(GDP per capita), 1979	−.067	−.041	.085		.053		
	(.061)	(.050)	(.084)		(.098)		
Democracy (Polity IV), $t-1$	.001	.001	.003		.004		
	(.005)	(.005)	(.006)		(.006)		
Ethnolinguistic fractionalization	.24	.23	.51		.51		
	(.26)	(.27)	(.40)		(.39)		
Religious fractionalization	−.29	−.24	.10		.22		
	(.26)	(.24)	(.42)		(.44)		
Oil-exporting country	.02	.05	−.16		−.10		
	(.21)	(.21)	(.20)		(.22)		
Log(mountainous)	.077**	.076*	.057		.060		
	(.041)	(.039)	(.060)		(.058)		
Log(national population), $t-1$	.080	.068	.182*		.159*		
	(.051)	(.051)	(.086)		(.093)		
Country fixed effects	no	no	no	yes	no	yes	yes
Country-specific time trends	no	no	yes	yes	yes	yes	yes
R^2	…	.13	.53	.71	…	…	…
Root mean square error	…	.42	.31	.25	.36	.32	.24
Observations	743	743	743	743	743	743	743

NOTE.—Huber robust standard errors are in parentheses. Regression disturbance terms are clustered at the country level. Regression 1 presents marginal probit effects, evaluated at explanatory variable mean values. The instrumental variables for economic growth in regressions 5–7 are growth in rainfall, t and growth in rainfall, $t-1$. A country-specific year time trend is included in all specifications (coefficient estimates not reported), except for regressions 1 and 2, where a single linear time trend is included.

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** Significantly different from zero at 95 percent confidence.
*** Significantly different from zero at 99 percent confidence.