Ec 320, Fall 2009

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FINAL EXAMINATION

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Please do not write your name on your blue books, only your student ID number.

1. ($5 \times 6 = 30$ **marks). Indicate whether you agree, or disagree with the following statements. State qualifications and exemptions whenever applicable. In each case provide a brief explanation for your answer, referring both to relevant theory and facts.**

(a) One of the causes for high fertility rates in underdeveloped countries is a high rate of infant mortality.

ANSWER: True. A high rate of infant mortality lowers the likelihood that a child born will survive to adulthood and look after the parents in their old age. In the absence of social security or financial instruments for old-age retirement savings, risk-averse parents will want to insure against the prospect of having no surviving children to look after them in their old age. The number of children they must give birth to in order to ensure at least one surviving child with a given probability, increases sharply as the survival odds fall.

(b) The Marshallian theory of sharecropping predicts that fixed rent tenants will be less productive than owner cultivators (everything else such as farm size remaining the same).

ANSWER: False. Both fixed rent tenants and owner cultivators earn every dollar return to farm profits at the margin, so their effort incentives are the same. Empirical evidence (Shaban's study of ICRISAT villages and Sen's study of farms in India) also show that the farm yields are similar across fixed rent tenant farms and owner cultivated farms of the same size.

(c) The hypothesis of monopoly power of lenders in informal credit markets is neither necessary nor sufficient to explain the prevalence of credit rationing.

ANSWER: True. The monopoly power hypothesis is not sufficient, because it is not profit-maximizing for a monopoly lender to impose quantity limits on lending to a borrower when they are willing to borrow more at the existing interest rate (it would be better for them to raise the interest rate). It is not necessary because competitive theories with endogenous default can explain prevalence of credit rationing: credit limits are imposed to prevent default rates from rising too high.

(d) High income countries ought to protect their farmers and unskilled workers by imposing tariffs on low cost imports of farm and manufactured goods from developing countries.

ANSWER: Disagree. There are better ways to protect poor farmers or workers who cannot withstand foreign competition, such as domestic subsidies financed out of general tax revenues. Consumers would be better off paying those subsidies and gaining access to cheaper imports. Moreover, infant industry arguments do not apply, since these sectors have been operating for long periods of time already in rich countries and so scope for learning-by-doing has been exhausted.

(e) Trade liberalization tends to reduce inequality of earnings between skilled and unskilled workers.

ANSWER: In theory, whether this is true depends on the context: the Stolper-Samuelson theorem says it is true in developing countries but not in developed countries. The reasoning is based on relative abundance of unskilled workers in developing countries which creates a comparative advantage for those countries in goods which are less skill-intensive. Trade liberalization will expand demand for unskilled workers relative to skilled workers in developing countries, and vice versa in developed countries. The Stolper-Samuelson theorem however relies on restrictive assumptions of two countries, two factors and perfect competition, and if any of these do not hold the result may not hold even for developing countries. Available empirical evidence also shows many instances where the Stolper-Samuelson prediction does not hold even for developing countries, especially in

Latin America. However, trade liberalization may have reduced inequality in East Asian countries.

2. (10 **marks)** (a) Describe how total fertility rates differ between poor, middle income and rich countries.

ANSWER: TFR has a strong decreasing and convex relationship with per capita income. In the poorest countries TFR can be as high as 7-8. It falls to 3-4 in less poor countries around per capita income of $800-1000, and falls slowly thereafter to a TFR of 2 or below in rich countries.

(b) What reasons can you provide to explain these differences?

ANSWER: There are many reasons: (a) increasing female education, and labor force participation (operating via the Becker theory where higher wages for women raise their wage rates, and the substitution effect dominates the income effect), (b) cheaper access to child schooling and health services (via quantity-quality tradeoffs in fertility decisions), (c) reduced role of children as forms of old-age security for parents, owing to better old-age security via social security or developed financial markets, increased rates of emigration of children, (d) reduced rates of infant mortality, which reduce incentives for parents to 'hoard' children for old-age security; and (e) increased empowerment of women which enhances their bargaining power within the households.

(c) Based on your answers to (a) and (b) above, suggest suitable policies that would be most effective in lowering fertility rates in poor countries.

ANSWER: The above reasons suggest the role of policies to increase women's schooling, labor force participation and intra-household empowerment; improve child schooling and health facilities; improving social security, developing financial markets; and enhancing opportunities for migration of young people.

3. (10 **marks)** (a) Describe the principal differences between formal and informal credit markets in rural areas in LDCs, focusing both on the nature of credit contracts as well as interest rates and patterns of credit access.

ANSWER: Informal credit is typically associated with substantially higher interest rates, wider credit access for the poor, absence of legal written contracts, reliance on long-term relationships, absence of use of collateral (except in the form of interlinked contracts), greater prevalence of credit interlinked with tenancy or crop marketing. It also uses informal means of gathering and using information by lenders to assess credit-worthiness of borrowers, and of extra-legal or social sanctions as means of enforcement of repayment obligations. Formal credit is accessed more by wealthier borrowers, at lower interest rates.

(b) Provide a brief (and verbal) explanation of these differences.

ANSWER: Informal lenders have access to informal, extra-legal, social sources of information about credit-worthiness of borrowers and sanctioning mechanisms for enforcement of repayment. They have relatively little access to formal courts or credit rating bureaus. Hence they tend to provide loans to those they have learnt from past experience to be reliable in repaying on time. They ration credit and interlink credit contracts with land, labor or marketing in order to limit non-repayment risk. They screen borrowers before starting to lend to them, and devote resources to recovering repayments from them. As shown in Aleem's study in Chambar district in Pakistan, these represent significant administrative costs for informal lenders which necessitate raising interest rates to be able to break even.

(c) What are the implications of your explanation for the design of rural credit policies in LDCs, that aims to expand access of the poor to credit?

ANSWER: One implication is that expansion of formal credit to rural sector in an LDC may do little to displace or affect the functioning of the informal credit market. The two markets are considerably segmented. Formal banks lack the access to informal sources of information and enforcement methods available to informal lenders. Hence expansion of formal credit may (and typically is) be associated with high rates of default, and/or poor targeting: the credit does not reach poor borrowers. Instead, expansion of formal credit has to use innovative methods such as microfinance which make use of informal community information and enforcement via social sanctions. Alternatively they can employ informal lenders as agents or financial intermediaries for lending to the poor.