Please answer all four questions. Each question will be graded equally. You have three hours to complete the exam.

**Question 1**

Consider a collection of villages indexed by $v = 1, \ldots, V$. The $v$th village has $N_v$ people, each belonging to one of $M_v \leq N_v$ households; the number of people in the $i$th household in village $v$ is given by $n_i^v$. You have data on basic demographic characteristics of all of these people, and a panel of data collected over $T > 1$ years on income ($y_{vt}$) and expenditures ($c_{vt}$) collected at the level of the household. The data collection is on-going.

Your initial investigation of the data reveals an interesting pattern: If you make a histogram of consumption growth rates for different households (e.g., of $(c_{iT} - c_{i1})/c_{i1}$) there’s a pronounced bimodality, with one group of households evidently having significantly higher rates of growth than the other.

1. Briefly describe three different models that might explain these differences in consumption growth.
2. For each of these three hypotheses, describe an empirical strategy which would allow you to test the model.

**Question 2**

Analyze and contrast the positions of Foster and Rosenzweig; Duflo, Kremer, and Robinson; and Suri, on the importance of profitability for the adoption of fertilizer and improved seeds in Africa. For each of these papers

1. State the main position of the authors.
2. Explain with precision how they support their position, reporting in detail on empirical evidence if it applies. Discuss these empirical findings, pointing to their limitations or weaknesses.
3. Explain how the authors argue against the theoretical or empirical studies that contradict their position in the debate.
Question 3

1. Briefly describe the theory for why corruption need not lead to short-run inefficiencies? Why might these theoretical arguments not hold in general equilibrium?

2. Why has it been so difficult to show empirically the effects of corruption on economic development? Briefly discuss two papers that have tried to address this question empirically. What are the strengths and weaknesses of these papers?

3. What would Fisman and Miguel (2007) and Olken and Barron (2009) argue are important determinants of corruption? For each paper describe the data, econometric approach, and robustness of the findings.

Question 4

1. Describe the cross-country relationship between civil conflict incidence and per capita income levels. Which world regions have particularly high rates of civil conflict?

2. Causality remains a key issue in interpreting these cross-country patterns. Briefly discuss the intuition behind at least one theoretical explanation for why poverty (low income levels) could increase civil conflict risk, and one explanation for how civil conflict could increase poverty.

3. Describe the main predictions of the Chassang and Padro-i-Miquel (2010) model of economic shocks and civil conflict. Why do permanent and transitory income shocks have different implications for conflict risk in their framework?

4. Describe the cross-country relationship between changes in per capita income and civil conflict incidence documented in Miguel, Satyanath and Sergenti (2004). Briefly discuss their data and econometric methodology, and relate their findings to predictions of the Chassang and Padro-i-Miquel (2010) model.