Written Exam Economics Summer 2017

Advanced Development Economics – the Micro Aspects

27-28 May from 10:00 am to 10:00 am

This exam question consists of 2 pages in total.

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.

The paper must be uploaded as <u>one PDF document</u>. Copy your STATA code to the end of the document before creating the PDF. The PDF document must be named with exam number only (e.g. '1234.pdf') and uploaded to Digital Exam. . Maximum number of pages is 10 + up to 5 pages of appendix.

Focus on Exam Cheating

In case of presumed exam cheating, which is observed by either the examination registration of the respective study programmes, the invigilation or the course lecturer, the Head of Studies will make a preliminary inquiry into the matter, requesting a statement from the course lecturer and possibly the invigilation, too. Furthermore, the Head of Studies will interview the student. If the Head of Studies finds that there are reasonable grounds to suspect exam cheating, the issue will be reported to the Rector. In the course of the study and during examinations, the student is expected to conform to the rules and regulations governing academic integrity. Academic dishonesty includes falsification, plagiarism, failure to disclose information, and any other kind of misrepresentation of the student's own performance and results or assisting another student herewith. For example failure to indicate sources in written assignments is regarded as failure to disclose information. Attempts to cheat at examinations are dealt with in the same manner as exam cheating which has been carried through. In case of exam cheating, the following sanctions may be imposed by the Rector:

● 1. A warning

● 2. Expulsion from the examination

● 3. Suspension from the University for at limited period or permanent expulsion.

The Faculty of Social Sciences
The Study and Examination Office
October 2006

1. **Early-life health and adult outcomes (30p)**

   a. Describe some of the mechanisms through which exposure to disease and malnutrition in early life may affect adult economic outcomes.

   The student should be able to describe how iodine deficiency in early life may have permanent effects on children when they grow up, and comment on the effects found in the literature. Other mechanisms may be commented upon as well. Especially, Horton and Ross (2003), Strauss and Thomas (2007), Currie and Vogl (2013), Field et al. (2009), and Feyrer et al. (2013) are relevant articles from the curriculum to look into.

   b. What is stunting and why is it an important metric for early-life health?

   The student should be able to give the definition of stunting and provide examples of what it measures above and beyond height-for-age. For instance it is an important metric for early life health because lack of good nutrition slows down the growing of children. If they are not becoming taller it is a sign of bad nutrition, which might also lead to lower and irreversible cognitive abilities.

   c. What are some of the challenges that econometricians face when attempting to establish causal relationships between early-life health and adult outcomes?

   The student should be able to distinguish between correlation and causality, and comment on the potential for endogeneity when studying early-life health and adult outcomes. Especially the omitted variable bias is a problem when doing simple OLS estimation, since parents who give their children good food are likely also 'investing' in their children in other dimensions which are difficult to measure (e.g. giving them the needed parental attention and care). Another challenge is attrition (or mortality selection), which may put a bias on the estimates. Children of parents with weak unobserved characteristics are more likely to die before adulthood. Consequently, when implementing a program to increase early-life health of poor children, these children of parents with weak unobserved characteristics are now more likely to survive, thereby decreasing the attrition rate and increasing the share of respondents of parents with weak unobserved characteristics.

2. (40p) Poverty estimation

A dataset based on a household survey in Malawi is included for this exam. The dataset contains information on consumption for individual households, the region they are located in, and poverty lines. In addition, household weights are provided to comment on overall poverty instead of poverty in the sample households only. Consumption per capita is calculated by simply dividing total consumption with number of household members.

a. Discuss why the food poverty line differs from the overall poverty line.

The student should be able to state that it is the non-food component, which makes the food poverty line differ from the overall poverty line. Further explaining how poverty lines are constructed is preferable.

b. Why do the poverty lines differ depending on whether they are based on national consumption bundles or regional consumption bundles? When is it preferable to use the regional poverty line over the national poverty line?

The student should be able to explain that in some areas it requires more money (e.g. urban areas) to reach a specific calorie intake, and that consumption bundles of the poor, which are used to calculate the poverty line, may deviate across the country. If it is only prices, however, that deviate within the country, we could use a spatial price index to create a poverty line in real terms (with a specific area being the base).

c. Calculate the headcount poverty rate, poverty gap index, and poverty severity index based on both the national and the regional poverty lines. Do this for the overall nation and for the regions separately using population weights. Comment on the results.

	Headcount		Poverty Gap Index		Severity Index	
	Based on national pov. line	Based on regional pov. lines	Based on national pov. line	Based on regional pov. line	Based on national pov. line	Based on regional pov. line
Overall	38.96%	39.82%	13.48	13.44	6.28	6.17
Urban	10.89%	22.97%	2.80	6.60	1.12	2.80
North Rural	38.90%	39.80%	12.39	12.80	5.39	5.60
Centre Rural	39.15%	40.94%	13.54	14.47	6.41	6.93
South Rural	50.16%	45.57%	18.05	15.42	8.50	6.96

Here it is important to do all the calculations asked for in the question, illustrated in the table above. This and incorrect results will reduce the score in this question.

d. Why are we dividing consumption with household members, and what are the (better) alternatives?

Splitting consumption among more household members leads to less welfare per member. This measure does not, however, account for the differing calorie requirements depending on age and gender of the household members. Instead, "adult equivalent household members" could be used. In addition, there might be some scaling effects, since it is cheaper to add an extra household member to a household consisting of six members compared to a household consisting of one member given they have the same level of welfare (consumption per adult equivalent household member).

e. While urban areas have the lowest share of poor people, the inequality is highest compared to the rural areas of the three regions in Malawi. Assuming that we are only interested in the sample households (that is, you don't have to use sample weights), how much money as a percentage of total consumption should be redistributed among households to make all the households equal in regard to consumption per household member in urban areas? Hint: Start by calculating consumption share and population share for each household and find the largest difference between the 45-degree line and the Lorenz-curve.

36.36% of total consumption in urban areas should be redistributed among households to make all of them equal in regard to consumption per household member.

3. Conflict (30p)

Blattman and Miguel (2010) list some of the most commonly studied causes of conflict and civil war. One of their critiques of the literature relates to the lack of detailed micro data on conflict events. Recently, a database called the Armed Conflict and Location Event Database (ACLED) has gained popularity – see attachment.

    a. Which hypothesis about the causes of conflict would you like to test using this data (in combination with e.g. survey data)? Motivate your choice based on the potential contribution to the literature and formulate a research question.

There are various ways this question could be answered, but it has to be related to the causes of conflicts. The student must argue why this research question is interesting and identify the gap in the literature it may fill.

    b. What type of additional data (if any) would you combine with the ACLED data in order to answer the question?

Again, there are various ways to answer this question. It is, however, important that the student thinks about relevant data sources to combine with the ACLED. In addition, the student could also reflect on the availability and quality of the suggested data sources (e.g. difficulty of getting access to call detail records from mobile companies). If the student plans to answer the research question only using ACLED data, they should argue why.

    c. Briefly outline your empirical strategy for answering the question including a discussion of potential threats to identification.

The answer to this question should include an outline of how the student would test the chosen research question. It should be presented in a structured and convincing manner. Threats to identification naturally depend on the chosen research question. Overall, the assessment of the answer to this question is based on an assessment of the technical knowledge about the application of econometrics in development economics and whether the student is able to pinpoint the potential weaknesses of the chosen strategy.