

# Report on Bachelor / Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

Student:	Bc. David Švenka
Advisor:	Petr Janský, M.Sc.
Title of the thesis:	Social learning among Ghanaian cocoa farmers: Choosing the optimal amounts of inputs

## OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

The author regresses the amount of an input used by cocoa farmers in Ghana on 1) the amount of the same input used by the same farmer in the previous year and 2) the average amount of the input used by all farmers in the village in the previous year. If the former variable is statistically significant, it is taken as evidence of „individual learning“; if the latter is significant, we get evidence for „social learning.“

My main problem with the thesis is that the authors doesn't answer the „so what“ question. I miss more motivation on why it is actually important to know whether cocoa farmers in Ghana determine the amount of inputs to be used based on their experience or based on what they see other people do in the village. For thesis defense the author should prepare a nice discussion of the relevance of his results for economic policy (or further research that might eventually be relevant for economic policy).

Moreover, I am not sure if the methodological framework chosen by the author is suitable for the problem in hand. Say, for example, that all farmers set their inputs according to what they see other people do in the village (social learning is the rule), except of one farmer who sets his inputs randomly. In that case both regression coefficients will be highly statistically significant and very similar, so the author would conclude that both individual and social learning are important. The author should explain during the defense why this reasoning is incorrect and why his methodology is fine.

Even if the methodological framework is okay in general, the details are still wrong. The author has panel data and is interested in the two regression coefficients mentioned above. To filter out individual effects, the author must use fixed effects. Instead, he adds some individual-level variables and employs random effects. It is inevitable that the random effects are correlated with some of the explanatory variables, and indeed the author reports that the Hausman test rejects the validity of random effects. I appreciate that the author disregards the Hausman test and uses the method that he prefers (Hausman test is useless in economics. One wants to explore cross-individual heterogeneity or not; it makes no sense to test between the two models, that would be a mechanistic statistical approach. it's either a boy, or a girl), although unfortunately in this case random effects are not the correct choice. It is nonsense to say that “Breusch-Pagan test implies that the OLS estimates are more accurate.” You should prefer fixed-effects panel data because you can get rid of unobservable individual effects; don't do Breusch-Pagan or Hausman. If you don't believe me, look at the development papers published in the AER during the last year and see if they use these tests.

Since you have panel data, standard errors must be clustered at the individual level. For the defense please try to estimate your models properly; that is, using fixed effects and clustered standard errors, and comment on the differences. You should comment more on the magnitude of the estimates, not just on their statistical significance. Because your model is dynamic, perhaps it would be even better to use GMM, but I am not sure if you have enough observations (years in your data set) to do that.

It is difficult to read the thesis for people who are not specialized in this subfield of development economics. The abstract is confusing. For example, there are two statements which seem to be contradictory: 1) „In this thesis I inspect learning about adoption of technologies among cocoa farmers in Ghana, which are represented by non-labor inputs, particularly by fertilizer and hybrid seeds.“ 2) „Cocoa farming is very labor intensive, and thus this thesis concentrates on learning about both non-labor and labor inputs, which are closely connected.“ Chapter 2 is unnecessary and seems to be mostly taken from 2 or 3 papers. The sample description in section 3.4 should be much shorter, given

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that the data were not collected by the author and were explored by several previous studies (including at least one IES thesis, which is not cited here). The thesis contains many typos and does not read very well. By the way, why is the amount of inputs always called optimal? In my understanding it's simply the observed chosen value of input. Do you control for, e.g., the amount of rainfall in the given years (or just for drought)? This could also influence the amount of inputs.

The thesis contains many, many figures (more than 20), sometimes taken from other studies. Indeed, when I was reading the thesis, I got the impression that it was quite short compared to what is the standard at the IES. So I did count the number of characters in the thesis and it seems that from the introduction to the conclusion the thesis has less than the 50 standardized pages required by the Faculty of Social Sciences as a minimum. I might be wrong since I only have the pdf version of the thesis, but during the defense the author must prove that he safely fulfills these minimum requirements (irrespective of what we might think of these rules, they must be met, otherwise the thesis can be questioned any time in the future).

If the defense goes well, the thesis can get a B.

## **SUMMARY OF POINTS AWARDED** (for details, see below):

<b>CATEGORY</b>	<b>POINTS</b>
<i>Literature</i> (max. 20 points)	14
<i>Methods</i> (max. 30 points)	19
<i>Contribution</i> (max. 30 points)	15
<i>Manuscript Form</i> (max. 20 points)	12
<b>TOTAL POINTS</b> (max. 100 points)	<b>60</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>3</b>

**NAME OF THE REFEREE:** **PhDr. Tomáš Havránek**

**DATE OF EVALUATION:** **15.8.2013**

**Referee Signature**