

Report on Bachelor / Master Thesis

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

Student:	Jan Mouček
Advisor:	PhDr. Julie Chytilová Ph.D.
Title of the thesis:	Effects of human capital in developing world

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

Jan Mouček chose an interesting topic of impact of human capital on productivity in two developing countries – Indonesia and Bangladesh. As the author correctly points out improving human capital (education and health) is one of the ways how to help developing countries to grow in the long-run perspective.

He follows Schultz (2003) methodologically, which is a legit way. However, it needs to be done correctly, which is unfortunately not the case of the thesis. The first misunderstanding comes already from interpretation of the original paper. Even though Schultz (2003) indeed estimates contributions of education, height, BMI and migration on productivity, the main contribution lies somewhere else. In the literature was well-established at that time that all four abovementioned variables are exogenous. He questions this assumption and shows that they are not. However, with usage of different specifications, panel estimations and large set of instrumental variables, he is able to get unbaised results for education and migration whereas height and BMI are prone to measurement errors. It leads him to implications for sampling methods and improvements in questionnaires used by the World Bank.

Jan starts with a summary of literature on the topic. However, he spends only two pages on the literature review where he cites mostly papers from Schultz (2003). Furthermore, there is a minor mistake in citation of the paper Schultz and Tansel (1997). I find the literature review unsatisfactory since it should be an integral part of a good master thesis where a student is able to prove that he studied the topic into detail and has good overview in the field.

Then the thesis proceeds with a statistical framework for further estimations. Unfortunately, I miss a theoretical framework. Even though statistical models copy the original paper, Schultz builds this model on theoretical model of demand for the human capital. Skipping this part in the thesis makes the statistical model hard to follow. Then Jan discusses endogeneity which is the major concern and really proves to be the main issue in the rest of the thesis, therefore it is not very clear why he mentions only two possible streams of endogeneity when the original paper discusses much more streams and in greater depth.

Next chapter is devoted to country overview and data description. We learn from this chapter very basic information about given economies, human capital variables are discussed in the following subchapter, however, there is a little context which would help a reader to understand situation in chosen countries. Maybe the reason is that Jan uses the only source of information (Worldmark Encyclopedia of Nations) that does not allow deeper analysis. From this chapter on the author compares countries of his choice (Indonesia and Bangladesh) with the original paper (Côte d'Ivoire and Ghana). Nevertheless, it is questionable if it is possible to compare two African and two Asian countries, moreover when chosen time periods are very different (late eighties for Côte d'Ivoire and Ghana, 1996 for Bangladesh and 2007-2008 for Indonesia). In my opinion comparison does not make sense and I would recommend the author to use the original results only for qualitative comparisons. The second major concern is the choice of dataset. It is mentioned several times in the thesis that even though the author wants to keep analysis as close as possible to the original paper, it is not possible due to lack of data. The problem becomes very important

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in the econometric part where the number of instrumental variables used is significantly lower than in the original paper. Then the question is why the author did not use the same type of dataset (Living Standards Measurement Surveys) used in the original paper which is available for several countries.

It is then no surprise that the author is unable to replicate the analysis of Schultz (2003) since he has smaller number of variables, instrumental variables and he also faced problems with linking variables to observations. Jan correctly tests endogeneity of human capital variables and finds that BMI and migration are endogenous. Therefore following with instrumental variable approach seems to be a correct way but when testing assumptions, he comes to the conclusion that his instruments are not strong enough to explain endogenous human capital variables. Actually, this result is in similar vein to the original paper. Nevertheless, Schultz tests the assumptions in much greater detail including quantification of biases in two endogenous variables and testing robustness with panel data models, therefore it is not true that Schultz omitted completely testing assumptions in IV analysis as the author writes on page 42. Secondly, Jan picks only some of the specifications done by Schultz, therefore it is not possible to consider his replication as complete. It is important to note that he cannot follow the original paper precisely due to lack of data. On the other hand, I would expect more thoughtful analysis for master thesis level. One possible way how to improve the analysis is to use advanced econometric techniques allowing estimations with weak instruments, the other is using another dataset with more variables as mentioned above.

Chapter 7 is completely devoted to the comparison with the original study. As I stressed earlier, since time periods and choice of countries is very different in both studies, it is hard to reason why this chapter is included in the thesis. Subsection 7.2. compares OLS estimates, however it has been shown that estimates in both studies are biased and it is not valid to compare them.

The thesis in my opinion suffers from many shortcomings including low knowledge of the field, shallow description and understanding of the situation in chosen countries or not carefully conducted empirical analysis. I personally do not like the replication style of the thesis which is on one side a legit way when done properly on the other side in this case it seems that the author chose the style to easen his own work. From all of the abovementioned arguments I suggest the grade **satisfactory**.

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

CATEGORY	POINTS
Literature (max. 20 points)	5
Methods (max. 30 points)	20
Contribution (max. 30 points)	8
Manuscript Form (max. 20 points)	15
TOTAL POINTS (max. 100 points)	48
GRADE (1 – 2 – 3 – 4)	3

NAME OF THE REFEREE:

DATE OF EVALUATION:



Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

Strong	Average	Weak
20	10	0

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

Strong	Average	Weak
30	15	0

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

Strong	Average	Weak
30	15	0

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Strong	Average	Weak
20	10	0

Overall grading:

TOTAL POINTS	GRADE		
81 – 100	1	= excellent	= výborně
61 – 80	2	= good	= velmi dobře
41 – 60	3	= satisfactory	= dobře
0 – 40	4	= fail	= nedoporučuji k obhajobě