Reply to Invited Referee Report

First of all, we would like to thank to the Referee for his/her valuable comments. We are honored by the effort made to understand something that we tried to develop. Our responses are provided below.

Comments

1.- This paper could be much more strongly motivated. The sheepskin effect is particularly important because the presence of a sheepskin effect is seen as a confirmation of the signaling or screening hypothesis. The authors do not mention this in motivating their paper. If the reader is not already familiar with the sheepskin effect, he has to work hard to figure out what it is and why he should care.

R/ Thanks for the comment. We have added the following paragraphs:

The contributions of Michael Spence (1973, 2002) and Kenneth Arrow (1973) gave rise to a considerable amount of work related to the debate on human capital and signaling. The theory of human capital postulated by Gary Becker (1964) contends that education (and on-the-job training) directly increases an individual's productivity, thereby increasing his/her salary. According to this theory, each additional year of schooling brings about a proportional salary increase. On the other hand, Spence's (1973) and Arrow's (1973) theories of both signaling and screening suggest that the benefits of obtaining a degree extend beyond salary increases because educational degrees provide either indications of a worker's productivity or the grounds for signaling or screening.

In the mid-1980s, Thomas Hungerford and Gary Solon (1987: 175) found evidence to confirm that "wages will rise faster with each extra year of education when an extra year also conveys a certificate." Therefore, a diploma has its own value aside from the number of years of schooling. Similarly, using cohorts from 1979 and 1991 in a cross-section model, Dale Belman and John Heywood (1997) found empirical evidence that degrees do have an effect on salaries in the U.S.

2.- I found equations 1-4 to more confusing than clarifying. please consider how this information is presented.

R/ Thanks for the comment. Equation (1) is the standard equation for sheepskin effects and equations (2), (3) and (4) are the standard equations in meta-analysis. Of course, it is possible to rewrite (2), (3) and (4) in the final version.

3.- The motivation for meta-analysis and the description of techniques employed should be stronger and clearer. Perhaps this information needs its own section. In particular, the section on publication selection was difficult to follow and evaluate.

R/ Thanks for the comment. In the final version we add a section titled "Brief review of the theoretical and empirical literature" and will include the main papers by country.

Minor points:

4.- A more complete description of your search process should be included as well as a list of the references used in your meta-analysis. It seems very surprising to me that more papers would have been written on the sheepskin effect in Brazil than in the US, but I cannot see which papers were included. Why does the data stop at 2011? Was only one estimate from each paper included? If yes, how was that estimate chosen? Are the results sensitive to including all estimates?

R/ We agree. In the final version we include a brief review of the main papers by country. In the case of Brazil there are many estimations by region, gender, and time period. We stopped at 2011 because that year is the 25th anniversary of the first estimation. And it is possible that if we change the data the results will change. For example, if we consider only ISI or Scopus (highest-impact journals), the results clearly change (see Table 5 in the paper).

5.- A histogram of the estimates would be a nice addition.

R/ Thanks for the comment. We will include a histogram in the final version.

6.- I would have liked to see more covariates included. If "distance to the equator" is important, the reader needs an explanation for why it would be important. What do we learn from its significance? I am curious as to whether the estimation methods used in the original paper affect the estimates. Surely there is variation.

R/ Distance to the equator is a proxy for country development level and is frequently used in literature on economic development. For example, Hall and Jones (1998) in "Why do some countries produce so much more output per worker than others? write, "[it] is widely known that economies further from the equator are more successful in terms of per capita income"(p. 22). Other examples include Nordhaus, William D. (1994) "Climate and Economic Development," Proceedings of the World Bank Annual Conference on Development Economics 1993, 1994, pp. 355-376: Theil, Henri and Dongling Chen (1985) "The Equatorial Grand Canyon," De Economist, 1995, 143 (3), 317- 327. Also, Daron

Acemoglu, Simon Johnson, and James A. Robinson (2000) in "The Colonial Origins of Comparative Development: An Empirical Investigation" write "Gallup, Mellinger, and Sachs (1998) and Hall and Jones (1999) document the correlation between distance from the equator (latitude) and economic performance" (p. 16).

7.- It would be nice to see the funnel plot before the tests for publication bias.

R/ Thanks for the comment. We will include a funnel plot in the final version.

8.- Explanatory footnotes to tables would be useful so that the reader does not have to search back through the text to understand the table.

R/ Thanks for the comment. We will include footnotes in the final version.