

Referee Report on
“Human Capital and the adoption of Information and Communications Technologies: Evidence from Investment Climate Survey of Pakistan”

This paper provides evidence from Pakistan on the link between the education level of the workforce of a firm and the firm's likelihood of adoption of new technologies. In particular, the authors find a significant relationship between the education level of the top manager of the firm and the effective use of internet resources by the firm. The paper also reports that there is a positive relationship between the education level of a firm's workforce and the email use by the firm.

Based on these results the authors argue that they showed the close causal link between the human capital of a firm and its adoption of new technologies.

I have several reservations about the paper and its reported results.

First and foremost, the authors assume that the firm's decision to adopt ICT is not driven by market forces but rather by the education level of the top manager. Assuming that the top manager is a salaried employee of the firm the education level of the manager cannot be assumed as an exogenous variable. If the market competition forces the firm to increase productivity, and efficiency in marketing etc. the firm might have to change the top manager and adopt ICT as well as adopting other new developments in their sector. A similar argument applies to the case of education level of employees. If a firm has to adopt the ICT to increase its competitiveness then it has to hire employees that can effectively use the technology. Hence, the technology adoption decision dictates that the education level of the workforce has to increase.

A more desirable study of the topic would consider the education level of the existing workforce in a country to have an impact on the widespread adoption of more advanced technologies by firms. The level of education of the labor force of a country is not endogenous to the adoption of new technologies.

The authors mentioned the endogeneity problem, but could do nothing to correct it. To support their position they cited other papers where the endogeneity issue had not been discussed and/or where the results found to be robust to the endogeneity of the right hand side variables.

Besides the critical endogeneity issue, I do not find the results reported in the paper to have significant economic policy implications. The paper just verifies the presence of a relationship that one would expect with certainty: those firms that need to adopt new technology needs to hire employees that are capable of using it.