



5th international conference on opportunities & challenges in MANAGEMENT, ECONOMICS & ACCOUNTING

29 – 31 August , 2019 Berlin, Germany

Are Electronically Developed Countries Gaining More from Ict Investments?

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Abstract

This paper examines whether electronically developed countries are gaining more from investments in information and communication technology (ICT) products. Previous research in the field has extensively used the GDP per capita as an index for country categorization into developed, emerging and developing. Instead, we make use of the UN's electronic government development index (EGDI) in order to construct two groups of countries based on their level of electronic development for the period 2007-2016. We use panel data regressions to estimate an augmented Cobb-Douglas production function for each of these two groups as well as the combined sample of all countries. The results indicate that ICT output elasticities are positive and statistically significant for both group of countries, with electronically developed countries having an edge over less developed. Moreover, the hypothesis of equal ICT elasticities between the two groups could not be rejected, suggesting that electronically developed countries do not exhibit excessive returns from ICT investments.

Keywords: ICT, economic growth, panel data, organizational issues, production function