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Title : GLOBAL DIGITAL DIVIDE: THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) ON ECONOMIC INDICATORS

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The advancement of information and communication technology (ICT) over the last decades has brought significant economic and social improvements to both the society and countries. Not only does it revolutionize the global economic structure, ICT is fast becoming a key tool in driving economic growth by promoting productivity and competitiveness, stimulating international trade as well as paving the way for more and better jobs in the market. In the body of literature, there exists a general consensus among researchers that ICT has significant and positive relationship with economic growth. However, most of the evidences come from microeconomic studies, where the firm or countries are typically restricted to specific sectors or regions, or even grouped according to different levels of development. Evidence on impacts of ICT on economic growth across different regions on the other hand, is still scarce and requires further investigation. With the endogenous growth theory as a theoretical basis, this study therefore attempts to analyze further the impact of ICT on economic indicators for five different country groups, namely Africa, America, Arab, Asia and Europe, over a 9-year period of 2006 to 2014. In this study, ICT is defined according to two dimensions – ICT access and usage – where they are proxied by four different measures, namely fixed broadband subscriptions, fixed telephone subscriptions, mobile cellular subscriptions and Internet

users. By employing several advanced econometric techniques such as Panel Feasible Generalized Least Squares (PFGLS), Fixed and Random Effects Instrumental Variables (FE/RE-IV) and Arellano-Bond Generalized Method of Moments (GMM) estimators, the impact of each measure of ICT access and usage is separately estimated on three different economic indicators such as GDP per capita, trade openness and unemployment rate. This study also extends both static and dynamic panel data analysis by investigating the role of human capital, namely education and health, in influencing the link between ICT and economic indicators. In general, although findings revealed that there is varying degree of significance of ICT on economic growth indicators across the five country groups, impact of ICT is more pronounced particularly in Asia and Europe. The significance of ICT enters with mixed coefficients, where overall they emerge with positive relationship with GDP per capita and trade, and a negative relationship with unemployment in most model specifications. The results of the extended analysis also render human capital (education and health) as important moderators in influencing the impact of ICT on the economic indicators.