

# Hubungan Indeks Pembangunan Teknologi Informasi dan Komunikasi (IP-TIK) dan Pertumbuhan Ekonomi Daerah Provinsi pada Tahun 2015-2021 = The Relationship between Information and Communication Technology Development Index (ICT-DI) and Economic Growth Regional Province in 2015-2021

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## Abstrak

Perkembangan Teknologi Informasi dan Komunikasi (TIK) dan kontribusinya dalam aspek sosial-ekonomi telah terbukti dewasa ini. Dalam kasus Indonesia, Indeks Pembangunan Teknologi Informasi dan Komunikasi (IP-TIK) terus bertumbuh terlebih dengan stimulasi dari pandemi Covid-19 hingga mencapai skala 5,78 pada tahun 2021. Kontribusi TIK terhadap pertumbuhan ekonomi sebagai bagian integral dari strategi pembangunan nasional menjadi isu utama. Penelitian ini berangkat dari fungsi produksi Cobb-Douglas dalam menginkorporasikan variabel teknologi dan meninjau hubungan timbal-balik antara TIK dan pertumbuhan ekonomi di 34 provinsi selama periode 2015-2021. Model penelitian ini mengadopsi model panel simultan instrumental variable (IV) yang terdiri dari persamaan IP-TIK dan PDRB. Hasil statistik mengkonfirmasi hubungan timbal balik antara TIK dan pertumbuhan ekonomi, dimana kenaikan PDRB sebesar 1%, ceteris paribus, akan meningkatkan IP-TIK sebesar 1.52%. Sebaliknya, kenaikan IP-TIK sebesar 1%, ceteris paribus, akan meningkatkan PDRB sebesar 0.37%. Menariknya, faktor pendorong lain seperti pengeluaran rumah tangga untuk telekomunikasi, sumber daya listrik, panjang jalan, dan APBD untuk fungsi ekonomi ditemukan berhubungan positif terhadap perkembangan TIK.

.....The development of Information and Communication Technology (ICT) and its contribution in socio-economic aspects has been proven today. In the case of Indonesia, Information and Communication Technology Development Index (ICT-DI) continues to grow, especially with stimulation from the Covid-19 pandemic, reaching a scale of 5.78 in 2021. The contribution of ICT to economic growth as an integral part of the national development strategy becomes a major issue. This research departs from the Cobb-Douglas production function in incorporating technology variable and reviewing the reciprocal relationship between ICT and economic growth in 34 provinces during the 2015-2021 period. This research adopts the panel model of the simultaneous instrumental variable (IV) which consists of the ICT-DI and GRDP equations. Statistical results confirm the reciprocal relationship between ICT and economic growth, where a 1% increase in GRDP, ceteris paribus, will significantly increase ICT-DI growth by 1.52%. Conversely, a 1% increase in ICT-DI, ceteris paribus, significantly increases GRDP by 0.37%. Interestingly, other driving factors such as household spending on telecommunications, electricity resources, road length and government expenditure for economic functions (which have not been extensively studied before) were found to be positively related to ICT development.