

# Seminario de microeconomía aplicada 27: Broadband internet, labor demand and total factor productivity in Colombia

## Calendario de actividades

- Consultor del BID

**Organizador:** Banco de la República

**Lugar:** Banco de la República Cali, Cra. 4 # 7 – 14

**Hora:** 04:00 p.m.

**Resumen:** In this paper, I study the relationship between information and communication technology (ICT), labor demand, and total factor productivity (TFP) in Colombia. I estimate TFP for the Colombian manufacturing sector using the methods developed by De Loecker and Warzynski (2012) and De Loecker (2013). This method assumes a law of motion where TFP evolves both according to an autoregressive process of order 1 as well as with the past use of Broadband technologies. Using fixed effects models, I estimate the relationship of broadband use on the labor demand of different workers controlling for TFP, capital and wages. To address the potential endogeneity between broadband adoption and labor demand, I used state-industry level variation of broadband quality (speed) and intensity of use. Results show a positive association of broadband adoption on labor demand suggesting ICT adoption can offset the employment effects of technological growth. The attempts to identify causal effects using an instrumental variable approach were inconclusive.

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