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ICT diffusion dynamics. World-wide evidence.

Comin et al. (2006) in their study on historical technology diffusion¹ covering 115 different technologies in over 150 economies during the last 200 years present arguments speaking in support of the hypothesis that technology is the critical factor, which differentiates economic performance of countries. Interestingly, they demonstrate that speed of convergence in levels of technology adoption observed before the year 1925 was crucially different from that reported after 1925. Before 1925 the average rate of convergence was at about 2.4% annually; while after 1925 it increases almost threefold – until 6.7% per annum. When discriminating between technologies developed between 1900 and 1925, 1925 and 1950, 1950 and 1975, the average speed of convergence was 1.5%, 5.8% and 7.8% accordingly; which inevitably leads to the general conclusion that the tempo of convergence for new technologies is faster than for old ones. Rapidly proceeding technology convergence suggests that new technologies diffuse at incomparably higher rate compared to old ones.

The rate of technological change we witness since early 70s of 20th century onward, is the fastest the world has ever experienced. This work extensively discusses the process of ICT diffusion between 1980 and 2015. It examines the process of ICT diffusion in 46 economically backward (low-, and lower-middle-income) countries over 1980-2012; in 34 upper-middle-income countries between 1980-2016 and 47 high-income countries

¹ Comin et al. (2006) in their study used Cross-Country Historical Adoption of Technology (CHAT) data set (see: <http://www.nber.org/papers/w15319.pdf>)



between 1980-2016. All data used in this chapter are exclusively extracted from World Telecommunications / ICT Indicators database 2016. The empirical work concentrates on providing evidence on:

- changes in ICT world-wide distribution and cross-countries inequalities
- country-wise ICT diffusion paths and dynamics
- technological convergence.