Estimation models of competition and complementarity within communication technologies

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Abstract: The question of complementarity and competition often comes up when analyzing and comparing communication technologies. A corollary is that if the technologies are complementary they will be able to co-exist peacefully - otherwise they will engage in a battle of technological dominance. The communication services in this analysis include: Internet, mobile cellular phone and fixed line telephone service in Commonwealth of Independent States (CIS). Modified Diffusion Models used for analyzing of complementarity and competition dynamics within technologies. We found that the ICT diffusion patterns, as well as the ICT diffusion factors, of the CIS countries were different. Therefore, we believe that the results of our research can be used in building strategies on reducing the digital divide gaps between countries.

Analyses of estimation results and factors associated with ICT diffusion dynamism can play significant role to provide policy recommendations for these countries and for other developing countries to achieve the desired pervasiveness of the ICTs.

Key words: Diffusion, telecommunication, fixed line, mobile cellular, internet.