

Paper Title:

Network Externalities and Critical Mass in the ICT Economy

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Abstract

In this paper we review the literature on network industries. We discuss the relevance of network theory in an interconnected economy and look at the self-reinforcing dynamics of increasing returns in the form of network externalities, critical mass and market tipping. Critical mass triggers exponential market growth at a particular stage in the life cycle of a network product. Market tipping is as a key consequence of increasing returns whereby early entrants may benefit from a 'winner takes all' scenario. However, the ICT (information communication and technology) poses a paradox in the new information economy. Not all network industries show signs of market dominance or market tipping, despite the presence of strong increasing returns. In interconnected networks, market shares are likely to converge, due to network externalities arising from the common industry platform. The strategies of companies operating on interlinked platforms show evidence of isomorphic behaviour, influenced by regulation, technology standards and network interconnectivity. The evolutionary perspective of network industries throws light on the dual nature of market development, whereby self-reinforcing and self-balancing factors come into play.