

A multi-scale story of the diffusion of a new technology: the web

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Abstract

This paper investigates the spatial diffusion of a new technology that is the Web in the UK. It employs novel data and machine learning methods to model the influence of well-established diffusion mechanisms. Contrary to previous studies, it adopts multiple scales, high spatial granularity and a long study period that captures the early stages of the Web until its maturity (1996-2012). Findings reveal the importance of such spatial mechanisms (namely distance, urban hierarchy and the S-shaped pattern of the cumulative level of adoption) even at granular scales. They also highlight spatial heterogeneity and instances of leapfrogging.

Keywords: diffusion, technologies, Web, digital

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