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

Emmanouil Tranos[a,*]

[a] *University of Bristol, School of Geographical Sciences, University Road, BS8 1SS, Bristol, UK,*

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

[*]Corresponding author
  Email address: `e.tranos@bristol.ac.uk` (Emmanouil Tranos)