

## Chapter 8

# Economic Impact of Digital Media: Growing Nuance, Critique, and Direction for Education Research

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### ABSTRACT

*Digitization by computers, like steam power and internal combustion, is widely recognized as a pervasive, disruptive engine powering new ways of living and affecting all aspects of economic life. Research on its economic impact cannot be entirely disentangled from powerful cultural stories connecting technological, educational, and economic progress. As cracks appear in the narratives of constant progress through technology, science, civilization, and economic prosperity, research on the economic impact of digital media develops nuance. This review of literature examines a wide range of perspectives on the economic impact of digital media as a basis for suggesting areas of further research and implications for education, civic, engagement, and policy.*

### INTRODUCTION

The breadth and depth of research on the economics of digital media point to a view shared across academic disciplines and governments that the production of machine-readable information is affecting how humans provide for their needs (Dobson & Willinsky, 2009); in other words, digital media is affecting the economy. “The economy” is often an opaque package of ideology, often exchanged without acknowledgement

of which economy, whose economy, what parts matter, and why. The combination of ubiquity and lack of clarity in lay political and educational discourse about the economy complicates efforts to conduct and share research. Equally challenging is researching and discussing the set of materials, texts, and social practices that make up digital media. Assessing the relation between economies and digital media(s) often involves unpacking cultural myths or overarching stories linking the two.

DOI: 10.4018/978-1-4666-8310-5.ch008

Digitization by computers, like steam power and internal combustion, is widely recognized as a pervasive, disruptive engine powering new ways of living (Carlsson, 2004; McQuivey, 2013). Economic growth and, therefore, digital media access are routinely equated with national or global stability (e.g., European Commission, 2014; Yu, 2002). Economic prosperity is often absolutely linked to digital literacy (e.g., Graff, 1979, 2011). These master narratives answer research questions so forcefully that it can be difficult to imagine disconfirmation. However, as cracks appear in the narratives of constant progress through technology, science, civilization, and economic prosperity, research on the economic impact of digital media develops nuance. Under emerging conditions of economic research across numerous academic fields, poverty is less likely to be viewed as a condition of privation to be alleviated by the actions of fiscally and politically powerful groups. Digital media is less likely to be viewed as a static set of tools to be ‘rolled out’ for others to access. Large-scale formal governing bodies are less likely to be viewed as unproblematic benefactors of struggling villages, regions, and countries.

Powerful stories, old and new, continue to inform research and discussion of the economic impact of digital media. These stories express belief in or suspicion of intrinsic benefits of market economics, global commerce, and privatization. They consequently shape digital media education, policy, and research. As a result, readers approaching the topic of digital media and the economy are likely to encounter a fragmented array of studies verifying and contesting causal links between digital media phenomena and economic life (e.g., Atkinson & McKay, 2007; Brynjolfsson & McAfee, 2012). Projects offer heterogeneous policy recommendations and reports for governments, corporations, and development and educational organizations, whose fragmented missions call for concerted action to steer economic development through digital media education, access, and use.

In order to review the literature comprehensively, digital media is defined broadly to encompass broadband networks, the physically wired infrastructure that supports them, information and communication technologies (henceforth, ICTs) that they support, and the merging of social and economic life into these digital spaces.

## **WHAT IS A SUCCINCT OVERVIEW OF THE RESEARCH?**

### **Economic Impact of Digital Media in the New Economy**

Prior to the Great Recession, research across multiple fields pointed to an emerging “New Economy” explicitly driven by machine-readable information as a “General Purpose Technology” comparable to steam power and the internal combustion engine (Carlsson, 2004). Two studies of the decade prior to the economic downturn found Broadband infrastructure and ICTs to affect national economic growth in Europe (Czernich, Falck, Kretschmer, & Woessmann, 2011; Vu, 2011). The New Economy was shown to depend fundamentally on digital media for increasing productivity, making markets more efficient, improving the quality of goods and services, and creating new or innovative products (Atkinson & McKay, 2007). This influence was “not likely to run out of gas anytime soon and should power robust growth [globally].” These studies before and after the Great Recession provided empirical backing for the “growth” imperative seemingly intrinsic to the Internet and cellular phone technology. In many cases, research explicitly claimed that the “lion’s share” of economic growth belonged to digital media (p. 1).

After an initial boom and bust of dot-com industry had passed, yet before the financial crises of the mid-2000s, digital media’s true believers trumpeted the narrative linking digital media with economic growth (Litan & Rivlin, 2001).

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