Bibliometric Analysis of European Research on Digital Divide: An Exploration of the Corporate Landscape

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1. Motivation

- The ubiquitous use of digital technologies has transformed many aspects of society and the economy, bringing potential benefits and drawbacks.
- The Digital Europe program and the agenda to bridge the digital divide.
- The few studies using the bibliometric method focus mainly on health sciences, computer science, and technology.
- Data availability from three platforms containing references and citations from academic journals has stimulated this research initiative.

2. Objectives

- Understand the intellectual structure within the domain of the digital divide.
- Examine European research components' intellectual interactions, structural connections, and thematic relationships.
- Explore the corporate digital divide among the collected corpus and identify trends and patterns within the literature.

3. The Digital Divide Overview I

- The digital divide is also known as the digital gap, inequalities, or disparities.
- The interaction with other existing gaps such as income, education, gender, generational, and regional, among others (Ragnedda 2017).
- The evolution of the concept has pointed out the phenomenon's complexity and the effects on the different layers of society and the economy (Dijk and Hacker 2003; Ragnedda 2017; Shakina, Parshakov, and Alsufiev 2021).

3. The Digital Divide Overview II

- The are four leading theories of the digital divide (Pick and Sarkar 2016):
  - Adoption and Diffusion Theory (ADT)
  - Van Dijk's Model of Digital Technology Access
  - Unified Theory of Acceptance and Use Technology (UTAUT)
  - Spatially Aware Technology Utilization Model (SATUM)

3. The Digital Divide Overview III

- Waves of Research
  - The first wave: Physical access to technology -> possession of computers and access to the internet (Dijk and Hacker 2003).
  - The second wave: Usage of digital technologies and skills (Dijk 2006).
  - The third wave: There needs to be more consensus among the scientific community while addressing the third-level digital divide:
    - Sociological perspective (Ragnedda 2017).
    - Disparities in the ability to transform internet engagement into favorable offline outcomes (Deursen and Helsper 2015).
    - The corporate digital divide (Shakina, Parshakov, and Alsufiev 2021).

4. Data

- Specific search on the digital divide merging data from the Web of Science, Scopus, and Dimensions platforms.
- Authors with European affiliations within the business, management, economics, technology, and computer science disciplines were included
- After data cleaning, a total of 1883 unique documents from 2000 to 2021 were incorporated.
- The sample includes articles, book chapters, conferences, and proceedings.
- The R programming language environment will be used during the data processing stage.

5. Bibliometric Analysis I

Following Donthu et al. (2021) and Aria and Cuccurullo (2017) bibliometric analysis:

- Is a methodology that applies quantitative techniques to bibliographic data.
- This technique allows researchers to uncover emerging trends identifying knowledge gaps in specific domains.
- Is useful when analyzing a significant quantity of documents.
- It offers three types of analysis: performance analysis, science mapping, and network analysis.

5. Bibliometric Analysis II

- There are also limitations when using this methodology:
  - Does not identify the purpose of citations.
  - Heterogeneity in behavior citations among disciplines.
  - Not all scientific output is published in bibliographic databases.

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