EXTENDED ABSTRACT

Socially Disadvantaged – Digitally Left Behind?

A Secondary Data Analysis of Digital Divides in Germany.

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Digital technologies have become indispensable for accessing information, communicating with others, and participating in societal life. However, the advantages of digitalization are not distributed equally. Research on digital divides has long demonstrated that social inequalities tend to manifest in the digital realm. From an ethical perspective, it is imperative to consider the impact of poverty, a complex phenomenon characterized by material and social exclusion, on one's capacity to utilize digital media in a meaningful way. The study therefore asks: How large are the digital divides between people affected by poverty in Germany today? The analysis is guided by the three-level model of digital inequality, which distinguishes between gaps in access, in usage and skill, and in tangible outcomes.

Theoretically, the study combines two strands of literature: research focusing on digital divides and research focusing on the impact of poverty. The three-level digital divide framework (cf. van Dijk 2006; Ragnedda 2017) posits that digital inequality is not a binary condition, but rather a cumulative process. The first level digital divide pertains to the quality and reliability of internet access, in addition to the heterogeneity of devices utilized. The second-level divide refers to discrepancies in online activities and digital competencies. The third-level divide addresses the question of whether digital engagement produces benefits such as better job opportunities, educational success, or political influence. These levels have been shown to reinforce each other over time. In addition, research focusing on poverty (cf. Groh-Samberg&Teichler 2025) has expanded the conventional understanding of poverty from a mere low-income status to a comprehensive condition that impedes involvement across diverse social domains. From a media ethics perspective, digital participation is therefore considered a matter of distributive justice. The introduction of digital infrastructures as a prerequi-

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site for accessing fundamental services has the potential to exacerbate existing disparities, particularly among economically disadvantaged populations.

Empirically, the study conducts a secondary analysis of the Allensbach Media Market Analysis 2025. The dataset comprises 23,075 face-to-face interviews conducted between June 2023 and February 2025, representing the German-speaking resident population aged 14 years and older. Poverty is defined as a household net income below 2,000 Euros, which approximates Germany's official at-risk-of-poverty threshold and applies to 17.6 % of the sample. Digital inequality is measured by using indicators for each of the three levels of digital divides. The first level, the access level, is captured by four items measuring ownership of digital devices such as laptops, tablets and smartphones. The second level, the usage level, is operationalized through 14 indicators including general internet use and specific online activities. The third level, the outcome level, is measured by two indicators: political interest in other countries and online participatory behavior. The analysis proceeds from bivariate comparisons between poverty-affected and non-affected individuals to an integrated index that combines all three levels into a summary measure of digital advantage and disadvantage.

The findings demonstrate clear and consistent differences between the two groups. Regarding access, individuals experiencing poverty are significantly less likely to own laptops and tablets, while smartphones are nearly universal in both groups. This configuration suggests a Smartphone-Only-User model that restricts poverty-affected individuals from more demanding tasks. Regarding usage, a marked discrepancy was observed. Poverty-affected individuals are more likely to be offline and are significantly underrepresented in activities such as online shopping, online banking, and targeted information searches. Furthermore, the subjects in question also rate their own digital skills as lower. Regarding outcomes, individuals affected by poverty exhibit marginally diminished levels of political interest and reduced frequency of online participation, although these differences are smaller. The integrated analysis reveals that cumulative disadvantage is prevalent among poverty-affected individuals: more than one in five poverty-affected individuals exhibit low scores on all three levels simultaneously, compared to only one in sixteen among the non-poverty affected.

The most significant findings can be summarized as follows. Firstly, it is evident that poverty remains a significant predictor of digital inequality in Germany. Secondly, the disadvantage is

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not confined to access but extends to usage, skills and outcomes. Thirdly, the predominance of the Smartphone-Only pattern indicates that financial constraints compel a considerable proportion of economically disadvantaged individuals to utilize a mode of access that is inherently constrained. Fourthly, individuals affected by poverty often encounter a cumulative burden, being disadvantaged on multiple levels simultaneously.

For future research, this implies two concrete needs. First, large-scale representative surveys must be conducted to allow for the identification of smaller poverty-affected subgroups, such as single parents and long-term unemployed individuals. Second, longitudinal studies are required to better understand the causal mechanisms between poverty and digital disadvantage over time. For practice, policymakers should develop tailored structural support measures specifically targeting poverty-affected subgroups rather than applying one-size-fits-all solutions. Additionally, educational providers need low-threshold digital literacy programs that are adapted to everyday realities and resource constraints of poverty-affected individuals. From a media ethics perspective, digital participation should ultimately be recognized as a matter of distributive justice, not merely technical proficiency.

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