The Enduring Impact of Historical Redlining on Social Vulnerability and Sustainability in Major U.S. Cities

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ABSTRACT:

This study, delving into the 1930s redlining practices in the United States, investigates the spatial disparities among HOLC (Home Owners' Loan Corporation) neighborhoods in over 200 major U.S. cities. The focus is on understanding the impact of historical redlining practices on social vulnerability (SV). Utilizing SV data collected in 2018 and employing ANOVA analysis, we scrutinized the spatial patterns of redlining's influence on SV in 196 U.S. cities. HOLC neighborhoods, categorized into four grades, were compared using various metrics, including the overall SVI value (social vulnerability index), four thematic SVI values (Social economic status, Household composition and disability, Minority status and language, and Housing type and transportation), and SVI values for fifteen SV factors. Significant disparities were uncovered in the overall SVI values across HOLC neighborhoods, with those graded "A" demonstrating the lowest vulnerability and those graded "D" exhibiting the highest. Furthermore, our findings underscored noteworthy distinctions between HOLC grades concerning four SV themes and the majority of SV factors. These findings underscore the importance for urban planners and policymakers to consider the impact of historical redlining practices on social welfare and address SV inequities among HOLC neighborhoods. Expanding the discussion to encompass climate and sustainability considerations, the study suggests that addressing SV inequities among HOLC neighborhoods is crucial for forging resilient and sustainable urban development strategies. This emphasizes the interdisciplinary nature of the challenges, urging a comprehensive and integrated approach to urban development.

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