

Examining Spatial Disparity of Primary Healthcare Service in South Korea: A Spatial-Temporal Discrepancy Approach

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The healthcare system of South Korea has rapidly and successfully implemented easily accessible and affordable medical services through its universal healthcare programs under control of central government. The level of healthcare services has expanded in both terms of quantity and quality, but its landscape of healthcare provision has changed raising concerns about the spatial disparity in healthcare provisions, particularly pronounced in essential primary care services. This phenomenon raises two key questions: how to examine the spatial disparity of healthcare services over time, and what the policy implications are, as these implications manifest differently at various geographic scales. Given this context, this research investigates the dynamics of spatial disparities in essential primary health services in South Korea from 1995 to 2023. We propose a spatial-temporal discrepancy approach with a set of novel disparity measures. These measures assess discrepancies between the geographic distribution of service providers and potential service demand across multiple geographic scales. For systematic analysis, we define primary care services as those offered by medical clinics and public health centers, which serve as the first line of healthcare in South Korea for non-emergency medical conditions, chronic diseases, and preventive services. As longitudinal time horizons, we examine the disparities of these services following four distinct external shocks: the Asian financial crisis (1999), the global financial crisis (2010), the COVID-19 pandemic (2022), and the post-pandemic period (2023) with the baseline analysis of year 1995. The measures will demonstrate the progression and identification of spatial disparities in healthcare provisions at different geographic scales, providing spatial policies tailored to each scale. Our research contributes to the literature by providing a standardized analysis framework that effectively examines changes in the spatial organization of primary healthcare services with simultaneous consideration of multiple spatial and temporal horizons.

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