



KRIHS Policy Brief

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Land Policy Directions and Challenges in the Era of Big Data

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Summary

1. Structured and unstructured big data generated by the Internet of Things (IoT), social media, and advanced sensors have rapidly emerged as a new tool to shape land policies by diagnosing and predicting various phenomena.
2. Big data should be actively used to diagnose and seek solutions for land issues (e.g., slow growth, climate change, aging population, social polarization) in a way that supports sustainable and smart growth of the land, health and welfare, and tolerance and cooperation.
3. Big data on buildings, personal credit information, and credit card use information were used to understand changes to the populations and consumption patterns of the innovation cities and forecast expansion of areas with poor infrastructure in the future. As a result, it was found that the data can serve as useful indicators for land policies. To accommodate highly reliable decision making, there should be measures to control the data quality, lay the foundation for systematic utilization of the data, and distribute the methods of the data use.
4. Directions to innovate land policies in the era of big data: 1) Establish a vision for “smart land” where information and communications technology are applied to land and space. 2) Introduce a diagnostic and monitoring system for land, based on big data and artificial intelligence.



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Policy Implications

- ① Pursue big data convergence “Pathfinder” project: Discover and select highly accurate big data regarding national agenda and current land issues for pilot tests. Share effects and methods of the big data use.
- ② Establish and share a big data-based land use inventory for diagnostic purposes: Build and share a new inventory of land uses based on big data to offer sophisticated information on the usage of land and space and parts that are subject to maintenance.
- ③ Introduce a big data-based system to diagnose and monitor land issues: Build and institutionalize a system that steadily monitors land-related changes and issues and reflect the results to policies on an ongoing basis.
- ④ Improve data quality and create conditions for big data use by strengthening the big data ecosystem and platforms: Secure trust in building, renewing, and maintaining big data; reorganize platforms; foster land-related big data analysts; and bolster research and development.