



KRIHS Policy Brief

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High-speed Rail and the Arrival of the Era of Compact Land

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Summary

1. (High-speed rail trend) High-speed trains capable of a speed of 400 km/h or higher are the Hemu (400 km/h) in Korea, the Linear Shinkansen (600 km/h), in Japan and the Hyperloop (1,200 km/h) in the U.S.
2. (Compact land) Compact land is land available for compressed development along with an introduction of high-speed transport means.
3. (Compression effect of the land space) The compression effect of the land space was studied by assuming an introduction of high-speed trains to the areas near the Seoul-Busan expressway. As a result, the effect was measured as 21.4 percent with the Hemu, 28.2 percent with the Linear Shinkansen, and 37.2 percent with the Hyperloop.
4. (Changes to populations available for exchange) Compared to the KTX, a potential change to population exchange that could be caused by each high-speed train mentioned above was studied. As a result, the biggest change was made by a train with a speed of 400 km/h.
5. (Issue of introducing high-speed rail) To reduce adverse effects that may accompany the introduction of high-speed rail, measures need to be established to bridge the gap between access to large cities and to smaller cities and mitigate the phenomenon of economic concentration in large cities



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Policy implications

- ① At a time of slow economic growth, there should be a measure to create cities that are connected by high-speed rail to share each city's specialties at low cost, rather than having all cities with similar functions.
- ② After analysis of alternatives to high-speed trains, it is desirable to introduce a 400 km/h high-speed train, considering a change to exchangeable populations, utilization of current facilities, and train speed.
- ③ If the range of economic activities expand to Pyongyang and Sinuiju along with changes to political conditions, an introduction of a 400 km/h bullet train could be desirable as it could reduce the extended distances.