

# **Growth and Convergence in a Two-region Model: The Hypothetical Case of Korean Unification**

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## **Summary**

The events leading to German reunification in 1990 were watched closely in Germany, Europe, and the rest of the world – particularly in South Korea, where for the first time in four decades distant and abstract dreams of Korean reunification suddenly moved into the realm of the possible. For more than four decades, the two Korean states have developed entirely different economies, with the South prospering under a market system and the North stagnating under an inefficient centrally planned economy with serious macroeconomic imbalances.

These developments simultaneously present to Korea a challenge and an opportunity. What remains unclear is how fast this process will go on. Therefore, it is important to get some idea as to how large the macroeconomic impacts of unification can actually be. This paper examines the impact and implications of Korean reunification based on a two-region endogenous growth model with optimizing agents and aims to provide economic policy guidance for such an event. This approach is, to the best of our knowledge, new in the literature. Naturally, the integration of the Korean peninsula provides tough challenges. North Korea has a substantial population, which is about half the population of South Korea, while its per capita income is only one tenth of South Korea's. Therefore, South Korea's fiscal burden would be substantially larger than West Germany's if Korea were to follow the German-style reunification. Given these initial conditions, the paper turns to an assessment of likely post-unification dynamics in Korea and produces a number of capsule lessons about the appropriateness of various policy scenarios including the fiscal transfers which are required after reunification.

The calibration results point to certain impacts that are highly relevant for future discussions of policy regime designs. In other words, subject to limitations imposed by the quality of the data, the paper leads to some critical guidelines for the transformation of the North Korean economy. One question we are addressing is how much the South would have to pay for the cost of rebuilding the backward North. The results indicate that proper consideration of borrowing abroad is essential for assessing the fiscal impact of Korean unification. All in all, the calibration results indicate that a rapid German-style unification, known as the Monetary, Economic and Social Union of July 1, 1990 would be feasible only if South Korea finances large parts of the huge reunification costs by borrowing abroad.