



## Values of Bridge in the Formation of Cities

### Sung-Pil CHANG

Professor Emeritus  
Seoul National University  
Seoul, Korea  
*spchang@snu.ac.kr*

Sung-Pil Chang, born 1943, received his civil engng. degree from Seoul National Univ. and his Ph. D from Stuttgart Univ. He is now Vice-President of IABSE.



### Jinkyoo F. CHOO

Assistant Professor  
Konkuk University  
Seoul, Korea  
*cjk@snu.ac.kr*

Jinkyoo F. Choo, born 1968, received his civil engng. degree from the Univ. Libre of Bruxelles and his Ph. D. from Seoul National Univ.



## Summary

Space and agglomeration are perhaps the most basic features in city formation. City formation also requires continuous investment in public infrastructure, housing, and business capital, which makes cities form and grow in sequence. As public infrastructure, bridge is closely related to the sedentarization and agglomeration of population as well as to the transportation of people and goods. Accordingly, the values of bridge are examined with respect to the evolution of bridge within the city formation process so as to predict the future development trends of bridge and corresponding meanings. The major social roles fulfilled by bridges as social infrastructures and cultural asset are examined and extended to their roles in the city formation and further in the economic development process of a country.

**Keywords:** values of bridges, city formation, public infrastructure, cultural asset

## 1. Introduction

Space and agglomeration are perhaps the most basic features in city formation. A city's spatial location determines a major part of its resource possibilities, ranging from the price of natural resources to the ease and cost of transportation while agglomeration of population and facilities within a city determines its potential growth and eventual outcomes. Planning city formation is of critical importance for decision-making related to urbanization. City formation requires continuous investment in public infrastructure, housing, and business capital, which makes cities form and grow in sequence. Considering that city should expand adaptively to absorb the inflow of population, city may grow continuously assuming that technological development and adjustment costs are possible [5]. In such a viewpoint, bridge is inseparable from city formation.

For civil engineering students, bridge is defined with a pure engineering meaning that is "a structure spanning and providing passage over a gap or barrier, such as a river or roadway". This engineering approach, however, limits the bridge simply as a tool to cross natural obstacles and a tool that must be structurally sound and economic in terms of safety and serviceability, and budget without giving clues on its other functions. Even though current approach selects the type of bridge generally on budget criteria rather than aesthetics, aesthetics has become a very important factor in the design since the beginning