

## Compactness and Quality of Life: Applying Regression Analysis on American Cities

**Authors :** Hsi-Chuan Wang, Hongxi Yin

**Abstract :** Compactness has been proposed as a type of sustainable urban form globally. However, the meanings and the measurements might diverse in regarding to the varying interpretation; moreover, since compactness was proposed to eliminate auto culture and urban sprawl in the developed countries, voices have emerged asking to rethink the suitability of compactness in the developing countries – based upon such understanding, Quality of Life (QOL) has been suggested as a good way to show the overall benefit of compactness. In regarding to such background, two subjects were targeted for discussion in this paper: (I) the meaning and feasibility of compactness between the developing and developed countries, and (II) the interaction between compactness and QOL. This paper argues that compactness should not be considered a universal principle for cities of all kind, but rather an ideal concept for urban designer and planner to consider throughout local practices. It firstly reviewed the benefits of both compactness and sprawl to uncover the features behind these urban forms, and later addressed the meaning and difficulty of adopting compactness in both the developing and developed countries. Secondly, arguing compactness to be positioned as a ‘process’ along the transition from the developing countries to the developed ones, this paper applied both cross-sectional and longitudinal analysis to uncover (I) the relationship between compactness and QOL in regarding to 30 American cities and (II) the impact of ‘becoming compact’ on QOL in regarding to 8 identified American Urbanized Areas (UZAs). The findings indicated that higher compactness could link to lower QOL among the compact cities, but with higher QOL among the sprawl cities. In addition, based upon the comparison between 2000 and 2010 on 8 UZAs, their QOL have escalated during the transition from the sprawl areas into the compact ones, but the extent of improvement in QOL could differ greatly among areas. In regarding to our findings, compact development should be proposed as a general guideline leading the contemporary sprawl cities in transition with sustainable urbanism; however, to prevent the externalities from damaging QOL with over-compactness, the compact policy should be flexible to adjust a long-term roadmap for sustainable development.

**Keywords :** compactness, quality of life, sprawl, sustainable urbanism

**Conference Title :** ICADCPS 2018 : International Conference on Architectural Design and City Planning for Sustainability

**Conference Location :** Singapore, Singapore

**Conference Dates :** May 03-04, 2018