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学 位 論 文 内 容 の 要 旨/Dissertation Abstract

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学 位 論 文 題 名/Title of Dissertation

The contribution of rural natural capital to quality of life of urban-to-rural migrants: combined empirical evidence from national- and municipality-scale studies in Japan using social surveys and geospatial analyses

（地域の自然資本による、地方移住者の生活の質向上効果：日本全国および市町村規模の社会調査と地理空間情報解析を用いた統合的実証研究）

The recent unprecedented urban population concentration across the world has several social and ecological consequences. It is therefore pertinent to explore an alternative deurbanization pathway, in which rural quality of life is key, to achieve a better urban-rural population equilibrium. Literature on environmental contributors to quality of life is accumulating but yet fragmented to support forward-looking policies to realize a deurbanization pathway. This thesis compiled three studies aimed to address this knowledge gap.

The first study applied the value-expectancy research model to analyze a dataset of 742 valid responses to an all-out survey of new residents in Hokuto City within a period from April 2017 to January 2019. The analysis identified common values that underlie their migration decision, i.e., nature, housing and food. It also revealed heterogeneity in priority values among migrants in different age groups, such as employment for singles in ages between 16 and 29, natural child raising environment for married couples in their 30s and 40s, and staying with or near family for retirees in or over 60s. The centrality of nature in the common values of migration implied the need of further investigations into the rural natural capital elements that are salient to these migration values.

To respond to this need, the second study introduced the ‘four-capital framework’ as a theoretical ground to analyze the causal relationships between rural capital and quality of life. An extended application of the four-capital framework to an analysis of 414 responses to a resident survey with quasi-random sampling from the entire Hokuto City territory and geospatial datasets revealed the contributions of specific rural capital elements to human needs satisfaction. These were natural capital including farmland, symbolic natural sites, mountain peak view, lower temperature and tranquillity; built capital, e.g., highways, railway stations, shops and restaurants; and financial capital such as employments. The results, however, had methodological limitations in the comprehensiveness of and comparability between the indicators representing the six types of rural capital.

The third study validated rural capital contributors to quality of life and their contribution pathways using a structural equation model that was built upon the extended four-capital framework. The modelling used standardized datasets generated by a nation-wide online survey, which obtained 1,315 valid responses by regional quota sampling from rural municipalities across the nation, and geospatial computation to ensure comprehensiveness and comparability. The results identified five rural capital factors and five human need factors, as well as the pathways and relative strength in which these factors contribute to migrants’ quality of life. Among the five human need factors, rural amenity, which principally derives from rural natural capital, contributes the strongest to increased quality of life, followed by urban and socio-cultural utilities of a mix of various rural capital. The contribution

of household income to quality of life was confirmed but marginal as compared with the above three factors. Furthermore, the results imply the role of rural touristic capital, which is comprised of unique natural and cultural assets of rural areas, to complement limited urban and human capital assets. The robustness of the model was validated modest and still has space for further improvements.

As a total, the three studies have important mutual complementarities. Importantly, findings from the three studies are consistent in that nature is the primary, but not the sole, contributor to rural QoL, demonstrating the robustness of this finding. These findings, with theoretical reflections on the value-expectancy research model and the four-capital framework, clarify priorities for forward-looking policies to realize a deurbanization pathway. These are the efforts to reinforce the value of known popular rural capital elements, or to explore new capital elements, that have strong contribution to migrants' QoL, such as those identified by this study.