

# *Abstracts*

# **An Empirical Study on the Promotion of U/I/J-turns and Firm–Talent Matching Structures among Science and Engineering Graduates: A Case Study of Morioka City, Iwate Prefecture**

Shinichi KONDO, Mayu MIYAKAWA

This paper empirically analyzes the matching structure between regional firms and STEM graduates in relation to U-turn, I-turn, and J-turn migration patterns in Morioka City, Iwate Prefecture, a regional core city. In regional cities experiencing population decline due to low birth rates, population aging, and population outflow, retaining young talent has become an urgent issue, as the outflow of STEM graduates has particularly undermined the technological foundation of regional industries. This study aims to identify the conditions for stable and sustainable matching between local firms and STEM graduates, based on regional industrial structure and talent migration patterns.

The analytical framework employs Roth and Shapley's (2012) matching theory, applying the principle of stable match formation that accounts for the preferences of both job seekers and employers. Furthermore, it draws on Granovetter's (1973) "strength of weak ties" and Burt's (1992) "structural holes theory to theoretically examine how human network structures in regional communities influence career choices and recruitment outcomes. A distinctive feature of this study is the construction of an analytical model that integrates economics, sociology, and psychology by incorporating psychological factors such as attachment and sense of connection to the region.

Survey results from firms and STEM graduates in Morioka City reveal that the motivations for U-turn, I-turn, and J-turn migration are influenced by both the strength of social capital ties to the hometown and firms' receptiveness to returnees. Notably, stable matches were more likely to form when firms emphasized regional affinity and long-term retention over immediate job readiness. The findings also suggest that contact points mediated by "weak ties," such as internships and regional projects during university years, could potentially trigger return migration.

This study presents a theoretical model for talent circulation in regional cities and offers new insights for regional economic policy design by integrating matching theory with social network analysis. Future research should extend the analysis comparatively to other regions and examine the sustainability of matching through longitudinal tracking.