BARRIERS AND SOLUTIONS FOR SMALL AND MEDIUM SIZED MANUFACTURERS' COLLABORATIVE ROBOT ADOPTION

Georgia Tech

PI: Nancey Green Leigh, Georgia Institute of Technology; GRA: Heon Yeong Lee.

Challenge
- Slow diffusion of co-robot technology
- Innovation challenges for small and medium-size manufacturers (SMMs)
- Lacking systematic understanding of barriers to co-robot adoption
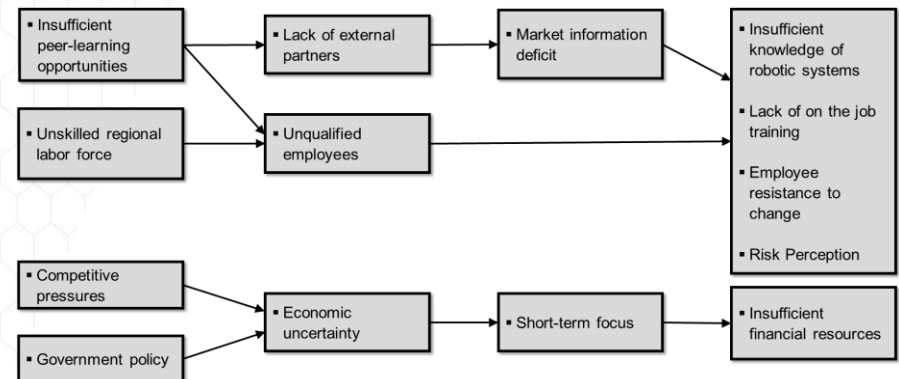
Scientific Impact
- Systematic analysis on barriers to co-robot adoption
- Understanding development needs for co-robot
- Development of labor market analysis method with novel datasets (Real Time Labor Market Information)

Solution
- Identifying the barrier structure through Delphi survey technique & Interpretive Structural Modeling
- Firm and labor market analysis using real time labor market information
- International case studies to identify enabling environments

Broader Impact
- Potential solution to problems & support for SMMs
    - Increase productivity & competitiveness
    - Upskill jobs & higher wages
    - Attract workers & counter growing inequality
- Understanding supportive environments for technological innovation in SMMs
- Insight for regional development & industrial development policy

Example of Barrier Structure to Co-robot adoption (preliminary analysis results)