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Shared Skills: Occupation Clusters for Poverty Alleviation and Economic Development in the U.S.

Background. Economic development efforts often focus on creating clusters of employers in industries that employ highly-skilled, high-wage workers. Such strategies may improve a region’s overall economic climate, but these efforts rarely include considerations of the fate of lower-skill workers in the region. In addition, industrial specialization may increase regions’ vulnerability to economic shifts relative to more diversified economies. Instead of focusing on industries, building economic development strategies based on the characteristics of a region’s existing labor pool could both provide a more resilient economic structure as well as help identify pathways for employment mobility for low-skill workers who might be able to transfer and build upon common skill needs across industries.

Methods. Colleen Chrisinger, Assistant Professor of Planning, Public Policy and Management at the University of Oregon and a former WCPC Dissertation Fellowship recipient, along with colleagues Christopher S. Fowler and Rachel G. Kleit, used data from the U.S. Department of Labor’s Occupational Information Network (O*Net) to develop a method for identifying broad occupational clusters and then explored how these clusters might be used to inform economic development strategies. First, the researchers used cluster analysis to group occupations that are similar based on nine domains related to job performance: abilities, education/training, interests, knowledge, job zones, skills, work activities, work styles, and work values. To demonstrate potential applications of this approach, the authors then examined the geographic and industry distributions of two clusters.

Findings. Of the thirty-one sets of occupation clusters generated by the cluster analysis, the researchers retained the set of twenty-five clusters that was most reflective of real-world occupation categories and characteristics. While similar based on the nine domains used to create the clusters, the resulting clusters were more diverse than standard groupings used to categorize occupations and many included occupations from multiple industries. For example, the Personal Health Care and Assistance cluster contained jobs as varied as registered nurses, bailiffs, and flight attendants, which were grouped together based on workers’ common focus on caring for others; knowledge of medicine, psychology, counseling; and the need to enforce safety regulations. There was also wide variation in the average hourly wages of jobs within clusters, ranging from $68.48 for the Medical and Therapeutic Treatment cluster (ex. surgeons, chiropractors) to $11.52 for the Food Production and Spatial Assistance cluster (ex. crossing guards, fast-food clerks).

These clusters can be classified by their geographic distribution as well as the range of industries in which the associated jobs are located. For example, the Labor and Machine Services cluster was concentrated in the Great Lakes region, the southeast, and California, but the jobs associated with that cluster were distributed across a wide range of industries. The Medical and Social Assistance cluster, on the other hand, was dispersed throughout the country, but jobs in that cluster fell within a smaller number of industries.

The authors argue that understanding occupational clusters as collections of people with shared values, knowledge, and skills suggests new mobility opportunities for workers within and between industries, and may also identify large pools of potential employees for businesses. Local application of this method could provide new insights into the use of a community’s existing labor assets to support economic growth and reduce poverty.
The West Coast Poverty Center at the University of Washington serves as a hub for research, education, and policy analysis leading to greater understanding of the causes and consequences of poverty and effective approaches to reducing it in the west coast states.

More information about the West Coast Poverty Center is available from our website: wcpc.washington.edu

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New research from Colleen K. Chrisinger, Christopher S. Fowler, and Rachel Garshick Kleit

Key Findings

• Most attempts to classify regional economic strength focus on industries and often neglect lower-wage occupations. An alternative approach would be to use the full range of jobs in an area to define local labor pools.

• Using national-level data on occupational characteristics, 25 occupation clusters were identified based on similarities in job tasks, skills, interests, values, and knowledge.

• The resulting clusters include diverse occupations and indicate that occupational groups might be better understood in terms of job skills and worker knowledge characteristics, rather than industry or product.

• A case study application of this method describes how these occupation clusters could present possible career paths within clusters and across industries, as well as potential avenues of upward mobility for low-income workers.