Working in the Shadows of the Gig Economy: Development and Validation of the Microworking Conditions Scale

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Abstract

In light of the rise of AI, microwork has become an increasingly important branch of the platform economy. This global labor market, consisting of individual workers labeling data and moderating content, supports the development of technological innovation. A growing body of literature examines the working conditions of microwork and their impact on work engagement, stress, identification, and worker well-being. These studies either employ existing frameworks to examine microwork, such as the job characteristics model, or set out to unveil new emerging working conditions in the digital platform economy. As a consequence, the insights on working conditions and well-being have been criticized for being fragmented, as well as lacking instruments to quantitatively assess novel working conditions of digital platform labor. In response, this research outlines the development and validation of the Microworking Conditions Scale (MWCS), an integrative instrument to assess the working conditions in microwork.
Guided by Self-Determination Theory (SDT) findings of the current literature were translated into the 15 working conditions of the MWCS: nine adapted from existing frameworks (e.g., autonomy, work significance) and six newly conceptualized working conditions reflecting novel aspects of microwork (e.g., task availability, unpaid labor). For each working condition, 10 items were developed to account for item attrition during the validation processes, with the goal to retain three items per working condition after validation. The MWCS's content validity was confirmed by 10 academic experts and 30 microworkers. Internal consistency, convergent, discriminant, criterion, and predictive validity were tested in two samples consisting of 407 and 455 microworkers.

Exploratory factor analysis confirmed a 15-factor structure (CFI = .887, RMSEA = .048), based on which the item pool was reduced to 61. Confirmatory factor analysis confirmed the measurement model (CFI = .988, RMSEA = .028). The final version of the scale includes 45 items. The MWCS has high reliability (α = .95), with Cronbach's alpha per factor ranging from .804 to .914. All 15 microworking conditions show convergent validity with related constructs, while staying discriminant from one another (r = -.248 to .802 ; $p <$ .01). Predictive validation showed that the MWCS correlates with workers' psychological, social, and psychosomatic well-being (r = -.222 to .270 ; $p <$ .01).
The MWCS enables a comprehensive assessment of working conditions in microwork, including its novel working conditions. It provides a tool for future research to examine the psycho-social risks associated with microwork and other digital platform labor.

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