

Introduction to HICCS-55 Minitrack on Crowdsourcing and the Digital Workforce in the Gig Economy

Xuefei (Nancy) Deng
California State University
Dominguez Hills
ndeng@csudh.edu

Sara Moussaswi
Carnegie Mellon University
smoussaw@andrew.cmu.edu

Joseph D. Taylor
California State University
Sacramento
joseph.taylor@csus.edu

1. Introduction

Crowdsourcing is the practice of obtaining needed services and content by soliciting voluntary contributions in the form of an open call from a large network of individuals rather than from an organization's employees or suppliers [1]. For organizations, crowdsourcing provides an online marketplace to tap into the labor and intelligence crowd. While crowdsourcing has been found to potentially provide new job opportunities for workers [2, 3], others have identified the legal and regulatory challenges associated with foster equitable, sustainable development through digital mediated work [4, 5].

During the past decade, scholars from different disciplines have paid increasing attention to examine the design and development of crowd-based platforms and the intelligence and innovation arising from crowdsourced contests and competitions. Studies on the technical systems and collective intelligence are informative, but our understanding of the crowdsourcing phenomenon cannot be complete without a comprehensive understanding of the crowd itself, the work made available on the digital platform, work conditions, and its institutional, regulatory and societal impacts.

More broadly, crowdsourcing contributes to the growth of the gig economy, the labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs, enabled by on-demand apps such as Uber and TaskRabbit. A new kind of flexible structure in the gig economy replaces the fixed employer-employee relationship in traditional organizations [6]. While the new, flexible structure in gig work affords extreme flexibility, it is also associated with instability in income and shifting of risks to workers. For example, the platform companies have shifted the operation risks from the employer to the worker because the platforms do not provide workers with training,

health or retirement benefits [7]. With the increasing concerns in the gig work and gig economy, it is important for both academia and policy makers to understand the work conditions and the impact of gig work on workers.

Finally, it's important for both academia and industry to better understand the impact of the ongoing global coronavirus (COVID-19) pandemic on work and workforce participating in both remote and place-based gig work. In the long term, technological developments at the intersection of crowdsourcing, gig work platforms and AI can potentially shape work at different levels. Research on the future of work and the essential skills and abilities of future workforce will update our knowledge and broaden our visions about the next generation of workforce.

2. Scope

Research of this minitrack lies at the intersections of multiple disciplines, namely Information Technology, Organization Science, Human Resource Management, and Behavioral Science. This minitrack publishes both theoretical and empirical studies addressing organizational, managerial, technical, and behavioral perspectives on crowdsourcing and digital workforce.

This minitrack presents research on the following three critical aspects of crowdsourcing and gig work, including (1) work conditions for crowd workers, (2) the impact of crowdsourcing and gig work, and (3) information technology and gig work.

Topics and issues presented in this minitrack include, but not limited to:

- Employment relations in the gig economy
- Ethical issues in the gig labor market and managing the gig workforce
- Gig work and workers in the times of COVID-19

- Gig work risk, worker behavior and performance
- Gig workers' participation, motivation and work-life balance
- Gig work conditions
- Global workforce in the gig economy
- Information technology and gig work
- Labor agency in the gig labor market
- Online communities of gig workers
- Organizational and regulatory challenges in the gig economy
- Psychological aspects of digital platforms on workers (e.g., Technostress, Well-being)
- Regulatory oversight of gig work platforms and labor market
- Skill development and career pathways of gig workforce
- Technology advancement, AI and future of work

3. Summary of Articles

This mini-track presents four papers in HICCS-55. First, Lorenz, De Cooman, and Verbruggen [8] conduct a daily diary study among 51 Belgian food app workers to examine the relationship between algorithmic control and workers' perception of meaningful work. The study shows that app workers' experience of high algorithmic control is associated with their perception of less meaningful work, highlighting the importance of work design and job crafting in app-based work.

Second, Ren and Curley [9] conduct a laboratory experiment and a field experiment to explore the impact of task significance on work quality. The study shows that perceived task significance improved work quality when participants were able to recall the purpose statement. However, the likelihood of recall was influenced by worker attributes such as English ability and personality traits. The findings suggest both the benefits and challenge of promoting task significance online.

Third, Frenzel-Piasentin, Glaser, Toutaoui, and Veit [10] focus on non-technical skills for information systems development (ISD) in gig work environments. Adopting an experiential learning theory perspective, the study examines how ISD professionals engaging in the gig economy develop non-technical skills. The study develops a process model of three phases - initiation, transition, and establishment - that explain how non-technical skill development occurs through gig work in a purely digitally mediated online work environment.

Finally, Xia [11] explores the scholars' and the Institutional Research Board (IRB)'s ethical concerns

about data collection on Amazon Mechanical Turk. Analyzing data from interviews with scholars across six disciplines and IRB officers in the U.S., the study reveals both common and distinctive (or even opposing) themes regarding the approval rate, rejection, internal and external research validity. The study calls for scholars' attention to the deterioration in data quality, the disciplinary differences regarding validity, and IRB officers' ethical concerns in crowd work-based research.

4. Reference

- [1] Howe, J. "The Rise of Crowdsourcing," *Wired magazine*, vol.14, no.6, 2006, pp. 1-4.
- [2] Deng, X., and K. D. Joshi. "Why Individuals Participate in Micro-task Crowdsourcing Work Environment: Revealing Crowdworkers' Perceptions," *Journal of the Association for Information Systems*, vol. 17, no. 10, 2016, pp. 711-736.
- [3] Taylor, J., and K. D. Joshi. "Joining the Crowd: The Career Anchors of Information Technology Workers Participating in Crowdsourcing," *Information Systems Journal*, vol. 16, no. 2, 2019, pp. 641-673.
- [4] Deng, X., K. D. Joshi, and R. D. Galliers. "The Duality of Empowerment and Marginalization in Microtask Crowdsourcing: Giving Voice to the Less Powerful Through Value Sensitive Design," *MIS Quarterly*, vol. 40, no. 2, 2016, pp. 279-302.
- [5] Taylor, J., X. Deng, and K. D. Joshi. "Exploring the Role of AIS Scholars in Framing the Concept of 'contractor' and 'employee' in the Gig Economy," *Proceeding of AMCIS 2020*, August 2020.
- [6] Gandini, A. "Labour Process Theory and the Gig Economy," *Human Relations*, vol. 72, no. 6, 2019, pp.1039-1056.
- [7] Bajwa, U., D. Gastaldo, E. Di Ruggiero, and L. Knorr. "The Health of Workers in the Global Gig Economy," *Globalization and Health*, vol. 14, no. 1, 2018, pp.1-4.
- [8] Lorenz, V., R. De Cooman, and M. Verbruggen. "The Food App is Watching You: The Relationship between Daily Algorithmic Control and Meaningful Work and the Role of Job Crafting," in *Proceedings of the 55th Hawaii International Conference on Systems Science (HICSS-55)*, January 3-7, 2022, virtual conference.
- [9] Ren, Y., and S. Curley. "Significance of Task Significance in Online Marketplaces for Work," in *Proceedings of HICSS-55*, January 3-7, 2022, virtual conference.
- [10] Frenzel-Piasentin, A., K. Glaser, J. Toutaoui, and D. Veit. "No Matter I'll Be Selected; in the Next Challenge I Will Be Better!" - Understanding Non-Technical Skill Development in the Gig Economy," in *Proceedings of HICSS-55*, January 3-7, 2022, virtual conference.
- [11] Xia, H. "Tragedy of the Commons - A Critical Study of Data Quality and Validity Issues in Crowd Work-Based Research," in *Proceedings of HICSS-55*, January 3-7, 2022, virtual conference.