

Iman Parsa | Research Statement

Driven by the rapidly growing demand for humanitarian interventions and substantial global health challenges, my research focuses on nonprofit operations management (OM), global health, and humanitarian supply chains (SCs). This focus is grounded in both theoretical and practical considerations. Theoretically, the unique characteristics of nonprofit operations often make existing models from commercial SCs inapplicable, presenting stimulating research challenges. It also offers opportunities to improve our general understanding of SCs and how they should operate in an increasingly volatile and dynamic environment. Practically speaking, nonprofit and humanitarian organizations play a crucial role in both developed and developing societies, yet there is a dearth of robust, theory-based models to guide their operations.

During my doctoral studies, as well as my postdoctoral work, I have employed theoretical modeling and empirical analysis to address practically relevant questions. I have closely worked with practice partners to apply my research in real-world settings. Examples include *Bill and Melinda Gates Foundation* and their partners in the health SCs, and *Praesens Care*, a social enterprise start-up that develops mobile diagnostic labs.

My first stream of research investigates how nonprofits can develop strategies that ensure their financial security and social impact. The main motivation for this research is that nonprofits' operations face substantial challenges due to financial turbulence resulted by their funding structure which heavily depends on external sources. Namely, donors' focus on financial metrics that value program spending over fundraising and administrative costs can lead to a starvation cycle where nonprofits cut necessary investments that inhibit their growth and exposes them to risks of failure. My paper co-authored with Mahyar Eftekhari and Charles Corbett, published in *Production and Operations Management*, empirically documents that communicating governance information can counterbalance the pressures that stem from this focus. Results underline the importance of information disclosure, show the possibility of countering the starvation cycle, and highlight that nonprofits should consider improving their governance quality to secure their donation income.

The focus on financial metrics leads nonprofits to prioritize strategies that enhance reported program expenses. Grant provision to other organizations is a strategy that allows them to do so without having to spend their funds on their own programs. This strategy is the focus of my joint work with Mahyar Eftekhari that is under review in *Manufacturing and Service Operations Management*. Through a comprehensive empirical analysis, we investigate drivers of this strategy, and its effects on nonprofits' financial capacity, social impact, and donor perceptions. Results indicate that relying solely on metrics designed to minimize administrative costs and expedite resource conversion can paradoxically compromise the sector's ultimate objectives, leading to less effective service delivery. Findings also underscore the need for a nuanced evaluation of the grant provision strategy, balancing its potential for revenue generation against its broader repercussions for individual charities and the sector as a whole.

My second stream of research is mainly focused on coordination between different stakeholders in humanitarian and health SCs. Despite efforts in the humanitarian sector to improve coordination, lack of effective coordinated response remains a challenge. Developing a stylized non-cooperative game theoretical model, I analyze horizontal coordination among humanitarian organizations involved in relief operations aftermath of a sudden-onset disaster. This paper is in collaboration with Mahyar

Eftekhar, Scott Webster, and Luk Van Wassenhove and is in final preparation for resubmission to *Production and Operations Management*. We aim to capture a broad picture of the system and build a model based on the literature and unstructured interviews with executives at multiple humanitarian organizations. We find that typical bureaucracies involved in coordination are substantial obstacles and can even make coordination harmful to the relief system performance. Our analysis highlights the need to rethink coordination structures, taking the relief context into account.

Coordination between actors is also a central theme in my research on Pathogen Genomic Sequencing (PGS) SCs. These SCs are essential for improving health systems, but face numerous challenges particularly in low- and middle-income countries. In two research papers in collaboration with Luk Van Wassenhove, Prashant Yadav, and Thomas Breugem, we analyze the root causes of these challenges and their interactions, and aim to provide a basis for coherent solutions to address these root causes. We conducted an extensive qualitative analysis (54 interviews) along with site visits to understand the core elements of the PGS SCs. In our paper submitted to *PLOS Global Public Health*, we identify nine categories of challenges and delve into their impact in the SC. We find that stakeholders have siloed views of the challenges and observe significant variability in labs' maturity in SC management. Thus, we develop a set of design propositions for Communities of Practice as locally-owned structures for knowledge sharing and learning on SC management. We also find that the lack of maturity makes it quasi-impossible for actors along these SCs to collaborate. In our paper in preparation for submission to *Production and Operations Management*, we develop a system dynamics model of a PGS SC to evaluate the pathways to sustainable improvements in the system. We analyze different interventions and show that the current policy taken by actors like Africa CDC which involves periodic in-kind donations can help in the short term, but disrupts the SC, inhibiting long-term improvements.

In addition to publications in top tier scholarly journals, I find it important to disseminate my research findings to a wider audience. For instance, I have accepted to contribute in writing a peer-reviewed chapter for a book on humanitarian logistics whose target audience are young researchers. I have also published a few articles in outlets like INSEAD Knowledge showcasing the key relevant insights from my research for a more general audience.

As my academic career progresses, I plan to continue working on practice-driven research questions that are intellectually stimulating for the OM community. Given the ever-increasing need for humanitarian aid and social services, and challenges and innovative interventions in health SCs, these areas are ripe with relevant and novel opportunities for rigorous research.

I believe that my research agenda combined with my rigorous training in my doctoral studies, my ongoing collaboration with practitioners, my experience in empirical and analytical research, and my data analytics skills can help me to become an expert in this field and to make impactful contributions to the existing body of knowledge.