

Modern slavery risks in agrifood supply chains

Addressing labor exploitation and other labor related social risks in agriculture is essential for sustainable food production, and relies on data-driven risk assessment for identifying hotspots and devising evidence-based risk mitigation strategies.

Stefan Gold, Gabriela Gutierrez Huerter O and Alexander Trautrimis

Agrifood supply chains have high risks of labor exploitation. Around two million people work under conditions of modern slavery and forced labor – as the most extreme end of the labor exploitation continuum – in this sector worldwide (ILO and Walk Free Foundation, 2017). So far, the concept of sustainable food system has focused on issues of food security, nutrition for society and consumer health in a way that planetary boundaries are not crossed but it has neglected parts of the social dimension of sustainability, in particular agricultural workers' rights and working conditions.

As long as modern slavery and forced labor remain undetected in agrifood chains, well-intended business and government interventions for improving environmental, economic or health outcomes are at risk of ignoring the interconnectedness of the Sustainable Development Goals (SDGs) and unintentionally exacerbate the risk of forced labor for agricultural workers in global and domestic supply chains. Considering supply chain opacity and the illegality surrounding labor exploitation, the development and implementation of sound methodologies for the collection and analysis of relevant data in a robust and meaningful manner remain strong challenges; nonetheless, such methodologies are urgently needed for increasing supply chain transparency and transforming sustainable food systems.

In this issue of *Nature Food*, Blackstone et al. (2021) develop a data-driven methodological approach for evaluating the risk of forced labor and apply it for assessing related risks embedded in US retail supply of fruits and vegetables. The authors draw on principles of social life cycle assessment (S-LCA) for their aggregate level analysis of forced labor risk. Departing from a qualitative analysis of data on known occurrences and government response for each country-commodity combination, qualitative risk levels are converted into medium risk hours equivalent (mrh eq) per serving. The advantage of this quantitative indicator is the ability for users to compare risks on a commodity-by-commodity basis but also to aggregate to a food supply or product portfolio level and thus identify areas where targeted investigation may be required. Out of the sample of 307 commodity-country combinations, 85% were coded as *high risk*, and 8% as *very high risk*. Converted to per serving risks, five fruit commodities account for 39% of the total forced labor risk in the US retail fruit supply (fresh avocados, bananas, tangerines, and fresh and processed pineapples), and five vegetable commodities account for 55% of the total forced labor risk in the US retail vegetable supply (fresh and processed tomatoes, fresh green peppers, processed chile peppers, and fresh asparagus).

While some of these findings are empirically supported by media coverage of labor issues, for example in Mexican avocado production, more generally, Blackstone et al.'s (2021) analysis exposes that a substantial part of forced labor risk is linked to US domestic supply chains. This underlines that forced labor is not exclusively a problem of low and middle income countries in global supply chains, but also affects those countries who create the demand for the produce made by forced labor. Their study identifies hotspots where businesses, policymakers, buyers, farmers, workers advocacy groups, consumers and communities are urged to take concerted action. In Florida, the Fair Food Program of the Coalition of Immokalee Workers (CIW) represents a prominent success case of combating modern slavery in agriculture through a “decentered, egalitarian, and ensemble approach” (Rosile et al., 2021, p. 376) of multiple stakeholders. Workers, growers and buyers such as supermarkets and restaurant chains collaborate on a code of conduct with explicit market sanctions and a monitoring

system with a rapid investigation and responses that protect and improve tomato pickers' working conditions (Marquis, 2017).

Blackstone et al. (2021) provide a methodology for measuring forced labor risks in agrifood supply chains through a triangulation of risk indicators and thus contribute to uncover a neglected aspect of social sustainability of food systems. Its data-based analysis at an aggregated level can direct business, government and society resources to those commodity-country combinations where interventions can yield the most impact and avoid risk shifting (i.e., exploiters moving to another geographic region or shifting to another commodity). An example of how fine-grained methodologies can support the allocation of limited resources towards tackling forced labor is the case of strawberry production in Southern Greece (Kougkoulos et al., 2021). As a labor-intensive crop, strawberry cultivation relies on the availability of cheap labor; therefore, the influx of migrants to Greece in 2015 led to vastly increased strawberry production and corresponding instances of labor exploitation. A combination of satellite remote sensing with ground-truthing through field visits are the input for a multi-criteria decision analysis (MCDA) that evaluates and ranks worker settlements based on labor exploitation risks.

The UN Sustainable Development Goal 8.7 stipulates to end all forms of labor exploitation by 2030 and relies on the development and integration of evidence-based risk assessment and prioritization methodologies as the one proposed by Blackstone et al. (2021) for agricultural food production. The use of multi-source data for triangulation and continuous update of data is critical. Blackstone et al., (2021) have set the foundations of a dynamic risk anticipation methodology which should account for a combination of indicators that reflect current and upcoming changes in labor laws, conflicts, or impacts due to the Covid-19 pandemic.

Appropriate responses to modern slavery are determined by stakeholders' conceptualisation of forced labor and its causes in high-risk sectors (Gutierrez-Huerter O et al., 2021) including agriculture. Modern slavery, forced labor and labor exploitation more widely need to be understood as a problem systematically embedded in contemporary capitalism rather than an abnormality in the system (New, 2020). Tackling the challenge of forced labor and other forms of labor exploitation cannot be solved by voluntary corporate social responsibility, auditing schemes, certification labels, or ethical consumerism (LeBaron, 2020). Instead, it requires changes in our socio-economic structures that improve workers' status in supply chains through new governance structures, law enforcement, novel social and economic policies and fundamentally transformed supply chain and business models. Data-driven methodologies for assessing forced labor risks and directing stakeholder attention as developed by Blackstone et al. (2021) are of paramount importance for the eradication of modern slavery in either case.

References

Blackstone NT, Benoit NC, Robbins T, Jackson B, and Decker Sparks JL (2021) Risk of forced labor embedded in the US fruit and vegetable supply. *Nature Food*.

Gutierrez-Huerter O G, Gold S, Trautrim A (2021) Rhetorical field settlement of the issue of modern slavery: Framing in the UK construction sector. *Academy of Management Best Paper Proceedings*.

ILO and Walk Free Foundation (2017) Global estimates of modern slavery: Forced labor and forced marriage. Available at https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_575479.pdf (Accessed 14 June 2021)

Kougkoulos I, Cakir MS, Kunz N, Boyd DS, Trautrim A, Hatzinikolaou K, Gold S (2021) A multi-method approach to prioritize locations of labor exploitation for ground-based interventions. *Production and Operations Management*, DOI: 10.1111/poms.13496

LeBaron, G. (2020) *Combatting modern slavery: why labour governance is failing and what we can do about it*. John Wiley & Sons.

Marquis, S. L. (2017). *I am not a tractor! How Florida farmworkers took on the fast food giants and won*. Cornell University Press.

New S (2020) Modern Slavery and Supply Chain Transparency. In: Thomas Y. Choi, Julie Juan Li, Dale S. Rogers, Tobias Schoenherr, and Stephan M. Wagner (Editors), *The Oxford Handbook of Supply Chain Management*.

Rosile GA, Boje DM, Herder RA, Sanchez M (2021) The Coalition of Immokalee Workers Uses Ensemble Storytelling Processes to Overcome Enslavement in Corporate Supply Chains. *Business and Society*, 60 (2), pp. 376-414.