Our research aims to fill a gap in literature on the economics of workplace charging. Currently, most publications investigate electric vehicle (EV) charging in either the home or workplace setting individually. The inclusion of both these charging sources in addition to the wider charging infrastructure has not been previously explored where EV users are presented with choices in charging sources. This introduces an element of competition that employers will be subjected to when pricing workplace charging.

Our paper focuses specifically on the interconnectedness and reliance of different charging sources depending on variations in pricing. This is achieved by presenting an economic framework for workplace charging using a bottom-up approach to explore emergent charging behaviours across a population. Using an agent-based model with metropolitan Melbourne as a case study, the collective behaviour of the agent population showcases the risk-sensitive charging dynamics when workplace charging is prevalent. The findings drawn from this research can be used to inform employers on workplace pricing for long-term financial viability in the presence of competing charging sources. Moreover, it includes emerging trends such as an increase in photovoltaics in the residential sector and the impact this will have on workplace charger utilisation rates.