

Abstract: We consider a revealed preference problem when a researcher can only observe the consumption of the subset of goods. The standard revealed preference problem would ask if there is an unobservable consumption vector, such that there is a utility function that generates the observed data. However, this statement leads to a problem that (i) cannot be solved in a computationally efficient manner and (ii) does not allow drawing robust inference. Instead, we propose a notion of robust rationalization. That is, there is a utility function that generates the observed data set for every unobservable vector of consumption (satisfying the budget constraint). This way of looking at the problem allows us to draw a robust inference and conduct a (conservative) welfare analysis. We start by providing a revealed preference characterization for the problem of robust rationalization if the total expenditure is known. Next, we consider the case when the total expenditure is unknown. We find that every data set is rationalizable (the problem has no empirical content) unless prices for unobserved goods are equal. In the latter case, we find that the problem is equivalent to rationalization of the data set with quasilinear utilities