Characterizations of solutions for vector equilibrium problems

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Abstract

In this paper, we characterize the solutions of vector equilibrium problems as well as dual vector equilibrium problems. We establish also vector optimization problem formulations of set-valued maps for vector equilibrium problems and dual vector equilibrium problems, which include vector variational inequality problems and vector complementarity problems. The set-valued maps involved in our formulations depend on the data of the vector equilibrium problems, but not on their solution sets. We prove also that the solution sets of our vector optimization problems of set-valued maps contain or coincide with the solution sets of the vector equilibrium problems.

Keywords

characterization of solutions, dual vector equilibrium problems, set-valued maps, vector equilibrium problems, Vector optimization problems