COALITIONAL STABILITY CONDITIONS
IN MULTICRITERIA DYNAMIC GAMES

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We study the stability of coalitions in multicriteria dynamic games. We use the Nash bargaining solution (Nash products) to construct a noncooperative equilibrium and the Nash bargaining solution for the entire planning horizon to find a cooperative solution. Conditions for the internal and external stability are extended to dynamic games with vector payoff functions. The notion of coalitional stability, which takes into account the stimuli for the player to transfer to other coalitions, is introduced. To illustrate the presented approach, we consider a multicriteria dynamic model of bioresource management. Conditions for the internal, external, and coalitional stability are presented.

Keywords: dynamic games, multicriteria games, Nash bargaining solution, internal and external stability, coalitional stability.

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