

# Existence and Uniqueness of Equilibrium in Asymmetric Contests with Endogenous Prizes

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## Abstract

This paper considers contests in which the efforts of the players determine the value of the prize. Players may have different valuations of the prize and different abilities to convert expenditures to productive efforts. In addition, players may face different financial constraints. This paper presents a proof for the existence and uniqueness of a pure Nash equilibrium in asymmetric contests with endogenous prizes.

*Keywords:* Contests; endogenous prize; existence and uniqueness.

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