



# A complete folk theorem for finitely repeated games

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## Abstract

This paper analyzes the set of pure strategy subgame perfect Nash equilibria of any finitely repeated game with complete information and perfect monitoring. The main result is a complete characterization of the limit set, as the time horizon increases, of the set of pure strategy subgame perfect Nash equilibrium payoff vectors of the finitely repeated game. This model includes the special case of observable mixed strategies.

**Keywords** Finitely repeated games · Pure strategy · Observable mixed strategies · Subgame perfect Nash equilibrium · Limit perfect folk theorem

**JEL Classification** C72 and C73

## 1 Introduction

This paper provides a full characterization of the limit set, as the time horizon increases, of the set of pure strategy subgame perfect Nash equilibrium payoff vectors of any finitely repeated game. The obtained characterization is in terms of appropriate notions of feasible and individually rational payoff vectors of the stage-game. These notions are based on Smith's (1995) notion of Nash decomposition and appropriately generalize the classic notion of feasible payoff vectors as well as the notion of effective minimax

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