

**Mehta, Ghanshyam; Tarafdar, Enayet**

**Infinite-dimensional Gale-Nikaido-Debreu theorem and a fixed-point theorem of Tarafdar.**  
(English) [Zbl 0646.47036](#)  
*J. Econ. Theory* 41, 333-339 (1987).

In the first part of their paper the authors give a list of five statements on fixed points for multivalued mappings defined in linear topological spaces and prove that they imply each other. One of them, a theorem of *G. Tarafdar* from [Proc. Am. Math. Soc. 67, 95-98 (1977; [Zbl 0369.47029](#))] is used in the second part to prove an infinite dimensional version of the Gale-Nikaido-Debreu theorem that occurs in mathematical economics. The theorem proved is more general than another infinite dimensional version of G.-N.-D. theorem given by *N. C. Yannelis* [*J. Math. Anal. Appl.* 108, 595-599 (1985; [Zbl 0581.90010](#))]. One of the tools used in the proof is the Hahn-Banach theorem.

Reviewer: [M.Sablik](#)

**MSC:**

[47H10](#) Fixed-point theorems  
[91B50](#) General equilibrium theory  
[54H25](#) Fixed-point and coincidence theorems (topological aspects)

Cited in **2** Reviews  
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**Keywords:**

[fixed points for multivalued mappings defined in linear topological spaces](#); [infinite dimensional version of the Gale-Nikaido-Debreu theorem](#); [mathematical economics](#); [Hahn-Banach theorem](#)

**Full Text:** [DOI](#)

**References:**

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