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
Cited in **12** Documents

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:

[1] Aliprantis, C; Brown, D, Equilibrium in markets with a Riesz space of commodities, J. math. econ., 11, 189-207, (1983) · Zbl 0502.90006

[2] Border, K, On equilibria of excess demand correspondences, ()

[3] Granas, A; Ben-El-Mechaiekh; Deguire, P, A non-linear alternative in convex analysis: some consequences, C. R. acad. sci. Paris, 257-259, (September 1982)

[4] Tarafdar, E, On nonlinear variational inequalities, (), 95-98 · Zbl 0369.47029

[5] Tarafdar, E; Mehta, G, On the existence of quasi-equilibrium in a competitive economy, Int. J. sci. engr., 1, 1-12, (1984)

[6] Yannelis, N, On a market equilibrium theorem with an infinite number of commodities, J. math. anal. appl., 108, 595-599, (1985) · Zbl 0581.90010

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.