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Iterative monotone comparative statics

For an increasing upper order hemi-continuous correspondence $F : A \rightrightarrows A$, where A a σ-complete lattice, we first provide tight fixed-point bounds for sufficiently large iterations $F^k(a^0)$, starting from *any* point $a^0 \in A$. We use this result for conducting iterative fixed-point comparative statics, and then apply our results to monotone games and economies. For games of strategic complementarities, we improve the correspondence principle based results of [1] by allowing for divergent learning processes, unstable fixed points, equilibrium indeterminacies, and unordered perturbations. We also apply our results to the comparative statics of stationary equilibria in large economies and the set of recursive equilibria in macroeconomic models with indeterminacies.

Keywords: comparative statics; comparative dynamics; adaptive learning; monotone iterations; games with strategic complementarities.

JEL classification: C62, C65, C72.

References

[1] F. Echenique, *Comparative statics by adaptive dynamics and the correspondence principle*, Econometrica 70 (2002), 833–844.