Alireza Mohammadi Sepahvand

Postdoctoral Researcher in Economic Theory and Theoretical Industrial Organization
School of Economics, University of Edinburgh

amohamma@ed.ac.uk — alirezasepahvand.com
Room 4.5, 31 Buccleuch Place, Edinburgh EH8 9NA, United Kingdom

Appointments

University of Edinburgh, School of Economics — Apr 2025 – Present
Postdoctoral Researcher in Economic Theory and Theoretical Industrial Organization — Edinburgh, UK

Education

Monash University, Monash Business School — 2021 – 2025
Ph.D. in Economics — Australia

University of Cambridge, Faculty of Economics — 2024
Visiting Ph.D. Student in Economics — UK

Sharif University of Technology, Graduate School of Economics — 2016 – 2019
M.Sc. in Economics — Iran

Sharif University of Technology, Department of Mathematics — 2011 – 2015
B.Sc. in Mathematics — Iran

Research Areas

Political Economy, Network Economics, Public Economics, Economic Theory

Research Papers

Plundering Coalitions
with Weijia Li. Job market paper.

We develop a model to study coalitions that extract the resources of outsiders. The players in our model are endowed with power and resources. The ruling coalition plunders outsiders, distributes the plundered resources among its members, and guarantees that insiders' resources remain safe. Under natural conditions, we predict that a unique ruling coalition exists using both axiomatic and non-cooperative approaches. We further study the resilience of the ruling coalition to shocks affecting powers and resources of both insiders and outsiders, as well as the intensity of plundering. We show that a coalition with a classic hierarchical structure of army and bureaucracy, where powers and resources are equal within each class but strictly higher in the higher class, exhibits weakly higher resilience to external shocks affecting outsiders' power and resources. The exception is when the plundering intensity is relatively weak, where the internal distribution of power and resources does not affect external resilience. Our final results derive insights into how the intensity of plundering affects the internal and external resilience of the ruling coalition in different political environments.

Finding the Key Player with Simultaneous Social Planner Intervention
with Arthur Campbell and Yves Zenou. Draft available.

This paper studies simultaneous intervention by a social planner in a network game with strategic complementarities. Players belong to degree classes and choose effort. The social planner targets players under a budget constraint, reducing the probability that their activity survives. Effort and intervention are chosen simultaneously, before realised links are observed. Under no assortative mixing—that is, beliefs about future neighbours are independent of own degree class—we show that there is a unique type-symmetric pure-strategy equilibrium. The equilibrium has a degree-threshold structure: sufficiently high-degree classes are targeted, and higher-degree targeted classes face lower survival probabilities. It also equalises effort across partially targeted classes. This is optimal when the planner takes effort as fixed, but it omits how survival probabilities affect effort through network amplification. We use a sequential benchmark to isolate this omitted margin and define a class-specific amplification score. The score captures how strongly a marginal increase in a class's survival probability raises total surviving effort through network spillovers. If scores differ across targeted classes, simultaneous targeting is not sequentially optimal. Under degree-biased neighbour beliefs, as implied by the friendship paradox, scores are strictly ordered by degree. Thus, when simultaneous policy targets at least two classes, the sequential planner strictly improves by shifting intervention toward higher-degree targeted classes. Simultaneous policy is directionally correct in degree space, but too diffuse within the targeted block.

A Centered Index of Spatial Concentration: Expected Influence Approach and Application to Population and Capital Cities
with Filipe R. Campante and Quoc-Anh Do.

We construct a general axiomatic approach to measuring spatial concentration around a center or capital point of interest. Building on expected utility theory, we propose a basic axiom of independence, subgroup consistency, and show that it implies an expected-influence representation of the concentration order. We prove that two additional axioms, monotonicity and rank invariance, imply that the associated influence function is a decreasing isoelastic function of the distance to the capital. We apply our index to measure the concentration of population around capital cities, show its advantages over alternative measures, and explore its correlations with many variables of interest.

When Uniform Access Reforms Backfire: Endogenous Participation in Contests

Many access reforms are designed to broaden participation by lowering the cost of becoming an effective competitor. This paper shows that such reforms can have the opposite effect when access is contestable. I study a nonatomic contestable-access model with ratio-form payoffs in which potential claimants differ in the cost of producing effective contest intensity. A uniform reform helps marginal claimants by lowering their cost of becoming effective competitors, but it also strengthens low-cost incumbents. When incumbents respond strongly, aggregate contest intensity rises and the endogenous participation cutoff moves against marginal claimants. Participation then falls even though every claimant faces a lower cost. I characterize this reversal using a lower-tail concentration index that measures whether effective intensity is concentrated among the lowest-cost active claimants or spread toward the participation margin. A uniform reform expands participation when intensity is spread toward the margin and contracts participation when intensity is concentrated among low-cost incumbents. I then derive primitive curvature conditions that determine which of these two cases obtains. The paper also compares uniform reform with targeted entry expansion. A policy that targets claimants near the participation cutoff has a first-order effect on entry, while its equilibrium cutoff feedback is second order. Small budgets spent at the boundary therefore generate larger access gains than equal-budget uniform reforms. The results explain why broad administrative simplification may fail to expand access in contestable allocation systems, and why targeted support can be more effective when the objective is participation.

Work in Progress

How Fatal Repression Spreads: Confrontational Diffusion and Local Containment.

Honors and Awards

- **Bronze Medal**, 21st National Scientific Olympiad in Economics, Iran, 2016.
- **Student Excellence Award** for Academic Performance, Monash University, 2021.
- **Monash Department-Funded Graduate Research Scholarship**, fees and stipend, 2021–2024.
- **Enhanced International Research Experience Grant Scheme**, Monash Business School, 2024.

Teaching Experience

- **Lecturer:** Principles of Economics; Game Theory.
- **Teaching Assistant, graduate courses:** Microeconomics I; Financial Econometrics; Advanced Mathematical Economics.
- **Teaching Assistant, undergraduate courses:** Microeconomics I; Intermediate Microeconomics; International Economics; Game Theory; Principles of Economics; Statistics; Linear Algebra; Discrete Mathematics; Topology; Calculus II.

Professional Service and Activities

- Co-organiser, **Applied Young Economist Webinar**, supported by the Monash–Warwick Alliance, 2022–2025.
- Founder, **Student Scientific Association of the Faculty of Economics**, Sharif University of Technology, 2017.

Skills

- **Programming and software:** R, Stata, LaTeX; Python working knowledge.
- **Languages:** Persian, native; English, proficient.

References

Arthur Campbell, Professor of Economics, Monash University. Arthur.campbell@monash.edu.

Yves Zenou, Professor of Economics, Monash University. Yves.zenou@monash.edu.

Kaveh Majlesi, Professor of Economics, Monash University. Kaveh.majlesi@monash.edu.

Weijia Li, Lecturer in Economics, Monash University. Weijia.li@monash.edu.