

100 years of Game Theory, 30 years of Games and Economic Behaviour

Hervé Moulin

University of Glasgow, HSE St Petersburg

EIC of economics journals, June 11, 2021
Beijing Jiaotong University

the origin

Zermelo's Theorem (1912):

in Chess, either White can secure a win; or Black can secure a win; or both can secure a draw

this is about finite two-person zero-sum games of perfect information

a bigger step

the minimax theorem (1928) J. von Neumann, E. Borel

I have an optimal randomised strategy in every two-person zero-sum game

many applications throughout mathematics, statistics etc..

John von Neumann meets Oskar Morgenstern

Theory of Games and Economic Behavior (published 1944) is received with much enthusiasm

its message: non-zero-sum games, “a subtle mixture of conflict and cooperation”, are the building blocks of all economic interactions

but the formal tools developed in the book are not suited to connect this intuition with concrete economic models

enters John Nash

the concept of Nash equilibrium (1951) is the proper way to discuss
interactions between rational and selfish economic actors

Nash's model of axiomatic bargaining (1950), and Shapley's "value" of a
cooperative game
initiate the normative discussion of economic institutions

we still need to wait until Harsanyi's (1969) modeling of the strategic role of information, and Selten's (1965) concept of subgame perfect equilibrium for Game Theory to become the universal formal language of economics, encompassing and enriching the earlier concept of competitive equilibrium.

the overtaking is so complete that GT receives two straight Nobel prizes in Economics (1994, Harsanyi-Nash-Selten; 2005, Aumann-Schelling) and four more that rest heavily on it (in 1996, 2007, 2012 and 2020)

but the influence of Game Theory goes far beyond economics:

- to the social sciences: political science, sociology
- to mathematics: set theory, logic, stochastic processes
- to psychology: experimental results and behavioral modeling
- to biology: evolutionary models of competition
- to algorithmics: computation and approximation of equilibria
- ...



EHUD KALAI

Northwestern University

*founder-Editor of
Games and Economic
Behaviour*

Ehud Kalai created GEB in 1989 to capture and amplify this intellectual energy

beyond its large body of articles in economic theory, where its publication standards put it at the very top of field journals (see below)
a large share of its articles fits in one or more of the directions just listed

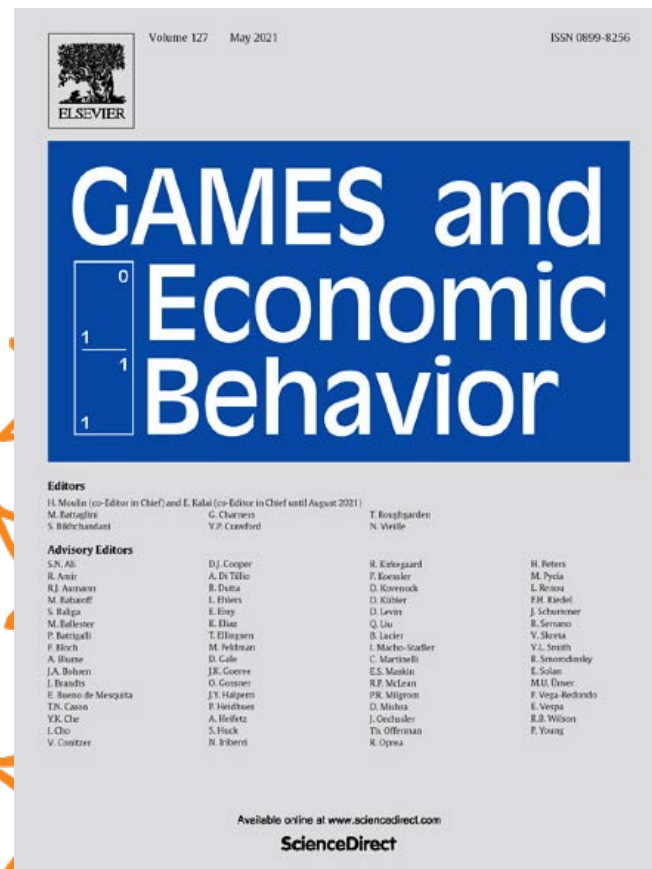
I am committed to preserve and expand the versatility and high standards of this unique journal.



ELSEVIER

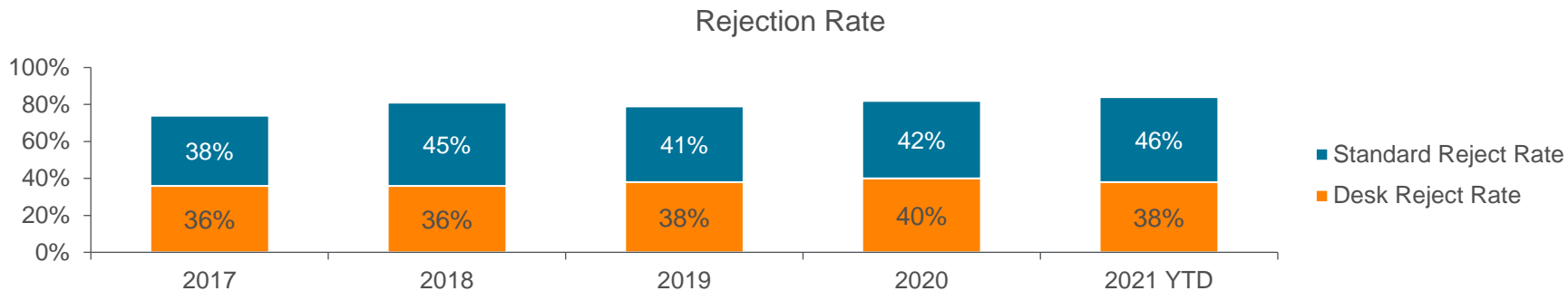
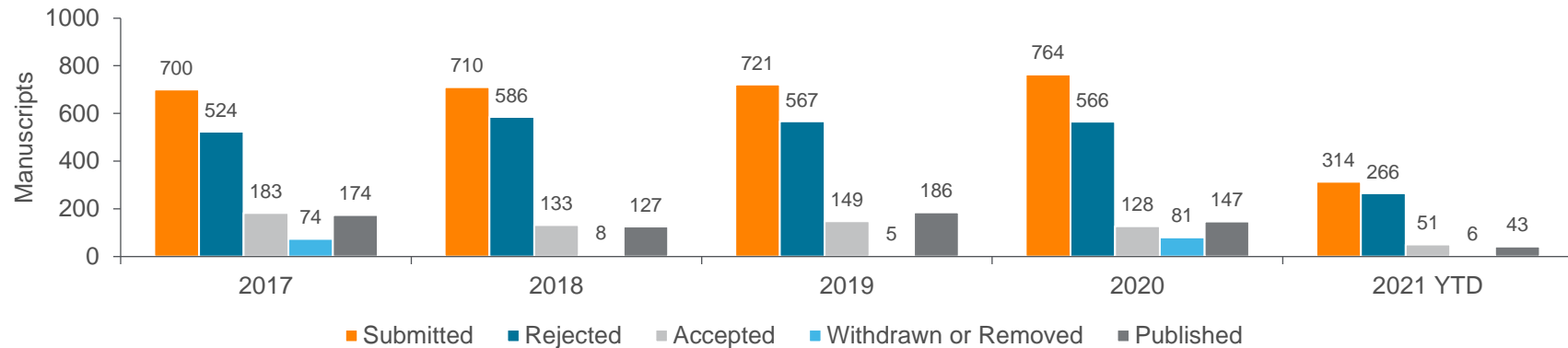
Games and Economic Behavior

Summary Report, June 2021

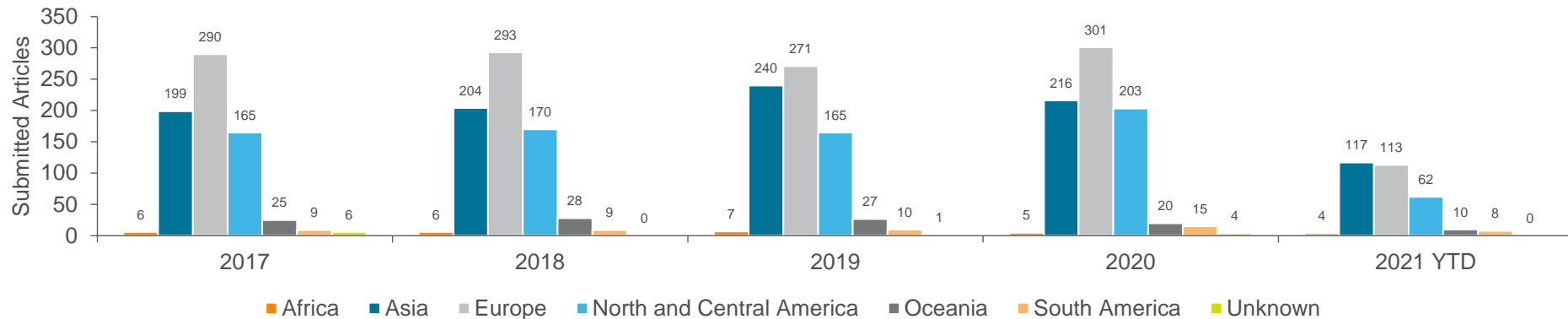


Manuscript Flow

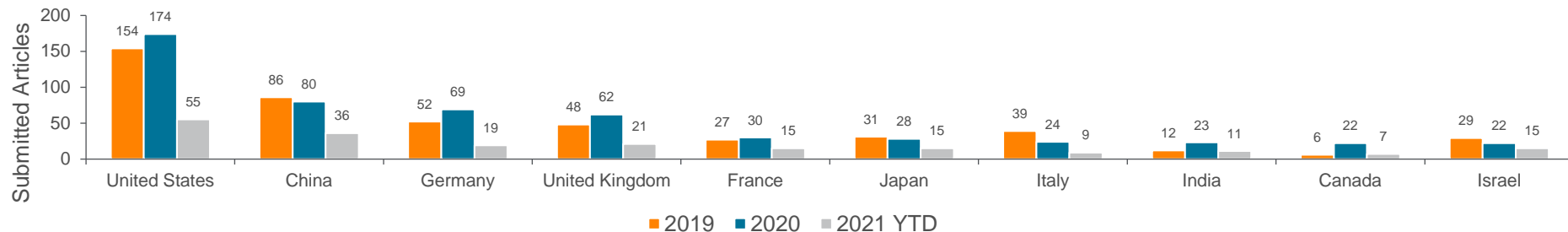
Submitted Manuscripts & Editorial Outcomes



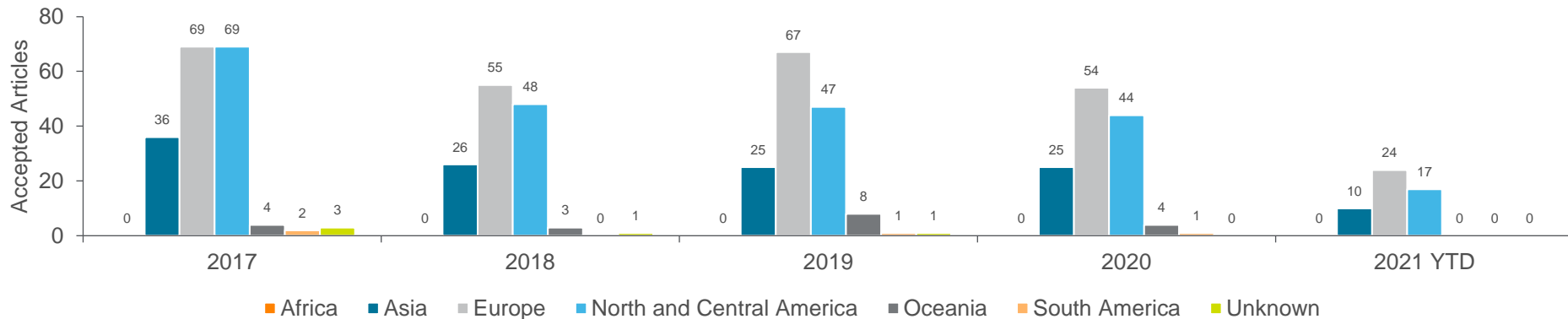
Submitted Articles by Country & Region



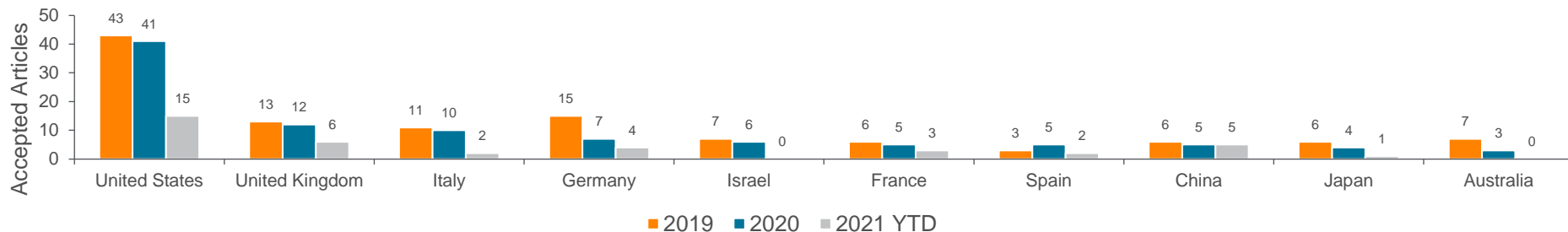
Trend of Top 10 Countries & Regions (2020)



Accepted Articles by Country & Region

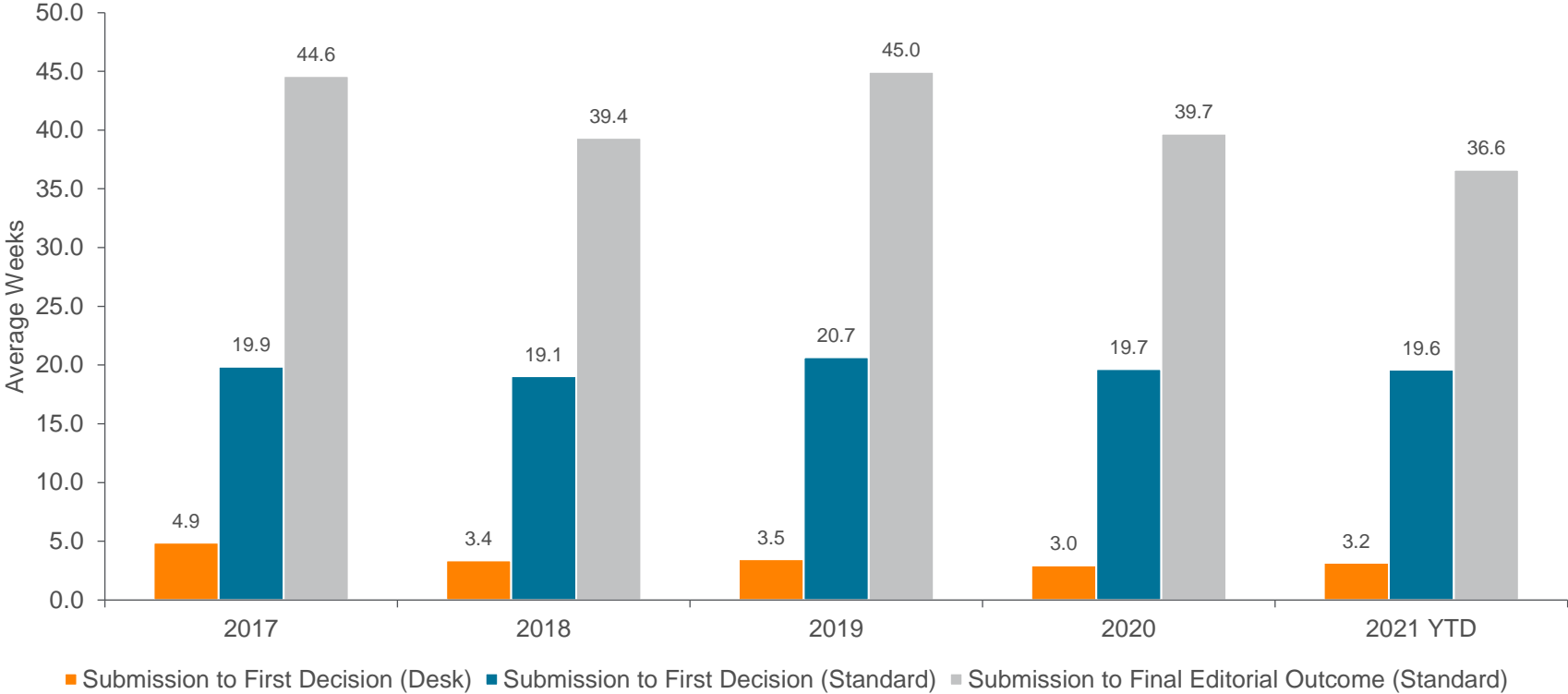


Trend of Top 10 Countries & Regions (2020)



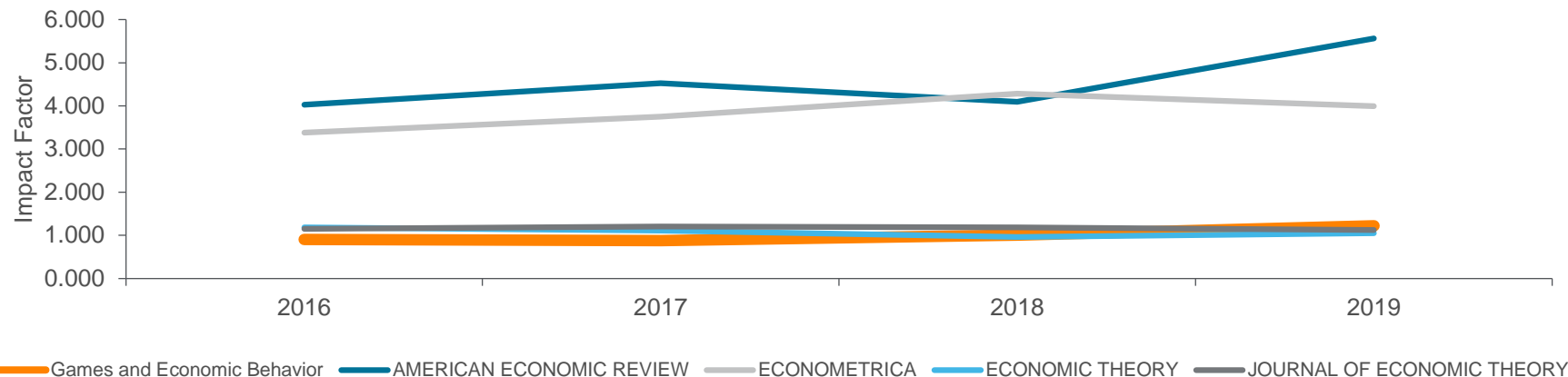
Speed

Average Editorial Speed for Accepted and Rejected Articles



Citation Impact

Impact Factor

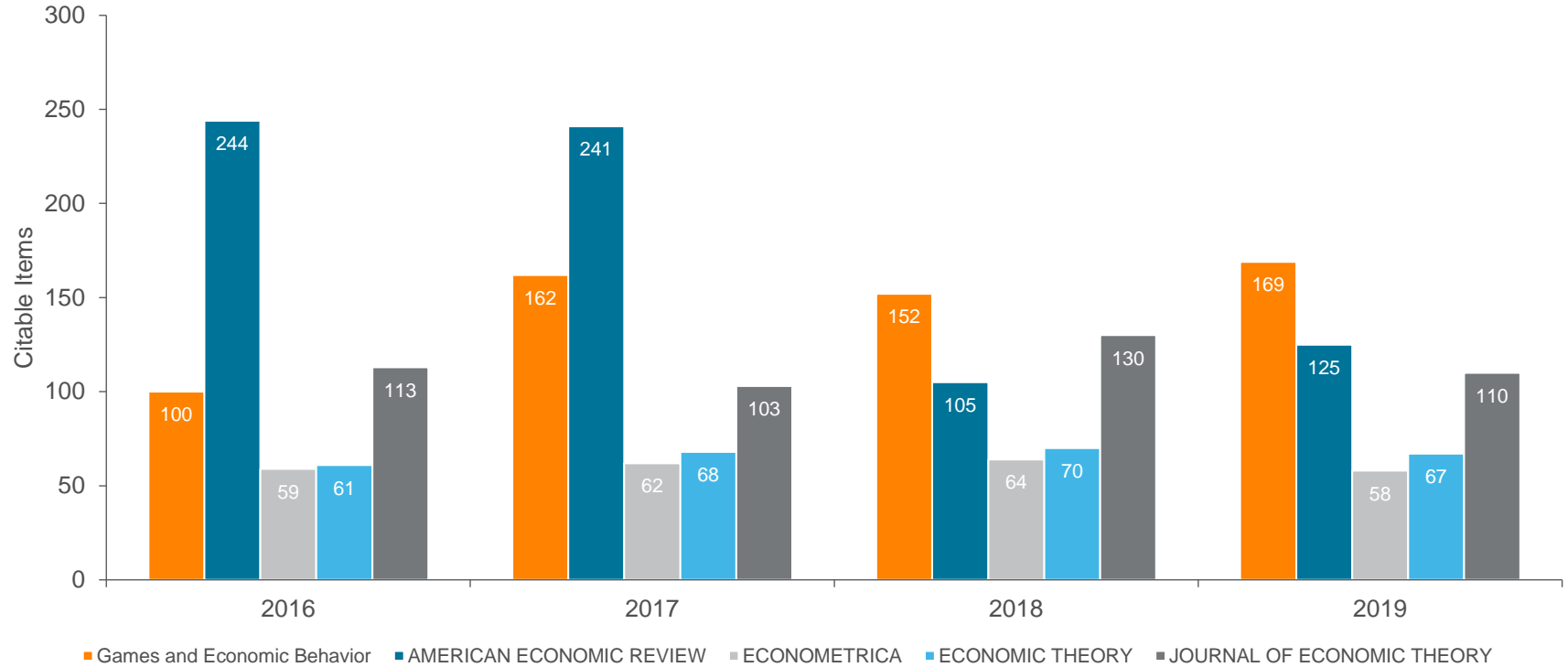


Title	2016	2017	2018	2019
Games and Economic Behavior	0.904	0.878	1.004	1.223
American Economic Review	4.026	4.528	4.097	5.561
Econometrica	3.379	3.750	4.281	3.992
Economic Theory	1.182	1.108	0.961	1.051
Journal of Economic Theory	1.147	1.204	1.181	1.124

Index	Category	Rank	Total Journals	Quartile
SCIE,SSCI	Economics	210	371	Q3



Impact Factor Citable Items Compared



Most Cited Articles, 2020 (Published All Time)

Citations	Citations (lifetime)	Article Title	Authors	Publication Year	Document Type	Open Access
267	2,692	Potential games	Monderer D.,Shapley L.S.	1996	Article	Subscription
196	2,495	Trust, reciprocity, and social history	Berg J.,Dickhaut J.,McCabe K.	1995	Article	Subscription
89	1,057	A theory of reciprocity	Falk A.,Fischbacher U.	2006	Article	Subscription
72	1,017	The somatic marker hypothesis: A neural theory of economic decision	Bechara A.,Damasio A.R.	2005	Article	Subscription
52	779	The Statistical Mechanics of Strategic Interaction	Blume L.E.	1993	Article	Subscription
49	468	The stability of hedonic coalition structures	Bogomolnaia A.,Jackson M.O.	2002	Article	Subscription
45	808	A theory of sequential reciprocity	Dufwenberg M.,Kirchsteiger G.	2004	Article	Subscription
44	932	Learning in extensive-form games: Experimental data and simple dynamic models in the intermediate term	Roth A.E.,Erev I.	1995	Article	Subscription
44	542	On players? models of other players: Theory and experimental evidence	Stahl D.O.,Wilson P.W.	1995	Article	Subscription
43	281	Combinatorial auctions with decreasing marginal utilities	Lehmann B.,Lehmann D.,Nisan N.	2006	Article	Subscription