

**THE PHILLIPE MONASTER CENTER  
FOR ECONOMIC RESEARCH**

**ACTIVITY REPORT**

**2015/16**

**THE PHILLIPE MONASTER CENTER  
FOR ECONOMIC RESEARCH  
ACTIVITY REPORT  
2015/16**

**TABLE OF CONTENTS**

<b>I.</b>	<b>MEMBERS OF THE CENTER AND THE STEERING COMMITTEE</b>	<b>3</b>
<b>II.</b>	<b>OPENING REMARKS</b> (presented by Oscar Volij, Director)	
		<b>4</b>
<b>III.</b>	<b>ACTIVITIES IN DETAIL:</b> Conferences, Guests, Seminars, Research Contracts, Fellowships and Awards, Committees, Appointments, and Cooperation with Other Institutions	
		<b>5</b>
<b>IV.</b>	<b>PARTICIPATION IN CONFERENCES AND SEMINARS</b>	
		<b>10</b>
<b>V.</b>	<b>PUBLICATIONS</b>	
		<b>12</b>
<b>VI.</b>	<b>WORKING PAPERS: Titles and Recent Abstracts</b>	
		<b>15</b>
<b>VII.</b>	<b>RESEARCH SUMMARIES</b>	
		<b>22</b>

**I. MEMBERS OF THE MONASTER CENTER FOR ECONOMIC RESEARCH**

**DIRECTOR:** Prof. Oscar Volij

**STEERING COMMITTEE:** Prof. Aner Sela, Prof. David Wettstein and Dr. Suleiman Abu-Bader

**MEMBERS**

Dr. Suleiman Abu-Bader  
Dr. Aamer Abu-Qarn  
Prof. Ofer Azar, Department of Business Administration  
Dr. Nadav Ben-Zeev  
Prof. Tomer Blumkin, Chairman, Department of Economics  
Dr. Danny Cohen-Zada  
Prof. Leif Danziger  
Prof. Oscar Volij, Director, Monaster Center for Economic Research  
Dr. Koresh Galil  
Prof. Mark Gradstein  
Prof. Ori Haimanko  
Prof. Moshe Justman  
Dr. Ariel Lavi  
Dr. Shirlee Lichtman-Sadot  
Dr. Oren Rigbi  
Prof. Edna Schechtman, Department of Industrial Engineering and Management  
Dr. Ella Segev, Department of Industrial Engineering and Management  
Prof. Aner Sela  
Prof. Avia Spivak  
Dr. Karine van der Beek  
Prof. Oscar Volij  
Prof. David Wettstein  
Dr. Ro'i Zultan

## II. OPENING REMARKS

The 2015-2016 academic year was another productive period for the Center, with the Department of Economics continuing to provide a stimulating environment for the academic staff to carry out high-quality research. More than 45 articles were accepted or appeared in top international journals. Another indication was the high number of presentations and attendance at international and local conferences and seminars. And as each year, within the department, the weekly seminar continued to provide the opportunity to learn about the latest developments in economic research from within Israel and abroad.

Several individual research projects are still supported through competitive grants, such as the ISF and the GIF. In addition, the working paper series distributed under the auspices of the Center continued to flourish, issuing a high number of articles produced by the department members (as enumerated in this report). (All titles are available on the Internet on the site entitled The Monaster Center for Economic Research.)

This year we are happy to welcome two new members to the academic staff of the department: Dr. Miri Stryjan, a graduate from the Stockholm School of Economics, is a field experimentalist interested in issues related to political economy and development economics in Africa, and Dr. Naomi Gershoni, a recent graduate from Tel-Aviv University, is an applied microeconomist whose fields of interest include health and labor economics as well as law and economics. We are also happy to welcome Dr. Tanya Baron who joined the department as a post-doctoral student. Dr. Baron, who recently graduated from Tel-Aviv University, is a labor macrotheorist who specializes in search and matching models. Finally, Dr. Ran Eilat, a micro-theorist and graduate of Tel-Aviv University, was recruited by the department. He is currently holding a post-doc position at the European University in Florence and will be joining our ranks in October 2017.

Departures from the department include Prof. Moshe Justman and Prof. Avia Spivak, two highly influential faculty members who retired in October 2016. Both were highly active academically, performing high-quality research, mentoring graduate students, and teaching at all levels. They also fulfilled prominent administrative responsibilities having both served as Dean of the Faculty of Social Sciences and Humanities. We hope they will continue to interact with the Department and wish them a fruitful retirement.

We are especially glad to report that two of our members received academic promotions during this period: Dr. Oren Rigbi received tenure and Dr. Karine van der Beek was promoted to Senior Lecturer.

Once again, we thank Ms. Ella Ginzburg and Ms. Estelle Schulgasser for their support in the production of this report.

Prof. Oscar Volij, Director  
Monaster Center for Economic Research

### III. ACTIVITIES IN DETAIL

On May 19<sup>th</sup> 2016 a special seminar day was held in the memory of Prof. Uri Regev, who was a leading figure in the field of environmental economics. Professor Regev passed away last year. Renowned speakers included Prof. David Zilberman from the Department of Agricultural Economics and Prof. Doron Lavi from the Tel-Hai Academic College.

The Fifth Annual Conference of the Economic History Association of Israel was organized by department member Karine van der Beek and was held at Ben-Gurion University on December 25, 2016. Among the guest speakers were Roi Kreitner (Tel-Aviv University), Sharon Gordon (Technion), Anat Leibler (Bar-Ilan University), Amir Tabenkin (Tel-Aviv University), Eli Cook (Haifa University), Itzhak Tzachi Raz (Harvard University), Moshe Vered (Beit Hinuch Yarkon), Tzaki Raz (Haifa University), Michael Birnhack (Tel-Aviv University), Dror Warman (Hebrew University), Joel Mokyr (Northwestern University). The keynote lecture was delivered by Avner Offer entitled “The Social Contract in Europe and the United States from the Seventies until Today.”

#### **Guests of the Center and the Department of Economics**

This year, owing to support of the Center, we hosted the following guest lecturers from abroad:

Daniel Bird (Northwestern University)  
 Guidon Fenig (University of British Columbia)  
 Francis Bloch (Paris School of Economics)  
 Dany Bahar (Inter-American Development Bank, The Brookings Institution, Harvard Center for International Development)  
 Saumitra Jha (Stanford University)  
 Andrea Ichino (European University Institute)  
 Mark Hoekstra (Texas A&M)  
 Subir Bose (University of Leicester)  
 David Neumark (UC Irvine)  
 Eliav Danziger (Simon Fraser University)  
 Yaniv Hedid-Levi (University of British Columbia)  
 Jun Honda (University of Frankfurt)  
 Mitchell Hoffman (University of Toronto)  
 David Abrams (University of Pennsylvania Law School)  
 Eduardo Morales (Princeton University)  
 Erez Yoeli (Harvard University)  
 Friedrich Schneider (Linz University)  
 Scott Baker (Kellogg School of Management)  
 Ben Meiselman (University of Michigan)  
 Tom Hamami (Northwestern University)  
 Jeffrey Mensch (Northwestern University)

**Seminar Lectures Presented by Department Members and Guests from Israel and Abroad (these include those that are presented as part of the regular Thursday seminar program and special seminars).**

- 03.01.16 Gilad Bavly (Bar-Ilan University)  
“Elasticity of Games”
- 07.01.16 Daniel Bird (Northwestern University)  
“Dynamic Nonmonetary Incentives”
- 10.01.16 Eytan Sheshinski (Hebrew University)  
“Taxation of Natural Resources: Extensions of Hotelling”
- 13.01.16 Guidon Fenig (University of British Columbia)  
“Complementarity in the Private Provision of Public Goods by Homo Pecuniarius and Homo Behavioralis”
- 14.01.16 Francis Bloch (Paris School of Economics)  
“The Formation of Partnerships in Social Networks”
- 17.01.16 Dany Bahar (Inter-American Development Bank, The Brookings Institution, Harvard Center for International Development)  
“Migration, Knowledge, Diffusion and the Comparative Advantage of Nations”
- 21.01.16 Saumitra Jha (Stanford University)  
“Valuing Peace: The Effects of Financial Market Exposure on Votes and Political Attitudes”
- 21.01. 16 Andrea Ichino (European University Institute)  
“Cognitive and Non-Cognitive Costs of Daycare 0-2 for Girls”
- 10.03.16 Yacov Tsur (Hebrew University)  
“Coping with Multiple Catastrophic Threats: an Intertemporal Approach”
- 17.03.16 Mark Hoekstra (Texas A&M)  
“The Long-Run Effects of Disruptive Peers”
- 31.03.16 Subir Bose (University of Leicester)  
“Eliciting Ambiguous Beliefs”
- 07.04.16 David Neumark (UC Irvine)  
“Is it Harder for Older Workers to Find Jobs? New and Improved Evidence from a Field Experiment”
- 14.04.16 Eliav Danziger (Simon Fraser University)  
“The Impact of Changing World Prices on a Small Open Economy”
- 05.05.16 Yaniv Yedid-Levi (University of British Columbia)  
“How Exporters Grow”

- 16.05.16 David Lagziel (Tel-Aviv University)  
“Reward Schemes”
- 16.05.16 Jun Honda (University of Frankfurt)  
“Intermediary Search for Suppliers in Procurement Auctions”
- 26.05.16 Mitchell Hoffman (University of Toronto)  
“How Do Managers Matter?” Evidence from Performance Metrics and Employee Surveys in a Firm”
- 02.06.16 David Abrams (University of Pennsylvania Law School)  
“To Plea or Not to Plea” Evidence from North Carolina”
- 09.06.16 Naomi Friedman-Sokuler (Ben-Gurion University)  
“Gender Streaming and Prior Achievement in High School Science and Mathematics”
- 16.06.16 Eduardo Morales (Princeton University)  
“The Impact of Innovation in the Multinational Firm”
- 23.06.16 Inbal Talgam-Cohen (Hebrew University)  
“Why Prices Need Algorithms”
- 30.06.16 Erez Yoeli (Harvard University)  
“Harnessing Observability to Promote Large-Scale Cooperation”
- 03.11.16 Friedrich Schneider (Linz University)  
“The Acceptance of Environmental Taxes:  
An Empirical Public Choice Investigation”
- 10.11.16 Ori Hefetz (Hebrew University)  
“Forgetting and Heterogeneity in Task Delay: Evidence from New York City Parking-Ticket Recipients”
- 17.11.16 Assaf Sarid (University of Haifa)  
“Geographical Origins and Economic Consequences of Language Structures”
- 24/11/16 Ori Katz (Tel-Aviv University)  
“The Effect of Industrialization on Fertility and Human Capital in the 19<sup>th</sup> Century: Evidence from the United States”
- 01.12.16 Scott Baker (Kellogg School of Management)  
“Shopping for Lower Sales Tax Rates”
- 08.12.16 Jorge Alé Chilet (Hebrew University)  
“Gradually Rebuilding a Relationship: The Emergence of Collusion in Retail Pharmacies in Chile”

- 15.12.16 Adi Shany (Hebrew University)  
“Too Scared for School? The Effects of Terrorism on Israeli Student Achievement”
- 21.12.16 Ben Meiselman (University of Michigan)  
“Ghostbusting in Detroit: Evidence on Non-filers from a Controlled Field Experiment”
- 22.12.16 Ofer Setty (Tel-Aviv University)  
“On the Asset Allocation of a Default Pension Fund”
- 28.12.16 Tom Hamami (Northwestern University)  
“Network Effects, Bargaining Power, and Product Review Bias: Theory and Evidence”
- 29.12.16 Jeffrey Mensch (Northwestern University)  
“On the Existence of Monotone Pure-Strategy Perfect Bayesian Equilibrium in Games with Complementarities”

### **Research Contracts, Fellowships and Awards**

Joint with Israel Luski and Miki Malul, Suleiman Abu-Bader was awarded a grant from the National Insurance Institute of Israel in the amount of 30,000 NIS for the project “Economical and Behavioral Aspects of Carrier Change.”

Tomer Blumkin is a Research Fellow at the Center for Economic Studies (CESifo) in Munich, Germany as well as the Institute for the Study of Labor (IZA) in Bonn, Germany.

Leif Danziger is a Research Fellow at the Center for Economic Studies (CESifo) in Munich, Germany as well as the Institute for the Study of Labor (IZA) in Bonn, Germany.

Ezra Einy is a fellow of the Society for the Advancement of Economic Theory.

Mark Gradstein is a Research Fellow at the Collegio Carlo Alberto, Italy.

Shirlee Lichtman-Sadot is the recipient of a Marie Curie International Reintegration Grant, European Commission, “School Food Environments,” in the amount of €100,000 for the period 2014-2018.

Oren Rigbi was awarded the following grants:

ISF Grant in the amount of 69,000\$ for a proposal entitled “The Economics of Rights: Benefits and Costs.”

The GIF Young Grant in the amount of 28,000 Euro for his proposal entitled "The Economics of Organizational Structure, Police Activity, Crime and Plea Bargaining" (together with Itai Ater and Yehonatan Givati).

A grant from the Elrov Real Estate Institute at Tel-Aviv University in the amount of \$10,000 (together with Itai Ater).

project entitled "The Causal Consequences of Religious Participation on Political Compromise and Risk Attitudes" in the amount of 50,000 NIS (together with Danny Cohen Zada).

Since 2003 Aner Sela is a Research Fellow of the CEPR.

Avia Spivak is a Senior Fellow at the Van Leer Institute.

Ro'i Zultan (with Miki Malul) were awarded a Gilford Glazer Faculty of Management, Ben-Gurion University grant for inter-faculty research, "The Public Sector in the Lab," ~\$7,800 in total and with Ella Segev a grant in the amount of \$10,000 from the 2015 International Foundation for Research in Experimental Economics Small Grants Program, "Asymmetric Sequential Auctions." Dr. Zultan still holds a grant from the Israel Science Foundation (no. 214/13) titled entitled "Group Reciprocity: Changing Attitudes Towards Groups." The grant is for the period 2013-2015 and is in the amount of ~\$40,000 p.a., ~\$80,000 in total.

### **Committees, Appointments and Cooperation with Other Institutions in Israel and Abroad**

Suleiman Abu-Bader collaborates with Elena Ianchovichina from the World Bank, USA and Miri Stryjan from Ben-Gurion University.

Aamer Abu-Qarn serves as head of the M.A. degree teaching committee, the academic coordinator of Economics at Achva Academic College and is a member of the Master's Degree Committee of the Faculty of Humanities and Social Sciences at Ben-Gurion University. He collaborates with Salem Abo Zaid from Texas Tech University, Muhammad Asali from Tbilisi State University, Michael Beenstock from the Hebrew University, and Markus Brückner from the University of Queensland.

Ofer Azar continued to serve as Editor to the Journal of Behavioral and Experimental Economics, formerly the Journal of Socio-Economics. This journal is ranked among the top three in both behavioral economics and socio-economics. Prof. Azar is also an Associate Editor for two other top journals in this field: the Journal of Economic Behavior & Organization and the Journal of Economic Psychology. He is also Head of the Multidisciplinary Specialty and Vice Chairman in the Department of Business Administration and the Teaching Committee Chairperson and Research Students Committee Chairperson of the Guilford Glazer Faculty of Business and Management at Ben-Gurion.

Prof. Azar's recent research collaborations include Ronnie Lidor, the Head of the Zinman College of the Wingate Institute, Dina Van-Dijk, Yaron Lahav and Michael Bar-Eli from Ben-Gurion University, as well as several graduate students.

Tomer Blumkin is a member of the CesIfo Research Institute in Munich and the IZA Institute for Labor Economics in Bonn. Since August 2015 he is serving as the chair of the Department of Economics here. Tomer collaborates with Leif Danziger and Ro'i Zultan from Ben-Gurion University, Efraim Sadka, Eran Yashiv and Yoram Margalioth from Tel-Aviv University, Michel Strawczynski from the Hebrew

University, Luca Micheletto from Bocconi University and Spencer Bastani from Linnaeus University.

Danny Cohen-Zada collaborates with Todd Elder from Michigan State University, Yotam Margalit from Columbia University, Alex Krumer from University of St. Gallen, Offer Shafir from NYU Shanghai, Zeev Shtudiner from Ariel University, and Mosi Rosenboim from Ben-Gurion University. He is also a research fellow at the Institute for the Study of Labor (IZA) (Bonn, Germany) since September 2010.

Leif Danziger collaborates with Tomer Blumkin from Ben-Gurion University, Eyal Baharad and Ruth Ben-Yashar both from Bar-Ilan University, Eran Yashiv from Tel-Aviv University, and Eliav Danziger from Simon Fraser University.

Koresh Galil collaborates with Zvika Afik (Ben-Gurion University), Uri Ben-Zion (Ben-Gurion University), Lior David-Pur (Ben-Gurion University), Eyal Lahav (Academic College), Mosi Rosenboim (Ben-Gurion University), Offer Shafir (NYU-Shanghai), Neta Sher (Tel-Aviv University), Rodrigo Zeidan (NYU-Shanghai).

Mark Gradstein serves on the Ministry of Education's committee for evaluating the economics program in the Israel Academic College in Ramat Gan.

Ori Haimanko continues to serve on the editorial board of the Journal of Mathematical Economics as an associate editor. In 2014-2015 he co-edited the special issue of the International Journal of Game Theory in Honor of Abraham Neyman. Prof. Haimanko does collaborative research on the following projects: Games with Incomplete Information – joint with Atsushi Kajii (University of Kyoto) and Contests with Asymmetric Information – joint with Ezra Einy and Aner Sela from Ben-Gurion University, Benyamin Shitovitz from the University of Haifa, Ram Orzach from Oakland University, Mridu Prabal Goswami from ISI Kolkata.

Moshe Justman is a Senior Research Fellow in the Van Leer Jerusalem Institute, where he heads the Institute's Program on Civil Society. He collaborates with Brendan Houg, Kyle Peyton and Susan Mendez at Melbourne University and with Danny Cohen-Zada and Karine van Der Beek at Ben-Gurion University. He serves on the Advisory Board of the Oxford Research Encyclopedia of Education.

Ariel Levy collaborates with Dan Amiram (Columbia Business School); Balazs Cserna (Frankfurt University), Offer Lieberman (Bar Ilan University), Amon Schriber (Bar-Ilan University), Zvi Weiner (Hebrew University), and Idan Hodor (Hebrew University).

Shirlee Lichtman-Sadot collaborates on projects with Edith Sand from the Bank of Israel and Oren Rigbi (Ben-Gurion University). She also carries out a project with Neryvia Pillay, a Ph.D. candidate from Stanford University.

Oren Rigbi collaborates with Itai Ater from Tel-Aviv University, Yehonatan Givati from the Hebrew University, Jonathan Meer from Texas A&M University, Danny Cohen Zada from Ben-Gurion University, Yotam Margalit from Columbia

University, Shirlee Lichtman-Sadot from Ben-Gurion University and Yona Rubinstein from LSE.

Edna Schechtman is a statistician in the Department of Industrial Engineering and Management. She does joint research with Hillel Bar Gera and Yisrael Parmet (Ben-Gurion University), Diamanta Benson (Open University), and Amit Shelef (Sapir College). She serves as an associate editor for Metron.

Ella Segev collaborates with Pnina Feldman (UC Berkeley), Yiangos Papanastasiou, (UC Berkeley) David Ong (HSBC, Business School, Beijing, China), Zhuoqiong (Charlie) Chen (LSE), John Morgan (UC Berkeley) and Ro'i Zultan (BGU).

Aner Sela does joint research with Ori Haimanko and Ezra Einy (Ben-Gurion University, Benyamin Shitovitz (Haifa University), and Diego Moreno (Universidad Carlos III de Madrid). He serves as a co-editor for the Journal of Economics and Management Strategy.

Avia Spivak collaborates on research with Nathan Sussman (Hebrew University), Rami Yosef (Ben-Gurion University), and Oded Palmon (Rutgers Business School). Since 2007 he is a member of the Shochat sub-committee for tuition in higher education and a member of the committee for the Israel Prize for Economics.

Karine van der Beek collaborates with Prof Joel Mokyr (Northwestern University) and with Nadav Ben-Zeev (Ben-Gurion University) on a joint project about the sources of mechanical skills and technological change during the Industrial Revolution; with Moshe Justman (Ben-Gurion University); and with Naomi Feldman (Federal Reserve Board). She is Research Affiliate at the Centre of Economic Policy Research (CEPR), serves as Trustee of the European Historical Economics Society and as Head of the Economics Curriculum for the IAF Flight Course, Ben-Gurion University.

Oscar Volij collaborates with Casilda Lasso (University of the Basque Country) and Ignacio Palacios-Huerta (London School of Economics). He serves as associate editor for the Journal of Public Economic Theory.

David Wettstein works on the following joint research projects: "Multi-Person Bargaining" with Yuan Ju (York University); "The Design of Multi-Stage Contests" with Todd R. Kaplan (University of Haifa); "Values for Environments with Externalities" with Ines Macho-Stadler and David Pérez-Castrillo (Universitat Autònoma de Barcelona); "Implementation in General Environments" with Mridu Prabal Goswami (Indira Gandhi Institute of Development Research) and "Promotion and Signaling" with Jed DeVaro (California State University East Bay) and Ori Zax (Tel-Hai College). Prof. Wettstein is both a member of the University Higher Appointments Committee and serves as Head of the Interdisciplinary Ph.D. Program at Ben-Gurion University.

Ro'i Zultan serves on the Ben-Gurion University Human Subjects Research Committee and on the Center for Decision Making and Economic Psychology Steering Committee. He collaborates with Tomer Blumkin, Shirlee Lichtman-Sadot, Shlomo Cohen, Ella Segev and Miki Malul (all from Ben-Gurion University); Shaul Shalvi (University of Amsterdam); Ori Weisel (Tel-Aviv University); Todd Kaplan

(Haifa University); Lawrence Choo (University of Erlangen-Nuremberg); Aniol Llorente-Saguer (Queen Mary, University of London); David Hugh-Jones (University of East Anglia); and Sven Fischer (Newcastle University).

#### **IV. PARTICIPATION IN CONFERENCES AND SEMINARS**

##### **Aamer Abu-Qarn**

Presentations at the EBES Conference, Vienna, Austria and at the International Atlantic Economic Association Conference, Lisbon, Portugal in 2016.

##### **Suleiman Abu-Bader**

“Polarization, External Intervention, and Conflict” presented with Elena Ianchovichina at the 11<sup>th</sup> Defence and Security Economics Workshop Program, Carleton University, Ottawa, Canada, November 4, 2016 and at the MENA Chief Economist Seminar Series. Washington D.C., June 29, 2016.

##### **Ofer Azar**

###### Seminar presentations

“Do Customers Return Excessive Change in a Restaurant? A Field Experiment on Dishonesty” (with Shira Yosef and Michael Bar-Eli), RWTH Aachen University (April 7, 2015).

“Does Relative Thinking Exist in Mixed Compensation Schemes?” University of Strasbourg (September 25, 2015).

“Relative Thinking,” University of Salento, Lecce (April 21, 2016) and at Middlesex University, London (June 23, 2016).

###### Conference presentations

###### Invited plenary lectures at conferences/meetings

“Relative Thinking,” Herbert Simon Lecture, National Chengchi University (February 12, 2015).

“Dishonesty in Restaurants and in Professional Basketball” [based on two papers, one with Elia Morgulev, Ronnie Lidor, Eran Sabag, and Michael Bar-Eli, and the other with Shira Yosef and Michael Bar-Eli], Herbert Simon Lecture, National Chengchi University (February 13, 2015).

“Applications of Game Theory in Sport,” Keynote speech at The 7th Annual International Conference on Sport Management, The Zinman College of Physical Education and Sport Sciences at the Wingate Institute, Israel (May 28, 2015).

###### Parallel sessions at conferences/meetings

“Do Customers Return Excessive Change in a Restaurant? A Field Experiment on Dishonesty (with Shira Yosef and Michael Bar-Eli) presented at the Incentives Morality and Unethical Behavior Conference, Rady School of Management, UCSD, San Diego, CA, US (March 14, 2015); the IMEBESS Conference, Rome, Italy (April 14, 2016); the FUR 2016 Conference, Coventry, UK (June 29, 2016); and at the ESA 2016 International Meetings, Jerusalem, Israel (July 10, 2016).

“Relative Thinking with Substitute Goods: Does it Exist with Real Choices?” presented at IAREP-SABE 2015, Sibiu, Romania (September 4, 2015) and at the ESA 2016 International Meetings, Jerusalem, Israel (July 10, 2016).

##### **Nadav Ben Zeev**

Presentations during 2016 at the Bank of Israel, Jerusalem and at the Money, Macro, and Finance Conference in Bath, UK.

**Tomer Blumkin**

“The Efficiency Enhancing Role of Mandatory Parental Leave Rules,” presented at the Israel Economic Association, Annual Meeting, Tel-Aviv, Israel, (June 2016), the Cesifo Area Conference on Employment and Social Protection, Munich, Germany, June 2016, and at Linnaeus University (Department of Economics), September 2016.

“Leveraging Wage Subsidies to Facilitate Fair Wages and Increase Social Welfare,” Cesifo Area Conference on Behavioral Economics, Munich, Germany, (October 2016).

**Leif Danziger**

European Economic Association Meeting in Geneva, Switzerland, August 2016.

**Ezra Einy**

International Conference on Game Theory, SUNY Stony Brook, July 2016.

World Congress of the Game Theory Society, Maastricht, July 2016.

**Koresh Galil**

Seminar presented in Tel-Aviv University, March 2015.

**Mark Gradstein**

Seminar presented at University of Fribourg, February 2016.

**Ori Haimanko**

Mini-Conference in Honor of Lloyd Shapley, Indian Statistical Institute, New Delhi.

Title: “Equivalence to Individual Power and the Banzhaf Power Index,” Nov. 2016.

**Ariel Levy**

The Arison Business School, IDC Herzliya, Finance Seminar, November 2015.

2015 Paris Financial Management Conference, Dec 2015.

The Israel Statistical Association, May 2015.

Ben-Gurion University, Guilford Glazer School of Business, Finance Seminar, May 2015.

The IDC School of Economics, Economics Workshop (discussant), June 2015.

The Israel Economic Association, June 2015.

International Risk Management Conference (IRMS), Jerusalem, 2016.

8th Annual Hedge Fund Research Conference, Université Paris-Dauphine, January 2016.

**Shirlee Lichtman-Sadot**

2016: American Society for Health Economists - Philadelphia, PA.

Israel Economic Association - Tel Aviv, Israel.

**Oren Rigbi**

Paper presentations at the EIEF (Italy) – October 2015, the University of Munich, CESifo and the University of Hamburg - November 2015.

Participation in the NBER Law and Economics Program Meeting in March 2016.

**Ella Segev**

“Sequential Bidding in Asymmetric First Price Auctions,” presented at the Conference of the Society for Economic Design (SED 2015), Istanbul, Turkey and at the Conference of the Society for Advances in Economic Theory (SAET 2015), Cambridge, England.

Invited talk: “Sequential Bidding in Multi Stage All-Pay Auctions” at the UCLA Workshop on Economic Theory, 2015; at the UC Davis Economic Theory Seminar, 2015; at the Bray Theory Seminar Series, Caltech Social Sciences Faculty, 2015; at the Mechanism Design Multidisciplinary Seminar, Stanford, 2015; and at the UC Berkeley Microeconomic Seminar, 2015.

**Aner Sela**

Contests: Theory and Evidence Conference, Norwich, UK, May 2016.  
Seminar at University of St. Gallen, Switzerland.

**Karine van der Beek**

“Flexible Supply of Apprenticeship in the British Industrial Revolution” (with Nadav Ben-Zeev and Joel Mokyr), European Historical Economics Society Conference, Pisa (2015) and at the XVIIth World Economic History Congress, Kyoto (2015)+.

Keynote speaker at the 10<sup>th</sup> Sound Economic History Workshop, Lund, 2015.

**Oscar Volij**

“The Value of a Draw,” presented at the 16th SAET Conference on Current Trends in Economics, 6-9 July, 2015, Rio de Janeiro, Brazil, and at the 5<sup>th</sup> World Congress of the Game Theory Society, Maastricht, The Netherlands, 24-28 July, 2016.

**David Wettstein**

Economic Theory Seminar, The Hebrew University of Jerusalem (December 2015), title of talk: “Innovation Contests.”

2016 “Values for Environments with Externalities - The Average Approach” (with I. Macho-Stadler and D. Pérez-Castrillo), 27th International Conference on Game Theory at Stony Brook, USA.

**Ro'i Zultan**Invited seminars:

“Auction Mechanisms and Bidder Collusion,” Business School, Tel-Aviv University, 2016.

“Imperfect Recall and Time Inconsistencies: An experimental test of the absentminded driver ‘paradox,’” Game Theory Seminar, Bar-Ilan University, 2016.

“Punishment and Reward Institutions with Harmed Minorities,” Center for Research in Experimental Economics and Political Decision Making, University of Amsterdam 2016.

Conferences:

“The Role of Wage Subsidies in Welfare Policy: a behavioral perspective,” presented at the Incentives and Behavior Change Workshop, Tel-Aviv, Israel, 2016 and at the Economic Science Association International Meeting, Jerusalem, Israel, 2016.

“Leveraging Wage Subsidies to Facilitate Fair wages and Increase Social Welfare”, presented at the Economic Science Association North-American Meeting, Tucson, Arizona, 2016.

“Conflict, Multiple Identities, and Cooperation,” presented at the Society for Judgment and Decision Making, Boston, Massachusetts (poster), 2016.

**V. PUBLICATIONS 2015-16** (names of Center members appear in capital letters)

Asali, M., ABU-QARN, A. S., and Beenstock, M. (2016) “The Cycle of Violence in the Second Intifada: Causality in Nonlinear Vector Autoregressive Models,” *Journal of Applied Econometrics*, forthcoming.

AZAR, O.H. (2015) “A Model of the Academic Review Process with Informed Authors,” *The B.E. Journal of Economic Analysis & Policy*, 15(2):865-889.

AZAR, O.H., Lahav, Y., and Voslinsky, A. (2015) “Beliefs and Social Behavior in a Multi-Period Ultimatum Game,” *Frontiers in Behavioral Neuroscience*, vol. 9 article 29, 1-11.

AZAR, O.H., (2015) “A Linear City Model with Asymmetric Consumer Distribution,” *PLOS ONE*, 10(6): e0129068.

AZAR, O.H., Yosef, S., and Bar-Eli, M. (2015), “Restaurant Tipping in a Field Experiment: How Do Customers Tip When They Receive Too Much Change?” *Journal of Economic Psychology* 50:13-21.

Itzkin, A., Van Dijk, D. and AZAR, O.H. (2016) “At Least I Tried: The Relationship Between Regulatory Focus and Regret Following Action vs. Inaction,” *Frontiers in Psychology*, vol. 7 article 1684, 1-16.

BEN ZEEV, N. and Pappa, E. “Chronicle of a War Foretold: The Macroeconomic Effects of Anticipated Defense Spending Shocks,” forthcoming in *Economic Journal*.

BEN ZEEV, N. and Khan, H. (2015) “Investment-Specific News Shocks and U.S. Business Cycles,” *Journal of Money, Credit and Banking* 47(7):1443-1464.

BEN ZEEV, N. and Pappa, E., (2015) “Multipliers of Unexpected Increases in Defense Spending: An Empirical Investigation,” *Journal of Economic Dynamics and Control* 57:205-226.

BEN-ZEEV, N., Mokyr, J., and VAN DER BEEK, K. (2016) “Flexible Supply of Apprenticeship in the British Industrial Revolution,” *Journal of Economic History*, forthcoming.

Bastani, S., BLUMKIN, T., and Micheletto, L. (2015) “Optimal Wage Redistribution in the Presence of Adverse Selection in the Labor Market,” *Journal of Public Economics* 131:41-57.

BLUMKIN, T., DANZIGER, L., and Yashiv, E. “Optimal Unemployment Benefit Policy and the Firm Productivity Distribution,” *International Tax and Public Finance*, forthcoming.

- DANZIGER, L. and Danziger, E. (2015) "A Pareto-Improving Minimum Wage," *Economica* 82:236-252.
- DANZIGER, L. and Ben-Yashar, R. (2016) "When Is Voting Optimal?" *Economic Theory Bulletin* 3:341-356.
- DANZIGER, L. and Ben-Yashar, R. (2016) "The Unanimity Rule and Extremely Asymmetric Committees," *Journal of Mathematical Economics* 64:107-112.
- EINY, E., HAIMANKO, O., Moreno, D., SELA, A., and Shitovitz, B. (2015) "Equilibrium Existence in Tullock Contests with Incomplete Information," *Journal of Mathematical Economics* 61:241-245.
- EINY, E., HAIMANKO, O., Orzach, R., and SELA, A. (2016) "Common-Value All-Pay Auctions with Asymmetric Information and Bid Caps," *International Journal of Game Theory* 45(1):63-88.
- EINY, E., HAIMANKO, O., Orzach, R., and SELA, A. "Common-Value All-Pay Auctions with Asymmetric Information," *International Journal of Game Theory*, forthcoming.
- EINY, E., Moreno, S., and Shitovitz, B., "The Value of Public Information in Common Value Tullock Contests," *Economic Theory*, forthcoming.
- Afik, Z., Arad, O. and GALIL, K. (2015) "The (Un)informative Value of Credit Rating Announcements in Small Markets," *Journal of Financial Stability* 14:66-80. 512-514.
- Afik, Z., Arad, O., and GALIL, K. (2015) "Using Merton's Model: an Empirical Assessment of Alternatives," *Journal of Empirical Finance* 35:43-60.
- GRADSTEIN, M. and Brueckner, M. (2016) "Income Windfalls and Schooling: Evidence from International Oil Price Shocks," *Journal of Human Capital* 10:212-234.
- GRADSTEIN, M. "Government Decentralization as a Commitment in Non-Democracies," *Journal of Comparative Economics*, forthcoming.
- HAIMANKO, O. and Kajii, A. (2016) "Approximate Robustness of Equilibrium to Incomplete Information," *International Journal of Game Theory* 45(4):839-857.
- Offer Lieberman and ARIEL LEVY (2016) "Active Flows and Passive Returns," *Review of Finance* 20(1):373-401.
- LICHTMAN-SADOT, S. (2016) "Does Banning Carbonated Beverages in Schools Decrease Student Consumption?" *Journal of Public Economics* 140:S30-50.
- LICHTMAN-SADOT, S. (2016) "Improving Academic Performance through Conditional Benefits: Open/Closed Campus Policies in High Schools and Student Outcomes," *Economics of Education Review* 54:95-112.

RIGBI, O., COHEN-ZADA, D., and Margalit, Y. (2016) “Does Religiosity Affect Support for Political Compromise?” *International Economic Review* 57(3):1085-1106.

RIGBI, O., Ater, I. and Givati, Y. “The Economics of Rights: Does the Right to Counsel Increase Crime?” *American Economic Journal: Economic Policy*, forthcoming.

Inzelberg, R., Massarwa, M., SCHECHTMAN, E., Strugatsky, R., Farrer, L.A., and Friedland, R.P. (2015) “Estimating the Risk for Conversion from Mild Cognitive Impairment to Alzheimer's Disease in an Elderly Arab Community,” *Journal of Alzheimer's Disease* 1:45(3):865-71.

Benson-Karhi, D. and SCHECHTMAN, E. (2015) “Using Measurements with Large Round-Off Errors for Interval Estimation of Normal Process Variance,” *IET Science, Measurement and Technology* 9:1-7.

SCHECHTMAN, E., Bar-Gera, H., and Musicant, O. (2016) “Driver Views on Speed and Enforcement,” *Accident Analysis & Prevention* 89:9–21.

Bar-Gera, H., Musicant, O., SCHECHTMAN, E., and Ze'evi, T. (2016) “Quantifying the Yellow Signal Driver Behavior on Naturalistic Data from Digital Enforcement Cameras,” *Accident Analysis & Prevention* 96:371-381.

Bar-Gera, H. Musicant, O., and SCHECHTMAN, E. “Impact of Speed Limit Change on Driving Speed and Road Safety at Interurban Roads: Meta-analysis.” *Transportation Research Record (TRR): Journal of the Transportation Research Board*, forthcoming

Parmet, Y. and SCHECHTMAN, E. “Simultaneous Decomposition of the Variance by Sources and Subgroups – New Insights,” *Communications in Statistics – Theory and Methods*, forthcoming.

Bar-Gera, H., SCHECHTMAN, E., and Musicant, O. “Evaluating the Effect of Enforcement on Speed Distributions Using Probe Vehicles Data,” *Transportation Research Part F: Traffic Psychology and Behaviour*, forthcoming.

Shelef, A. and SCHECHTMAN, E. “A Gini-based Time Series Analysis and Test for Reversibility,” *Statistical Papers*, forthcoming

Krumer, A. Megidish, R., and SELA, A. “Round-Robin Tournaments with a Dominant Player,” *The Scandinavian Journal of Economics*, forthcoming

JUSTMAN, M. and VAN DER BEEK, K. (2015) “Market Forces Shaping Human Capital in Eighteenth Century London,” *Economic History Review* 68(4):1177-1202.

VAN DER BEEK, K. (2015) “The Effects of the Political Space on Watermill Construction in 11<sup>th</sup> and 12<sup>th</sup> Century Ponthieu, France,” *Zmanim, A Historical Quarterly*, issue 129: 16-25. (in Hebrew)

Feldman, N., and VAN DER BEEK, K. (2016) “Skill Choice and Skill Complementarity in Eighteenth Century England,” *Explorations in Economic History* 59: 94-113.

Ruffle, Bradley, and VOLIJ, O. (2015) “First-Mover Advantage in Two-Sided Competitions: An Experimental Comparison of Role-Assignment Rules,” *International Journal of Game Theory* (2016) 45:933–970 DOI 10.1007/s00182-015-0493-7.

Mahajne, M., Nitzan, S., and VOLIJ, O. (2015) “Level  $r$  Consensus and Stable Social Choice,” *Social Choice and Welfare* 45:805–817 DOI: 10.1007/s00355-015-0882-7.

Pérez-Castrillo, D. and WETTSTEIN, D. (2016) “Discrimination in a Model of Contests with Incomplete Information about Ability,” *International Economic Review* 57:881-914.

Prabal Goswami, M. and WETTSTEIN, D. (2016) “Rational Bidding in a Procurement Auction with Subjective Evaluations,” *International Journal of Industrial Organization* 44:60-67.

Weisel, O. and ZULTAN, R. (2016). “Social Motives in Intergroup Conflict: Group Identity and Perceived Target of Threat,” *European Economic Review* 90:122-133.

**VI. WORKING PAPER SERIES 14/15/16 and  
abstracts of RECENT working papers  
(issued from the Monaster Center for Economic Research)**

**Discussion Paper Series 2014**

- 14-01 O. Volij, “Segregation: Theoretical Approaches.”
- 14-02 E. Einy, O. Haimanko, R. Orzach and A. Sela, “Common-Value All-Pay Auctions with Asymmetric Information and Bid Caps.”
- 14-03 M. Prabal Goswami, “Equal Treatment of Equals in Classical Quasilinear Exchange Economies.”
- 14-04 S. Fischer, W. Guth, T.R. Kaplan and Ro’i Zultan, “Auctions and Leaks: A Theoretical and Experimental Investigation.”
- 14-05 S. Dekel, S. Fischer and Ro’i Zultan, “Punishment and Reward Institutions with Harmed Minorities.”
- 14-06 A. Llorente-Saguer and Ro’i Zultan, “Auction Mechanisms and Bidder Collusion: Bribes, Signals and Selection.”
- 14-07 D. Perez-Castrillo and D. Wettstein, “Discrimination in a New Model of Contests with Two-Sided Asymmetric Information.”

- 14-08 E. Einy, D. Moreno, and B. Shitovitz, "The Value of Public Information in Common-Value Tullock Contests."
- 14-09 H. Shalit, "Measuring Risk in Israeli Mutual Funds: Conditional Value-at Risk vs. Aumann-Serrano Riskiness Index."
- 14-10 G. Gertsman and H. Shalit, "Optimizing MCSD Portfolios."

### **Discussion Paper Series 2015**

- 15-01 N. Ben Zeev, "What Can We Learn About News Shocks From the Late 1990s and Early 2000s Boom-Bust Period?"
- 15-02 M. Brueckner, A. Chong and M. Gradstein, "Does Economic Prosperity Breed Trust?"
- 15-03 Z. Afik, O. Arad and K. Galil, "Using Merton's Model: an empirical assessment of alternatives."
- 15-04 U. Benzion, K. Galil, and E. Lahav, "Debt Composition and Lax Screening in the Israel Corporate Bond Market."
- 15-05 K. Galil and N. Sher, "Predicting Default More Accurately: to proxy or not to proxy for default?"
- 15-06 A. Krumer, R. Megidish and A. Sela, "Round-Robin Tournaments with a Dominant Player."
- 15-07 S. Bastani, T. Blumkin and L. Micheletto, "Optimal Wage Redistribution in the Presence of Adverse Selection in the Labor Market."
- 15-08 "T. Blumkin, L. Danziger and E. Yashiv, "Optimal Unemployment Benefit Policy and the Firm Productivity Distribution."
- 15-09 A. Krumer, R. Megidish and A. Sela, "First-Mover Advantage in Round-Robin Tournaments."
- 15-10 Y. Minchuk and A. Sela, "Asymmetric Sequential Search under Incomplete Information."
- 15.11 B. Houg and M. Justman, "Out-of-Sample Predictions of Access to Higher Education and School Value-Added."
- 15-12 M. Justman and K. Peyton, "Credible Enforcement of Compulsory Schooling by Linking Welfare Payments to School Attendance: Lessons from Australia's Northern Territory."
- 15-13 N. Friedman-Sokuler and M. Justman, "Gender Streaming and Prior Achievement in High School Science and Mathematics."

**Discussion Paper Series 2016**

- 16-01 C.L. de la Vega and O. Volij, “The Value of a Draw in Quasi-Binary Matches.”
- 16-02 O. Volij, “An Alternative Proof of Hardy, Littlewood, and Pólya’s Necessary Condition for Majorization.”
- 16-03 F. Hespeler and H. Shalit, “Mean-Extended Gini Portfolios: The Ultimate Frontier.”
- 16-04 O. Haimanko, “The Axiom of Equivalence to Individual Power and the Banzhaf Index.”
- 16-05 O. Ravid, M. Malul, and R. Zultan, “The Effect of Economic Cycles on Job Satisfaction in a Two-Sector Economy.”
- 16-06 I. Macho-Stadler, D. Perez Castrillo, and D. Wettstein, “Values for Environments with Externalities – The Average Approach.”
- 16-07 T.R. Kaplan and D. Wettstein, “Two-Stage Contests with Preferences over Style.”
- 16-08 M. Asali, A.S. Abu-Qarn, and M. Beenstock, “The Cycle of Violence in the Second Intifada: Causality in Nonlinear Vector Autoregressive Models.”
- 16-09 A.S. Abu-Qarn, “A Reassessment of the Proximate Determinants of Income Levels and Growth of Nations.”
- 16-10 N. Ben Zeev, E. Pappa, and A. Viccondoa, “Emerging Economies Business Cycles: The Role of the Terms of Trade Revisited.”
- 16-11 N. Cohen, G. Maor and A. Sela, “Two-Stage Elimination Contests with Optimal Head Starts.”
- 16-12 A. Sela, “Two-Stage Contests with Effort-Dependent Rewards.”
- 16-13 M. Amiad and A. Sela, “The Optimal Allocation of Punishments in Tullock Contests.”
- 16-14 A. Aiche, E. Einy, O. Haimanko, D. Moreno, A. Sela, and B. Shitovitz, “Information Advantage in Common-Value Classic Tullock Contests.”

**ABSTRACTS OF DISCUSSION PAPERS** (issued since the previous report)**THE VALUE OF A DRAW IN QUASI-BINARY MATCHES**

Casilda Lasso de la Vega and Oscar Volij

Discussion Paper 16-01

A match is a recursive zero-sum game with three possible outcomes: player 1 wins, player 2 wins or there is a draw. Play proceeds by steps from state to state. In each state players play a “point game” and move to the next state according to transition probabilities jointly determined by their actions. We focus on quasi-binary matches which are those whose point games also have three possible outcomes: player 1 scores the point, player 2 scores the point,  $\epsilon$  probability of drawing a point is uniformly less than 1, a quasi-binary match has an equilibrium. Additionally, we can assign to each state a value of a draw so that quasi-binary matches always have a stationary equilibrium in which players’ strategies can be described as minimax behavior in the associated point games.

**AN ALTERNATIVE PROOF OF HARDY, LITTLEWOOD, AND PÓLYA’S (1929) NECESSARY CONDITION FOR MAJORIZATION**

Oscar Volij

Discussion Paper 16-02

One of the fundamental mathematical results in inequality measurement, due to Hardy Littlewood and Pólya [2], states that a necessary and sufficient condition for a vector  $y \in \mathbb{R}_+^n$  to majorize another vector  $x \in \mathbb{R}_+^n$  is the existence of a doubly stochastic matrix  $Q$  such that  $x = y^T Q$ . The standard proof of this result is elementary but somewhat indirect. It first shows that when  $y$  majorizes  $x$  it is possible to move from  $y$  to  $x$  by a finite sequence of non-regressive transfers, and then notes that each one of these transfers can be expressed by means of a simple doubly stochastic matrix. The desired doubly stochastic matrix is then the product of these simple matrices. In this note we offer a direct proof, based on the minimax theorem for zero sum games. The idea of the proof is not new. It resembles the one used by Blackwell[1] in his beautiful characterization of the *at least as informative* relation on experiments.

**MEAN-EXTENDED GINI PORTFOLIOS: THE ULTIMATE FRONTIER**

Frank Hespeler and Haim Shalit

Discussion Paper 16-03

Using numerical optimization techniques we construct the mean-extended Gini (MEG) efficient frontier as a workable alternative to the mean-variance efficient frontier. The MEG model enables the introduction of specific risk aversion in portfolio selection and thus offers an alternative approach for calculating efficient portfolios and pricing risky assets. The resulting portfolios are stochastically dominant (SSD) for all risk-averse investors. Solving for MEG portfolios allows investors to construct efficient portfolios that are tailored to specific risk requisites. As a measure of risk, the model uses the extended Gini which is calculated by the covariance of asset returns with a weighing function of the cumulative distribution function (CDF) of these returns. Efficient MEG portfolios are obtained by minimizing the extended Gini of portfolio returns subject to a required mean return constraint. In a sample of asset returns, the CDF is estimated by ranking the returns. In this case analytical optimization techniques using continuous gradient approaches are unavailable, thus the need to develop numerical optimization techniques. In this paper we solve for MEG efficient portfolios expanding spreadsheet (*Excel*)

techniques. In addition, using *Mathematica* software we develop a numerical optimization algorithm that finds the portfolio optimal frontier for arbitrarily large sets of shares. The result is a 3-dimension MEG efficient frontier in the mean, the extended Gini, and the risk aversion coefficient space.

### **THE AXIOM OF EQUIVALENCE TO INDIVIDUAL POWER AND THE BANZHAF INDEX**

Ori Haimanko

Discussion Paper 16-04

I introduce a new axiom for power indices on the domain of finite simple games that requires the total power of any given pair  $i, j$  of players in any given game  $v$  to be equivalent to some individual power, i.e., equal to the power of *some* single player  $k$  in *some* game  $w$ : I show that the Banzhaf power index is uniquely characterized by this new “equivalence to individual power” axiom in conjunction with the standard semivalue axioms: transfer (which is the version of additivity adapted for simple games), symmetry or equal treatment positivity (which is strengthened to avoid zeroing-out of the index on some games), and dummy.

### **THE EFFECT OF ECONOMIC CYCLES ON JOB SATISFACTION IN A TWO-SECTOR ECONOMY**

Oded Raviv, Mike Malul and Ro'i Zultan

Discussion Paper 16-05

Economic growth improves the material well-being of all workers. When remuneration in one sector is less sensitive to economic cycles than another, as is typically the case with the public and private sectors, workers in that sector can suffer from an unfavorable comparison, even though they improve in absolute terms. Can job satisfaction in such a situation be countercyclical? We test this counterintuitive hypothesis in a real-effort laboratory experiment that simulates an economy with two sectors differing only in the remuneration scheme. We implement economic cycles to test their effect on job satisfaction and productivity in the two-sector economy. We find that job satisfaction in the “public” sector decreases with the state of the economy. This effect, however, does not carry over to productivity: When a public-sector worker’s productivity increases, his relative income decreases compared to a similar private sector worker. Nonetheless, we find that this reduction in relative standing does not carry a negative effect on job satisfaction.

### **VALUES FOR ENVIRONMENTS WITH EXTERNALITIES – THE AVERAGE APPROACH**

Inés Macho-Stadler, David Pérez-Castrillo and David Wettstein

Discussion Paper 16-06

We propose the “average approach,” where the worth of a coalition is a weighted average of its worth for different partitions of the players’ set, as a unifying method to extend values for characteristic function form games. Our method allows us to extend the equal division value, the equal surplus value, the consensus value, the  $\lambda$ -egalitarian Shapley value, and the least-square family. For each of the first three extensions, we provide an axiomatic characterization of a particular value for partition function form games, for each of the last two extensions, we find a family of values that satisfy the properties.

### **TWO-STAGE CONTESTS WITH PREFERENCES OVER STYLE**

T.R. Kaplan and David Wettstein  
Discussion Paper 16-07

Many grant applications have a preliminary stage where only a select group are invited to submit a full application. Similarly, procurement contracts by governments are often awarded through a two-stage procedure. We model and analyze such environments where the designer cares about the style of the application as well as its quality. The designer has the option of choosing an initial stage, where contestants can enter and learn about their desirability while the designer learns about their style. We determine closed form solutions for equilibrium outcomes and designer payoffs and use this to analyze design questions regarding whether or not a second stage is desirable, different rules for deciding who will advance, as with whether or not to communicate the number of contestants that qualify for the second stage.

### **THE CYCLE OF VIOLENCE IN THE SECOND INTIFADA: CAUSALITY IN NONLINEAR VECTOR AUTOREGRESSIVE MODELS**

M. Asali, A.S. Abu-Qarn and M. Beenstock  
Discussion Paper 16-08

Using daily fatalities data during the Second Intifada, we show that Israelis and Palestinians were engaged in tit-for-tat violence. However, this mutual violence was asymmetric: Israel reacted more rapidly and aggressively with a kill-ratio several times larger than that of the Palestinians. These results refute the claims of Jaeger and Paserman (2008) that, whereas Israelis reacted to Palestinian aggression, Palestinians did not react to Israeli aggression but randomized their violence instead. Our different conclusions stem from the fact that we (i) address the fundamental differences between the two sides in terms of patterns, timing and intensity of violence; (ii) apply nonlinear VAR models that are suitable for analyzing fatalities data when the linear VAR residuals are not normally distributed; (iii) identify causal effects using the principle of weak exogeneity rather than Granger-causality, and (iv) introduce the “kill-ratio” as a concept for testing hypotheses about the cycle of violence.

### **A REASSESSMENT OF THE PROXIMATE DETERMINANTS OF INCOME LEVELS AND GROWTH OF NATIONS**

A.S. Abu-Qarn  
Discussion Paper 16-09

This paper provides further evidence of the inconsistency of the Solow growth model with the observed cross-country variation in income levels and growth rates. We relax the assumption made by Mankiw, Romer, Weil (1992) of identical technical progress rates across countries by estimating country-specific rates of technological progress using growth accounting. We document the varied technological progress rates across countries and show that the testable predictions of the Solow model are often not fulfilled with the model performing better when testing the out of steady-state dynamics than when assessing the determinants of the steady-state income levels. Similar results are obtained when considering different data sources, other country samples and time periods. Our findings suggest that the usual investigations of the proximate determinants of income levels and growth across countries should be supplemented by a thorough analysis of the fundamentals.

### **EMERGING ECONOMIES BUSINESS CYCLES: THE ROLE OF THEIR TERMS OF TRADE REVISITED**

N. Ben-Zeev, E. Pappa and A. Vicendoa

Discussion Paper 16-10

Common wisdom and standard open economy models suggest that terms-of-trade (TOT) shocks are an important driver of business cycle fluctuations in small open economies. Recently, [Schmitt-Grohe and Uribe \(2015\)](#) challenge this hypothesis by showing that unexpected TOT shocks explain only 10% of movements in aggregate activity on average for poor and developing countries. We confirm their findings for a sample of Latin American countries and show that TOT news shocks explain a bigger fraction of fluctuations in those countries. News shocks are identified as the shocks that best explain future movements in the TOT over an horizon of one year and that are orthogonal to current TOT. Our SVAR predictions imply that unexpected and news TOT shocks account on average for 37% of variations in output volatility. When feeding the standard small open economy model with both shocks, we show that we can match reasonably well the model and the empirical predictions for news shocks, while the model overstates the role of unexpected TOT shocks.

### **TWO-STAGE ELIMINATION CONTESTS WITH OPTIMAL HEAD STARTS**

N. Cohen, G. Maor and A. Sela

Discussion Paper 16-11

We study two-stage elimination Tullock contests. In the first stage all the players compete against each other of which some advance to the second stage while the others are eliminated. The finalists compete against each other in the second stage and one of them wins the prize. To maximize the expected total effort the designer can give a head start to the winner of the first stage when he competes against the other finalists in the second stage. We show that the optimal head start, independent of the number of finalists, always increases the players' expected total effort. We also show how the number of players and finalists affect the value of the optimal head start.

### **TWO-STAGE CONTESTS WITH EFFORT-DEPENDENT REWARDS**

A. Sela

Discussion Paper 16-12

We study two-stage all-pay contests where there is synergy between the stages. The reward for each contestant is fixed in the first stage while it is effort-dependent in the second one. We assume that a player's effort in the first stage either increases (positive synergy) or decreases (negative synergy) his reward in the second stage. The subgame perfect equilibrium of this contest is analyzed with either positive or negative synergy. We show, in particular, that whether the contestants are symmetric or asymmetric their expected payoffs may be higher under negative synergy than under positive synergy. Consequently, they prefer smaller rewards (negative synergy) over higher ones (positive synergy).

### **THE OPTIMAL ALLOCATION OF PUNISHMENTS IN TULLOCK CONTESTS**

M. Amiad and A. Sela

Discussion Paper 16-13

We study the role of punishments in Tullock contests with symmetric players. We first characterize the players' equilibrium strategies in a contest with either multiple identical prizes or multiple identical punishments (negative prizes). Given that a prize and a punishment have the same absolute value, we show that if the number of prizes is equal to the number of punishments and is lower (higher) than or equal to

half the number of players, a designer who wishes to maximize the players' efforts will prefer to allocate punishments (prizes) over prizes (punishments). We also demonstrate that if the sum of the punishments is constrained, then in a contest without an exit option for the players, it is optimal for the designer who maximizes the players' efforts to allocate a single punishment that is equal to the punishment sum. However, in a contest with an exit option the optimal number of punishments depends on the value of the punishment sum and, in particular, the optimal number of punishments does not monotonically increase in the value of the punishment sum.

### **INFORMATION ADVANTAGE IN COMMON-VALUE CLASSIC TULLOCK CONTESTS**

A. Aiche, E. Einy, O. Haimanko, D. Moreno, A. Sela, and B. Shitovitz

Discussion Paper 16-14

We show that in a common-value classic Tullock contests with incomplete information a player's information advantage is rewarded. Interestingly, in two-player contests both players exert the same expected effort. We characterize the equilibrium of two-player contests in which a player has information advantage, and show that this player exerts a larger effort and wins the prize with a larger probability the larger is the realized value of the prize, although he wins the prize less frequently than his opponent. In addition, we find that players may exert more effort in a Tullock contest than in an all-pay auction.

## **VII. RESEARCH SUMMARIES OF CENTER MEMBERS**

### **Suleiman Abu-Bader**

Dr. Abu Bader's research interests deal with the application of econometric techniques to study macroeconomic relations. He investigates growth-related issues in the Middle East as well as the relationship between economic growth, globalization, income inequality, and poverty in developing countries. His current research is focused on studying the relationship between ethnical\religious polarization and civil conflicts, with special focus on the MENA region.

### **Aamer Abu-Qarn**

Dr. Abu-Qarn focuses his research on the determinants of economic growth in general and on the MENA region in particular. To accomplish this, he applies both time series techniques and panel data methods. He also examines various aspects of the Israeli-Arab conflict, including testing for structural breaks in military expenditures, the arms race, and the relationship between defense and economic growth. Recently, he has focused on the determinants of labor force participation of Arab women and the impact of access to public transportation on labor market, health, and education outcomes.

### **Ofer Azar**

Ofer Azar's main research areas include behavioral economics, experimental economics, industrial organization and strategy. His recent research has focused on several particular topics. One was to examine experimentally how people make decisions between differentiated products and how workers respond to certain types of incentives. Another was to analyze how firm strategy should respond to the consumer bias of "relative thinking." Some other recent research studies analyzed the behavior and decision making of sports players, and the willingness of restaurant customers to report excessive change.

**Nadav Ben Zeev**

Nadav Ben-Zeev's research interests lie in the areas of macroeconomics and macroeconometrics. His work aims to contribute to our understanding of the sources of business cycles. To accomplish this, he employs suitable macroeconometric methods. Currently, he is mainly studying the role of changes in expectations about future investment-specific technology in the business cycle. He is also engaged in another project that studies the role of changes in expectations about fiscal policy in the economy.

**Tomer Blumkin**

Prof. Blumkin's research continues to focus on normative issues related to the design of the tax and transfer system. He examines, inter-alia, the efficiency-enhancing role of mandatory parental leave rules, the desirable role of minimum wage legislation in re-distribution towards the class of deserving poor and the optimal tax treatment of charitable contributions by businesses. He is also engaged in experimental research examining the incentivizing role of wage subsidies provided to employer and workers in a setting with incomplete labor contracts. Over the last year Prof. Blumkin has been involved in an empirical project examining the effect of permanent tax reductions on emigration from Israel for the period 2004-2010.

**Danny Cohen-Zada**

Dr. Cohen-Zada's research deals with the economics of education, the economics of religion and sport economics. Currently, he is studying how religious pluralism and religious market share affect the demand for religious schooling. In another project he estimates the treatment effect of religious schooling in Israel on student outcomes and drug use. Recently, he began a project on the causal effect of school entrance age on student performance. Dr. Cohen is also investigating whether religiosity affects political compromise. His research in sports economics deals with whether men or women choke more under pressure and which gender is more responsive to psychological momentum.

**Leif Danziger**

Prof. Danziger's research concentrates on the following subject areas: (1) output and welfare effects of a minimum wage; (2) design and implications of labor contracts; (3) macroeconomic consequences of adjustment costs; (4) properties of voting mechanisms; and (5) risk and the number of export destinations.

**Ezra Einy**

Prof. Einy's research concentrates on values of games, large games, voting games, utility theory, inequality measures, and refinement of correlated equilibria. His present focus is on solution concepts of economies with differential information.

**Koresh Galil**

Dr. Galil's research interests focus on empirical finance and credit risk. His current projects include empirical examination of quality trends in corporate ratings and sovereign ratings, the relation between economic profits and expected stock returns, corporate bond issuance, informed trading prior to default events, and anomalies in credit derivatives markets.

**Mark Gradstein**

Prof. Gradstein's research interests are concerned with private versus public provision of public goods and public growth-promoting policies. His current project (jointly with M. Justman) focuses on growth promoting policies as implied by actual political mechanisms.

**Ori Haimanko**

Prof. Haimanko currently studies robustness of equilibria and continuity of equilibrium correspondences in games with incomplete information; competitive contracts and contests with asymmetric information; and axiomatizations of values of cooperative games.

**Moshe Justman**

Prof. Justman's current research focuses on the economics of education, including the analysis of standardized tests, gender and ethnic gaps in educational opportunity and achievement, and funding education; and intergenerational mobility.

**Ariel Levi**

Ariel Levy's research interests lie in the areas of empirical finance, investment products, and credit risk. In his research he analyzes pricing patterns and anomalies and identifies the underlying mechanisms that govern them. His research has been published in academic journals such as the Review of Finance and the Journal of Banking and Finance. He joined the Department of Economics at Ben-Gurion University this year as an Assistant Professor after spending several years at the Technion - Israel Institute of Technology in Haifa. Ariel received his Ph.D. in economics from UCLA, and holds undergraduate and graduate degrees in philosophy and economics from the Hebrew University in Jerusalem.

**Shirlee Lichtman**

Dr. Lichtman-Sadot is an applied economist whose research emphasizes health, family and education economics. Her work has focused on school food environments and their effect on various student outcomes. Some of her current projects make use of data from Soroka University Medical Center for evaluating various policies and environmental factors experienced by pregnant women and their effect on birth outcomes.

**Oren Rigbi**

Dr. Rigbi's main research interests are applied microeconomics, industrial organization, and law and economics. Much of his time is devoted to investigating the economics of alternative credit markets including person-to-person markets and online charitable giving markets in developed and developing countries. In addition, he explores how the structure of law enforcement agencies affects their activities and crime.

**Edna Schechtman**

Prof. Schechtman's research is directed towards the use of Gini in various areas of statistics, starting with the Gini correlation, moving to Gini's simple and multiple regressions and finally analysis of Gini (ANOVI). Another direction is using Gini for time series data by replacing the variance and its related parameters by the Gini and its related parameters.

**Ella Segev**

Dr. Segev applies game theoretic tools for the analysis of economic situations such as contests, auctions and bargaining in order to describe equilibrium behavior in these situations and design optimal mechanisms.

**Aner Sela**

Prof. Sela's research concerns optimal designs of contests and auctions.

**Avia Spivak**

Prof. Spivak continues his research activities in two main fields of interest: the macroeconomics of Israel and the economics of pensions and social insurance.

**Karine van der Beek**

Dr. van der Beek's research interests include economic history, growth, and institutions. She mainly focuses on industrialization, technological change and the evolution of human capital in pre-modern Europe. Her current research project explores the skilled labor sector in England during the Industrial Revolution.

**Oscar Volij**

Prof. Volij does research in economic theory and game theory. His current projects involve the measurement of income segregation, income inequality, and recursive games.

**David Wettstein**

Prof. Wettstein's current research focuses on introduction of new solution concepts for cooperative environments with externalities and asymmetric information; non-cooperative foundations for old and new cooperative solution concepts (the Nash Program); contests and auctions; patent policy, and innovative activity.

**Ro'i Zultan**

Ro'i Zultan is an experimental economist with a background in cognitive and experimental psychology. He is mainly interested in understanding how groups shape cognitions and behavior as well as in more broad issues of cooperation and behavior in teams. He is also interested in some basic game theoretical issues, experimental auctions, and experimental methodology.