

**THE PHILLIPE MONASTER CENTER  
FOR ECONOMIC RESEARCH**

**ACTIVITY REPORT**

**2003/04**

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

Dr. Suleiman Abubader  
Dr. Aamer Abu-Qarn  
Prof. Arie Arnon  
Dr. Gila Benisti  
Dr. Tomer Blumkin  
Prof. Uri Benzion  
Dr. Danny Cohen-Zada  
Prof. Ezra Einy  
Prof. Mark Gradstein  
Dr. Yossi Hadar  
Dr. Ori Haimanko  
Mr. Gadi Hazak  
Prof. Samuel Hollander  
Prof. Oded Hochman  
Prof. Moshe Justman  
Prof. Israel Luski  
Prof. Uri Regev  
Dr. Bradley Ruffle  
Dr. Aner Sela, Director of the Monaster Center for Economic Research  
Prof. Haim Shalit  
Prof. Avia Spivak  
Prof. Oscar Volij  
Prof. Jimmy Weinblatt Rector of the University  
Prof. David Wettstein, Chairman of the Department of Economics

**STEERING COMMITTEE**

Prof. Moshe Justman  
Prof. David Wettstein  
Dr. Aner Sela

## II. SUMMARY OF ACTIVITIES

During 2003-2004 the Monaster Center continued its support of economic research through its sponsorship of seminars, visits from abroad, conferences, and direct grants to specific projects. For this period Aner Sela replaced David Wettstein as Director of the Center.

We are glad to report that this year the Department made three senior appointments: Naomi Feldman, who was previously affiliated with Michigan University, specializes in public economics (taxation); Benny Berdugo, who just received his Ph.D. degree from Hebrew University, focuses on macroeconomics (growth); and Aamer Abu-Qarn, who last year was a post doctoral student here and this year joins our staff, devotes his research to economics problems in the Middle East.

We also lose a member this year. After 25 years of dedication, Tuvia Blumenthal is retiring from the department. Prof. Blumenthal will be deeply missed by his colleagues, students and the staff. He devoted most of his research to the Japanese economy and is internationally renowned as an expert in this field.

Several members of the Monaster Center take an active part in addressing important economic and social issues related to Israeli society. Uri Benzion carries out research and consulting on finance and options and futures, specifically their application to the medical and industrial sectors and to banking. Arie Arnon continues his work on issues related to the Palestinian economy in the West Bank and Gaza. He is head of the Israeli group participating in the research workshop "The Potential for Economic Cooperation in the Middle East: the Israeli-Palestinian Perspective" as well as co-chair of "Commitment to Peace and Social Justice" - NGO, which deals mainly with problems related to unemployment. Uri Regev serves on the advisory committee of the Central Bureau of Statistics and the Minister of the Environment's steering committee for determining environmental regulations. Moshe Justman is a member of the steering committee on scientific and technological infrastructure at the Ministry of Science, Culture and Sport. He is also on the Executive Committee of the International Joseph A. Schumpeter Society, and Deputy Editor of Economic Quarterly.

Major focal points of this year's research in the Center are summarized in the following. Suleiman Abubader carries out on his research on the causality between financial development and economic growth, as well as other growth-related issues in the Middle East, particularly the relationship between income inequality, poverty and economic growth. In cooperation with Aamer Abu-Qarn he studies the possibility of establishing a currency union in the Gulf Cooperation Countries (GCC). Ezra Einy and Ori Haimanko work together on a project whose aim is to study sensitivity of solution concepts of theoretical economics to changes in information. Ezra Einy investigates the effects of differential information in Cournot models and with Ori Haimanko the provision of public goods in a society comprised of distinct communities. Aner Sela studies asymmetric auctions, large auctions and optimal design of auctions. Israel Luski and David Wettstein study competition for multinational and innovation races. David Wettstein focuses on non-cooperative foundations for cooperative solution concepts and the introduction and study of new solution concepts for cooperative

environments and the properties of extended switching regression models. Oded Hochman focuses on the theoretical aspects of urban economics. Uri Regev concentrates on environmental issues. Samuel Hollander continues to work on the history of economic thought, particularly the writings of the British and French classical economists and Karl Marx. Mark Gradstein and Moshe Justman analyze the political economy of education. Danny Cohen-Zada's research focuses particularly on the religious factor in private education. Haim Shalit does research on financial markets. Bradley Ruffle works on cooperation in different societies and continues with his projects in experimental economics. Tomer Blumkin concentrates on framing effects and taxation issue. Yossi Hadar investigates the role of real options in the labor market and their implications in matching and search models. Oscar Volij works on the measurement of intellectual influence and auctions.

Avia Spivak continues to serve as Deputy Governor of the Bank of Israel and Jimmy Weinblatt as Rector of the University.

We must also acknowledge the invaluable support of Ronen Massad and Anatoly Fleitman who provide computer-related consultation and services. And once again we express our gratitude to the Monaster Center's administrative coordinator, Ms. Ella Ginzburg, and the department's English secretary, Ms. Estelle Schulgasser, for their dedication to the Center and their efforts in producing this report.

Dr. Aner Sela, Director  
Monaster Center for Economic Research

### III. ACTIVITIES IN DETAIL

#### 1) Special Lectures organized under the auspices of the Center and the Department of Economics

During the period of this report, Danny Cohen-Zada took charge of organizing the “Conference on Economics and Religion” which was held on January 1, 2004. The lecturers and subjects of the talks were: Prof. Carmel Chiswick (University of Illinois at Chicago) - “Who is a Jew? A Human Capital Approach”; Stephen Sharot (Ben-Gurion University) - “Beyond Christianity: A Critique of the Rational Choice Theory of Religion from a Weberian and Comparative Religions Perspective”; Danny Cohen-Zada “Preserving Religious Identity through Education: Economic Analysis and Evidence from the United States”; and Barry Chiswick (University of Illinois at Chicago) “Do Enclaves Matter in Immigrant Adjustment?”

On March 29 2004, the Peres Center for Peace held a one-day seminar entitled “Economic Dimensions of a Permanent Agreement between Israel and Palestine.” The seminar was jointly organized by the Peres Center for Peace, the Pinhas Sapir Center for Development at Tel Aviv University and the Monaster Center for Economic Research at Ben-Gurion University. Speakers included senior economists from Israel, the Palestinian Authority, the World Bank and the IMF, among them:

- **Israelis:** Prof. Arie Arnon, Prof. Avi Ben Bassat, Prof. Ephraim Kleiman, Prof. Avia Spivak, Prof. Assaf Razin, Prof. Jimmy Weinblatt.
- **Palestinians and internationals:** Mr. Saeb Bamyia, PA Ministry of National Economy; Mr. Nigel Roberts, World Bank Country Director for the West Bank and Gaza; Dr. Karim Nashashibi, IMF Resident Representative in the West Bank and Gaza.

The aim of the seminar was to discuss the various aspects of Israeli-Palestinian economic relations, and to examine the economic dimension of an Israeli-Palestinian permanent agreement, a subject which has been previously neglected.

The first session of the seminar was dedicated to the topic “The Paris Protocol: Ten Years After”. In this session, the Paris Protocol (an economic agreement for Israelis and Palestinians, signed in 1994) was evaluated, with discussion about the various pros and cons of the agreement.

In the second and third sessions of the seminar, different studies on the economic dimensions of a permanent agreement between Israel and Palestine were presented, and different possibilities for future economic relations were discussed. An interesting debate took place between those economists who favor integration, and those who favor full separation.

Among the economic studies presented in the seminar was the “Economic Road Map”, a joint Israeli-Palestinian-International research paper which examines optional models for long-term Palestinian-Israeli economic relations and is written with the political Road Map in mind. This paper was a joint project of the Peres Center for Peace and the University d'Aix-Marseille.

The Adam Klug Annual Memorial Lecture this year took place on May 10, 2004. The key lecture “On the Wealth of Nations: The Ecological Aspects of Sustainable

Development” was delivered by Prof. Sir Partha Dasgupta from the University of Cambridge.

This year’s “Ehud Zuskovitch Annual Memorial Lecture” was held on June 15, 2004. The guest speaker was Prof. Jacques Thisse, President of Core and Prof. of Economics, Université Catholique de Louvain. Prof. Thisse spoke on “New Economic Geography: What About the N?”

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

Support from the Center allows us to invite economists from abroad. This year we hosted the following guest lecturers:

12/03	Naomi Feldman, Michigan University
01/04	Ofer Azar, Northwestern University
01/04	Gal Hochman, Columbia University
10/04	Yaron Raviv, Princeton University
03/04	David Benjamin, University of Minnesota
04/04	Mark Kennet
05/04	Joel Mokyr, Northwestern University
06/04	Ilia Rainer, Harvard University

## **3) Seminar Lectures Presented by Department Members and Guests from Israel and Abroad**

6.11.03	David Wettstein, Ben-Gurion University “Sharing the Surplus: A Just and Efficient Proposal for Environments with Externalities”
13.11.03	David Bigman, Ben-Gurion University “Has Global Growth been Pro-Poor”
20.11.03	Sarit Cohen, Bar-Ilan University “The Dynamic Impact of Immigration on Natives’ Labor Market Outcomes: Evidence from Israel”
27.11.03	Baruch Gliksberg, Tel-Aviv University “Interest-rate Rules and Equilibrium Determinacy in a Cash-in-Advance Economy with Investment and Adjustment Costs”
4.12.03	David Feldman, Ben-Gurion University “Separating Signaling Equilibria under Random Relations between Costs and Attributes”

- 11.12.03 Arie Preminger, Ben-Gurion University  
“Extended Switching Regression Models: Allowing for Multiple Latent State Variables”
- 25.12.03 Ella Segev, Tel-Aviv University  
“Escalation and Delay in Protracted International Conflicts”
- 31.12.03 Naomi Feldman, Michigan University  
“Tax Withholding and Taxpayer Behavior: Evidence from a 1992 Executive Order”
- 08.01.04 Ofer Azar, Northwestern University  
“Do People Think about Dollar or Percentage Differences? Experiments, Pricing Implications, and Market Evidence”
- 15.01.04 Gal Hochman, Columbia University  
“The Pros and Cons of Safeguard Regimes”
- 22.01.04 Alex Cukierman, Tel-Aviv University  
“Monetary Institutions, Monopolistic Competition, Unionized Labor Markets and Economic Performance”
- 26.01.04 Yuval Arbel, Bar-Ilan University  
“A Statistical Test of Nested Linear Models: Application to the United States Housing-Services Cost Function”
- 03.03.04 Koresh Galil, Tel-Aviv University  
“The Quality of Corporate Credit Rating: an Empirical Investigation”
- 10.03.04 Yaron Raviv, Princeton University  
(1) “The Role of the Bidding Process in Price Determination: Jump Biddings in Sequential English Auctions”  
(2) “New Evidence on Price Anomalies in Sequential Auctions: Used Cars in New Jersey”
- 11.03.04 Benny Berdugo, Hebrew University  
“Delays in Technology Adoption, Appropriate Human Capital, Natural Resources and Growth”
- 14.03.04 David Benjamin, University of Minnesota  
“Fast Bargaining in Bankruptcy”
- 18.03.04 Eyal Winter, Hebrew University  
“Incentives and Discrimination”



- 15.04.04 Mark Kennet  
“Engineering-Economic Cost Models, Economic Theory, and Telecommunications Policy”
- 22.04.04 Motty Perry, Hebrew University  
“Rational Expectation Equilibria”
- 29.04.04 Dan Weiss, Tel-Aviv University  
“Informational Merits of Conservatism”
- 06.05.04 Tomer Blumkin, Ben-Gurion University  
“Ideological Polarization, Information Frictions, and Policy Stickiness”
- 13.05.04 Joel Mokyr, Northwestern University  
“Long-term Economic Growth and the History of Technology”
- 20.05.04 Daniel Levy, Bar-Ilan University  
“‘The Real Thing’: Nominal Price Rigidity of the Nickel Coke, 1886-1859”
- 27.05.04 Leif Danziger, Bar-Ilan University  
“Delays in Renewal of Labor Contracts: Theory and Evidence”
- 03.06.04 Oscar Volij, Ben-Gurion University  
“Measuring Segregation”
- 10.06.04 Michel Strawchinsky, The Bank of Israel  
“Cyclical Ratcheting in Government Spending: Evidence from the OECD”
- 17.06.04 Ilia Rainer, Harvard University  
“The Modern Impact of Pre-Colonial Centralization in Africa”

#### **4) Research Contracts and Fellowships**

David Wettstein continues to receive a grant from The Israel Science Foundation (ISF) for a research project entitled “An Ordinal Shapley Value for Economic Environments.”

In 2004 Aner Sela together with his research associate Gadi Fibich were awarded a three year grant for \$90,000 from The Israel Science Foundation (Bikura, F.I.R.S.T). The research project is entitled “An Applied Mathematics Approach to Auction Theory.”

Dr. Sela is a Research Fellow, CEPR, since 2003 to the present.

Uri Regev (together with G. Regev-Yochay, R. Dagan, M. Raz, and E. Rubinstein) is the recipient of a three-year research grant (NIS 750,000) from the Israel National Institute for Health Policy and Health Services Research (NIHP). The project is entitled “Can a change in physicians’ practices of antibiotic prescription decrease carriage of resistant pneumococci in the community?”

Bradley Ruffle (together with T. Kaplan) holds grants from the Israel Science Foundation and Britain’s Economic and Social Research Council to study cooperation in environments heretofore not studied either theoretically or experimentally.

### **5) Committees and Cooperation with Other Institutions in Israel and Abroad**

Many of the members of the Center collaborate on a regular basis with investigators from various research centers and academic institutions in Israel and abroad.

From 1993-present, Arie Arnon serves on the Editorial Board of The European Journal of the History of Economic Thought. Prof. Arnon is also co-chair of “Commitment to Peace and Social Justice” - NGO, an organization which deals mainly with employment problems.

Uri Benzion is head of the committee to evaluate the Industrial Engineering Program of the Open University.

Since 2003, Ezra Einy serves as a member of the committee for evaluation of Bikura proposals.

Ori Haimanko is engaged in a research project with S. Weber (Southern Methodist University, Dallas, Texas), and M. Le Breton (University of Toulouse, France) on the subject of efficiency and stability of coalition structures. Another joint project (with J. Geanakoplos from Yale University and P. Dubey from SUNY at Stony Brook NY) is on research of competitive labor contracts. Jointly with Ezra Einy, Dr. Haimanko conducts research on continuity of solution concepts of economies and with Prof. B. Shitovitz from the University of Haifa games with differential information.

Moshe Justman serves on the University Finance Committee, the Humanities and Social Sciences Faculty Appointments Committee, the Ministry of Science National Steering Committee on Scientific and Technological Infrastructure, the Central Bureau of Statistics advisory committee of the Consumer Price Index, several program evaluation committees of the Council for Higher Education, the Executive Committee of the International Joseph A. Schumpeter Society, and the Steering Committee of the “Mishtalem Bet” Investment Fund. He is also Coordinator of Economics Studies at the Achva College and Deputy Editor of *Economic Quarterly*.

Israel Luski is the Coordinator of Economics Studies at the Air Force Academy.

Uri Regev continues his collaboration with A.P. Gurierez and D. Zilberman at the University of California at Berkeley on biological economic foundations of renewable resource exploitation and problems of pest resistance to pesticides. He also continues to cooperate with Kupat Holim, Israel's major health care agency, on a project that deals with bacteria resistance to antibiotics. In addition, he is a consultant on coal pricing for the State of Israel Public Authority for Electricity Regulation.

Bradley Ruffle collaborates on experimental projects with J. Engle-Warnick (Oxford University) on inferring buyer strategies to determine the impact of buyer concentration on pricing; with H.-T. Normann (Royal Holloway University) and C. Snyder (George Washington University) on buyer market power and the implications for retailer consolidation; with A. Weiss (Bar-Ilan University) on coordination in markets with network externalities in which a critical mass of consumers is needed; with R. Sosis (University of Connecticut, Anthropology) on the impact of religious observance on intra-group cooperation; with O. Tykocinski (Ben-Gurion University, Behavioral Sciences) on rational reasons for delaying making a decision; and with T. Kaplan (University of Exeter) on the origins of cooperation.

Aner Sela collaborates with Benny Moldovanu (Bonn University) on research on theory of contests and with Todd Kaplan (Exeter University) on auction theory.

Avia Spivak continues to serve as deputy governor of the Bank of Israel.

#### **IV. PARTICIPATION OF MEMBERS OF THE CENTER IN CONFERENCES AND PAPERS PRESENTED**

##### **Suleiman Abubader**

“The Case for a GCC Monetary Union,” Eastern Economic Association 30<sup>th</sup> Annual Conference, Washington D.C., February 2004.

EEA – European Economic Association 19<sup>th</sup> Annual Congress, Madrid, Spain, August 2004.

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

“The Case for a GCC Monetary Union” Eastern Economic Association 30<sup>th</sup> Annual Conference, Washington D.C., February 2004.

##### **Arie Arnon**

“The Aix Group - Economic Road Map,” presented together with Prof Gilbert Benhayoun and Mr. Saeb Bamyia and “Absorbing Returnees in a Viable Palestinian State: A Forward-Looking Macroeconomic Perspective,” presented together with Nu'man Kanafani at Economic Dimensions of a Permanent Agreement between Israel and Palestine, Colloquium - Sapir Center for Development, Tel-Aviv University,

Monaster Center for Economic Research, BGU and the Peres Center for Peace. March 2004.

“Economic Road Map” presented at HM Treasury Seminar, London, March 2004; at World Bank Seminar, Washington, April 2004; at Aix En Provence Seminar, France, May 2004; and at the Israeli Economic Association Conference, Jerusalem, June 2004.

### **Uri Benzion**

“Risk Attitude, Win Loving and the Evaluation of Lotteries-An Experimental Study” (with Shosh Shahrabani and Tal Shavit), presented at the Society for Judgment and Decision Making 2003 Annual Meeting, November 2003; the European Economic Association & Econometric Society 2004 Annual Meeting, August 2004; and the 2004 International Meeting of the Economic Science Association.

“An Individual’s Decision versus Social Optimum: The Case of Vaccination” (with Shosh Shahrabani and Amiram Gafni), presented at SABE/IAREP 2004 Conference, Cross Fertilization Between Economics and Psychology; The Portuguese Health Economics Association (APES) 2003 Annual Conference and the Israel National Institute for Health Policy and Health Services Research, 2003 annual meeting.

### **Tomer Blumkin**

International Institute of Public Finance, 56<sup>th</sup> Annual Conference, Milan, Italy, August 2004.

Silvaplana Workshop in Political Economy, Silvaplana, Switzerland, July 2004.

### **Danny Cohen-Zada**

“The Religious Factor of Private Education” (with Moshe Justman), presented at the 28<sup>th</sup> Annual Conference of the American Education Finance Association, Florida, 2003 and at the Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, 2003.

“The Political Economy of School Choice: Linking Theory and Evidence,” National Center for the Study of Privatization in Education, Columbia University, New York, 2003.

“Preserving Religious Identity through Education: Economic Analysis and Evidence from the United States,” Presented at 1) Annual Meeting of the Israeli Economic Association, 2004; 2) Conference on Immigration and Social Exclusion in Memory of Tikva Lecker, Department of Economics, Bar-Ilan University, June 2004; 3) Third Annual Conference on Religion, Economics, and Culture, Kansas City, October 2004.

### **Ezra Einy**

International Conference on Game Theory and its Applications, Mumbai, January 2003.

Games 2004, Second World Congress of the Game Theory Society, Marseille, July 2004.

International Conference on Game Theory, Stony Brook, July 2004.

### **Mark Gradstein**

Seminar presentations at the Universities of Indiana, Stanford, and Virginia.

### **Yossi Hadar**

“City Size and Diversity: Optimum versus Laissez Faire” (with O. Hochman and D. Pines) presented at the International Meeting of the Regional Sciences Association, Philadelphia, November 2003.

### **Ori Haimanko**

Second World Congress on Game Theory, Marseilles, July 2004.

International Conference on Game Theory and Economic Theory, July 2004.

### **Moshe Justman**

“Academic Admissions Criteria” (with M. Gradstein), ATINER Conference on Education, Athens, Greece.

“Public Education and the Melting Pot” (with M. Gradstein), Conference in Memory of Tikva Lecker, Bar-Ilan University.

“Academic Admissions Criteria” (with M. Gradstein), Biannual IARIW Conference, Cork, Ireland.

### **Bradley Ruffle**

“Does it Pay to Pray? Evaluating the Economic Return to Religious Ritual,” presented at McMaster University, Economics, Hamilton, Canada (October 2002); University of Toronto, Economics, Toronto, Canada (October 2002); University of New Brunswick, Economics, St. John, Canada (October 2002); Bar-Ilan University, Economics, Ramat Gan (December 2002); Hebrew University-Rehovot, Agricultural Economics (January 2003); University of Exeter, Economics, Exeter, England (February 2003); Harvard University, Economics (October 2003).

“Experimental Economics: An Interactive Evening” American Association for Ben-Gurion University, NYC (March 2004).

“It’s My Turn ... Please, After You: An Experimental Study of Cooperation and Social Conventions,” presented at Florida State University, Economics (March 2004); Emory

University (March 2004); MIT, Sloan School of Management (April 2004); Harvard University, Harvard Business School (May 2004); McMaster University, Economics (September 2004).

### **Aner Sela**

“Auctions with Private Entry Costs,” presented at 1) the Second World Congress of the Game Theory Society, Marseille, July 2004, and 2) ESEM - European Meeting of the Econometric Society, Madrid, Spain, August 2004.

### **Haim Shalit**

“Derivation of the Mean-Gini Efficient Frontier,” presented at the International French Finance Association Meetings, Lyon, June 2003 and the European Financial Management Association, Helsinki, Finland, June 2003.

### **Oscar Volij**

Seminar in the Department of Economics at Hebrew University.

Seminar in the Department of Economics at Haifa University.

Paper presented at the Murat Sertel Memorial Conference on Economic Theory, Istanbul, Turkey.

### **David Wettstein**

“An Ordinal Shapley Value for Economic Environments” (with D.P. Castrillo), The XV Italian Meeting on Game Theory and Applications, Urbino, Italy, 2003.

“Sharing the Surplus: a Just and Efficient Proposal for Environments with Externalities” (with D.P. Castrillo and I.M. Stadler), The IX Coalition Theory Workshop, Barcelona, Spain 2004 and The Second World Congress of the Game Theory Society, Marseilles, France 2004.

**V. PUBLICATIONS, 2003-2004** (names of Center members appear in capital letters)

ABUBADER, S. and ABU-QARN, A. (2003) "Government Expenditures, Military Spending and Economic Growth: Causality Evidence from Egypt, Israel and Syria," *Journal of Policy Modeling*, 25(6), pp. 567-583.

ABU-QARN, A. and ABUBADER, S. (2004) "The Validity of the ELG Hypothesis in the MENA Region: Cointegration and Error Correction Model Analysis," *Applied Economics*, 36, pp. 1685–1695.

ARNON, A., SPIVAK, A. and Sussman, O. (2004) "Incomplete Contracts, the Port of Gaza and the Case for Economic Sovereignty" in D. Cobham and N. Kanafani (eds.) *Economic Policy and Institutional Reform for a Viable Palestinian State*, Ch. 11, London: Routledge.

ARNON, A. (2004) "Introduction" to [The Aix Group] "Economic Road Map: An Israeli Palestinian Perspective on Permanent Status," *The Economic Quarterly*, 51(1), pp. 114-120. (in Hebrew)

ARNON, A., BAMYA, S. and Ben-Hayoun, G. with others [The Aix Group] (2004) "Economic Road Map: An Israeli Palestinian Perspective on Permanent Status," Published January 2004. [in English, Arabic, French] Also in *The Economic Quarterly*, 51(1), pp. 121-139 (in Hebrew)

ARNON, A. and Kanafani, N. "Compensation and the Absorption of Returnees in a Viable Palestinian State" in D. Cobham and N. Kanafani (eds.) *Economic Policy and Institutional Reform for a Viable Palestinian State*, Routledge. (forthcoming)

ARNON, A., SPIVAK, A. and Sussman, O. "Incomplete Contracts, the Port of Gaza and the Case for Economic Sovereignty" in D. Cobham and N. Kanafani (eds.) *Economic Policy and Institutional Reform for a Viable Palestinian State*, Routledge. (forthcoming)

Yosef, R., BENZION, U. and Gross, S. (2004) "Pricing of a European Call Option on Pension Annuity Insurance," *Journal of Insurance Issues*, 27(1), pp. 66-82.

BENZION, U.; Haruvy, E. and Shavit, T. (2004) "Adaptive Portfolio Allocation with Options." (to appear in *Journal of Behavioral Finance*, 5(1))

BENZION, U. and Yagil, J. "Portfolio Composition Choice: A Behavioral Approach." (forthcoming in *Journal of Behavioral Finance*)

BENZION, U., Shachmurove, Y. and Yagil, J. "Subjective Discount Functions – An Experimental Approach." (forthcoming in *Applied Financial Economics*)

BENZION, U. Shavit, T. and Sonsino, D. "On the Evaluation of Lotteries and Options – An Experimental Study." (forthcoming in *Journal of Psychology and Financial Markets*)

BLUMKIN, T. and Sadka, E. (2004) "Estate Taxation with Intended and Accidental Bequests," *Journal of Public Economics*, 88, pp. 1-21.

BLUMKIN, T. and Sadka, E. "Income Taxation with Intergenerational Mobility: Can Higher Inequality Lead to Less Progression?" (forthcoming in *European Economic Review*)

COHEN-ZADA, D. and JUSTMAN, M. (2003) "The Political Economy of School Choice: Linking Theory and Evidence," *Journal of Urban Economics*, 54(2), pp. 277-308.

EINY, E. and Shitovitz, B. (2003) "Symmetric von Neumann-Morgenstern Stable Sets in Pure Exchange Economies," *Games and Economic Behavior*, 43, pp. 28-43.

EINY, E., Moreno, D. and Shitovitz, B. (2003) "The Value of Public Information in a Cournot Duopoly," *Games and Economic Behavior*, 44, 2003, pp. 272-285.

Dubey, P., EINY, E. and HAIMANKO, O. "Compound Simple Games and the Banzhaf Index." (forthcoming in *Games and Economic Behavior*)

EINY, E., HAIMANKO, O., Moreno, D. and Shitovitz, B. "On the Continuity of Equilibrium and Core Correspondences in Economies with Differential Information." (forthcoming in *Economic Theory*).

GRADSTEIN, M. and Glazer, A. (2004) "Governance and Growth," *Journal of Development Economics*, 73, pp. 505-518.

GRADSTEIN, M. and Glazer, A. "Elections with Contribution-Maximizing Candidates." (forthcoming in *Public Choice*)

GRADSTEIN, M., and JUSTMAN, M. "The Melting Pot and School Choice." (forthcoming in *Journal of Public Economics*)

GRADSTEIN, M., JUSTMAN, M. and Meier, V. *The Political Economy of Education: Implications for Growth and Inequality*. MIT Press. (forthcoming)

HAIMANKO, O., Le Breton, M., and S. Weber (2004) "Voluntary Formation of Communities for the Provision of Public Projects," *Journal of Economic Theory*, 115(1), pp. 1-34.

Dubey, P. and HAIMANKO, O. (2004) "Learning with Perfect Information," *Games and Economic Behavior*, 46 (2), pp. 304-324.



HAIMANKO, O., Le Breton, M., and Weber, S. (2004) "Transfers in Polarized Society: Bridging the Gap Between Efficiency and Stability." (forthcoming in *Journal of Public Economics*)

HOLLANDER, S. (2003) "Ricardo's Analysis of the Profit Rate, 1813-15," *Economica*, 40, August 1973; reprinted in *Intellectual Legacies in Modern Economics: The Legacy of Piero Sraffa*. Ed. H.D. Kurz and N. Salvadori. Cheltenham: Edward Elgar, 1, pp. 577-599.

HOLLANDER, S. (2003) "Engels-Marx versus Malthus on Distribution and the Population Issue." In *Faith, Reason and Economics: Essays in Honour of Anthony Waterman*. Ed. Derek Hum. Winnipeg: St. John's College Press, pp. 135-152. Hebrew translation in *The Economic Quarterly*, 50(2), pp. 363-378.

HOLLANDER, S. (2004) "Economic Organization, Distribution and the Equality Issue: The Marx-Engels Perspective," *Review of Austrian Economics*, 17(1), pp. 5-39.

HOLLANDER, S. (2004) Review of *Jean-Baptiste Say: Nouveaux Regards sur son Oeuvre*, J.P. Potier and A. Tiran eds. (Paris: Economica); in *History of Political Economy*, 36, pp. 405-407.

HOLLANDER, S. *Jean-Baptiste Say and the Classical Canon in Economics: the British Connection in French Classicism*. London and New York: Routledge, xvi + 317. (forthcoming)

JUSTMAN, M. and SPIVAK, A. (2004) "Socio-Economic Dynamics of Local Authorities in Israel: Theory and Evidence," *Israel Economic Review*, 2(1), pp. 1-27. An earlier Hebrew version was published in *Economic Quarterly*, 48 (December 2001) pp. 572-606.

JUSTMAN, M. (2004) "Transitional Dynamics of Output, Wages and Profits in Innovation-Led Growth," *Structural Change and Economic Dynamics*, 15(2), pp. 183-205.

Kaplan, T., LUSKI, I. and WETTSTEIN, D. (2003) "Innovative Activity and Sunk Cost," *International Journal of Industrial Organization*, 21, pp. 1111-1133.

Kaplan, T., LUSKI, I. and WETTSTEIN, D. (2003) "Government Policy Towards Multi-national Corporations," *Economics Bulletin*, 6, pp. 1-8.

LUSKI, I. and WETTSTEIN, D. (2004), "Optimal Patent Policy in a Dynamic Model of Innovation," *Problems and Perspectives in Management*, 1, pp. 31-43.

Tykocinski, O.E. and RUFFLE, B.J. (2003) "Reasonable Reasons for Waiting," *Journal of Behavioral Decision Making*, 16, pp. 1-11.

RUFFLE, B. J. (2003) "Competitive Equilibrium and Classroom Pit Markets," *Journal of Economic Education*, 34:2, pp. 123-137.

Sosis, R. and RUFFLE, B.J. (2003) "Religious Ritual and Cooperation: Testing for a Relationship on Israeli Religious and Secular Kibbutzim," *Current Anthropology*, 44:5, pp. 713-722.

Kaplan, T.R. and RUFFLE, B.J. (2004) "The Self-Serving Bias and Beliefs about Rationality," *Economic Inquiry*, 42:2, pp. 237-246.

Sosis, R. and B.J. RUFFLE (2004) "Ideology, Religion and the Evolution of Cooperation: Field Experiments on Israeli Kibbutzim." (forthcoming in *Research in Economic Anthropology*, 23)

RUFFLE, B.J. "Tax and Subsidy Incidence Equivalence Theories: Experimental Evidence from Competitive Markets." (forthcoming in *Journal of Public Economics*)

RUFFLE, B.J. and R. Sosis "Cooperation and the In-Group-Out-Group Bias: A Field Test on Israeli Kibbutz Members and City Residents." (forthcoming in *Journal of Economic Behavior and Organization*)

Moldovanu, B. and SELA, A. (2003) "Patent Licensing to Bertrand Competitors," *International Journal of Industrial Organization*, 21(3), pp. 1-13.

Gavious, A., Moldovanu, B. and SELA, A. (2003) "Bid Costs and Endogenous Bid Caps," *RAND Journal of Economics*, 33(4), pp. 709-722.

Fibich, G., Gavious, A. and SELA, A. (2004) "Revenue Equivalence in Asymmetric Auctions," *Journal of Economic Theory*, 115, pp. 309-321.

SELA, A. and Cohen, C. "Manipulations in Contests." (forthcoming in *Economics Letters*)

SHALIT, H. and Yitzhaki, S. (2004) "Derivation of the Mean-Gini Efficient Frontier." (forthcoming in *The Journal of Financial Research*)

VOLIJ, O. and Palacios-Huerta, I. (2004) "The Measurement of Intellectual Influence," *Econometrica*, 72, pp. 963-977.

VOLIJ, O. and Slutzki, G. "Scoring of Web Pages and Tournaments -- Axiomatizations." (forthcoming in *Social Choice and Welfare*)

S. Mutuswami, D. P. Castrillo and WETTSTEIN, D. (2004), "Bidding for the Surplus: Realizing Efficient Outcomes in Economic Environments," *Games and Economic Behavior*, 48, pp. 111-123.

**VI. WORKING PAPER SERIES 02/03/04 AND  
ABSTRACTS OF RECENT WORKING PAPERS (2004)  
(issued from the Monaster Center for Economic Research)**

**Discussion Paper Series 2002**

- 02-01 M. Gradstein and M. Justman, "Public Education and the Melting Pot."
- 02-02 J. Engle-Warnick and B.J. Ruffle, "The Strategies Behind their Actions: A New Method to Infer Repeated-Game Strategies and an Application to Buyer Behavior."
- 02-03 Y. Gilboa and M. Justman, "University Admissions Criteria: Implications for Output, Distribution and Mobility."
- 02-04 D. Cohen-Zada, "Preserving Religious Values Through Education: Economic Analysis and Evidence from the US."
- 02-05 B. Moldovanu and A. Sela, "Contest Architecture."
- 02-06 O. Haimanko, M. Le Breton and S. Weber, "On Efficiency and Sustainability in a Collective Decision Problem with Heterogeneous Agents."
- 02-07 P. Dubey, O. Haimanko and A. Zapechelnyuk, "Strategic Substitutes and Potential Games."
- 02-08 A. Glazer and M. Gradstein, "Elections with Contribution-Maximizing Candidates."
- 02-09 J. Engle-Warnick and B. Ruffle, "Buyer Countervailing Power versus Monopoly Power: Evidence from Experimental Posted-Offer Markets."
- 02-10 O. Hochman, "Agglomeration of Spatial Clubs."
- 02-11 B.J. Ruffle and R.H. Sosis, "Just How Cooperative are Kibbutz Members? Field Experiments on Israeli Kibbutzim and in Israeli Cities."
- 02-12 P. Dubey, O. Haimanko and A. Zapechelnyuk, "Strategic Substitutes and Potential Games." (revised version of DP 02-07)
- 02-13 M. Gradstein, "Bargaining with Secession: Buchanan Meets Coase."
- 02-14 M. Gradstein, "Governance and Growth."
- 02-15 G. Fibich, A. Gaviious and A. Sela, "All-Pay Auctions with Risk-Averse

Buyers.”

- 02-16 B.J. Ruffle and Z. Shtudiner, “A Rational Explanation for Price Endings in 99: Experimental Evidence.”
- 02-17 H. Shalit and S. Yitzhaki, “Derivation of the Mean-Gini Efficient Portfolio Frontier.”

### **Discussion Paper Series 2003**

- 03-01 S. Abubader and A.S. Abu-Qarn, “Government Expenditures, Military Spending and Economic Growth: Evidence from Egypt, Israel and Syria.”
- 03-02 E. Einy, O. Haimanko, D. Moreno and B. Shitovitz, “On the Continuity of Equilibrium and Core Correspondences in Economies with Differential Information.”
- 03-03 U. Benzion, Y. Shachmurove and J. Yagil, “Subjective Discount Functions – An Experimental Approach.”
- 03-04 U. Benzion and J. Yagil, “Decisions in Financial Economics: An Experimental Study of Discount Rates.”
- 03-05 U. Benzion and J. Yagil, “Portfolio Composition Choice: A Behavioral Approach.”
- 03-06 Y. Saadon, U. Benzion and Z. Shiffer, “Central Bank Interest Rate Policy and Asymmetric Preference.” (in Hebrew)
- 03-07 H.-T. Normann, B.J. Ruffle and C.M. Snyder, “Do Buyer-Size Discounts Depend on the Curvature of the Surplus Function? Experimental Tests of Bargaining Models.”
- 03-08 A. Preminger, U. Ben-Zion and D. Wettstein, “Extended Switching Regression Models: Allowing for Multiple Latent State Variables.”
- 03-09 G. Fibich, A. Gavious and A. Sela, “Auctions with Weakly Asymmetric Interdependent Values.”
- 03-10 P. Dubey, E. Einy and O. Haimanko, “Compound Voting and the Banzhaf Power Index.”
- 03-11 B.J. Ruffle and R.H. Sosis, “Does It Pay To Pray? Field Experiments Evaluating the Economic Return to Religious Ritual.”

- 03-12 C. Groh, B. Moldovanu, A. Sela and U. Sunde, "Optimal Seedings in Elimination Tournaments."
- 03-13 A. Preminger, U. Ben-Zion and D. Wettstein, "Extended Switching Regression Models with Time Varying Probabilities for Combining Forecasts."
- 03-14 A. Preminger and D. Wettstein, "Using the Penalized Likelihood Method for Model Selection with Nuisance Parameters Present only under the Alternative: An Application to Switching Regression Models."

#### **Discussion Paper Series 2004**

- 04-01 A. Arnon and N. Kanafani, "Absorbing Returnees in a Viable Palestinian State: A Forward-Looking Macroeconomic Perspective."
- 04-02 G. Fibich, A. Gaviious and A. Sela, "Asymptotic Analysis of Large Auctions."
- 04-03 C. Cohen and A. Sela, "Manipulations in Contests."
- 04-04 E. Einy, O. Haimanko, D. Moreno and B. Shitovitz, "Uniform Continuity of the Value for Zero-Sum Games with Differential Information."
- 04-05 D. Lavee, U. Regev and A. Zemel, "Optimal Intervention in Uncertain Waste Recycling Markets."
- 04-06 Y. Hadar, O. Hochman and D. Pines, "City Size and Diversity: Optimum versus Laissez Faire."
- 04-07 T. Blumkin and V. Grossmann, "Ideological Polarization, Sticky Information, and Policy Reforms."
- 04-08 T. Blumkin, Y. Margalioth and E. Sadka, "On Vertically Challenged and Horizontal Equity – Reassessing Anti-discrimination Rules."
- 04-09 T. Blumkin and E. Menirav, "Framing the Rabbit to Snare the Votes - The Case for Political Framing."
- 04-10 T. R. Kaplan and B. J. Ruffle, "It's My Turn . . . Please, After You: An Experimental Study of Cooperation and Social Conventions."
- 04-11 P. Dubey, O. Haimanko and A. Zapechelnyuk, "Strategic Complements and Substitutes and Potential Games."
- 04-12 D. Perez-Castrillo and D. Wettstein, "An Ordinal Shapley Value for Economic Environments."

- 04-13 I. Macho-Stadler, D. Perez-Castrillo and D. Wettstein, "Sharing the Surplus: A Just and Efficient Proposal for Environments with Externalities."
- 04-14 R. Arnott, O. Hochman and G. Rausser, "Pollution and Land Use: Optimum and Decentralization."

**ABSTRACTS OF WORKING PAPERS** (issued since the previous report)

**ABSORBING RETURNEES IN A VIABLE PALESTINIAN STATE: A FORWARD-LOOKING MACROECONOMIC PERSPECTIVE**

A. Arnon and N. Kanafani

Discussion Paper No. 04-01

Compensation to the Palestinian refugees should be an integral component of a comprehensive and durable solution to the Middle East conflict. Compensations may be best determined on basis of a forward-looking formula, linking them principally to the cost of rehabilitating the camps and absorbing the returnees in a viable and growing economy in the WBGS.

We attempt in this paper to develop a macroeconomic approach to demonstrate how the cost of absorption/compensation can be estimated. A macroeconomic framework is used to analyse the implications of resettling the returnees and rehabilitating the Palestinian economy under an assumed overall political settlement. The exercise of estimating the funds required for collective compensation is carried out under various scenarios regarding the number of returnees, the schedule of their return and access to Israel's labour market. Our main aim however is to demonstrate the plausibility of the approach rather than to present precise calculation or argue for specific compensation figures.

The paper reviews first the three approaches found in the literature for determining the pool of resources for compensating the Palestinian refugees. Thereafter a brief survey of the distribution of the Palestinian refugees is presented along with the factors which are likely to affect the households' decision to relocate. The purpose of this is to give some estimate of the potential number of returnees to the WBGS. Lastly, Israel's experiences in absorbing immigrants are used to shed light on the policy options which will confront the future Palestinian state in designing and implementing a successful absorptions strategy.

Although the paper recognizes the multi-dimensional nature of the refugee/compensation problem and leaves open the possibility of other forms of private/individual compensatory schemes, it argues that the forward-looking approach to refugee compensation is superior in many ways to alternative approaches, such as valuation of lost assets. It concludes that a solution to the refugee problem based on the forward-looking formula is feasible economically. The cost of absorption will be smaller the longer the period of implementation and the lower the uncertainty, especially with respect to the commitments of the parties to the peace agreement as well as the commitment of the international community.

**ASYMPTOTIC ANALYSIS OF LARGE AUCTIONS**

G. Fibich, A. Gaviols and A. Sela

Discussion Paper No. 04-02

We study private-value auctions with a large number of bidders. We first calculate asymptotic approximations of the equilibrium bids and the seller's revenue in first-price auctions, regardless of whether the bidders are symmetric or asymmetric, risk-neutral or risk averse. We then show that with  $n$  bidders, the effects of risk aversion and of asymmetry on the equilibrium bids and on the seller's revenue are only  $O(1/n^2)$  revenue equivalent to large classes of standard auctions.

### **MANIPULATIONS IN CONTESTS**

C. Cohen and A. Sela

Discussion Paper No. 04-03

We study the classical Tullock's model of one-stage contests where the probability of winning is a function of the efforts exerted by the contestants. We show that by a simple non-discriminating rule the contest designer is able to manipulate the outcome of the contests such that the probabilities to win are not ordered according to the contestants' abilities.

### **UNIFORM CONTINUITY OF THE VALUE FOR ZERO-SUM GAMES WITH DIFFERENTIAL INFORMATION**

E. Einy, O. Haimanko, D. Moreno and B. Shitovitz

Discussion Paper No. 04-04

We establish uniform continuity of the value for zero-sum games with differential information, when the distance between changing information fields of each player is measured by the Boylan (1971) pseudo-metric. We also show that the optimal strategy correspondence is upper semi-continuous when the information of fields of players change, even with the weak topology on players' strategy sets.

## **OPTIMAL INTERVENTION IN UNCERTAIN WASTE RECYCLING MARKETS**

D. Lavee, U. Regev and A. Zemel

Discussion Paper No. 04-05

This paper deals with the effect of uncertainty and the irreversible investment on the decision of a municipality to switch from landfill waste disposal to recycling. We show that uncertainty regarding the price of recycled materials may induce a risk neutral municipality to prefer landfill disposal, even when recycling is less expensive. Consequently, a policy designed to reduce uncertainty is preferable to Pigouvian taxes or to subsidies as a means to enhance recycling. We estimate the parameters of a theoretical model with empirical data from 90 municipalities in Israel. The empirical results support the observation that price stabilization can be effective to establish viable recycling markets.

## **CITY SIZE AND DIVERSITY: OPTIMUM VERSUS LAISSEZ FAIRE**

Y. Hadar, O. Hochman and D. Pines

Discussion Paper No. 04-06

This paper synthesizes a monopolistic competition set up portrayed in Dixit and Stiglitz (1977) with elements of urban economics, local public goods, and new economic geography (NEG) to explore the bias of laissez-fair city size and diversity vis-à-vis their optimum counterparts. Regarding both city size and diversity, the bias is ambiguous. However, in contrast to earlier studies, the paper finds that laissez-faire city size may be smaller than optimal city size and laissez-faire diversity may be larger than optimal diversity. Furthermore, only when laissez-faire city size is larger than optimal city size, laissez-faire diversity may be larger than optimal diversity. Using the Cobb-Douglas utility function of leisure and differentiated goods, the paper shows that the relationships between laissez-faire city size and diversity and their optimal counterparts depends on aggregate population size. For sufficiently small aggregate population, optimal city size and diversity are larger than their laissez-faire counterparts; for intermediate aggregate population, optimal city and diversity are smaller than their laissez-faire counterparts; and for sufficiently large aggregate population, optimal city size is smaller and optimal diversity is larger than their laissez-faire counterparts.



**IDEOLOGICAL POLARIZATION, STICKY INFORMATION,  
AND POLICY REFORMS**

T. Blumkin and V. Grossman

04-07

We develop a dynamic two-party political economy framework, in which parties seek to maximize vote share and face the trade-off between catering to their respective core constituencies on the one hand and ‘middle of the road’ voters with no partisan affiliation on the other hand. In contrast to ideology-driven individuals, ‘middle of the road’ voters care about the state of the economy in the sense that a policy reform is desirable for them when the fundamentals of the economy change. However, information is “sticky” in the sense that the process of information diffusion about the state of the economy, which is determined by some exogenous stochastic process, is imperfect. Contrary to conventional wisdom, we show that an increase in ideological polarization may enhance social welfare by mitigating the friction in information flow.

**ON VERTICALLY CHALLENGED AND HORIZONTAL EQUITY –  
REASSESSING ANTI-DISCRIMINATION RULES**

T. Blumkin, Y. Margalioth and E. Sadka

04-08

We consider a model of prejudice-driven discrimination, where the advantaged ‘tall’ discriminate against the disadvantaged ‘short’. We employ an egalitarian social welfare function to compare anti-discrimination legal rules with a non-discriminatory (‘height - blind’) income tax.

**FRAMING THE RABBIT TO SNARE THE VOTES – THE CASE FOR  
POLITICAL FRAMING**

T. Blumkin and E. Menirav

04-09

Results in cognitive psychology and experimental economics suggest that people are prone to systematic misperception of policy. In this paper we employ a standard political economy framework and examine the case for political framing, namely the potential of political parties to derive political gains by manipulating those misperceptions.

**IT'S MY TURN . . . PLEASE, AFTER YOU: AN EXPERIMENTAL STUDY OF COOPERATION AND SOCIAL CONVENTIONS**

T. R. Kaplan and B. J. Ruffle

04-10

We introduce a class of two-player cooperation games where each player faces a binary decision, enter or exit. These games have a unique Nash equilibrium of entry. However, entry imposes a large enough negative externality on the other player such that the unique social optimum involves the player with the higher value to entry entering and the other player exiting. When the game is repeated and players' values to entry are private, cooperation admits the form of either taking turns entering or using a cutoff strategy and entering only for high private values of entry. Even with conditions that provide opportunities for unnoticed or non-punishable "cheating", our empirical analysis including a simple strategy inference technique reveals that the Nash-equilibrium strategy is never the modal choice. In fact, most subjects employ the socially optimal symmetric cutoff strategy. These games capture the nature of cooperation in many economic and social situations such as bidding rings in auctions, competition for market share, labor supply decisions in the face of excess supply, queuing in line and courtship.

**STRATEGIC COMPLEMENTS AND SUBSTITUTES AND POTENTIAL GAMES**

P. Dubey, O. Haimanko and A. Zapechelnyuk

04-11

We show that games of strategic complements, or substitutes, with aggregation are "pseudo-potential" games. The upshot is that they possess Nash equilibria in pure strategies (NE), even if the strategy sets are not convex; and that various dynamic processes converge to NE. In particular, NE exist in Cournot oligopoly with indivisibilities in production.

Our notion of aggregation is quite general and enables us to take a unified view of several disparate models.

## **AN ORDINAL SHAPLEY VALUE FOR ECONOMIC ENVIRONMENTS**

D. P.-Castrillo and D. Wettstein

04-12

We propose a new solution concept to address the problem of sharing a surplus among the agents generating it. The problem is formulated in the preferences-endowments space. The solution is defined recursively, incorporating notions of consistency and fairness and relying on properties satisfied by the Shapley value for Transferable Utility (TU) games. We show a solution exists, and call it an Ordinal Shapley value (OSV). We characterize the OSV using the notion of coalitional dividends, and furthermore show it is monotone and anonymous. Finally, similarly to the weighted Shapley value for TU games, we construct a weighted OSV as well.

## **SHARING THE SURPLUS: A JUST AND EFFICIENT PROPOSAL FOR ENVIRONMENTS WITH EXTERNALITIES**

I. Macho-Stadler, D. Perez-Castrillo and D. Wettstein

04-13

Economic activities, both on the macro and micro level, often entail widespread externalities. This in turn leads to disputes regarding the compensation levels to the various parties affected. We propose a general, yet simple, method of deciding upon the distribution of the gains (costs) of cooperation in the presence of externalities. This method is shown to be the unique one satisfying several desirable properties. Furthermore, we illustrate the use of this method to resolve the sharing of benefits generated by international climate control agreements

## **POLLUTION AND LAND USE: OPTIMUM AND DECENTRALIZATION**

R. Arnott, O. Hochman and G.C. Rausser

Discussion Paper No. 04-14

Space matters not only by inducing transport costs but also by mitigating pollution damages. Previous models of pollution either disregard space altogether or presume a predetermined separation between polluters and pollutees. In our model, workers commute to factories and all possible location combinations of housing and industry around a circle are considered. We investigate optimal allocations and their decentralization. The tradeoff between pollution costs and transport costs, along with the non-convexity inherent in spatial models, results in multiple local optima. With negligible commuting costs, the optimal allocation has one industrial and one residential zone. As commuting costs increase, the number of zones of each type

increases until an allocation is reached in which housing and industry are completely intermixed. The global optimal allocation is decentralized by imposing a tax per unit area of industrial land at a particular location equal to the total damage caused by the pollution from that unit area, evaluated at the global optimum. Location-specific Pigouvian taxes by themselves are inefficient.

## VII. RESEARCH SUMMARIES OF CENTER MEMBERS

### **Suleiman Abubader**

Dr. Abubader's research interests deal with the application of times series econometric techniques for studying macroeconomic relations. His current research focuses on the determination of economic growth in the Middle East countries, and the relationship between income inequality, poverty and economic growth.

### **Aamer Abu-Qarn**

Aamer Abu-Qarn focuses his research on the determinants of economic growth in general and in the MENA region in particular. To accomplish this, he applies both time series techniques as well as panel data methods. In addition, in collaboration with Suleiman Abu-Bader, Dr. Abu-Qarn examines the possibility of establishing a currency union in the Gulf Cooperation Countries (GCC).

### **Arie Arnon**

Prof. Arnon's research interests primarily deal with macroeconomics, monetary economics and banking, the Israeli economy and in particular the labour market and the history of economic thought. He is currently working on a monograph "*Money, Credit and the Economy: Monetary Theory from Smith to Wicksell.*"

Prof. Arnon continues to be actively involved in regional economics and research on economic policies in the Middle East, particularly on the Israeli–Palestinian relations. Since 2002 he has been the Israeli Coordinator within "The Aix Group" – a Working Research Group on the Economic Dimensions of the Israeli Palestinian conflict.

For part of 2004 Prof. Arnon was on sabbatical leave working as a Visiting Scholar at the New School for Social Research, New York and a Professorial Research Associate in the Department of Financial and Management Studies at the School of Oriental and African Studies [SOAS], University of London.

### **Uri Benzion**

Prof. Benzion's current research projects deal with evaluation of mutual funds; interrelationship between international markets and country funds; marketing policy by use of cent-off-coupons; and use of activity-based costing in medical decision-making.

**Tomer Blumkin**

Dr. Blumkin's research interests deal with the following topics: 1) Models of optimal taxation; 2) Political economy (voting and institutions, polarization); 3) Law and Economics (racial profiling, re-distributive legal rules); 4) Labor market institution and re-distributive policies (minimum wage, UI, antidiscrimination rules); and 5) Behavioral public economics (political framing).

**Danny Cohen-Zada**

Dr. Cohen-Zada's research deals with the political economy of school-choice, with a special focus on the religious factor in private education. Currently, he is studying the treatment effect of religious schooling in Israel.

**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.

**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.

**Dr. Yossi Hadar**

Dr. Hadar's research topics focus on three areas: economic geography and urban economics which includes investigation of the stability of the equilibrium and extensions to Helpman's (1998) model; examination of the role of real options in the labor market and their implications in matching and search models; and characterization of some aspects of the energy market and organization of electrical networks.

**Ori Haimanko**

Dr. Haimanko's current projects include the study of efficiency and stability of coalition structures arising in the presence of horizontally differentiated public goods or heterogeneous policy preferences, comparison of different types of labor contracts in multi-agent settings, learning in extensive form games, and the study of continuity of solution concepts in games and economies with differential information.

**Oded Hochman**

Prof. Hochman's research interests center on urban and environmental economics, public economics, industrial organization and economic growth. His current research projects include urban location and pollution, marketing of quality differentiated products, efficient water pricing, uncertainty in water supply and its economic implications, and impact of income tax on sizes of cities.

### **Samuel Hollander**

Prof. Hollander is working currently on *The Economics of Karl Marx* for Cambridge University Press and has just carried his book *J.B. Say and the Classical Canon* through the press (Routledge). He received the Queen Elizabeth II 50th Anniversary Medal in 2003 for his research contribution.

### **Moshe Justman**

Prof. Justman's activities focus on the political economy of education. He also does work on technology policy and on regional development.

### **Israel Luski**

Prof. Luski's research interests deal with the following areas of industrial organization: R&D and patent policy – Optimal strategies for R&D investment; The economics of multinational corporations – The economic impact of multinational corporations on the host country; optimal incentives policy; Nonprofit organizations – Economic efficiency of nonprofit organizations, and government policy toward nonprofit organizations.

### **Uri Regev**

Prof. Regev's research focuses on environmental economic issues. These include the impact of coal burning in power stations of the Israeli electric company, policies for enhancing municipal waste recycling and measurement of environmental pollution impacts on health. He is also interested in the problem of bacterial resistance to antibiotics, which has become a number one health problem. The economic incentives that lead to market failure in antibiotic prescriptions is the subject of a new joint research project with Kupat Holim Macabbi.

### **Bradley Ruffle**

Bradley Ruffle is primarily an experimental economist. He uses experimental methods in the laboratory and in the field to test theories and examine phenomena in product and labor markets, industrial organization, negotiations, and the role of cooperation, trust, signaling, emotions, and cognitive biases in interactive and individual decision making. He also uses rational choice theories to understand religiosity and religious institutions.

### **Aner Sela**

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

### **Haim Shalit**

Prof. Shalit's research is directed toward the use of the mean-Gini model and Conditional Stochastic Dominance in financial markets. Working with Prof Edna Schechtman, Prof. Shalit is developing a new statistical procedure for MCSD that demonstrates the dominance of improved portfolio. In addition, his work on the mean-

Gini model shows how risk aversion affects the composition of efficient portfolios.

**Avia Spivak**

Prof. Spivak continues his research activities in two main fields of interest: the economics of peace in the Middle East and the economics of pensions and social insurance. He continues to serve as Deputy Governor of the Bank of Israel.

**Oscar Volij**

Prof. Volij is an economic theorist. His research areas include the foundations of bargaining solutions, measurement of intellectual influence and auctions.

**Jimmy Weinblatt**

Prof. Weinblatt's research efforts are devoted to pursuing various issues within the large scale project on the Economic Aspects of Peace in the Middle East: macroeconomic modeling, Israeli-Jordanian-Palestinian trade and the development of special industrial zones. Much of his time at present is taken up with his responsibilities as Rector of the University.

**David Wettstein**

Prof. Wettstein's research interests focus on the construction and implementation of new cooperative solution concepts in economic environments, auctions, cost sharing, the properties of extended switching regression models and penalized likelihood methods for model selection.