

**THE PHILLIPE MONASTER CENTER  
FOR ECONOMIC RESEARCH**

**ACTIVITY REPORT**

**1999/00**

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

Dr. Suleiman Abubader	Department of Economics
Prof. Arie Arnon	Department of Economics, Chairman
Prof. Tuvia Blumenthal	Department of Economics
Prof. Uri Ben-Zion	Department of Economics
Prof. Dov Chernichovsky	Department of the Management and Economics of Health
Prof. Ezra Einy	Department of Economics
Prof. Mark Gradstein	Department of Economics
Prof. Oded Hochman	Department of Economics
Prof. Moshe Justman	Department of Economics
Dr. Todd Kaplan	Department of Economics (sabbatical year)
Dr. Yaakov Khazanov	Department of Economics
Dr. Adam Klug (may his memory be blessed)	Department of Economics
Prof. Israel Luski	Department of Economics
Prof. Abraham Mehrez	Department of Industrial Engineering and Management
Prof. Uri Regev	Department of Economics, Director of the Center
Dr. Bradley Ruffle	Department of Economics
Dr. Aner Sela	Department of Economics
Prof. Haim Shalit	Department of Economics
Dr. Oren Sussman	Department of Economics (on leave)
Prof. Avia Spivak	Department of Economics
Prof. Jimmy Weinblatt	Department of Economics, and presently Dean, Faculty of Humanities and Social Sciences
Dr. David Wettstein	Department of Economics
Prof. E. Zuscovitch (may his memory be blessed)	Department of Economics

### STEERING COMMITTEE:

Prof. Arie Arnon  
 Prof. Uri Regev  
 Dr. David Wettstein

I begin the traditional letter that accompanies the annual Monaster Report with a heavy heart for in September 2000 two dearly cherished and esteemed members of the Economics Department, Prof. Ehud Zuscovitch and Dr. Adam Klug, passed away well before their prime.

Ehud joined the Department of Economics in 1988. Ehud played a central role in the development of the department from his very first days here, serving as Director of the Monaster Center for Economic Research, and as department Chair, while advancing to his recent promotion to full professor. An academic entrepreneur of the first order, Ehud was constantly involved in developing new projects both in teaching and research. Some of his early work in Israel he undertook with M. Teubal and colleagues at the Jerusalem Institute for Israel Studies, with whom he edited two books on technological infrastructure policy, and collaborated on a number of articles. His last major projects were an evaluation of Israel's R&D subsidy program, on which he worked together with Moshe Justman, and an international conference on learning, which he organized with particular flair. All the while, he retained the ties in France he had formed at the beginning of his career, advancing to the position of Directeur de Recherche in the CNRS, and participating in numerous academic initiatives on the economics of innovation. A leading member of the J. A. Schumpeter Society from its founding, he served on the editorial board of the Journal of Evolutionary Economics. Here in Beer Sheva, Ehud will always be fondly remembered for his unique personal qualities. Never one to stand on ceremony, he always had a warm word and sympathetic ear for those in need of one or the other, and combined a strong will and sense of purpose with a kind heart. His untimely loss is deeply mourned, his presence among us sorely missed. May his memory be blessed.

Adam arrived at the Department of Economics in 1994. Previously, he had spent four years in the US – two years as a visitor at the International Finance Section at Princeton and two years as a visiting professor at Rutgers. Adam's field of interest was financial history and he published several important articles on German reparations and sovereign debt defaults in the 1930s. He was also interested in the relation between economics and politics and several of his publications dealt with British politics in the mid-19<sup>th</sup> century and the Suez crisis of 1956. What was so special about Adam was his intellectual curiosity, and his broad range of expertise. Adam combined history with empirical analysis, and identified strongly with the cliometrics tradition. He kept coming up with the most interesting and arcane data and ingenious hypotheses on important issues. Adam contributed much to Monaster's activities. In 1999 he organized a conference on Economic History. A workshop he was in the midst of organizing scheduled to take place in June 2000 on CEG – Computable General Equilibrium - unfortunately had to be cancelled because of his illness. We all miss him.

May his memory be blessed.

## II. SUMMARY OF ACTIVITIES

During 1999-2000 the Monaster Center continued with its usual activities -- weekly seminars, visits from guests from abroad and the sponsorship of several departmental conferences. The Center also continued to sponsor a monthly seminar on the economic history of the Middle East jointly with the Department of Middle East Studies.

The Monaster Center continues to maintain its commitment to applied research on other issues of central interest to Israeli society and economy. Still in progress is the program on Health Economics and Policy in a Stressed Society that is implemented in collaboration with the University's Faculty of Health Sciences, led by Center member Dov Chernichovsky together with an international steering committee. Uri Ben-Zion carries out research and consulting on finance and options and futures, specifically their application to the medical and industrial sectors and to banking. Avia Spivak's research on pensions figures prominently in the national debate on the future of the country's pension funds. Jimmy Weinblatt conducts extensive research on social policy issues with the Center for Social Policy Studies in Jerusalem and has served on several national committees. Moshe Justman and Avia Spivak prepared a report on unemployment for the Ministry of Labor. Arie Arnon continues his research on the history of monetary thought, particularly in England during the nineteenth century, and has published a paper on the free banking school, a sorely neglected topic in the literature on the history of economics. He also continues his work on issues related to the Palestinian economy in the West Bank and Gaza, with special focus on the importance of its links with the Israeli economy. Uri Regev still serves on the advisory committee of the Central Bureau of Statistics. Also, the Minister of the Environment has appointed him to serve as a member of the steering committee for determining environmental regulations.

The applied work described above is complemented by theoretical research in mathematical economics and game theory by Ezra Einy, mechanism design by David Wettstein, industrial organization by Israel Luski and David Wettstein, urban economics by Oded Hochman, pest management and environmental economics by Uri Regev, public choice by Mark Gradstein, the political economy of education, inequality and growth by Mark Gradstein and Moshe Justman, and financial theory by Haim Shalit and Oren Sussman. Tuvia Blumenthal remains active in his work on Japan's economy. Bradley Ruffle's current research projects include the application of experimental methods to investigate the role of buyers in different market institutions. Bradley Ruffle's current research projects include the application of experimental methods to investigate the role of buyers in different market institutions (with Jim-Engle Warnick), the origins of cooperation (with Todd Kaplan), and the impact of religious observance and privatization on intra-group cooperation and trust (with Richard Sosis). Yaakov Khazanov, who specializes in macroeconomics, gears his current research toward an in-depth analysis of the impact of economic growth on nationalist movements. Aner Sela's research interests concern auctions and industrial organization.

This year the Department of Economics and the Monaster Center is happy to welcome Samuel Hollander, who has joined our staff as Visiting Professor. Prof. Hollander is one of the world's foremost authorities on the history of economic thought. His series of innovative volumes on the nineteenth-century fathers of economics have revolutionized the study of classical economics. He is currently engaged in research on *The Economics of Karl Marx* to be published by Cambridge University Press. Prof. Hollander is University Professor Emeritus at the University of Toronto, and previous to coming to Israel he was Directeur de recherche at CNRS – Université de Nice-Sophia Antipolis, France. His recent publications include the book *John Stuart Mill on Economic Theory and Method: Collected Essays III* (Routledge: London and New York, 2000).

Other staff members deserve mention as well. With the great advances and increasing complexities

of computer technology, more than ever we appreciate the outstanding abilities of the department's two computer experts, Ronen Massad and Dani Grishchenko. Without their advanced knowledge, always delivered with patience and a smile, we would all be lost.

Finally, this report would not be complete without giving special thanks to our administrative coordinator, Ms. Ella Ginzburg, and our English secretary, Ms. Estelle Schulgasser, for their dedication to the Center and their efforts in producing this report.

Professor Uri Regev, Director  
Monaster Center for Economic Research

### III. ACTIVITIES IN DETAIL

#### 1) **Conferences and workshops organized under the auspices of the Center and the Department of Economics**

On March 16, 2000, the Economics Department together with the Southern Society held on special forum Entitled: "Agriculture: Where Next?" Prof. Uri Regev from our department organized the proceedings. The session was held in honor of Israel's Minister of Agriculture, Mr. Chaim Oron, who delivered the opening lecture. The panel seated Mr. Gedalia Gal representing Tunuva's Dairy Industry, Mr. Doron Grooper from Mekorot, and Profs. Yoav Kislov and Ezra Sadan from the Faculty of Agriculture at Hebrew University in Jerusalem.

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

Support from the Center allows us to invite economists from abroad:

10/99	David Perez-Castrillo, Universitat Autònoma de Barcelona
10/99	Oscar Volij, Brown University
11/99	Oded Palmon, Rutgers University
12/99	Daniel Levy, Emory University
12/99	Nobuhiro Kiyotaki, London School of Economics
12/99	David Weil, Brown University
12/99	Richard Sosis, University of Connecticut
2/00	Jonathan Samuel Waglein, Columbia University
3/00	Kala Krishna, Penn State University and NBER
3/00	Vijay Krishna, Penn State University
3/00	Yunus Aksoy, UCL
3/00	Avner Ben Ner, University of Minnesota
4/00	Steven Tadelis, Stanford University
5/00	Tomer Blumkin, University of Michigan
6/00	Ernst-August Nuppenau, University of Giessen

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

- 14.10.99 David Perez-Castrillo, Universitat Autònoma de Barcelona  
“Auditing with Signals”
- 21.10.99 Aner Sela, Ben-Gurion University  
“The Optimal Allocation of Prizes in Contests”
- 28.10.99 Oscar Volij, Brown University and Hebrew University  
“Risk Aversion and Bargaining Outcomes”
- 4.11.99 Mark Gradstein, Ben-Gurion University  
“Education, Social Capital and Growth”
- 11.11.99 Chaim Fershtman, Tel-Aviv University  
“Trust and Discrimination in a Segmented Society: An Experimental Approach”
- 18.11.99 Ron Shachar, Tel-Aviv University  
“Brands, Information, and Loyalty: Theory and Evidence”
- 25.11.99 Oded Palmon, Rutgers University  
“Clustering in Real Estate Prices: Patterns and Impacts on Transaction Outcomes”
- 2.12.99 David Schmeidler, Tel-Aviv University  
“Axioms for Cognitive Foundations of Inductive Inference and Probability”
- 9.12.99 Daniel Levy, Emory University  
“Managerial and Customer Menu Costs in Industrial Markets”
- 10.12.99.1 Nobuhiro Kiyotaki, London School of Economics  
“Inside Money and Liquidity”
- 12.12.99 Sivan Forshner, Haifa University
- 16.12.99 David Weil, Brown University  
“Mortality Decline and the Emergency of Life-Cycle Saving”
- 23.12.99 Eugene Kandel, Hebrew University  
“Nine is Enough for Competition: Between Search and Walras”
- 30.12.99 Richard Sosis, University of Connecticut  
“Costly Signaling and Torch Fishing on Ifaluk Atoll”
- 6.1.00 David Wettstein, Ben-Gurion University  
“Bidding for the Surplus: A Non-Cooperative Approach to the Shapley Value”
- 24.2.00 Jonathan Samuel Weglein, Columbia University  
“The Rational Donor: An Empirical Study of Individual Campaign

Contributions”

- 2.3.00 Kala Krishna, Penn State University and NBER  
 “Providing Uncertain Quantities Efficiently: Theory and Applications to Electricity Deregulation”
- 9.3.00 Vijay Krishna, Penn State University  
 “Multiple-Object Auctions with Budget Constrained Bidders”
- 16.3.00 Yunus Aksoy, UCL  
 “Real Exchange Rates and Monetary Policy Effectiveness in EMU”
- 23.3.00 Rachel Friedberg, Hebrew University  
 “The Impact of Migration on the Israeli Labor Market”
- 28.3.00 Avner Ben Ner, University of Minnesota
- 6.4.00 Ruth Klinov, Hebrew University
- 13.4.00 Steven Tadelis  
 “The Market for Reputations as an Incentive Mechanism”
- 27.4.00 Oded Galor, Hebrew University  
 “From Physical to Human Capital Accumulation: Inequality in the Process of Development”
- 4.5.00 Ram Orzach, Ben-Gurion University  
 “Dominance Solvability of Second-Price Auctions with Differential Information”
- 25.5.00 Tomer Blumkin, University of Michigan  
 “Multiple Equilibria and Informational Externalities in Search Environments”
- 12.6.00 Ernst-August Nuppenau, University of Giessen (Germany)  
 “Determining the Price of Nature in an Exchange Economy: Towards the Modelling of Interaction between Humans and Nature in a Principal-Agent Framework”
- 13.6.00 Rami Josef, University of Haifa  
 “Annuities and Life Insurance Under Random Interest Rates”

#### 4) Research Contracts and Fellowships

Bradley Ruffle was recently awarded a grant from the Binational Science Foundation (with Richard Sosis, University of Connecticut, Anthropology) to study the role of religious observance and privatization on intra-group cooperation and trust. On this same topic, he holds other grants from the Pinhas Sapir Center for Development and the Ruppin Institute. In addition, he also continues to hold a grant from the Russell Sage Foundation's program in Behavioral Economics for his research study "Buyer Behavior in Experimental Posted-Offer Markets."

Uri Regev continues his joint work with J. Margalit and J. Safi (Head of the Environmental Research Institute in Gaza) on a project for regional cooperation.

Avia Spivak is presently working on a World Bank project for pension reform and on the annuity market in Israel and is also participating in the Falk Institute Project in Honor of Michael Bruno on pension reform in Israel. Arie Arnon has begun a research project on the Israeli labor market.

Uri Ben-Zion received a grant from the Technion Institute of Management (TIM) to do work on a case study of Elscint Ltd. entitled "The value of the parts is higher than the value of the whole" (with Gadi Harel). He was also awarded The Joseph Kasierer Grant to study the topic "An evaluation of R&D expenditure by firms: A methodological approach" (with Haim Falk and Dan Weiss).

#### 5) 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.

Aner Sela is engaged in joint research with B. Moldovanu (Mannheim University) and D. Herreiner (Bonn University). Oren Sussman is on an extended visit to the London Business School. Since 1997 Avia Spivak is Chairman of the Finance Ministry Committee on the Licensing and Training of Insurance Agents and at present serves as Director of Bank Otzar Hahayal. Prof. Spivak also collaborates with the Bank of Israel in his research on Israel's pension systems, and carries out collaborative research with O. Palmon on models of adverse selection in the annuity market. David Wettstein actively collaborates with Prof. David Pérez-Castrillo from Universitat Autònoma de Barcelona, Spain and Prof. Todd Kaplan from Exeter University, Exeter, Britain. Bradley Ruffle collaborates on experimental projects with Jim Engle-Warnick (Oxford University) on inferring buyer strategies to determine the impact of buyer concentration on pricing, with Richard Sosis (University of Connecticut) on intra-group cooperation and trust, and with Todd Kaplan (University of Exeter) on the origins of cooperation. Drs. Ruffle and Kaplan have also recently completed a search model of gift giving. This paper solves the puzzle why gift giving continues despite the fact that it is believed to be inefficient and welfare-reducing. Arie Arnon served as a member of the Committee on Minimum Wages (an annual report was submitted in July 2000).

Mark Gradstein organized an invited session on “The Political Economy of Education” at the European Economic Association annual meetings, Santiago de Compostela, Spain, 1999. He also made research visits to the World Bank, DELTA-ENS, Paris and Indiana University.

Ezra Einy periodically visits the Department of Economics at the Universidad Carlos III de Madrid as a teaching and research professor. Oren Sussman is engaged in joint research with J. Suarez (CEMFI Madrid), J. Franks (London Business School), and C. Mayer (Oxford University).

Uri Regev continues his collaboration with A.P. Gutierrez and D. Zilberman at University of California at Berkeley on biological economic foundations of renewable resource exploitation and problems of pest resistance to pesticides. He also recently began cooperating with Kupat Holim, Israel’s major health care agency, on a project that deals with bacteria resistance to antibiotics.

Jimmy Weinblatt collaborates with the Center for Social Policy Studies in Jerusalem on social policy. Moshe Justman is a member of the Council of the Israel Economics Association, and of the Infrastructure Committee of the Ministry of Science.

The Monaster Center has also joined with the Universities of Athens, Bristol, Cyprus and the Hebrew University in a special training project under the European Community's Med-Campus program. We aim to extend our participation in this program in a new collaboration with the Middle East Technical University of Ankara, and the Universities of Liverpool, Picardie and Montpellier.

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

##### **Arie Arnon**

“The Israeli and Palestinian Economies: Between Interim and Permanent Arrangements,” Israeli Economic Association - Mini Conference, June 1999.

“Sovereignty and Economic Development: The Case of Israel and Palestine,” Royal Economic Society, St. Andrews Scotland, July 2000 (invited paper).

##### **Uri Ben-Zion**

Annual Economic Science Association Meetings, Lake Tahoe, California, May 1999, “The Negative Complexity Effect in Multiperiod Choice - Experimental Evidence” (with D. Sonsino and G. Mador).

Annual Economic Science Association Meetings, New York, June 2000. “On the Evaluation of Lotteries and Options – An Experimental Study” (with T. Shavit and D. Sonsino).

2000 European Financial Management Association Conference, Athens, Greece “On the Evaluation of Lotteries and Options – An Experimental Study” (with T. Shavit and D. Sonsino).

Ryde Symposium on Experimental Economics, Lund University, Sweden, November 2000, “A Comparative Study of Lotteries Evaluation in Class and on the Web” (with T. Shavit and D. Sonsino).

### **Ezra Einy**

European Workshop on General Equilibrium Theory, Paris, May 2000.  
International Conference on Game Theory and Economic Theory, SUNY at Stony Brook, July 2000.

First World Congress of the Game Theory Society, Bilbao, July 2000.

### **Mark Gradstein**

Israeli Economic Association Meetings, CESifo Summer Institute, Venice 2000, Indiana University, 2000.

### **Moshe Justman**

“Public Education, Social Capital and Growth” (with M. Gradstein) 4<sup>th</sup> Euro-Mediterranean Meetings. Nice, France. 2000.

“Utility from Education: Theory and Evidence” (with D. Cohen-Zada) Israel Economics Association annual meetings. Jerusalem, 2000.

“Quantifying the Benefits of Israel’s Industrial R&D Subsidy Program, 1986-94.” (with E. Zuscovitch) Israel Economics Association annual meetings. Jerusalem, 2000.

### **Israel Luski**

“Contests with Variable Rewards” (with A. Sela, T. Kaplan, and D. Wettstein), the International Conference on Game Theory, Stony Brook, New York, July 2000.

### **Uri Regev**

“A Bio-Economic Paradigm of IPM” (with A.P.Gutierrez). XIV International Plant Protection Congress, Jerusalem, July 1999, Session Chair, Sociological, Economic and Technological Aspects in IPM.

An International Workshop on “Antibiotic Resistance: Global Policies and Opinions,” Center for International Development at Harvard University, February 2000.

Pest Resistance in Agriculture: An Economic Perspective,” Biotechnology, Environmental Policy, and Agriculture: a workshop on the management of the impacts of biotechnologies, Rome, May 2000.

### **Bradley Ruffle**

“Experimental Economics,” Indian Institute of Management, Ahmedabad, India, February 2000.

“Inferring Buyer Strategies to Determine the Effect of Buyer Concentration on Pricing” (with Jim Engle-Warnick), European Association for Research in Industrial Economics, Lausanne (September 2000); Economic Science Association meetings, Tucson AZ (September 2000); Amsterdam (October 2000).

### **Aner Sela**

First World Congress of the Game Theory Society, Bilbao, July 2000

### **David Wettstein**

“All-Pay Auctions with Variable Rewards” (with T. Kaplan, I. Luski and A. Sela), International Conference on Game Theory in Stony Brook, New York, 2000.

“Bidding for the Surplus: A Non-cooperative Interpretation of the Shapley Value” (with D.P. Castrillo), International Conference on Game Theory, Stony Brook, New York, 2000, and First World Congress of the Game Theory Society, Bilbao, Spain, 2000.

## **V. PUBLICATIONS, 1999-2000** (names of Center members appear in capital letters)

ARNON, A and SPIVAK, A. (1999) "Free (and Not So Free) Banking Theories Among the Classical or Classical Forerunners of Free Banking and Why They Have Been Neglected," *History of Political Economy* 31(1):79-107.

ARNON, A. (1999) “The Links Between the Israeli and Palestinian Economies Since 1967: Between Imposed Integration and Voluntary Separation.” In: H. Gordon (ed.) *Looking Back at the Six Day War*, Praeger.

ARNON, A. (2000) “Sovereignty and Economic Development: From the Interim to Permanent Arrangements between Israelis and Palestinians,” *The Economic Quarterly* (47(1):33-47.

ARNON, A. and WEINBLATT, J. (2000) “Sovereignty And Economic Development: The Case of Israel and Palestine,” *The Economic Journal* (forthcoming).

Lieberman, O., BEN-ZION, U. and Hauser, S. (1999) “A Characterization of the Price Behaviour of International Dual Stocks: An Error Correction Approach,” *Journal of International Money and Finance* 18(2):289-304.

BEN-ZION, U., Roni Hibshush, R. and Uriel Spiegel, U. (1999) "The Optimal Face Value of a Discount Coupon," *Journal of Economics and Business* 51(2):159-174.

Mador, G., Sonsino, D. and BEN-ZION, U. (2000) "On Complexity and Lotteries' Evaluation – Three Experimental Observations," *Journal of Economic Psychology* 21(6):625-637.

Hauser, S., Rozenkranz, M., BEN-ZION, U. and Yaari, U. (2000) "International Hedge of Fixed-Income Contract," *Journal of Portfolio Management* (forthcoming).

EINY, E., Moreno, D. and Shitovitz, B. (1999) "The Asymptotic Nucleolus of Large Monoplist Market Games," *Journal of Economic Theory* 89:186-206.

EINY, E., Moreno, D. and Shitovitz, B. (2000) "The Bargaining Set of Large Economies with Differential Information," *Economic Theory* (forthcoming).

EINY, E. and Shitovitz, B. (2000) "Private Value Allocations of Large Economies with Differential Information," *Games and Economic Behavior* (forthcoming).

EINY, E., Moreno, D. and Shitovitz, B. (2000) "On the Core of an Economy with Differential Information," *Journal of Economic Theory* (forthcoming).

EINY, E., Moreno, D. and Shitovitz, B. (2000) "Competitive and Core Allocations of Large Economies with Differential Information," *Economic Theory* (forthcoming).

GRADSTEIN, M. (2000) "An Economic Rationale for Public Education: The Value of Commitment," *Journal of Monetary Economics* 45:463-474.

JUSTMAN, M. and GRADSTEIN, M. (2000) "Human Capital, Social Capital and Public Schooling," *European Economic Review* (forthcoming).

GRADSTEIN, M. and JUSTMAN, M. (2000) "Human Capital, Social Capital, and Public Schooling" *European Economic Review* (forthcoming).

Horowitz, E., Berry, O. Dori, U., JUSTMAN, M., Levite, I. and Melnik, R. (1999) "Growth and Productivity." In: A. Ben-Bassat, (ed.) *Economic Growth Renewal*. Jerusalem: Israel Democracy Institute, pp. 95-115 (in Hebrew).

JUSTMAN, M., ZUSCOVITCH, E., Porath Y. and Gottesman, O. (1999) "Evaluation of Israel's Industrial R&D Subsidy Program, 1986-94." Ministry of Industry and Trade, 190 pp. (in Hebrew).

JUSTMAN, M. and Thisse J.-F. (2000) "Local Public Funding of Higher Education when Skilled Labor is Mobile." *International Tax and Public Finance* 7: 247-258.

JUSTMAN, M. and GRADSTEIN, M. (2000) "The Democratization of Political Elites and the Decline in Inequality in Modern Economic Growth." In: E. Brezis and P. Temin (eds.) *Elites, Minorities and Economic Growth*, Amsterdam: Elsevier.

JUSTMAN, M (2000) "The Transformation of Israel's Industrial Structure, 1985-98." In: A. Ben-Bassat (ed.) *The Changing Israeli Economy: Studies in Honor of Michael Bruno*, Am Oved Publishing, forthcoming.

KAPLAN, T. and WETTSTEIN, D. (1999) "Cost Sharing: Efficiency and Implementation," *Journal of Mathematical Economics* 32:489-502.

KAPLAN, T. and WETTSTEIN, D. (2000) "Surplus Sharing with a Two Stage Mechanism," *International Economic Review* 41:399-409.

KAPLAN, T. and WETTSTEIN, D. (2000) "The Possibility of Mixed-Strategy Equilibria with Constant-Return-to-Scale Technology under Bertrand Competition," *Spanish Economic Review* 2:65-71.

LUSKI, I. and WEINBLATT, J. (1999) "A Dynamic Analysis of Fiscal Pressure and Demographic Transition," *Applied Economics* (forthcoming).

REGEV, U. (1999) "The Interaction of Externalities and Uncertainty in Pest Management Strategy." In: Cleve Willis and David Zilberman (eds.) *Economics of Chemical Use: Essays in memory of Caroline Harper*, Clewer Publishing. House. (forthcoming).

RUFFLE, B. (1999) "Gift Giving with Emotions," *Journal of Economic Behavior and Organization* 39(4):399-420.

RUFFLE, B. (2000) "Some Factors Affecting Demand Withholding in Posted Offer Markets," *Economic Theory* 16(3): 529-544.

RUFFLE, B. and Tykocinski, O. (2000) "The Deadweight Loss of Christmas: Comment," *American Economic Review* 90(1): 319-324.

SELA, A. (1999) "Fictitious Play in 'One-Against-All' Multi-player Games," *Economic Theory* 14:635-651.

SELA, A. (2000) "Fictitious Play in 2x3 Games," *Games and Economic Behavior* 31:152-162.

Moldovanu, B. and SELA, A. (2000) "The Optimal Allocation of Prizes in Contests," *American Economic Review* (forthcoming).

Bar-Niv, R. and SPIVAK, A. (1999) "Deductibles and Wealth: The Case of Flood Insurance," *Journal of Insurance Losses* (forthcoming).

SUSSMAN, O. (1999) "Language and Contract," *Journal of Institutional and Theoretical Economics* (forthcoming).

T. KAPLAN and D. WETTSTEIN (1999) "Cost Sharing: Efficiency and Implementation," *Journal of Mathematical Economics* 32:489-502.

WETTSTEIN, D. AND Castrillo, D.P. (2000) "Implementation of Bargaining Sets via Simple Mechanisms," *Games and Economic Behavior* 31:106-120.

T. KAPLAN and D. WETTSTEIN (2000) "The Possibility of Mixed-Strategy Equilibria with Constant>Returns-to-Scale Technology under Bertrand Competition," *Spanish Economic Review* 2:65-71.

T. KAPLAN and D. WETTSTEIN (2000) "Surplus Sharing with a Two Stage Mechanism," *International Economic Review* 41, 399-409.

D.P. Castrillo and D. WETTSTEIN (2000) "Bidding for the Surplus: A Non-Cooperative Interpretation of the Shapley Value," *The Journal of Economic Theory* (forthcoming).

**VI. WORKING PAPER SERIES 1998/99/00 AND  
ABSTRACTS OF RECENT WORKING PAPERS  
(issued from the Monaster Center for Economic Research)**

**Discussion Paper Series 1998**

- 98-1 H. Shalit and S. Yitzhaki, "Estimating Beta."
- 98-2 D. Perez-Castrillo and D. Wettstein, "Implementation of Bargaining Sets via Simple Mechanisms."
- 98-3 B. Ruffle and O. Tykocinski, "Unwrapping the Deadweight Loss of Gift Giving."
- 98-4 E. Einy and B. Shitovitz, "Equivalence of Value and Competitive Allocations in Large Economies with Differential Information."
- 98-5 A.P. Gutierrez, U. Regev and D. Zilberman, "Examining God's Utility Function: Why Nature Knows How to Manage Renewable Resources but Humans Might Not."
- 98-6 M. Gradstein, "An Economic Rationale for Public Education: The Value of Commitment."
- 98-7 M. Gradstein, "Optimal Taxation and Fiscal Constitution."
- 98-8 D. Cohen-Zada and M. Justman, "The Effect of Income Distribution on the Public/Private Mix of Educational Services: A Theoretical Model and Evidence from the U.S."

- 98-9 A. Arnon and A. Spivak, "Economic Aspects of the Oslo Peace Process: The Disappointing Consequences of an Incomplete Agreement."

### Discussion Paper Series 1999

- 99-1 A. Avishur and Y. Tsoref, "On the Predictability of Kibbutz Financial Distress: A Principal Component Analysis with Bootstrap Confidence Intervals."
- 99-2 Y. Tsur and A. Zemel, "Sustainable Water Policies and the Optimal Development of Desalination Technologies."
- 99-3 E. Einy, D. Moreno and B. Shitovitz, "Fine Value Allocations in Large Exchange Economies with Differential Information."
- 99-4 E. Einy, D. Moreno and B. Shitovitz, "The Bargaining Set of a Large Economy with Differential Information."
- 99-5 E. Einy, D. Moreno and B. Shitovitz, "On the Core of an Economy with Differential Information."
- 99-6 O. Hochman, D. Pines and B. Ruffle, "The Agglomeration of Clubs."
- 99-7 D. Perez-Castrillo and D. Wettstein, "Bidding for the Surplus: A Non-Cooperative Approach to the Shapley Value."
- 99-8 B. Moldovanu and A. Sela, "The Optimal Allocation of Prizes in Contests."
- 99-9 M. Gradstein and M. Justman, "Public Schooling, Social Capital and Growth."
- 99-10 T. Kaplan and B. Ruffle, "The Self-Serving Bias and Beliefs about Rationality."
- 99-11 E. Einy, D. Moreno and B. Shitovitz, "Information Advantage in Cournot Oligopoly."
- 99-12 A. Preminger and H. Shalit, "Normality is a Necessary and Sufficient Condition for OLS to Yield Robust Results."
- 99-13 A. Arnon and J. Weinblatt, "Sovereignty and Economic Development: The Case of Israel and Palestine."
- 99-14 D. Sonsino, U. Benzion and G. Mador, "The Complexity Effects on Choice with Uncertainty — Experimental Evidence."
- A. Spivak, "Pension Reform in Israel." (in Hebrew).

M. Gradstein and M. Justman, "Education, Social Cohesion, and Economic Growth."

### **Discussion Paper Series 2000**

00-1 E. Einy, R. Orzach and A. Sela, "Dominance Solvability of Second-Price Auctions with Differential Information."

00-2 D. Cohen-Zada and M. Justman, "Demand for Public and Private Education: Theory and Evidence."

00-3 E. Einy, R. Orzach and A. Sela, "Information Advantage in Second-Price Auctions."

M. Justman, "Lerner's Index Meets the Coase Conjecture."

T. Kaplan, I. Luski, A. Sela and D. Wettstein, "All-Pay Auctions with Variable Rewards."

H. Shalit and S. Yitzhaki, "Solving the Portfolio Allocation Puzzle."

00-7 B. Moldovanu and A. Sela, "Patent Licensing to Bertrand Competitors."

M. Justman, "Transitional Dynamics of Output, Wages and Profits in Innovation-Led Growth: A General Equilibrium Analysis."

D. Pérez-Castrillo and D. Wettstein, "In Whose Backyard? A Generalized Bidding Approach."

U. Ben-Zion, A. Hibshoosh and U. Spiegel, "Price Discrimination by Coupons Restriction."

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

#### **DOMINANCE SOLVABILITY OF SECOND-PRICE AUCTIONS WITH DIFFERENTIAL INFORMATION**

E. Einy, R. Orzach and A. Sela

Discussion Paper No. 00-1

We study a class of common-value second-price auctions with differential information. This class of

common-value auctions is characterized by the property that each player's information set is connected with respect to the common value. We show that this class of second-price auctions is dominance solvable.

### **DEMAND FOR PUBLIC AND PRIVATE EDUCATION: THEORY AND EVIDENCE**

D. Cohen-Zada and M. Justman

Discussion Paper No. 00-2

We use an extension of previous models of education finance to recover the parameters of household utility from a regression of private enrolment on mean income and income homogeneity, controlling for religious composition, cost factors, and Tiebout sorting. We find an efficiency advantage of 26% for private schooling; an income elasticity of 0.98; and an elasticity of substitution of  $-1.20$ , corresponding to a price elasticity of education spending of  $-0.14$ . This indicates a median-income political equilibrium, though with little income-related variation in the desired level of taxes within communities. Application of our findings to school vouchers reveals their potential advantages.

### **INFORMATION ADVANTAGE IN SECOND-PRICE AUCTIONS**

E. Einy, R. Orzach and A. Sela

Discussion Paper No. 00-3

We study a general model of common-value second-price auctions with differential information. We show that if one of the bidders has an information advantage over the other bidders, then he has a dominant strategy that is the conditional expectation of the common value with respect to his information field. Furthermore, when this bidder uses his dominant strategy, other bidders cannot make a profit.

### **LERNER'S INDEX MEETS THE COASE CONJECTURE**

Moshe Justman

Discussion Paper No. 00-4

Lerner's index, the markup of price over marginal cost, is the standard measure of market power. It is defined, however, in static terms that cannot fully describe competitive conditions in markets for durable goods, in which current sales vie with sales in later periods-as implied by the Coase conjecture. The present paper imbeds Lerner's index in a dynamic context that incorporates this intertemporal dimension of competition. In this context, the time-consistent steady-state markup is decreasing in the temporal elasticity of demand, the degree of durability and the monopoly's cost of credit, and increasing in buyers' credit costs.

**ALL-PAY AUCTIONS WITH VARIABLE REWARDS**

T. Kaplan, I. Luski, A. Sela and D. Wettstein

Discussion Paper No. 00-5

We study all-pay auctions with variable rewards under incomplete information. In standard models, a reward depends on a bidder's privately known type; however, in our model it is also a function of his bid. We show that in such models there is a potential for paradoxical behavior where a reduction in the reads or an increase in costs may increase the expected sum of bids or alternatively the expected highest bid.

**SOLVING THE PORTFOLIO ALLOCATION PUZZLE**

H. Shalit and S. Yitzhaki

Discussion Paper No. 00-6

This note looks at the rationale behind popular advice on portfolio allocation among cash, bonds and stocks and proposes a solution to the asset allocation puzzle posed by Canner, Manikiw and Weil (1997) who show that popular advice contradicts financial theory. We offer a rational model based on stochastic dominance to demonstrate that most popular advice portfolios belong to the efficient set for all risk averse investors. Hence, we cannot come to the conclusion that investment bankers are offering bad advice. On the contrary, our results show that advisors, acting as agents for numerous clients, recommend portfolios that are efficient and consistent with expected utility maximization.

**PATENT LICENSING TO BERTRAND COMPETITORS**

B. Moldovanu and A. Sela

Discussion Paper No. 00-7

A cost-reducing process innovation protected by a patent is sold to one of several firms engaged in price competition. There is incomplete information about production costs. Our main result is that classical auctions mechanisms do not allocate the innovation efficiently. The inefficiency result also extends to "patent races" frameworks.

## **TRANSITIONAL DYNAMICS OF OUTPUT, WAGES AND PROFITS IN INNOVATION-LED GROWTH: A GENERAL EQUILIBRIUM ANALYSIS**

M. Justman

Discussion Paper No. 00-8

Macroeconomic models that depict technological change as a progression of steady states are poorly suited to describing the singular diffusion of new technological paradigms such as the current revolution in information technologies. The present paper focuses instead on the transition between steady states of innovation-led growth, in terms of a model in which growth is triggered by the exogenous appearance of a new technological paradigm, and fueled by a wave of endogenous, stochastic, incremental innovations that implement the new paradigm. The analysis demonstrates existence of a unique Markov-perfect equilibrium in contingent consumption, production and development strategies, and shows that its transition dynamics conform in expected values to commonly observed empirical patterns. These include an initial productivity decline, followed by a greater increase in productivity; and “creative destruction: that reduces the market value of traditional, incumbent firms while creating new value in innovative entrants.

## **IN WHOSE BACKYARD? A GENERALIZED BIDDING APPROACH**

D. Pérez-Castrillo and D. Wettstein

Discussion Paper No. 00-9

We analyze situations in which a group of agents (and possibly a designer) have to reach a decision that will affect all the agents. Examples of such scenarios are the location of a nuclear reactor or the siting of a major sport event. To address the problem of reaching a decision, we propose a one-stage multi-bidding mechanism where agents compete for the project by submitting bids. All Nash equilibria of this mechanism are efficient. Moreover, the payoffs attained in equilibrium by the agents satisfy intuitively appealing lower bounds.

## **PRICE DISCRIMINATION BY COUPONS RESTRICTION**

U. Ben-Zion, A. Hibshoosh and U. Spiegel

Discussion Paper No. 00-10

In this paper we show how the use of a restricted number of coupons in the presence of different types of customers is an effective means of implementing a price discriminating policy. Hence, firm profits can be increased even when traditional price discrimination is forbidden.

## VII. RESEARCH SUMMARIES

The following presents brief summaries of the research interests and activities of Center members:

### **Arie Arnon**

Prof. Arnon continues to be actively involved in research on Peace in the Middle East. He is also working on a research project entitled "Free (and not so free) Banking Theories." Prof. Arnon's research interests primarily deal with the history of economic thought, macro- economics, monetary economics and banking, the Israeli economy, privatization and the Arab economies.

### **Uri Ben-Zion**

Prof. Ben-Zion'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.

### **Tuvia Blumenthal**

Prof. Blumenthal specializes in the Japanese economy and economic development. His current research projects are directed toward the Japanese education system, economic effects of the introduction of industrial robots, and Japanese management practices.

### **Dov Chernichovsky**

Dr. Chernichovsky conducts research on health economics with a particular focus on health policy in societies under social, political, and economic stress. He works extensively with the Russian health system.

### **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, as well as public growth promoting policies. His current project (jointly with M. Justman) focuses on growth promoting policies as implied by actual political mechanisms.

### **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.

### **Moshe Justman**

Prof. Justman's activities focus on the political economy of education, growth, inequality and

mobility. He also does work on technology policy and on regional development.

### **Yaakov Khazanov**

Dr. Khazanov does research on the impact of economic growth on nationalist movements.

### **Israel Luski**

Prof. Luski's research interests deal with the following areas of industrial organization:

1. R&D and patent policy: Optimal strategies for R&D investment.
2. The economics of multinational corporations: The economic impact of multinational on the host country; Optimal incentives policy.

Nonprofit organizations: Economic efficiency of nonprofit organizations, government policy toward nonprofit organizations.

### **Uri Regev**

Prof. Regev's research focuses on environmental implications of pest management policies which involve issues of environmental sustainability and the ability to maintain a quality life style in a world governed by a population explosion and increasing environmental pressures. Measurement of environmental amenities and mechanism design problems in regulation of economic activities that affect the environment are the subjects of a prospective Ph.D. project to be undertaken at the Center.

### **Bradley Ruffle**

Bradley Ruffle is 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.

### **Aner Sela**

Dr. Sela's research concerns game theory, learning, auction theory, and industrial organization.

### **Haim Shalit**

Prof. Shalit's research is directed toward the use of the mean-Gini model and Conditional Stochastic Dominance in financial markets. His work on Marginal Conditional Stochastic Dominance (MCSD) constructs a portfolio of stocks that improves upon the market portfolio. Prof. Shalit succeeded in developing a statistical procedure for MCSD that demonstrates the dominance of the new portfolio. In addition, his work on the mean-Gini model shows how the standard procedure of Ordinary Least Squares used to estimate systematic risk is not robust with respect to wide market fluctuations.

**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 currently serves as chairman of the committee at the Ministry of Finance that is in charge of defining a new curriculum for insurance agents.

**Oren Sussman**

Dr. Sussman's main research interests focus on two topics: i) macroeconomics and finance and (ii) contract-standardization and institutional change.

**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 Dean of the Faculty of Humanities and Social Sciences.

**David Wettstein**

Dr. Wettstein's research interests focus on cost allocation, innovation and the patent system, implementation of cooperation solution concepts (the Shapley value, bargaining sets), and auctions.