GLOBAL DEVELOPMENT AND ENVIRONMENT INSTITUTE WORKING PAPER NO. 03-02

Macroeconomics for the 21st Century

Neva R. Goodwin

February 2003

Tufts University Medford MA 02155, USA http://ase.tufts.edu/gdae

Macroeconomics for the 21st Century

Neva R. Goodwin neva.goodwin@tufts.edu

Abstract

Macroeconomic theory has not yet come to grips with major issues of the twenty-first century. These include environmental pressures, demographic changes, the size, structure, and power of multinational corporations, and growing economic inequality. Existing macroeconomic theory also does not deal adequately with normative issues, focuses excessively on market solutions, assumes that a single macroeconomic theory can apply to all situations, and ignores issues concerning the scale of economic activity and the speed of change.

Macroeconomic theory also does not distinguish between final and intermediate goals, and fails to take account of the implications of hedonic psychology for a theory of economic well-being. It implicitly accepts a consumerist ethos according to which increased consumption is treated as a final goal. It is also based on a competitive theory of markets, which is out of step with the contemporary reality of corporate power.

For the industrialized world, macroeconomic theory needs to address the issue of whether it is possible, in the absence of continual growth, for an economy to promote human well-being. For the developing world, the prioritization of economic goals such as universal literacy and public health service should be an important element of macro theory. The diverging demographics of developed and developing nations pose further important macroeconomic issues regarding health care costs, tax burdens, immigration, and savings and investment rates.

Evaluation of ecosystem carrying capacity, and distinctions between essentials and luxuries, should be important elements of a macro theory that is sensitive to environmental impacts. In addition, the rate of economic growth needs to be compared to the rate at which ecosystems can adapt to large scale, and sometimes irreversible, changes.

Northampton, Massachusetts: Edward Elgar, forthcoming 2003).

2

¹ This paper will appear as the Preface to the book *New Thinking in Macroeconomics: Social, Institutional, and Environmental Perspectives* (Jonathan M. Harris and Neva R. Goodwin eds., Cheltenham U.K. and

Macroeconomics for the 21st Century

I. Introduction

Macroeconomic theory has been left behind by some critical facts and trends that are emerging in the 21st century. One large set of discordant facts may be summarized as the limits of the Earth's carrying capacity in relation to both human demands for resources and anthropogenic emissions of destructive pollutants. Other areas in which macro theory, and economic theory in general, have persistently ignored important concerns include the effects of demographic changes; the size, structure and power of multinational corporations; and, most importantly, the harm to social and individual well-being that results from severe and growing economic inequality.

There is nothing new in the equity-related disconnect between the priorities that seem required by reality and the priorities evidenced in economic theorizing. In contrast, a dramatic novelty of the 21st century is the growing consensus regarding the environmental perils associated with continuing economic behavior, and economic theory, as usual. The tectonic shifts that will be required to adjust to this newly realized situation may also have the salutary effect of reopening the social questions that have been for too long the stepchildren of economic theory.

Several characteristics of standard macroeconomic theory have allowed it to continue ignoring the old social problems as well as the growing environmental problems. All of the following characteristics will need to be altered if macro theory is to play a useful role in explaining national and global economic realities, and in supporting policies that lead to increased human well-being.

- 1. The theory does not address openly several essential questions: Is macroeconomic theory intended to explain and also to guide the macroeconomic system? If so, to what end? What directions of change, or what preferred state of the economy, are implied in the understandings and the guidance afforded by macroeconomic theory?
- 2. Standard macro theory pays too little attention to problems that cannot or will not be resolved through markets.
- 3. It assumes that a single macroeconomic theory can apply to all situations, ignoring the increasingly critical differences between understandings, goals and policies appropriate to developed vs. developing countries.
- 4. It ignores issues concerning the total scale of human economic activity, and the speed of change.

This is by no means a complete list. Generalizing further, one could point to how economic systems are presented as though they existed in a vacuum, instead of being embedded in physical contexts of ecology, technology, and the built environment; and in

social contexts of history, culture, institutions, politics, ethical and behavioral norms, etc. Or one could note the impediments to change that arise through traditions of describing production in terms of functions whose significant inputs are capital and labor, giving little attention to natural resources in general, and failing to distinguish among resources in terms of their salience for the economy, their relation to technological change, or the ecological side-effects of their use. However, the list above is a sufficient starting point for examining some of the major requirements for fundamental change if macroeconomic theory is to grapple effectively with the most significant national and global economic issues of the 21st century.

II. The Goals of the System, and of the Theory

The first item on the list is the most fundamental to the failure of macroeconomic theory to change with a changing world. At the core of economic theory in the West, as it was formally enunciated and taught throughout the second half of the twentieth century, was a claim to be a purely positive science. This claim required that economists overlook a virtually unarguable belief, that an economic system should (normative statement) be designed to work for human well-being in the present and the future. If macroeconomic theory were to be reconceptualized, taking the acceptance of this belief as a starting point, it would then become reasonable to take the next step, and require of economic theory that, at minimum, it assist its users to recognize whether the economic system on which they depend is moving toward, or away from, the goal of contributing to human well-being.

The essential first step, if economic theory is to accept the reasonable normative assumptions just suggested, is to make the distinction between final and intermediate goals. Increased consumption and economic growth as currently measured are both best understood as intermediate goals; that is, they are not simply good in themselves, but are desirable to the extent that they lead to what are recognized as final goals. Efficiency, often cited as another economic goal, is also intermediate: a means to the ends of increased production and consumption. If economic theory is to guide people toward the creation of economic systems that will promote well-being, it must first stop treating efficiency, consumption and economic growth as final goals.

What, then, are the final goals? The term, 'well-being,' is increasingly being used as a short-hand expression for whatever we wish to include in our final goals.² People will to

² To give just a few examples, this terminology is used in the writings of Amartya Sen and others who are building on the United Nations' work on 'human development.' It is the essential term in the new field of hedonic psychology, described below. It has been central to the work of the Global Development And Environment Institute (www.gdae.org), from its 6-volume series, Frontier Issues in Economic Thought (Island Press, 1995-2001) through its introductory textbook, Microeconomics in Context (forthcoming, Houghton Mifflin). (Final goals are discussed in the first chapter of Microeconomics in Context.) Why replace the older economic term, 'utility,' with 'well-being'? The reasons have to do with the history of usage of these words. 'Utility' has been accepted as a black box: a word that points to whatever is wanted by the person doing the wanting. Its usefulness has depended upon its not being

some extent differ on what these should include, but there is widespread convergence on a number of basic elements such as security, happiness, freedom, fairness, and participation. A critical source of flexibility, that would permit appropriate change in a changing world, is lost to standard models that have not invited assessment of their success against the broad goal of human well-being, but only against the intermediate goals of efficiency in production, increased consumption, and economic growth as currently measured.

It might be argued that these intermediate goals are indeed means to the ends, at least, of security and happiness; but this is not always true. Security implies an ability to shape one's own future, and/or reasonable confidence that the aspects of the future that are beyond ones control will nevertheless be as benign as possible. Only the rich, in all countries, have a substantial ability to shape their own futures. For the rest – and even, to some extent, for the rich – a secure future depends on the larger social and physical environment. On the social side, it requires a caring society that will assist individuals who suffer from catastrophic illness or indigent old age. On the physical side, it requires a healthy ecosystem, not one in which there is increasing likelihood of epidemics, pandemics and newly untreatable diseases; of shortages of critical resources, including food and water; of increasingly dangerous and disruptive weather extremes; or of healththreatening environmental pollution. Thus an economic theory that took security seriously as a goal would adapt more quickly to novel stresses and dangers. In the context of the early 21st century, that means that it would be less strongly market-oriented than the theories with which we are familiar: it would give relatively more attention to the social provision of the essentials for security on both an individual and a society-wide basis.

As for the relationship of wealth and consumption to happiness, the first thing to be said is that neither macro nor micro-economics has yet absorbed the impacts that will result from one of the newest social science disciplines, hedonic psychology. Evolving from work begun in the 1950s by Richard Easterlin, and carried forward by Daniel Kaheneman (recently recognized with a Nobel award), Ed Diener, and others, the extensive surveys and scrupulously careful psychological analyses that are the grounding for this area of study have produced several findings with major significance for economics (Kahneman et al, 1999). These include:

1. The largest bundle of determining factors, accounting for nearly half the difference in average happiness among individuals, are inherited personality traits.

defined. As it has become clear to some thinkers that economics needs to be concerned with actual human goals, a different word was required: one that could be taken to include what people want, but that invites investigation into both what it is that people do, actually, want, as well as what they will be glad to have if they have it. 'Well-being' is being employed to fill this need.

- 2. The majority of the rest of the variation among individuals is accounted for by childhood circumstances and ongoing relationships (with friends, family, etc.).
- 3. People who cannot be sure of having the basic requirements for survival are likely to be at the relatively unhappy end of the spectrum. (Here we see that security, while often thought of as a final goal, can also serve as intermediate to the goal of happiness.)
- 4. However, for people who are accustomed to living above poverty, the influence of wealth or consumption on their happiness is largely a relative matter. To the extent that their comparison group is their neighbors, this is a zero sum game; only some people can derive their happiness from superior wealth, while others must suffer from having, relatively speaking, less. As the globalized world encourages ever-greater proportions of the human population to take wealthy Americans as their comparison group (e.g., on the TV show, Dallas), there is reason for ever-growing dissatisfaction.
- 5. The comparison may also be temporal, a matter of whether one is on a rising or a falling trajectory in terms of wealth and income. It is clear that happiness is positively affected as people come up in the world. However, one of the strong findings of hedonic psychology is that people adjust fairly quickly to changed circumstances. A few years after having attained better (or worse) living circumstances, an individual is likely to return to the same base condition of happiness that obtained before the rise (or fall).

What does this mean for macroeconomics? It suggests that economic growth has much to contribute when a population is living below a level of basic needs satisfaction, but less – indeed, it is possible to imagine circumstances where it has nothing – to contribute to the happiness aspect of well-being above that level. Thus, for relatively wealthy populations, economic theory should readjust the balance of its concerns, giving less weight to the issues of efficiency, growth and consumption, at least insofar as these concerns are justified as contributing to the happiness aspect of well-being, and giving more weight to the issue of equity (Veenhoven, 1993; Diener and Oishi, 2000). It should focus somewhat less on the well-being that is expected to result from individual spending, and more on what may be achieved through social investments (Diener 1995a; Diener 1995b; Frank, 1999). These conclusions are strengthened as we consider (more briefly) the other aspects of well-being that were singled out above.

The freedom of choice which, in certain respects, is often greater in market systems than in other familiar economic systems, is a freedom to choose what the market provides. However the value of this kind of freedom in an individual's life depends greatly on the extent to which the economic system is characterized by fairness and participation.

In the economic context, fairness is often translated as equity. It includes questions about whether individuals get a fair start in life, receiving the kind of nurturing that will enable them to develop their productive capacities as well as their capacity for happiness. The issue of equity also directs us to consider the opportunities that people face when they seek productive employment: are they favored by birth and connections, disadvantaged

by skin color, gender, or accent? And how are people compensated for the work they do? Considering, for example, the relative pay of a financier or a CEO on the one hand, vs. a teacher or nurse on the other, what do these differences reflect, and are they fair? How much is the value of the freedom to choose in the market mitigated by the inequalities in purchasing power that result from the cascade of life experiences, starting with pre-natal and early childhood care and nutrition, and ending up in highly differentiated earning powers?

When the value of participation is well realized, it may sometimes balance the curtailment of market freedom for those members of society who have less purchasing power. This balance is achieved when the one-person-one-vote system allows people to express their desires for basic needs such as health care and education, which may be provided outside of the market, and not subject to the one-dollar-one-vote restrictions on who can receive these basic needs.

III. The Theoretic View of Markets

The second reason, listed above, for the self-imposed limitations of contemporary macroeconomic theory, was the extent to which the standard models are trapped in the functional logic of the markets whose ideal form they describe. Modern markets are dominated by corporations – increasingly multinational or global in their reach – which are motivated by a constant need to expand their sales. It is probably not an exaggeration to say that this pressure (itself not thoroughly understood or represented within contemporary economic theory), more than any other consideration, drives the global economic system. Among other things, it is a major force behind the consumerist ethos which appears to be in radical conflict with most realistic possibilities for an accommodation between economic systems and the ecological realities and limits they are encountering.

Questions about the kinds of learning that are required in order to derive well-being from the choices and the temptations offered in a market economy (Scitovsky, 1976) were heard less and less often in economics as the last century went on. More obviously economic questions – about who is in charge of corporations and what are the motives of those in charge – have been explored by such critics of the system and the theory as John Kenneth Galbraith (Galbraith, forthcoming – additional cites for earlier works?), but they are generally swamped by mainstream assumptions. In most standard models it is simply assumed that the shareholders, as owners, have the moral and effective right to direct the corporation to set maximization of return as the highest, perhaps the only, priority (Friedman, 1962).

The contemporary reality is far otherwise. The ownership of publicly traded shares is divided among individuals and institutional owners. 'Those who hold shares directly (50% of all shares in America, 20% in Britain) are individually so insignificant as to be virtually powerless.' The institutions that hold the remaining half of U.S. stocks and 80% of U.K. stocks have traditionally acted as though they, also, are powerless. (Monks and

Sykes, 2002, p. 10) However pension funds, which represent roughly one-quarter of all share-ownership in the U.S. (including a sizeable proportion of shares in foreign-based companies) have begun to recognize that their ownership decisions may affect not only their immediate portfolio returns but also the long-term health of the economy and society.

This topic is one entry point into the larger question of the purpose of corporations. '[U]ntil 15 years ago it ... was accepted that corporations existed to serve the interests of society, and they derived their legitimacy from that object' (Ibid., p 22). Given that the economic size and the political and economic power of many corporations is equal to or greater than many national governments, the role of corporations in serving or dis-serving social goals has become an issue of high importance. However, since macroeconomic theory laid aside the question of what are the interests of society it has paid little attention to how modern corporations might serve these goals. Instead it has implicitly and explicitly accepted the corporations' own goal of growth, allowing this to trump all others.

The foregoing suggests that, despite its 20th century positivist ambitions, the currently dominant theory does contain normative elements. However they have not been admitted openly, and therefore their consequences have not been thought through. We inherit a dominant macroeconomic theory that in effect accepts the goals set by corporations (the actors and the theory both aim to maximize consumption), and gives too little attention to questions concerning the social and environmental impacts of corporations.

IV. Different Macro Theory for Different Circ umstances

Hedonic psychology suggests that neither GNP growth nor increased consumption can always be regarded as contributing to the achievement of the final goals of well-being. Most generally, consumption that fulfills basic needs or that promotes health, education, and social welfare, should be treated differently from consumption of luxury goods.

In the industrialized world goals to maintain or improve current living standards will need to accommodate significant changes in the content of output and consumption. (The shift from goods to services, called 'dematerialization' or 'ephemeralization' is already underway.) Macroeconomic theory has not even broached the essential question of whether it is possible, in the absence of continual growth, for an economy to promote human well-being in the present and the future. A theory that could address this question would need to reexamine many assumptions, including, to start with, assumptions about relationships among the following variables: work, jobs, leisure, income, well-being.

There are different requirements for theory for the developing world, where increased material consumption continues to be an essential intermediate goal, but one to be pursued with a deeper understanding, and better prioritization, regarding the different ways in which an increase in wealth can contribute to well-being. It is becoming evident that a very poor population gains more from broad achievement of elementary and middle school literacy than from the creation of advanced degree programs for a few; or

from widely available public health services than from a few hospitals offering the most modern technology to a tiny segment of the population.

One of the most striking – to some, terrifying – aspects of the macroeconomic and macrosocial differences between First and Third World countries lies in the area of demographics. In most industrialized countries population growth rates are now below the replacement rate. The decline in births to citizens of countries such as Italy, the Netherlands, or Japan is accompanied by increased longevity. The combined trends mean that the shape of the age profile of these countries has changed dramatically, from the pyramid of a growing population, in which the youngest age cohorts are the largest, to a more rectangular shape, in which the number of retirees is now, and in the foreseeable future, growing relative to the active workforce. By contrast, many Third World countries maintain the demographic pyramid associated with the first industrial revolution, in which the bulge is at the youngest ages.

Each of these situations has serious macroeconomic implications; and they are inextricably interrelated. The industrialized countries face the likelihood of all or most of the following: growing costs for health and other kinds of elderly care, higher tax burdens on the economically active group, lower savings rates, lower investment rates, and a decline in asset prices. (Pryor, 2002) The developing countries are already in need of more investment than they can attract; this may be exacerbated by lower savings rates in the industrialized countries. They suffer a shortage of skilled workers who can support the large youth generation (this is especially true in countries where AIDS is decimating the cohort of young adults; China, with its low birth rate, is the great exception, even with the growing threat of an AIDS epidemic). However, given low domestic wages and the growing pull-factor of the need for more workers in the First World, the drain on Third World talent and energy, already significant, will likely continue to grow.

The 'guest workers' in the more developed countries encounter, and by their numbers help to create, social stresses, including confusion of national identity and ethnic hostilities. At the same time, they themselves suffer mistreatment, depression, and the disruption of families and communities. The market solution – let the workers follow the wages, around the world if necessary – is debated, and often resisted, on a variety of well-being grounds which require more attention in economic theory.

For the reasons just listed, and many others, diverging demographics heighten the differences in First and Third World countries, requiring significant differences in the emphasis, the policy results, and even in some of the important assumptions about facts and goals, in the macroeconomics that are taught and applied in the 21st century.

V. The Scale of the Economy and the Pace of Change

Like growth and consumption, overall scale is a relative matter: more may well be better up to the point where the balance between the local and/or global scale of human activities goes beyond the carrying capacity of the relevant ecosystem. Past that point,

more can be worse. The final item on the initial list of general critiques of standard theory was that the totality of the scale of human economic activity appears nowhere in the theory: not as either an intermediate or a final goal, nor even as a policy variable – except as it is implied in a pervasive assumption that more is always better.

This assumption, with an associated goal of always increasing consumption, dovetails with the imperative that appears (without theoretical justification) to drive major corporations: 'grow or die.' As suggested earlier, with its normative base hidden and unthought-through, standard theory has fallen into the trap of allowing its goals to follow the goals of corporations. While corporations are, in many ways, the most powerful actors in modern economies, a decision to let them set the goals of either economic theory or the general economic system is a decision that should not be made by default.

In contemporary economics it is rare to find attention to the distinction between consumption of essentials vs. luxuries, or to the distribution of consumption expenditures. A recognition of environmental limits implies that the overall economic activities of the human species must be understood in the context of present and future effects on resources and environmental services. At the same time, the importance of local realities must be recognized – the scale, as well as the nature, of local economic activities in relation to the carrying capacity of the appropriately defined local ecosystem.

It is also essential to take into account the pace at which economic impacts are now creating environmental and social changes. Macroeconomic theory could benefit from comparing the rate of economic growth to the rate at which ecosystems can adapt – for example forest and ocean ecosystems, as well as the global climate. Large scale changes that are likely to arrive in a few decades may not be more important than those that will take hundreds of years to play out, but issues on such different time scales require different kinds of understanding and response. As with the issues of biodiversity, cultural survival, and potentially massive human conflict that arise in connection with the scale of the economy, the rate of change is most obviously critical in dealing with irreversibilities.

VI. Conclusion

Not only must a major theoretical revision of macroeconomic theory begin with a clear understanding of final goals; it will also be aided by a set of concrete, practical intermediate goals that can be viewed as steps for moving toward the final goals. Such intermediate goals might be concerned with systems for providing legal justice, education, health care, nutrition, and other social needs, as fundamental requirements for all of the final goals mentioned earlier. As we tentatively propose ideas for a new theoretic approach, we can test these against how well they explain the realities confronting us, and how well they support the policies that seem most likely to take a given economy in a positive, well-being-enhancing direction.

This is an obviously normative stance – starting with an idea of what needs to be done, and then seeking the theoretical explanation. There is good precedent for such an

approach; it can be found in Adam Smith³ and in most of the great economic theorists since his time. To be sure, this approach can be misused – as can nearly any tool. An overt statement of what the theorist is doing – to what goals s/he is adhering – is the best way to assist others to judge both the validity and the value of the proposed theory.

To embrace these suggestions would constitute a seismic shift in economic theory. If ever such a shift was warranted it is now, when demography, technology and corporate structures and strategies have created a new world, while Western and global economic effects on the environment are heading for severe risk, even likelihood, of catastrophic reductions in well-being for the majority of human beings.

Neva Goodwin is co-director of the Global Development and Environment Institute. She holds a Ph.D. in economics from Boston University.

REFERENCES

Diener, Ed, Marissa Diener, and Carol Diener (1995a), 'Factors Predicting the Subjective Well-Being of Nations,' *Journal of Personality and Social Psychology*, 69: 851-864.

Diener, Ed and Marissa Diener (1995b), 'Cross-Cultural Correlates of Life Satisfaction and Self-Esteem,' *Journal of Personality and Social Psychology*, 68: 653-663.

Diener, Ed and Shigehiro Oishi (2000), 'Money and Happiness: Income and Subjective Well-Being Across Nations' in Diener and E.M. Suh, eds., *Subjective Well-Being Across Cultures*. Cambridge, MA: MIT Press.

Frank, Robert (1999), *Luxury Fever: Money and Happiness in an Era of Excess*. Princeton, NJ: Princeton University Press.

Friedman, Milton (1962), *Capitalism and Freedom*. Chicago: University of Chicago Press

Galbraith, John Kenneth (forthcoming, 2004), *The Economics of Innocent Fraud*. Boston, MA: Houghton Mifflin.

Goodwin, Neva R., Julie Nelson, Frank Ackerman and Thomas E. Weisskopf (forthcoming), *Microeconomics in Context*. Boston, MA: Houghton Mifflin.

Monks, Robert, and Allen Sykes (2002), *Capitalism Without Owners Will Fail: A Policymaker's Guide to Reform*. New York, NY, Center for the Study of Financial Innovation.

-

³ Smith 'backed into' significant portions of his new theory from convictions about policies relating to taxes on international trade: he saw these as harmful to the wealth of his nation, and provided theoretical explanations for the cause and effect relationship he perceived.

- Kahneman, Daniel, Ed Diener and Norbert Schwarz, eds., (1999) *Well-Being: The Foundations of Hedonic Psychology*. New York, NY: Russell Sage Foundation
- Pryor, Frederick L. (2002), *The Future of U.S. Capitalism*. Cambridge, UK: Cambridge University Press.
- Scitovsky, Tibor (1976), *The Joyless Economy*. New York, NY: Oxford University Press.
- Veenhoven, Ruut (1993), *Happiness in Nations: Subjective Appreciation of Life in 56 Nations 1946-1992*. Rotterdam: Erasmus University, RISBO Press.

The Global Development And Environment Institute (GDAE) is a research institute at Tufts University dedicated to promoting a better understanding of how societies can pursue their economic goals in an environmentally and socially sustainable manner. GDAE pursues its mission through original research, policy work, publication projects, curriculum development, conferences, and other activities. The "GDAE Working Papers" series presents substantive work-in-progress by GDAE-affiliated researchers. We welcome your comments, either by e-mail directly to the author or to GDAE, Cabot Center, Fletcher School, Tufts University, Medford, MA 02155 USA; tel: 617-627-3530; fax: 617-627-2409; e-mail: gdae@tufts.edu; web: http://ase.tufts.edu/gdae.

Papers in this Series:

- **00-01** Still Dead After All These Years: Interpreting the Failure of General Equilibrium Theory (Frank Ackerman, November 1999)
- **00-02** Economics in Context: The Need for a New Textbook (Neva R. Goodwin, Oleg I. Ananyin, Frank Ackerman and Thomas E. Weisskopf, February 1997)
- **00-02** Trade Liberalization and Pollution Intensive Industries in Developing Countries: A Partial Equilibrium Approach (Kevin Gallagher and Frank Ackerman, January 2000)
- **00-04** Basic Principles of Sustainable Development (Jonathan M. Harris, June 2000)
- **00-05** Getting the Prices Wrong: The Limits of Market-Based Environmental Policy (Frank Ackerman and Kevin Gallagher, September 2000)
- **00-06** Telling Other Stories: Heterodox Critiques of Neoclassical Micro Principles Texts (Steve Cohn, August 2000)
- **00-07** Trade Liberalization and Industrial Pollution in Mexico: Lessons for the FTAA (Kevin Gallagher, October 2000) (*Paper withdrawn- see www.gdae.org for details*)
- **00-08** Waste in the Inner City: Asset or Assault? (Frank Ackerman and Sumreen Mirza, June 2000)
- **01-01** Civil Economy and Civilized Economics: Essentials for Sustainable Development (Neva Goodwin, January 2001)
- **01-02** Mixed Signals: Market Incentives, Recycling and the Price Spike of 1995. (Frank Ackerman and Kevin Gallagher, January 2001)

- **01-03** Community Control in a Global Economy: Lessons from Mexico's Economic Integration Process, Tim Wise and Eliza Waters, February 2001)
- **01-04** Agriculture in a Global Perspective (Jonathan M. Harris, March 2001)
- **01-05** Better Principles: New Approaches to Teaching Introductory Economics (Neva R. Goodwin and Jonathan M. Harris, March 2001)
- **01-06** The \$6.1 Million Question (Frank Ackerman and Lisa Heinzerling, April 2002)
- **01-07** Dirt is in the Eye of the Beholder: The World Bank Air Pollution Intensities for Mexico (Francisco Aguayo, Kevin P. Gallagher, and Ana Citlalic González, July 2001)
- **01-08** Is NACEC a Model Trade and Environment Institution? Lessons from Mexican Industry (Kevin P. Gallagher, October 2001)
- **01-09** Macroeconomic Policy and Sustainability. (Jonathan M. Harris, July 2001)
- **02-01** Economic Analysis in Environmental Reviews of Trade Agreements: Assessing the North American Experience. (Kevin Gallagher, Frank Ackerman, Luke Ney, April 2002)
- **03-01** Read My Lips: More New Tax Cuts The Distributional Impacts of Repealing Dividend Taxation (Brian Roach, February 2003)
- **03-02** Macroeconomics for the 21st Century (Neva R. Goodwin, February 2003)
- **03-03** Reconciling Growth and the Environment (Jonathan M. Harris and Neva R. Goodwin, March 2003)