Joseph E. Stiglitz and Economics for an Imperfect World

Richard Arnott, Bruce

Greenwald, Ravi Kanbur, and

Barry Nalebuff

Joseph Stiglitz was awarded the Nobel Prize in Economics in October 2001 for his contributions to the study of imperfect information. Eight months before this happy news, a group of his teachers, students and coauthors had come together to pay tribute to him by writing essays in his honor, marking his sixtieth birthday in 2003. This volume is the result of those contributions.

The collection of authors in this volume reflects the impact that Stiglitz has had on the profession of economics. They include four Nobel Prize winners, the president of an Ivy League University, the head of an Oxford College, the present chief economist of the World Bank, and other recognized leaders in economics from the leading universities around the world. The areas covered in this volume also reflect the ''Stiglitzian'' influences on much of economics today. The impact of his work is most strongly seen in the area of imperfect information, for which he won the Nobel Prize. But his influence extends to many other areas, including macroeconomics, public economics and development economics, counting in the latter the problems of transition from centrally planned to market economies.

Throughout, his focus has been on the world as it actually is, with all of its imperfections—whether of information, competition, or government—rather than the world often depicted in the basic economics textbooks. Hence the title of this volume—Stiglitz's economics is truly an Economics for an Imperfect World.

On a more personal level, the authors who contributed to this volume along with the editors, have all felt the effect of Joe Stiglitz on their lives, in his role as student, teacher, mentor and coauthor. His remarkable impact on the economics profession is rivaled only by his personal impact on economists the world over.

Joe Stiglitz was born in Gary, Indiana, in 1943. The grim realities of that declining steel town, with its stark inequalities and sharp racial discrimination, raised questions early on about these outcomes and the processes that led to them. He did his undergraduate studies at Amherst College, where he was a student body leader. He took part in the great civil rights march in Washington, D.C. in 1963 and heard Dr. Martin Luther King, Jr., give his ‘‘I Have a Dream’’ speech, another lasting influence on his thinking. He completed his Ph.D. at MIT, and two of his teachers, Nobel Prize winners Paul Samuelson and Robert Solow, have contributed papers to this volume.

Stiglitz became a tenured full professor at Yale at the age of 27. Between 1969 and 1971 he was at the Institute for Development Studies in Nairobi, Kenya. The stay in a developing country led not only to his abiding interest in the problems of development, but also led him to ask questions of received economic doctrine, questions that eventually led to research that won him the Nobel Prize. After Yale, he taught at Stanford, Oxford, Princeton, and then Stanford again. This quarter-century of research established him as one of the giants of economics, his contributions ranging across every part of the discipline and winning him the coveted Clark Medal of the American Economic Association. His coauthors from that prolific period are well represented in this volume. At every university where he taught, he imbued generations of graduate students with his infectious enthusiasm for ideas and his belief in the capacity of economic analysis to lead to a better world, provided it brought to center stage the imperfections of the real world. These students are proud to have studied under him and many of them, now leading economists in their own right worldwide, have contributed chapters to this volume.

In 1993 Stiglitz left academia for the world of policy to join President Clinton’s Council of Economic Advisers, of which he eventually became chairman, thereby holding a cabinet level position in the

Clinton administration. In 1997 he left the White House to become senior vice president and chief economist of the World Bank, a move that saw a strengthening of the close involvement with development that started his career, which he maintained throughout the years. In both of these policy positions, Stiglitz argued against the strictures of orthodox economic policy, especially where it emanated from a market fundamentalism that he believed was not warranted in a world of imperfect information, imperfect competition, and imper-

fect markets. In both of these positions, he came into conflict with the U.S. Treasury’s espousal of orthodox economic policies that he believed were not serving the interests of the population at large, in particular the poor. After the East Asia crisis, Stiglitz spoke out against what he saw as policies that were economically wrongheaded and detrimental to growth and poverty reduction in poor countries. The World Bank came under pressure from the U.S. Treasury to silence him, but rather than be silenced he resigned and returned to academia in 2000, first to Stanford and now at Columbia University.

At first sight it is rather odd that there should be a need to develop a new economics for an imperfect world. Surely, all of economics should be about the world as it is. Even the use of the term ‘‘imperfections’’ stands in contradistinction to the usually assumed ‘‘perfections’’ of the world analyzed in our basic textbooks—perfect information, perfect competition, and so on. This was certainly true thirty-five years ago, when Stiglitz began his economics education. It is sadly still the case formany basic textbooks, although increasingly there are exceptions, and advanced textbooks do treat of the imperfections of the real world. As Stiglitz has argued, however, in the policy world it still appears that those who analyze and advise draw their basic instincts from the perfect information, perfect competition world of Economics 101, rather than the living, breathing world that we inhabit.

A key feature of that real world is asymmetric information. In most situations, the two sides of the market have vastly different information about the good or service being transacted. In particular, sellers typically know more about what they are selling than buyers do. This can lead to adverse selection where low-quality products drive out good-quality products unless other actions are taken. What sorts of actions? Agents may choose to signal information that they have and that other parties do not. For those with high-quality products, it may be worthwhile doing this rather than be shut out from the market as bad quality drives out good. Or one side of the market may offer a menu of transaction terms, relying on the choices by the other side to screen transactors of one type from another. Offering such a menu may be better than continuing with imperfect information, but for it to play its role as a screening device, the menu has to have a structure that will separate out different types into preferring different parts of the menu. The theory then predicts that

the types of transactions that one sees will be different from those that would emerge in a world of perfect information. Combining signaling and screening further enriches the scope of the analysis.

Stiglitz's research often starts with a simple truth and then shows the profound consequences of that idea. Take, for example, the demonstration of the internal contradiction of perfect competition (Grossman and Stiglitz 1980). A long tradition in economics argues that one of the features, indeed virtues, of perfect competition is that prices reflect all of the information in the market. But if that is the case, then no one has any incentive to gather any information. They can get it for free by looking at prices. If no one gathers information, however, then the prices do not have any information to reflect. This paradox lays the basis for the argument that imperfect information in markets is likely to be the rule rather than the exception. Adam

Smith's invisible hand can be, at best, an imperfect guide.

Many if not most features of real-world transactions can only be understood in an imperfect information framework. The work of Joe Stiglitz, his fellow Nobel Prize winners for 2001 George Akerlof and Michael Spence, and many others, including contributors to this volume, elaborates on this point. Whether it be education as a screening device (Stiglitz 1975), the insurance market (Rothschild and Stiglitz 1976), market prices as aggregators and disseminators of information (Grossman and Stiglitz 1980), unemployment as a worker discipline device (Shapiro and Stiglitz 1984), price dispersion as a way of screening through search (Salop and Stiglitz 1982), credit rationing (Stiglitz and Weiss 1981), macroeconomic fluctuations (Greenwald, Stiglitz, and Weiss 1984), or any of a host of other issues analyzed in the articles listed in his bibliography at the end of this volume, Stiglitz has led the way in showing how the imperfect information paradigm can help us understand economic phenomena much better. The enormous richness and potential of the paradigm he helped to create are reflected in the chapters in part I of this volume, which analyze problems ranging from insurance and financial regulation, through cultural equilibria and cooperation, to industrial organization. They are a fitting tribute to the continued vitality and relevance of his contributions in the area of imperfect information.

Although the Nobel Prize was awarded for Stiglitz's seminal contributions on imperfect information, his influence on economics stretches far beyond even this gigantic achievement. Emerging

partly from the imperfect information paradigm, but also from a realization of other sorts of imperfections in markets, he has made equally seminal contributions to macroeconomics, public economics, and the economics of development and transition. The chapters in Part II of this volume reflect his contributions in these areas.

Nobel Prize winners Robert Solow and George Akerlof are among those who contribute chapters on macroeconomics and unemployment, on which Stiglitz made an early contribution with his teacher (Solow and Stiglitz 1968). A key aspect of his work in these areas is the recognition of the pervasiveness of imperfect competition. One of his most cited papers is Dixit and Stiglitz (1977), which developed an elegant model that has become the workhorse of the new literature on monopolistic competition, with applications in industrial organization and in trade, as amply demonstrated by two of the chapters in part II. Joe's work in public economics is characterized by the recognition of the imperfections of governments and the limited range of governmental instruments. The design of tax and expenditure policies in this real world setting is enormously important for policy, but also exciting as an area of theoretical enquiry. Atkinson and Stiglitz (1980) remains as important a part of graduate courses in public economics as when it first came out almost a quarter of a century ago. This Atkinson-Stiglitz perspective is present in the public economics chapters in Part II, including a paper coauthored by Nobel Prize winner Kenneth Arrow. Finally, chapters on development and transition problems round out this tribute. As noted earlier, development issues have influenced his thinking profoundly (Stiglitz 1974). But, equally, development thinking has been influenced greatly by him, especially at a conjuncture where the economics of Economics 101 appear to be deployed to prescribe policies for countries where they are clearly not applicable. Failures of information, markets, and governments are pervasive, and a sophisticated analysis is needed that also takes into account the needs of the poorest and most vulnerable (Stiglitz 2002). The chapters in part II illustrate this well.

Joe Stiglitz turns sixty in 2003. Many of us who knew him first as a student, then as a teacher or as a colleague, see no diminution in his energies and in his creativity. This is good news. The world will go on being imperfect, and it will be important for him to go on producing more economics for an imperfect world, and to go on encouraging others to do so as well.

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