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**THE LIFE AND WORK
OF MARTIN STUART (“MARTY”)
FELDSTEIN**

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Abstract

Martin Stuart (“Marty”) Feldstein, currently George F. Baker Professor of Economics at Harvard University and President Emeritus of the National Bureau of Economic Research, Inc. (NBER), is a renowned American economist who has made important contributions to public finance, macroeconomics, social insurance, health economics, the economics of national security, and many other fields of economics.

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Introduction

Martin Stuart (“Marty”) Feldstein, a renowned American economist who has made important contributions to public finance, macroeconomics, social insurance, health economics, the economics of national security, and many other fields of economics, was born in New York City on November 25, 1939. He graduated *summa cum laude* from Harvard College with a major in economics in 1961, and even though he was admitted by the Harvard Medical School, he opted to study at the University of Oxford. He received a B.Litt. in 1963 and a Ph.D. in 1967, both in economics, from Oxford, but combined his interest in medicine and economics by writing a doctoral dissertation about how hospital costs could be reduced in a government-run health system. He was a Fellow of Nuffield College, Oxford, from 1964 until 1967 before returning to the States and to his alma mater. He became an Assistant Professor of Economics at Harvard University in 1967, and only two years later at the age of 28, he was granted tenure and promoted to full professor, becoming one of the youngest full professors in Harvard’s history. It was in England that Feldstein met and married his wife Kathleen, an economist in her own right who received a Ph.D. from the Massachusetts Institute of Technology (MIT).

Feldstein is currently George F. Baker Professor of Economics at Harvard University and President Emeritus of the National Bureau of Economic Research, Inc. (NBER) and is still very active in teaching and research. He has written close to 400 scholarly articles on a broad range of topics, many of which show, via careful theoretical and empirical analysis, that government tax and transfer policies have important impacts on the economic behaviour of households and firms--in other words that households and firms respond to incentives and disincentives--and that the impact of tax and transfer policies cannot be gauged accurately unless one takes account of the behavioural responses that they induce.

In recognition of his impressive research achievements, Feldstein was awarded the John Bates Clark Medal of the American Economic Association (AEA), which at the time was awarded every two years to the economist under the age of 40 who is judged to have made the greatest contribution to economic science, in 1977. Moreover, he was elected President of the American Economic Association in 2004 and is one of the twelve most influential living economists in the world according to IDEAS/RePEc. In 2007, he received the Bradley Prize from the Lynde and Harry Bradley Foundation; in 2011, he was included in the 50 Most Influential ranking of *Bloomberg Markets* magazine; and in 2012,

he received the SIEPR Prize for Contributions to Economic Policy from the Stanford Institute for Economic Policy Research (SIEPR) of Stanford University.

Feldstein has been regarded as a perennial favorite to win the Nobel Prize in Economic Sciences and was named a Thomson Reuters Citation Laureate (many of whom have gone on to win Nobel Prizes) in 2008.

Feldstein's Contribution to Social Insurance

Feldstein has made significant contributions to a broad range of fields in economics, but one area in which he has truly revolutionized the thinking of economists and policymakers alike is in the area of social insurance (see Feldstein (2005a) for a useful overview). Feldstein showed that, while existing social insurance programs protect individuals from a variety of risks, they also distort individuals' behaviour in a variety of ways, thereby lowering saving, economic growth, and welfare. For example, unemployment insurance protects individuals from the loss of income during unemployment spells but at the same time causes individuals to search for new jobs for too long, induces them to save less, and encourages them to take jobs that have a greater likelihood of seasonal and/or cyclical layoffs. Social security (public old-age pensions) protects individuals from poverty during old age and longevity risk but at the same time induces individuals to reduce their saving and to retire too early. Health insurance protects individuals from the risk of being unable to afford needed medical care but at the same time induces them to consume too much health care, to take inadequate precautions with their health, and to save too little because they know that they will not have to bear the full cost themselves.

Feldstein has done extensive research to show that social insurance programs have indeed distorted individuals' behaviour in the expected ways. For example, Feldstein (1976b, 1978a) shows that unemployment insurance substantially increases the amount of temporary layoff unemployment, while Feldstein and Poterba (1984) show that the higher is the replacement rate of unemployment benefits, the higher is the reservation wage of unemployed workers, meaning that the longer will be the duration of unemployment.

Turning to Feldstein's work on the impact of social security (see Feldstein and Liebman (2002b) for a useful overview), Feldstein (1974), a very well-known article, analyzes theoretically and empirically the impact of social security on household consumption and saving behaviour. As Feldstein notes, there are at least two offsetting ways in which a social security system can affect household saving. On the one hand, the introduction of a social security system will cause households to not feel as much need to save for retirement as they did before the

introduction of such a system (the wealth replacement effect). On the other hand, the introduction of a social security system will induce households to retire earlier, lengthen their retirement span, and make it necessary for them to save more than before (the induced retirement effect). Thus, it is not clear a priori if the introduction of a social security system will induce households to save more or less than before. However, Feldstein has shown using a variety of data that the wealth displacement effect dominates the induced retirement effect, as a result of which the net effect of the public pension system is to lower household saving and capital accumulation. For example, Feldstein (1974, 1982c, and 1996b) shows using time-series data for the United States that social security has substantially increased personal consumption (and by implication has substantially reduced personal saving).¹ Similarly, Feldstein (1977, 1980) estimates the magnitudes of both the wealth displacement effect and the induced retirement effect using cross-country data and shows that the former is larger in absolute magnitude than the latter, as a result of which social security reduces private saving, on balance.

Turning to Feldstein's work on health insurance (see Feldstein (1995c) for a useful overview), Feldstein (1970) finds that the price of physicians' services rose much faster than the consumer price index after the introduction of Medicare and Medicaid in 1966, suggesting that these health insurance programs increased the demand for physicians' services, thereby bidding up the price. Similarly, Feldstein (1973) estimates a demand function for health care using time series data on individual states of the United States and finds that health insurance has a significant impact on the demand for health care.

Moreover, after establishing that social insurance programs have indeed distorted the behaviour of individuals as theory would predict, Feldstein has then gone on to make recommendations about how to reform these programs so that they continue to protect individuals from the risks they are designed to protect them from while at the same alleviating the distortions they cause including the reductions in saving that they cause. For example, Feldstein proposes reforming the current unemployment insurance system by making benefits taxable (as they are now, due in large part to Feldstein's own efforts), reducing replacement rates, and/or (better yet) introducing a more fundamental reform involving the introduction of unemployment insurance saving accounts earmarked to pay benefits when unemployment occurs (see, for example, Feldstein and Altman (2007)).

Similarly, Feldstein proposes a transition from the current pay-as-you-go social security system to a mixed system with a substantial investment-based (funded) component (see, for example, Feldstein (1995a, 1996a, 1997, 1998, 2005b, and 2009a), Feldstein and Samwick (1997, 1998a, 1998b, and 2002), Feldstein and

Ranguelova (2001), and Feldstein and Liebman (2002a)). Economists have traditionally felt that it is difficult, if not impossible, to make the transition from a pay-as-you-go social security system to a mixed system or a fully funded system because one generation will have to bear a so-called “double burden,” financing the social security benefits of its parents’ generation as well as its own benefits, but Feldstein shows in the aforementioned papers that this is not an insurmountable problem.

Finally, Feldstein proposes a transition from the current pay-as-you-go comprehensive low-deductible low-coinsurance Medicare system (the U.S. federal health care program for those over the age of 65) to a health savings account (HSA) system that creates strong incentives to choose high deductibles and high coinsurance (see, for example, Feldstein (1971, 1999a), Feldstein and Gruber (1995), and Feldstein and Samwick (1997)). Tax-advantaged health savings accounts have been available to taxpayers who have a high-deductible health plan (HDHP) since 2003, and these accounts could provide a model for Medicare reform.

A related paper (Feldstein (1995b)) pertains to college scholarships, which are not a form of social insurance narrowly defined but which have similar distortive effects on individual behaviour. Feldstein (1995b) shows that college scholarships are beneficial in that they enable the children of low-income families to attend college but distortive in that expected parental contributions are higher and the amounts of financial assistance lower if parental assets are higher. This implies a hefty “education tax rate” on saving and strongly discourages parents from saving.

Feldstein’s Contribution to Public Finance

Feldstein’s second major contribution to economics is in the area of public finance. Feldstein has shown in a long series of papers that taxes distort the behavior of households and firms, causing substantial deadweight losses, and that one needs to take full account of the behavioral response of households and firms to tax changes when estimating their impact. For example, Feldstein (1995a, 1995d, 1999b) estimated the impact of the Tax Reform Act of 1986 using the compensated elasticity of taxable income with respect to changes in tax rates, which allows one to take account of the fact that tax changes would affect not only labor supply but also the forms of compensation, the investment of assets, and the extent of spending on tax-deductible activities (see Feldstein and Feenberg (1996) for a similar analysis of the 1993 tax rate increases).

Feldstein has also argued that tax policies have had the effect of depressing saving and investment, thereby causing a substantial deadweight loss and lowering economic growth (see Feldstein (1995e) for a useful survey). We

have already discussed the saving-depressing effects of various social insurance programs, but the tax system also has the effect of depressing saving. The combination of the corporate income tax and personal income taxes on interest, dividends, and capital gains creates a substantial wedge between the pre-tax marginal product of capital and the net return received by individual savers (i.e., it raises the effective tax rate on capital income), which depresses saving, investment, and economic growth.

Feldstein (1976a, 1978b, 1978c, 1995e) points out that, when doing a welfare analysis, the deadweight loss arising from the current tax system must be compared to the deadweight loss of the tax system that replaces it, and Feldstein (1995e) shows that a shift from the current income tax to a consumption tax or a labor income tax will increase national saving and reduce the deadweight loss of the overall tax system.

Feldstein has also analyzed the distortionary effects of specific taxes. For example, Feldstein and Yitzhaki (1978) show that capital gains taxes have discouraged the sale of equities and reduced tax revenue via the lock-in effect and that cutting the capital gains tax would *increase* tax revenues by encouraging investors to realize their capital gains.

As another example, Feldstein (1981) shows that the use of "historic cost" method of depreciation for tax purposes implies that higher inflation rates reduce the real value of future depreciation deductions and therefore raise the real net cost of investment, that the rise in the real net cost of investment can be substantial at recent inflation rates, and that allowing accelerated depreciation and valuing depreciation at replacement cost for tax purposes are alternate ways of alleviating the biases caused by the use of "historical cost" depreciation.

As yet another example, Feldstein has written a series of papers on the impact of tax breaks for charitable contributions on the amount of charitable giving (see, for example, Feldstein and Clotfelter (1976)). These papers find that the elasticity of charitable giving with respect to the price or net cost of giving is slightly greater than one, which implies that any reduction in price will increase the total contributions received by charitable organizations by more than the reduction in tax revenue.

Moreover, Feldstein has also shown that the distortions caused by the tax system are exacerbated by the interaction between an unindexed tax system interacts and high inflation (see Feldstein (1983b) for a collection of a number of his papers on this topic). For example, inflation increases households' nominal incomes and pushes them into higher and higher tax brackets, thereby raising their marginal tax rates (a phenomenon called "bracket creep").

Similarly, Feldstein (1983b, 1995e) has shown that inflation distorts the measurement of capital income and raises the effective tax rate on the return to saving. For example, because nominal interest income and nominal capital gains (the nominal increase in asset values) are taxed at the personal level, interest income and capital gains are overstated and overtaxed when there is inflation. Furthermore, because depreciation is understated and inventory profits are overstated when there is inflation, corporate income is overstated and overtaxed (although the fact that nominal interest payments can be deducted from profits works in the opposite direction). For example, Feldstein and Summers (1978) show that, on balance, the high rates of inflation in the United States in the 1970s raised the effective tax rate on corporate income substantially, and Feldstein (1982a) shows that this, in turn, has substantially reduced business investment in the United States since the late 1960s. Moreover, Feldstein (1982b) shows that the interaction between the tax code and inflation has distorted not only the size of the capital stock but also the allocation of capital between business capital and housing capital, leading to too little of the former and too much of the latter.

The Feldstein-Horioka Paradox or Puzzle

One of Feldstein's best known papers is Feldstein and Horioka (1980), his joint paper with Charles Yuji Horioka on international capital mobility (see also Feldstein (1983a) and Feldstein and Bacchetta (1991)). In this paper, the authors regress the domestic investment rate on the domestic saving rate using cross-section data on OECD member countries for the 1960-74 period and find that the coefficient of the domestic saving rate (subsequently referred to as the "saving retention coefficient") is significantly different from zero but not significantly different from one. If capital markets are fully integrated and capital flows freely across national borders in search of the highest return, this coefficient should be zero (at least in the case of small economies). The fact that it is not significantly different from one suggests (in the absence of legal and other restrictions on international capital flows) that "home bias" is strong and that people strongly prefer to invest their saving in their home country. This result generated considerable interest and surprise because many economists had assumed that capital had become perfectly mobile internationally, and it came to be known as the "Feldstein-Horioka puzzle or paradox." It spawned a voluminous literature trying to verify and/or explain the result (see Coakley, Kulasi, and Smith (1998) and Apergis and Tsoumas (2009) for surveys of this literature), it was included in Obsfeldt and Rogoff's (2001) list of the "six major puzzles in international macroeconomics," it is covered in many, if not most, textbooks in macroeconomics and international economics, and it is one of the most frequently cited papers in international economics.

The findings of this paper are important for a number of reasons. First, they shed light on the true nature of the world capital market and on the extent to which capital markets are integrated. Second, they confirm that it is appropriate, at least as a first approximation, to study income distribution in general and tax incidence in particular using models that ignore international capital mobility. Third, they imply that the national return on domestic saving is approximately equal to the pre-tax domestic marginal product of capital since such saving increases the domestic capital stock rather than either flowing abroad or replacing foreign investment at home.

Feldstein's Contribution to the Economics of National Security

In recent years, Feldstein has become increasingly interested in the economics of national security, which had not attracted the interest of economists until he came along. In addition to conducting research on various topics relating to national security, Feldstein has been advising graduate students on topics relating to national security, started a new graduate course on the Economics of National Security at Harvard shortly after the September 11, 2001, attacks, heads the Working Group on the Economics of National Security at the National Bureau of Economic Research, and founded the Economics of National Security Association (ENSA) in 2013.

To cite two examples of Feldstein's work in this area, Feldstein (2008) proposes ways of reforming the institutions for domestic counterterrorism (CT) in the United States and of strengthening cooperation among the CT activities of the U.S. and its allies, while Feldstein (2009b) draws lessons from the 1930s to make recommendations concerning economic and national security policies for the United States today, one of which is to increase the scale and funding of the Federal Bureau of Investigation (FBI) and the Department of Homeland Security to prepare for the threats of domestic terrorism and cyber attacks that did not exist in the 1930s.

Feldstein's Contribution to the National Bureau of Economic Research

Moreover, Feldstein has contributed significantly to the development of the field of economics through his administrative roles as well. For example, he became President of the National Bureau of Economic Research, Inc. (NBER), the U.S.'s leading non-profit economic research organization, in 1977 at the tender age of 37. He served in this capacity until he retired in 2008 (except in 1982-84, when he was Chairperson of the Council of Economic Advisers under President Reagan), and the NBER expanded and prospered enormously during his 29 years at the helm. He organized the NBER into Programs and Working Groups and attracted the best empirical economists in every field. One

indication of the NBER's prominence is that 24 Nobel Prize winners in Economics and 13 past Chairs of the President's Council of Economic Advisers have been researchers at the NBER.

Feldstein is still active at the NBER as President Emeritus and Director of the Working Group on the Economics of National Security. Moreover, to honor Feldstein's outstanding tenure as President, the NBER inaugurated the Martin Feldstein Lecture, an annual lecture by an outstanding economist, in 2009. The first Martin Feldstein Lecture was given by John B. Taylor of Stanford University, followed by Roger W. Ferguson, Jr., of TIAA-CREF (a former Vice Chairman of the Federal Reserve System), Kenneth S. Rogoff of Harvard University, Stephen N. Kaplan of the University of Chicago, Lawrence H. Summers of Harvard University, and Stanley Fischer, Vice-Chair of the Board of Governors of the Federal Reserve System.

Feldstein's Contribution to Economic Policymaking

In addition, Feldstein has been deeply involved in economic policymaking for much of his career. In 1982-84, he served for two years as Chairperson of the Council of Economic Advisers under President Reagan and spoke out strongly about the dangers of ballooning federal government deficits. He served on the President's Foreign Intelligence Advisory Board from 2007 to 2009 under President Bush (the son), and in 2009, he was named to President Obama's Economic Recovery Advisory Board.

Feldstein currently serves on the Board of Directors of the Council on Foreign Relations, the Trilateral Commission, the Group of 30 (a Washington-based financial advisory body), and the National Committee on United States-China Relations and was formerly on the Boards of Directors of a number of major corporations including AIG, Eli Lilly, and JP Morgan.

With respect to the specific policies upon which Feldstein had an influence, he was instrumental in cutting the capital gains tax and making unemployment compensation benefits taxable and has long been an avid advocate of social security reform, was instrumental in implementing a tax reform that made social security benefits taxable in the case of high-income households, and was one of the main driving forces behind former President George W. Bush's initiative of partial privatization of the social security system. Moreover, one of his disciples, Jose Pinera, privatized Chile's pension system and converted it into a fully funded system based on personal retirement accounts as Secretary of Labor and Social Security.

Feldstein's Contribution to Economics Education

Moreover, Feldstein has made a substantial contribution to economics education as well. Most importantly, he has trained numerous prominent economists who went on to occupy the top echelons of government and academia, among them Alan J. Auerbach (Robert D. Burch Professor of Economics and Law, Director of the Burch Center for Tax Policy and Public Finance, and formerly Chair of the Economics Department, University of California, Berkeley, and formerly Deputy Chief of Staff of the U.S. Joint Committee on Taxation), Raj Chetty (professor at Harvard University, a 2012 MacArthur Fellow, and recipient of the 2013 John Bates Clark Medal), David T. Ellwood (professor and Dean of the John F. Kennedy School of Government at Harvard University and formerly Assistant Secretary for Planning and Evaluation at the U.S. Department of Health and Human Services), Douglas W. Elmendorf (Director of the Congressional Budget Office and formerly Deputy Assistant Secretary for Economic Policy at the U.S. Department of the Treasury and Senior Fellow at the Brookings Institution), Charles Yuji Horioka (Vea Family Professor of Technology and Evolutionary Economics Centennial at the University of the Philippines, Diliman, and recipient of the 2001 Japanese Economic Association-Nakahara Prize), R. Glenn Hubbard (professor and Dean of the Business School at Columbia University and formerly Deputy Assistant Secretary for Tax Analysis at the U.S. Department of the Treasury and Chairperson of the President's Council of Economic Advisers), Steven N. Kaplan (Neubauer Family Distinguished Service Professor of Entrepreneurship and Finance at the University of Chicago and one of the top twelve Business School professors in the country according to *Business Week*), Jeffrey B. Liebman (Malcolm Wiener Professor of Public Policy, John F. Kennedy School of Government, Harvard University, and formerly Acting Deputy Director for Policy in the U.S. Office of Management and Budget), Lawrence B. Lindsey (Chief Executive Officer of the Lindsey Group and formerly Director of the National Economic Council and member of the Board of Governors of the Federal Reserve System), Jose Pinera (Distinguished Senior Fellow at the Cato Institute and formerly Chile's Secretary of Labor and Social Security and Secretary of Mining and architect of Chile's private pension system), James M. Poterba (professor and formerly Head of the Economics Department at the Massachusetts Institute of Technology, Feldstein's successor as President of the National Bureau of Economic Research, and formerly a member of the President's Advisory Panel on Federal Tax Reform), Harvey S. Rosen (professor and formerly Chair of the Economics Department at Princeton University and formerly Deputy Assistant Secretary for Tax Analysis at the U.S. Department of the Treasury and member and Chairperson of the President's Council of Economic Advisers), Jeffrey D. Sachs (Professor and Director of the Earth Institute at Columbia University and

formerly Professor at Harvard University, advisor to many Latin American and post-Communist economies, and Special Adviser to two successive United Nations Secretaries-General on the Millennium Development Goals), Andrew A. Samwick (Sandra L. and Arthur L. Irving '72a, P'10 Professor of Economics and Director of the Nelson A. Rockefeller Center for Public Policy and the Social Sciences, Dartmouth College, and formerly Chief Economist of the President's Council of Economic Advisers), Joel Slemrod (Professor, Economics Department Chair, and Director of the Office of Tax Policy Research at the University of Michigan, Ann Arbor, a member of the Congressional Budget Office Panel of Economic Advisers, and recipient of the 2001 Ig Nobel Prize in Economics), Lawrence H. Summers (Professor and formerly President of Harvard University, recipient of the 1993 John Bates Clark Medal, and formerly Secretary of the Treasury, Chief Economist of the World Bank, and Chairperson of the President's National Economic Council), and this is a very incomplete list.

Furthermore, Feldstein taught the introductory course in economics at Harvard for twenty years, and this course was the most popular course on campus when he was teaching it, with more than 1000 enrollees.

Finally, Feldstein also frequently writes OpEd pieces for the *Wall Street Journal* and other newspapers and makes policy proposals about a variety of economic issues. In past years, he regularly co-authored such pieces with his economist wife Kathleen.

Thus, Feldstein has made a remarkable contribution not only to the development of the field of economics but also to the conduct of economic policy as a researcher, research administrator, policy-maker, educator, and journalist. That he has been able to accomplish so much in one lifetime is close to a miracle.

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¹ Leimar and Lesnoy (1982) pointed out that there was a programming error in the program used to calculate the social security wealth variable used in Feldstein (1974), but Feldstein (1982c) showed that correcting the error does not change the basic result, and moreover, Feldstein (1974) remains of seminal importance even though the empirical results have been debated because it focused attention on social security crowd-out issues.