

Economics in America: The Founding of the NBER

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In 1920, a few idealistic men (only men for many decades), with highly polarized economic views, surprised themselves by coming together to establish an organization that would endow economics with the scientific properties they admired in the physical sciences. Their revolutionary approach entailed rescuing economics from the philosophical and theoretical battles of the past and, in its place, establishing economics as a social science with the rigor of scientific principles. The organization they established was the National Bureau of Economic Research, which became the home of economists in the United States.

One hundred years later, the NBER remains “a *private, non-profit, non-partisan* organization dedicated to conducting economic research and to disseminating research findings among academics, public policy makers, and business professionals.”¹ The early history of this organization is a story of idealism and indefatigable effort, with the aspiration of improving the welfare of all.

There are two sources to mention at the outset. The first is a 1984 essay by Solomon Fabricant, entitled *Toward a Firmer Basis of Economic Policy: The Founding of the National Bureau of Economic Research*. The other is a book written by the Nobel Prize winning economist Robert William Fogel, with the assistance of two others, called *Political Arithmetic: Simon Kuznets and the Empirical Tradition of Economics*.

Much of my presentation relies on those two sources. I will not pause orally to note all the citations, but they are available in the hard-copy version. Fabricant and Fogel are the foundational authors of this essay.

I. Precursors

In 1914, as Europe was swept into WWI, Jerome Greene of the Rockefeller Foundation approached Edwin Gay and Frank Taussig of Harvard. The Rockefeller Foundation was already notable for its support of medical research. Greene wanted to expand that mission through support for the social sciences. “Greene proposed the establishment of a well-financed institute for economic research headed by a group of luminaries free to choose its own research agenda

¹ “About the NBER.” NBER. <https://www.nber.org/info.html>. Emphasis added.

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regardless of expense, with a well-paid director with as many associates as desired, a well-stocked library, and all other requisites.”²

Greene brought together a small group, chaired by Gay, to serve as an exploratory committee. Their proposal was submitted on August 4, 1914, the very day that WWI broke out in Europe. The fundamental idea was to undertake studies that “were beyond the scope of existing research universities and that would yield basic *facts* of interest to both economists and the public.”³ These plans were set aside during the war. Gay envisioned a non-educational institution that would be respected as a “scientific, impartial and unprejudiced investigator.”⁴ He proposed the collection of data on prices, wages and rents, with a study to be headed by Wesley Clair Mitchell, a professor of economics at Columbia, who went on to become the renowned director of research at the NBER for 25 years from its founding.

The idea for an economic research association came up again in 1916 when Malcolm Rorty of AT&T approached Edwin Gay to organize a study at Harvard Business School, where Gay was Dean. The study was to focus on the *distribution of American income*.⁵ Gay brought in Nahum Stone, a left-wing economist with a doctorate from Columbia University. They had met in New York in 1915, at a hearing on a minimum wage law, where Stone testified for, and Rorty against. Rorty had expected a diatribe from Stone but was won over by the factual care that Stone took with his arguments. In 1917, they formed the “Committee on the Distribution of Income,” which included Mitchell, as well as John Commons of the University of Wisconsin, Allyn Young of Cornell, and T.S. Adams from Yale, along with representatives from business and labor.⁶ This was the template for the NBER, but its work was also set aside as the members were called upon for more urgent war related tasks in government.

The committee had seen a need for the scientific determination of distribution of income among individuals and families, as well as by sources: wages and other returns for personal service, land rents, interest, and profits beyond the interest rate returns. They believed that “knowledge of the distribution is of vital consequence in the consideration of almost every important political and social problem,” e.g. taxation, war mobilization and postwar demobilization.⁷

² Fogel, Robert William., et al. *Political Arithmetic: Simon Kuznets and the Empirical Tradition in Economics*. University of Chicago Press, 2013. Page 21.

³ Fogel, et al., page 22. Emphasis added.

⁴ Ibid.

⁵ Ibid., page 23.

⁶ Ibid., pages 22-24

⁷ Fabricant, Solomon. *Toward a Firmer Basis of Economic Policy: The Founding of the National Bureau of Economic Research*. NBER, 1984. Page 6.

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II. Founding and Principles

After WWI, President Woodrow Wilson refused to make permanent the various statistical agencies which had been established, and so a private National Bureau of Economic Research was founded.⁸ It had noble ambitions; the goal of the founders was to encourage the research that would improve “the well-being of mankind.”⁹ Also, significant was the composition of the Board, which was established with representation from Labor, employers, manufacturing, banking, farming, engineering, and law, as well as economists from six named universities and directors at large. Together, they hoped to find the solutions to avoid the social strife, which was so prevalent in those years.¹⁰

From the outset, the NBER was guided by five precepts, which reflected the aspiration to mimic the certainty of the natural sciences:

- Concentrate research on determining facts and connections between facts that are important to economic policy
- Wherever possible, knowledge should be expressed in quantitative terms
- Follow scientific principles
- Ensure impartiality through oversight and safeguards
- Make no recommendations on policy¹¹

The aim of the principles was to make a significant contribution “to the working methods of intelligent democracy.”¹² While these early statements seem so lofty that they can sound almost arrogant, it is important to take them in earnest. Without research and data, economic policies were based on contesting ideologies and prejudice. Democratic government required a stronger foundation if consensus was to be achieved.

Private foundations were the most important funders of the NBER, including the Carnegie Corporation, the Russell Sage Foundation, and the Commonwealth Fund. But the most important was the Laura Spellman Rockefeller Memorial Fund, which funded the Social Science Research Council (SSRC), the Brookings Institution, and was responsible “for much of the fortyfold increase in philanthropic support for the social sciences that occurred” in the founding decade.¹³

⁸ Fogel, et al., page 35.

⁹ Ibid., page 37.

¹⁰ Ibid.

¹¹ Fabricant, pages 2-3.

¹² Ibid., page 3.

¹³ Fogel, et al., page 45.

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At the University of Chicago, the Spellman Fund paid for the construction of the Social Science Research Building. Chiseled into the building façade were the words of Lord Kelvin (the eminent physicist): “When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind.”¹⁴

With aspirations of this kind, there is always a great risk that you measure what you can and ignore the rest. However, the NBER recognized that qualitative factors could not be ignored.

III. The Research Agenda: Wesley Mitchell and Simon Kuznets

A. Mitchell

Research in economics is the NBER’s mission and for most of its history, the directors of research, not the presidents, set the agenda. They recruited a highly able staff and produced reports in-house which defined American economics with its emphasis on empiricism. Several research directors with long tenure are particularly renowned for their contributions—notably Wesley Mitchell, Arthur Burns, and Solomon Fabricant. Mitchell was one of the founders of the NBER and its director of research from 1920-1946. He was a professor at Columbia University, where he mentored Simon Kuznets. Kuznets was on the research staff from 1927-1961.¹⁵ In 1971 he won the Nobel Prize “for his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development... He made a decisive contribution to the transformation of economics into an empirical science and to the formation of quantitative economics.”¹⁶ Fabricant was part of the Kuznets team at NBER. He succeeded Arthur Burns as research director in 1953 but in 1965 he stepped away from the director position to go back to full time research.

Wesley Mitchell chose the topic of National Income for the NBER’s first study. In Fabricant’s words it “was a singularly appropriate subject” for the Bureau. “Modern economic life is organized very largely on the basis of making and spending money incomes, so analysis of the sources of economic change should start with the measurement of the national income and its principal components as they changed over time.”¹⁷ It was a daunting task, which was fundamental to modern economics. Just imagine collecting the data for those estimates in the days before government publications of statistical surveys or internet for gathering information.

¹⁴ Ibid., pages 46-47.

¹⁵ Ibid., page xii.

¹⁶ “Simon Kuznets.” The Nobel Prize. <https://www.nobelprize.org/prizes/economic-sciences/1971/kuznets/facts/>.

¹⁷ Fabricant, page 11.

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In assembling the data, Mitchell's team checked themselves by having two separate working groups. One calculated income by sources of production—to estimate value added by each industrial group, including government. The other calculated from data on income received using occupational data on the number of workers and wages, income tax reports, corporate reports, etc. They were very aware of the shortcomings in the data that was available. It was a great spur to their work when they discovered that the discrepancy between the two groups was only 7%.¹⁸

The researchers wished they could rely on a “general law” for adjusting their data findings. They turned to Vilfredo Pareto's famous finding that “the shape—not the level—of the size distribution of income in different countries and at different times was invariant.” But when their colleague Frederick Macaulay studied it, he had serious doubts about its validity and the far-reaching policy implications that people were drawing from it.¹⁹ I found this early incident a resounding illustration of the difference between European economic tradition and the new world of the NBER. Theory was important but theoretical propositions had to be tested against empirical data to move beyond supposition.

In contesting the general law, the NBER researchers took great care with each of the many components of the data, no matter how small, because they knew that other economists might have an interest in parts of the data, despite its contribution to the total. Everything was considered provisional and they even returned manuscripts to outside authors when they were not up their own standards, suggesting publication through another channel.²⁰ They were not making friends; they were committed to science.

Under Mitchell, the Bureau also began its work on Business Cycles, which was to become another hallmark of NBER research. Mitchell's work showed historical connections between business cycles and prices and money, including an “illuminating discussion of the factor of time in the equation connecting the quantity and velocity of money with the volume and price of goods exchanged.”²¹ Mitchell hoped “to determine the average amplitude of fluctuation and average timing of changes in each process during successive stages of the business cycle.”²² By the end of the 1930's, they had identified *leading, coincident, and lagging* indicators, which have proven of interest to today.

Mitchell's colleague, Frederick Macaulay, searched for data to support his work on cyclical fluctuations in interest rates. His work got underway early in the 1920's. He needed data on rates, yields, and more. His classic work was published in 1938, with the modest but imposing title:

¹⁸ Ibid., page 12.

¹⁹ Ibid., page 13.

²⁰ Ibid.

²¹ Ibid., page 17.

²² Ibid., pages 18-19.

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*Bond Yield and Stock Prices in the United States since 1856.*²³ The Bureau did not begrudge 20 years of data collection before the reward of publication.

Herbert Hoover, the president who is often mocked for his insouciance regarding the upcoming Great Depression, was actually a believer in the importance of empirical work. When he was Secretary of Commerce, he asked the NBER to work on the cyclical fluctuations in employment and examine the merits and defects of the remedies others proposed. At that time, “even the magnitude of the problem was unclear” because there were “no measures of national employment, nor of GNP, nor even of industrial output.”²⁴

In 1923, the National Academy of Science and the National Research Council requested the NBER examine the relation between migration and labor supply, against the background of legislation to restrain immigration into the United States. In 1926, NBER published *Migration and Business Cycles*. In Mitchell’s preface he stressed that the study was meant to enhance understanding of a topic that was too often argued in a spirit of controversy.²⁵ This topic led to the NBER’s first international study with 20 authors from as many countries.

When I read this history of the NBER’s first decade, I am astonished at the depth and breadth of the work. Mitchell left a rich legacy when he retired in 1945. Fabricant ends his paper by underscoring the work that was done by so many staffers and outside partners over time, all seeking “information applicable to scientific and policy issues concerning the growth, stability, and distribution of the nation’s income.”²⁶

B. Kuznets

Simon Kuznets was born in Pinsk, Belarus, to Lithuanian-Jewish parents in 1901. He completed his schooling in Kharkiv, present-day Ukraine. The curriculum at the Institute where he studied included economic history, mathematics, statistics and political economy. “According to the Institute’s curriculum, development of the national economies had to be analyzed in the wider context of changes in connected spheres and with involvement of proper methods and empirical data.”²⁷

By 1921, the Soviet Union was in charge. Kuznets emigrated to the United States in 1922. Under Mitchell at Columbia University, he earned his B.A. in 1923, his M.A. in 1924, and his PhD in 1926. Kuznets is probably best known today for the so-called Kuznets curve, which describes the relationship between economic growth and income inequality. My focus is on his earlier work, for which he was awarded the Nobel prize in 1981. I find a link between his personal history of

²³ Ibid., pages 21-22.

²⁴ Ibid., page 23.

²⁵ Ibid., page 24.

²⁶ Ibid., page 34.

²⁷ “Simon Kuznets.” Wikipedia. https://en.wikipedia.org/wiki/Simon_Kuznets.

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fleeing an oppressive regime and his great insights into the advantages of developed countries in enhancing growth and increasing opportunity across economic classes. Democratic freedoms were fertile ground for the major building blocks of faster growth, and Kuznets enumerated those advantages in detail.

In 1930, Simon Kuznets was loaned by the NBER to the Commerce Department to provide estimates for U.S. national income. His first big task was to assemble data regarding the prolonged recession of 1929-1931. Kuznets recruited Robert Nathan, one of his former graduate students at the University of Pennsylvania.

A decade later, in the last days of 1940, President Franklin Roosevelt gave a speech saying that the United States would become the “arsenal of democracy,” to build support for the lonely British struggle against the Nazis, who were bombing the cities and preparing for an invasion. The U.S. needed to mobilize an economy for war. By 1942, after Pearl Harbor, in his state of the union address, Roosevelt announced his “must list” of production targets for that year, including “60,00 planes, 45,00 tanks, and 6 million tons of shipping. The goals for 1943 were almost double.²⁸ But there were disagreements between the economists and the military on what was feasible. The economists argued that resources would be wasted in producing parts that could not be used.

Kuznets was the chief economist of the Planning Committee of the War Production Board. Robert Nathan was the chairman. “Kuznets prepared a highly classified memorandum using national income techniques to show that much more could be produced with ambitious but attainable goals than with unattainable goals.”²⁹ The armed services were persuaded. As Fogel puts it, “the use of national income accounting to allocate resources between military and civilian needs was the most important contribution of economists to victory in WWII.”³⁰ I would note that Milton Friedman did the work that doubled the effectiveness of anti-aircraft shells.³¹ Wartime mobilization in the United States was crucial to the allied victory in WW II. Empirical economics greatly enhanced the feasibility of the planning effort and the efficiency of the operations that followed.

I cannot do justice to Kuznets’s long career, leading to his Nobel prize. But the hallmark of all his work was painstaking and patient collection of data to understand the links between income and growth. The four key elements in his linkage were demographic growth, knowledge accretion over time, a country’s ability to adapt to new institutional and structural features of the economy, and external relations between countries (transportation and communications). The way these elements expressed themselves in modern industrial/democratic countries was the foundation

²⁸ Fogel, et al., page 56.

²⁹ Ibid., page 57.

³⁰ Ibid.

³¹ Ibid., pages 58-59.

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for their great strides in national income. Modern economic growth was both rapid and sustained due to the interplay of technological and institutional change.

For Kuznets, the modern era of growth was a scientific epoch. Applying science to production required also three “spiritual changes,” which Kuznets described as secularism, egalitarianism, and nationalism³² Secularism was a focus on life on earth, not heaven. Egalitarianism meant everyone should have equal opportunity to perform. And nationalism was the positive sense of being part of a community.³³ His theory was complex, and the model was dynamic. Factors that promoted growth could become obstacles over time. But his message was optimistic and captured in his Nobel Prize lecture.³⁴

The Fogel book explains well Kuznets’ multifaceted work on demography and growth. For Kuznets, his broad gauged schooling in Kharkov informed his lifelong work. Economic theory and history remained essential complements of useful data and empirical work.

In examining the “Scientific Methods of Simon Kuznets”, Fogel emphasizes that Kuznets established his research priorities on the basis of three factors: what policymakers need for promoting economic growth, stability, and equity; the social scientists beliefs regarding the measures that will best resolve debates; and the availability of data and tools to process the data.³⁵

As a teacher, Kuznets emphasized what Fogel calls the *art of measurement*—how to make a reliable estimate from incomplete and biased data. His gift to American economics was not only his own celebrated work but also the legacy he left behind in the economists whom he trained to be transparent about the limits to reliability of conclusions based on incomplete information.

IV. Martin Feldstein and James Poterba

While this essay is about the founders of the NBER, the modern NBER reflects the leadership of Martin (Marty) Feldstein and James (Jim) Poterba.

Martin Feldstein, who passed away this year, was an illustrious Professor of Economics at Harvard University. He served as President of the NBER from 1977-2008, with a stint in government from 1982-1984 as Chairman of the Council of Economic Advisers under President Reagan. Many of you know him from his wonderfully doubting columns in the Wall Street Journal. I was a great fan of his and honored by his invitation to join the Board (and Executive Committee) of the NBER.

³² Ibid., page 71.

³³ Ibid., pages 71-72.

³⁴ Kuznets, Simon. “Modern Economic Growth: Findings and Reflections.” The Nobel Prize. December 11, 1971. <https://www.nobelprize.org/prizes/economic-sciences/1971/kuznets/lecture/>.

³⁵ Fogel, et al., page 92.

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When Marty announced his intention to step down, the *Wall Street Journal* wrote: “Under his tenure the NBER was revitalized to become probably the country’s most important research network for academic economists. It also became the official arbiter of U.S. recessions and expansions.”³⁶

After Marty’s passing, Larry Summers published a beautiful memorial column in the *Wall Street Journal*. He wrote: “Marty’s death isn’t merely the loss of an economics superstar; it is the loss of a mentor and friend who, through his teaching, generosity of spirit and example, made possible everything I have been able to achieve professionally. Countless others can say the same about him, in other ways.” Larry was Marty’s research assistant, where he learned that “rigorous and close statistical analysis of data can provide better answers to economic questions, and possibly better lives for millions of people.” And so, the NBER became Larry’s home.³⁷

Marty transformed the NBER by abolishing the in-house research team and enhancing the substantive role of the President through the appointment of NBER Faculty Research Fellows or Research Associates. The Faculty Research Fellows are junior scholars. The Research Associates, whose appointments are approved by the Board, hold tenured positions at their home institutions.

In 2008, when Marty stepped down, the Board undertook an expansive and careful search for a successor. The unanimous choice was Jim Poterba, professor of economics at MIT.

Under both Marty and Jim, the Fellows, Working Papers, conferences, and books of the NBER have made the NBER the national home of university economics in the United States. The publications and Fellows appointments have cemented the role of empirical economics and underscored the importance of discovering sources of data to advance our national understanding.

V. 100 years

In January 2020, the NBER will celebrate its 100th anniversary. That month, the NBER has scheduled a session at the American Economics Association (AEA) with four papers on key themes of early research: monetary policy, business cycles, human capital, and national income accounts.

But the NBER is not looking backwards, next generation scholars continue to flourish. For example, *The Economist* began in 1988 to publish each decade a list of young stars in the

³⁶ “Feldstein to Step Down as President of NBER.” *The Wall Street Journal*. September 9, 2007.

<http://on.wsj.com/17bOK5w>.

³⁷ Summers, Lawrence. “The Economist Who Helped Me Find My Calling.” *The Wall Street Journal*. June 12, 2019.

<https://www.wsj.com/articles/the-economist-who-helped-me-find-my-calling-11560378015>.

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profession. In 2018, all eight of the researchers they featured were NBER affiliates. Indeed, Jim had named two of them as NBER program directors just the year before. NBER researchers win John Bates Clark medals, awarded by the AEA to “that American economist under the age of forty who is adjudged to have made a significant contribution to economic thought and knowledge.” Similarly, NBER researchers are well represented amongst the Distinguished Fellows of the AEA.³⁸

Most of us here today would probably name Paul Samuelson as the founder of modern economics.

Indeed, Samuelson won the Nobel prize in 1970, for having “done more than any other contemporary economist to raise the level of scientific analysis in economic theory.” Samuelson considered mathematics to be the “natural language” for economists. His famous *Economics: An Introductory Analysis* textbook was originally published in 1948, with many editions to follow in many languages.³⁹ He had a brilliant career at MIT, where he recruited to the faculty Robert Solow, Franco Modigliani, Robert Merton, Joseph Stiglitz, and Paul Krugman, all of whom went on to win Nobel Prizes.⁴⁰

Samuelson was the premier academic economist and “likely the most influential economist of the later 20th century.”⁴¹ When Simon Kuznets passed away in July 1985, Paul Samuelson was quoted in the New York Times obituary as saying: “Simon Kuznets was a giant in twentieth century economics. He was the founder of national income measurement and he created quantitative economic history.”⁴²

I like this story of Samuelson paying his respects to Kuznets because respect is what I most feel in reading about these early founders of the NBER. They cared about making the world a better place. They set out to make economics a science through painstaking empirical work. They believed that facts would strengthen democracy through consensus on best policy choices. It is a story that is painfully resonant in these times. We should remember it.

³⁸ “American Economics Association Announces Award Recipients for 2019.” American Economics Association. May 1, 2019. <https://www.aeaweb.org/news/press-release-awards-2019>.

³⁹ “Nobel-winning economist Paul A. Samuelson dies at age 94.” MIT News. December 13, 2009. <http://news.mit.edu/2009/obit-samuelson-1213>.

⁴⁰ “Paul Samuelson.” Wikipedia. https://en.wikipedia.org/wiki/Paul_Samuelson.

⁴¹ Ibid.

⁴² Fogel, et al., page 107.

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