### A P P E N D I X A

# REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS DURING 2016

#### LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS Washington, D.C., December 15, 2016

Mr. President:

The Council of Economic Advisers submits this report on its activities during calendar year 2016 in accordance with the requirements of the Congress, as set forth in section 10(d) of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely yours,

Jason Furman, Chairman Sandra E. Black, Member Jay C. Shambaugh, Member

## COUNCIL MEMBERS AND THEIR DATES OF SERVICE

Name	Position	Oath of office date	Separation date
Edwin G. Nourse	Chairman	August 9, 1946	November 1, 1949
Leon H. Keyserling	Vice Chairman	August 9, 1946	
	Acting Chairman	November 2, 1949	
	Chairman	May 10, 1950	January 20, 1953
John D. Clark	Member	August 9, 1946	
	Vice Chairman	May 10, 1950	February 11, 1953
Roy Blough	Member	June 29, 1950	August 20, 1952
Robert C. Turner	Member	September 8, 1952	January 20, 1953
Arthur F. Burns	Chairman	March 19, 1953	December 1, 1956
Neil H. Jacoby	Member	September 15, 1953	February 9, 1955
Walter W. Stewart	Member	December 2, 1953	April 29, 1955
Raymond J. Saulnier	Member	April 4, 1955	
	Chairman	December 3, 1956	January 20, 1961
Joseph S. Davis	Member	May 2, 1955	October 31, 1958
Paul W. McCracken	Member	December 3, 1956	January 31, 1959
Karl Brandt	Member	November 1, 1958	January 20, 1961
Henry C. Wallich	Member	May 7, 1959	January 20, 1961
Walter W. Heller	Chairman	January 29, 1961	November 15, 1964
James Tobin	Member	January 29, 1961	July 31, 1962
Kermit Gordon	Member	January 29, 1961	December 27, 1962
Gardner Ackley	Member	August 3, 1962	
	Chairman	November 16, 1964	February 15, 1968
John P. Lewis	Member	May 17, 1963	August 31, 1964
Otto Eckstein	Member	September 2, 1964	February 1, 1966
Arthur M. Okun	Member	November 16, 1964	
	Chairman	February 15, 1968	January 20, 1969
James S. Duesenberry	Member	February 2, 1966	June 30, 1968
Merton J. Peck	Member	February 15, 1968	January 20, 1969
Warren L. Smith	Member	July 1, 1968	January 20, 1969
Paul W. McCracken	Chairman	February 4, 1969	December 31, 1971
Hendrik S. Houthakker	Member	February 4, 1969	July 15, 1971
Herbert Stein	Member	February 4, 1969	
	Chairman	January 1, 1972	August 31, 1974
Ezra Solomon	Member	September 9, 1971	March 26, 1973
Marina v.N. Whitman	Member	March 13, 1972	August 15, 1973
Gary L. Seevers	Member	July 23, 1973	April 15, 1975
William J. Fellner	Member	October 31, 1973	February 25, 1975
Alan Greenspan	Chairman	September 4, 1974	January 20, 1977
Paul W. MacAvoy	Member	June 13, 1975	November 15, 1976
Burton G. Malkiel	Member	July 22, 1975	January 20, 1977
Charles L. Schultze	Chairman	January 22, 1977	January 20, 1981
William D. Nordhaus	Member	March 18, 1977	February 4, 1979
Lyle E. Gramley	Member	March 18, 1977	May 27, 1980
George C. Eads	Member	June 6, 1979	January 20, 1981
Stephen M. Goldfeld	Member	August 20, 1980	January 20, 1981
Murray L. Weidenbaum	Chairman	February 27, 1981	August 25, 1982
William A. Niskanen	Member	June 12, 1981	March 30, 1985
Jerry L. Jordan	Member	July 14, 1981	July 31, 1982

## COUNCIL MEMBERS AND THEIR DATES OF SERVICE

Name	Position	Oath of office date	Separation date
Martin Feldstein	Chairman	October 14, 1982	July 10, 1984
William Poole	Member	December 10, 1982	January 20, 1985
Beryl W. Sprinkel	Chairman	April 18, 1985	January 20, 1989
Thomas Gale Moore	Member	July 1, 1985	May 1, 1989
Michael L. Mussa	Member	August 18, 1986	September 19, 1988
Michael J. Boskin	Chairman	February 2, 1989	January 12, 1993
John B. Taylor	Member	June 9, 1989	August 2, 1991
Richard L. Schmalensee	Member	October 3, 1989	June 21, 1991
David F. Bradford	Member	November 13, 1991	January 20, 1993
Paul Wonnacott	Member	November 13, 1991	January 20, 1993
Laura D'Andrea Tyson	Chair	February 5, 1993	April 22, 1995
Alan S. Blinder	Member	July 27, 1993	June 26, 1994
Joseph E. Stiglitz	Member	July 27, 1993	, ,
, 1 0	Chairman	June 28, 1995	February 10, 1997
Martin N. Baily	Member	June 30, 1995	August 30, 1996
Alicia H. Munnell	Member	January 29, 1996	August 1, 1997
Janet L. Yellen	Chair	February 18, 1997	August 3, 1999
Jeffrey A. Frankel	Member	April 23, 1997	March 2, 1999
Rebecca M. Blank	Member	October 22, 1998	July 9, 1999
Martin N. Baily	Chairman	August 12, 1999	January 19, 2001
Robert Z. Lawrence	Member	August 12, 1999	January 12, 2001
Kathryn L. Shaw	Member	May 31, 2000	January 19, 2001
R. Glenn Hubbard	Chairman	May 11, 2001	February 28, 2003
Mark B. McClellan	Member	July 25, 2001	November 13, 2002
Randall S. Kroszner	Member	November 30, 2001	July 1, 2003
N. Gregory Mankiw	Chairman	May 29, 2003	February 18, 2005
Kristin J. Forbes	Member	November 21, 2003	June 3, 2005
Harvey S. Rosen	Member	November 21, 2003	,,
,	Chairman	February 23, 2005	June 10, 2005
Ben S. Bernanke	Chairman	June 21, 2005	January 31, 2006
Katherine Baicker	Member	November 18, 2005	July 11, 2007
Matthew J. Slaughter	Member	November 18, 2005	March 1, 2007
Edward P. Lazear	Chairman	February 27, 2006	January 20, 2009
Donald B. Marron	Member	July 17, 2008	January 20, 2009
Christina D. Romer	Chair	January 29, 2009	September 3, 2010
Austan D. Goolsbee	Member	March 11, 2009	
	Chairman	September 10, 2010	August 5, 2011
Cecilia Elena Rouse	Member	March 11, 2009	February 28, 2011
Katharine G. Abraham	Member	April 19, 2011	April 19, 2013
Carl Shapiro	Member	April 19, 2011	May 4, 2012
Alan B. Krueger	Chairman	November 7, 2011	August 2, 2013
James H. Stock	Member	February 7, 2013	May 19, 2014
Jason Furman	Chairman	August 4, 2013	January 20, 2017
Betsey Stevenson	Member	August 6, 2013	August 7, 2015
Maurice Obstfeld	Member	July 21, 2014	August 28, 2015
	Member	August 10, 2015	January 20, 2017
Sandra E. Black	Member	11ugust 10, 2015	January 20, 2017
Sandra E. Black Jay C. Shambaugh	Member	August 31, 2015	January 20, 2017

## REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS **DURING 2016**

The Council of Economic Advisers was established by the Employment Act of 1946 to provide the President with objective economic analysis and advice on the development and implementation of a wide range of domestic and international economic policy issues. The Council is governed by a Chairman and two Members. The Chairman is appointed by the President and confirmed by the United States Senate. The Members are appointed by the President.

#### THE CHAIRMAN OF THE COUNCIL

Jason Furman was confirmed by the U.S. Senate on August 1, 2013. Prior to this role, Furman served as Assistant to the President for Economic Policy and the Principal Deputy Director of the National Economic Council.

From 2007 to 2008, Furman was a Senior Fellow in Economic Studies and Director of the Hamilton Project at the Brookings Institution. Previously, he served as a Staff Economist at the Council of Economic Advisers, a Special Assistant to the President for Economic Policy at the National Economic Council under President Clinton, and Senior Adviser to the Chief Economist and Senior Vice President of the World Bank. Furman was the Economic Policy Director for Obama for America. Furman has also served as Visiting Scholar at New York University's Wagner Graduate School of Public Service, a visiting lecturer at Yale and Columbia Universities, and a Senior Fellow at the Center on Budget and Policy Priorities.

#### THE MEMBERS OF THE COUNCIL

Sandra E. Black was appointed by the President on August 10, 2015. She is on leave from the University of Texas, Austin where she holds the Audre and Bernard Rapoport Centennial Chair in Economics and Public Affairs and is a Professor of Economics, Dr. Black received her B.A. from the University of California, Berkeley and her Ph.D. in economics from Harvard University.

Jay C. Shambaugh was appointed by the President on August 31, 2015. He is on leave from George Washington University, where he is a Professor of Economics and International Affairs. Dr. Shambaugh received a B.A. from Yale, an M.A.L.D. from The Fletcher School at Tufts University, and a Ph.D. in Economics from the University of California, Berkeley.

#### AREAS OF ACTIVITIES

A central function of the Council is to advise the President on all economic issues and developments. In the past year, as in previous years, advising the President on policies to spur economic growth and job creation, and evaluating the effects of these policies on the economy, have been priorities.

The Council works closely with various government agencies, including the National Economic Council, the Domestic Policy Council, the Office of Management and Budget, White House senior staff, and other officials to engage in discussions on numerous policy matters. In the area of international economic policy, the Council coordinates with other units of the White House, the Treasury Department, the State Department, the Commerce Department, and the Federal Reserve.

Among the many economic policy areas that received attention in 2016, the Council focused in particular on: income inequality and inclusive growth; the Affordable Care Act and health care costs; labor force participation; criminal justice policies and incarceration; innovation and competition, including in the labor market; the minimum wage and unemployment insurance; trade policies and the Trans Pacific Partnership; international economics; financial system reform; energy and environment policies; and higher education and college affordability.

The Council prepares for the President, the Vice President, and the White House senior staff a daily economic briefing memo analyzing current economic developments, almost-daily memos on key economic data releases, and periodic memos on broader topics. The Council and its staff also presents a monthly briefing on the state of the economy to senior White House officials.

The Council, the Department of Treasury, and the Office of Management and Budget—the Administration's economic "troika"— are responsible for producing the economic forecasts that underlie the Administration's budget proposals. The Council initiates the forecasting process twice each year, consulting with a wide variety of outside sources, including leading privatesector forecasters and other government agencies.

The Council was an active participant in the trade policy process, providing analysis and opinions on a range of trade-related issues involving the enforcement of existing trade agreements, reviews of current U.S. trade policies, and consideration of future policies. The Council also participated on the Trade Promotion Coordinating Committee, helping to examine the ways in which exports may support economic growth in the years to come. In the area of investment and security, the Council participated on the Committee on Foreign Investment in the United States (CFIUS), reviewing individual cases before the committee.

The Council is a leading participant in the Organisation for Economic Co-operation and Development (OECD), an important forum for economic cooperation among high-income industrial economies. The Council coordinated with other agencies to provide information for the OECD's review of the U.S. economy. Chairman Furman is chairman of the OECD's Economic Policy Committee, and Council Members and staff participate actively in working-party meetings on macroeconomic policy and coordination and contribute to the OECD's research agenda.

The Council issued a wide range of reports and issue briefs in 2016. In January, the Council commemorated the seven-year anniversary of the Lilly Ledbetter Fair Pay Act by releasing an issue brief on the gender pay gap and progress made to ensure that women receive equal pay for equal work. In February, the Council released a retrospective assessment of the impact of the clean energy investments made in the American Recovery and Reinvestment Act.

In March, the Council released an issue brief on the digital divide and the economic benefits of broadband access. The brief highlighted the impacts that the Administration's initiatives have had in dramatically expanding access to the Internet for families and students, and reviewed academic research that shows that Internet access leads to better labor market outcomes. The Council also released a March issue brief on patent litigation and its impact on innovation. The brief reviewed recent trends in increasing levels of patent litigation, and the possible negative effect of these suits on entrepreneurship and productivity growth. That same month, the Council released new analysis on the impact of the Affordable Care Act six years after passage. The analysis reviewed the substantial progress made on health care coverage, costs, and quality.

In April, the Council released a report on the economic impacts of incarceration and criminal justice policies. The report applied an economic framework to policy questions related to criminal justice reform and found

that some criminal justice policies, such as increased incarceration, fail costbenefit tests. The report also highlighted that minority communities are disproportionately impacted by interactions with the criminal justice system, and these interactions can have long-run effects on individuals, families, and communities. In addition, the Council released an issue brief on the benefits of competition and indicators of market power. The issue brief highlighted the economic benefits of competition for workers and firms and reviewed several indicators that competition may be decreasing in the U.S. economy.

The Council released a June report on financial inclusion in the United States, which highlighted the lack of access to safe and affordable financial services for many low-income individuals. The report showed that expanding access to traditional banking services for underbanked communities has positive economic impacts. That same month, the Council released an extensive report on the long-term decline in the prime-age male labor force participation rate. The report reviewed trends over the last 50 years of declining labor force participation among working age men, and emphasized the economic impact of this decline for both the macroeconomy as well as individual families. The report reviewed various explanations for these changes, as well as policy responses.

In June, the Council also focused on energy and environment policies, issuing a report on prospects for integrating renewable energy sources into the electric grid. The report emphasized the important transition toward renewable generation in the United States, and the economics of integrating these energy sources into electric grid operation. The Council also released a report on the economics of coal leasing on Federal lands and reforms needed to ensure that taxpayers receive a fair return.

In July, the Council released a report on investments in higher education and the state of student debt. This report highlighted the financial benefits to individuals and the economy from higher education investments, and evaluated recent trends in the level of education-related debt. The report also highlighted the importance of the Administration's policies to make college affordable for American families and to protect students from lowquality academic institutions.

The Council published a report in August on the performance of community banks over time, finding that, across many measures, community banks have remained strong since financial reform legislation was passed in 2010. In October, the Council released an issue brief on the economic progress of the Hispanic community over the past eight years, focusing in particular on rising wages, declining poverty, and increased health insurance coverage.

In October, the Council released a report on labor market monopsony, or wage-setting power, including recent trends and policy responses. The report highlighted the role that firm wage-setting power may have played in the slow wage growth over recent decades and increasing inequality. In November, the Council released an issue brief on trade policy and the industries and jobs at risk if the Trans Pacific Partnership does not pass.

Some of the analysis and findings of these reports can be found throughout this Economic Report of the President. Additionally, over the course of 2016, the Council published a series of reports examining the Administration's economic record and quantifying the impact of President Obama's economic policies. These reports included analysis of progress reducing income inequality, economic benefits of health care reform, investments in higher education, the role of financial reform in strengthening the financial system, and actions to address climate change. They are collected and expanded upon in this Economic Report of the President.

All of the aforementioned reports can be found on the Council's website, archived at http://www.obamawhitehouse.gov/administration/eop/ cea/factsheets-reports.

The Council continued its efforts to improve the public's understanding of economic developments and of the Administration's economic policies through briefings with the economic and financial press, speeches, discussions with outside economists, and regular updates on major data releases and postings of CEA's reports on the White House and CEA blogs. The Chairman and Members also regularly met to exchange views on the economy with the Chairman and Members of the Board of Governors of the Federal Reserve System.

#### Public Information

The Council's annual Economic Report of the President is an important vehicle for presenting the Administration's domestic and international economic policies. It is available for purchase through the Government Printing Office, and is viewable on the Internet at www.gpo.gov/erp.

The Council frequently prepared reports and blog posts in 2016, and the Chairman and Members gave numerous public speeches. The reports, posts and texts of speeches are available at the Council's website, archived at www.obamawhitehouse.gov/cea. Finally, the Council published the monthly Economic Indicators, which is available online at www.gpo.gov/ economicindicators.

#### THE STAFF OF THE COUNCIL OF ECONOMIC ADVISERS

The staff of the Council consists of the senior staff, senior economists, staff economists, research economists, and the administrative and support staff. The staff at the end of 2016 was:

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10	$n_{1} \cap v$	Staff
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Andrea Taverna ...... Chief of Staff

Matthew Fiedler . . . . . . . . . . Chief Economist

Steven N. Braun . . . . . Director of Macroeconomic

Forecasting

Tomeka R. Jordan..... Director of Finance and

Administration

Adrienne Pilot...... Director of Statistical Office

#### Senior Economists

Victor Bennett...... Innovation, Industrial Organization,

Technology

William J. Congdon . . . . . . . . Behavioral Economics, Labor, Welfare

Laura Giuliano . . . . . . . . Education, Labor, Welfare

Gregory Leiserson . . . . . . . Budget, Retirement, Tax

Sheila Olmstead . . . . . . . . . Energy, Environment

Christopher Otrok . . . . . . . . Housing, Macroeconomics

Burt Porter. . . . . . . Finance

Katheryn Russ..... International Economics

Aaron Sojourner...... Criminal Justice, Education, Labor

#### **Economists**

Emily R. Gee . . . . . . . . . . . Health

## Staff Economists

James Elwell ...... Criminal Justice, Labor

Amy Filipek..... Housing, Macroeconomics

Conor Foley...... International Trade, Macroeconomics

Stephen Harrell.....Labor

Rahul Rekhi...... Budget, Health, Tax

#### Research Economists

David Boddy..... Labor

Marie Cases...... International Trade, Macroeconomics

Neha Dalal..... Education, Labor

Amelia Keyes...... Competition, Energy, Environment

Nataliya Langburd . . . . . . . . . Energy, International Trade,

Macroeconomics

Robert Liu . . . . . Finance, Macroeconomics

Ayushi Narayan ..... Education, Labor

Jana Parsons ...... Industrial Organization

Wilson Powell III . . . . . . . . . . Health, Labor

### Statistical Office

The Statistical Office gathers, administers, and produces statistical information for the Council. Duties include preparing the statistical appendix to the Economic Report of the President and the monthly publication Economic Indicators. The staff also creates background materials for economic analysis and verifies statistical content in Presidential memoranda. The Office serves as the Council's liaison to the statistical community.

Brian A. Amorosi ..... Statistical Analyst Jennifer Vogl..... Economic Statistician

## Office of the Chairman and Members

Jeff Goldstein ...... Deputy Chief of Staff and Special

Assistant to the Chairman

Harris R. Eppsteiner. . . . . . . Special Assistant to the Chairman and

Research Economist

Jamie Keene. . . . . . . . . . . Special Assistant to the Members

### Administrative Office

The Administrative Office provides general support for the Council's activities. This includes financial management, human resource management, travel, operations of facilities, security, information technology, and telecommunications management support.

Doris T. Searles..... Operations Manager

#### **Interns**

Student interns provide invaluable help with research projects, dayto-day operations, and fact-checking. Interns during the year were: Andres Arguello, Edward Brown, John Patrick Bruno, Arianna Davis, Atticus Francken, Amy Frieder, Samarth Gupta, Kevin Gawora, Joe Jacobson, Joanna Jin, Gloria Li, Stephanie Lu, Karna Malaviya, Victoria Marlin, Brianna E. McClain, Femi Olaleye, Katherine Reinmuth, Andrés Rodríguez Brauer, Kunal Sangani, John Scianimanico, Riley Webster, Stacey Young, Laura Zhang, and Robin Zhang.

#### DEPARTURES IN 2016

The senior economists who resigned in 2016 (with the institutions to which they returned after leaving the Council in parentheses) were: Kenneth Gillingham (Yale University), Timothy Park (Department of Agriculture), Nirupama Rao (New York University), Claudia Sahm (Federal Reserve), and Robert Seamans (New York University).

The staff economists who departed in 2016 were Martha Gimbel, E. Mallick Hossain, Bryson Rintala, Gabriel Scheffler, Paige Weber, and Emily Weisburst.

The research economists who departed in 2016 were Lydia Cox, Samuel Himel, Emma Rackstraw, and Jason Sockin.

The research assistants who departed in 2016 were William Weber and Samuel Young.

Anna Y. Lee resigned from her position as Director of Finance and Administration. Eric Van Nostrand resigned from his position as Special Assistant to the Chairman and Staff Economist. Jonathan Sheppard resigned from his position as Economic Statistician.