



C O N T E N T S

CHAPTER 1

INCLUSIVE GROWTH IN THE UNITED STATES	21
FORMS OF ECONOMIC INEQUALITY:	
INCOME, WEALTH, AND OPPORTUNITY	23
<i>Income Inequality</i>	23
<i>Wealth Inequality</i>	28
<i>Inequality of Opportunity</i>	30
<i>The Interplay of the Forms of Inequality</i>	34
SOURCES OF INEQUALITY:	
COMPETITIVE MARKETS AND ECONOMIC RENTS	34
<i>The Competitive Channel</i>	36
<i>The Rents Channel</i>	38
THE INTERPLAY OF INEQUALITY AND GROWTH	44
POLICIES TO PROMOTE INCLUSIVE GROWTH	46
<i>Strengthening Aggregate Demand</i>	47
<i>Promoting Equality of Opportunity</i>	48
<i>Reducing Market Power Concentration and Rent-Seeking Behavior</i>	48
<i>Protecting Families Against the Consequences of Inequality While Fostering Mobility</i>	49
CONCLUSION:	
THE 2016 <i>ECONOMIC REPORT OF THE PRESIDENT</i>	50

CHAPTER 2

THE YEAR IN REVIEW AND THE YEARS AHEAD	51
POLICY DEVELOPMENTS	54
<i>Fiscal Policy</i>	54
<i>Monetary Policy</i>	60
LABOR MARKET	65
OUTPUT	71

<i>Consumer Spending</i>	74
<i>Housing Markets</i>	79
<i>Investment</i>	91
<i>Net Exports</i>	96
PRODUCTIVITY	96
WAGE GROWTH AND PRICE INFLATION	100
FINANCIAL MARKETS	103
THE OUTLOOK	106
<i>Forecast over the Next Three Years</i>	106
<i>Forecast over the Long Term</i>	109
CONCLUSION	117
CHAPTER 3	
THE GLOBAL MACROECONOMIC SITUATION	119
SOURCES OF THE BROADER SLOWDOWN	120
DEVELOPMENTS IN 2015	129
<i>Euro area</i>	129
<i>United Kingdom</i>	133
<i>Japan</i>	133
<i>Emerging markets</i>	134
U.S. TRADE	145
CONCLUSION	152
CHAPTER 4	
INEQUALITY IN EARLY CHILDHOOD AND EFFECTIVE PUBLIC POLICY INTERVENTIONS	153
INTRODUCTION	153
THE ECONOMICS OF INVESTING EARLY AND THE CONSEQUENCES OF EARLY LIFE DISADVANTAGE	155
<i>Pathways for Returns to Early Investments</i>	155
<i>Inequality in Early Health and Human Capital Investments</i> ..	156
<i>The Role of Public Investment in Early Childhood</i>	172
POLICY INTERVENTIONS THAT IMPROVE CHILDREN'S OUTCOMES	175
<i>Direct, Indirect and In-Kind Investments in Early Health and Human Capital</i>	176
<i>Income and Other Near-Cash Transfer Programs</i>	200
CONCLUSION	206

CHAPTER 5

TECHNOLOGY AND INNOVATION..... 207

- COMPETITION AND DYNAMISM PLAY A CRITICAL ROLE 210
 - The Role of Startups* 210
 - Declining Business Dynamism* 213
 - Declining Labor Market Dynamism*..... 218
- TRENDS IN R&D SPENDING AND PATENTING..... 220
 - The Growth of Private R&D and Decline of Public R&D*..... 220
 - Recent Trends in Patenting* 227
- NEW OPPORTUNITIES AND CHALLENGES 230
 - Robotics* 231
 - Effect of Robotics on Workers* 236
 - Internet and New Business Models* 239
 - The Digital Divide Challenge* 241
- CONCLUSION 248

CHAPTER 6

THE ECONOMIC BENEFITS OF INVESTING IN U.S.

INFRASTRUCTURE 251

- ECONOMIC PRINCIPLES FOR INFRASTRUCTURE POLICY..... 252
 - Role of Government* 253
- THE STATE OF U.S. INFRASTRUCTURE 254
 - Current Investment Levels* 254
 - Transportation Infrastructure Quality*..... 255
 - Congestion* 259
- BENEFITS OF INVESTING IN INFRASTRUCTURE..... 260
 - Short-Term, Demand-Side Benefits*..... 262
 - Long-Term, Supply-Side Benefits*..... 265
 - Infrastructure’s Direct Boost to Productivity* 266
 - Infrastructure Investment and Agglomeration* 270
 - Spillover Effects*..... 271
 - Household Effects*..... 274
- PROSPECTS FOR INCREASED INFRASTRUCTURE INVESTMENT.. 275
 - Low Interest Rates* 275
 - Maintenance and Repair*..... 276
- MANAGING AND FUNDING INFRASTRUCTURE PROJECTS 278
 - User Fees*..... 278
 - Public-Private Partnerships* 279

THE ROLE OF THE FEDERAL GOVERNMENT	282
<i>Federal Grants</i>	283
<i>Federal Lending and Loan Guarantees</i>	284
<i>Tax-Exempt Bonds</i>	285
<i>Build America Bonds</i>	286
<i>Recent Legislation</i>	287
CONCLUSION	289
CHAPTER 7	
THE 70TH ANNIVERSARY OF THE COUNCIL OF ECONOMIC	
ADVISERS.	291
GOALS AND DUTIES	292
<i>Origins of CEA—Legislative History of the Employment</i>	
<i>Act of 1946.</i>	292
<i>Institutional Structure</i>	294
<i>Policy Focus</i>	295
HELP TO DEVELOP ECONOMIC POLICY	299
<i>Keyserling and “Full-Employment Economics”</i>	300
<i>The Heller Council and the 1964 Tax Cut</i>	301
<i>Countercyclical Policy in Other Administrations.</i>	303
<i>Microeconomic Policy</i>	306
<i>Ensuring that Policies are in the Public Interest.</i>	309
HELP TO ADVANCE THE PRESIDENT’S ECONOMIC AGENDA. . . .	313
<i>Nourse and Keyserling</i>	314
<i>Institutional Lessons.</i>	316
GATHER, ANALYZE, AND INTERPRET INFORMATION ON	
ECONOMIC TRENDS AND DEVELOPMENTS	319
<i>The Burns Council and the 1953-54 Recession.</i>	319
<i>The 1970s and Stagflation</i>	323
ENGAGE THE ECONOMICS COMMUNITY	324
<i>The Origins of Economists in the White House</i>	324
<i>Institutional Advantages and Challenges</i>	325
CONCLUSION	329
REFERENCES	331

APPENDIXES

A.	Report to the President on the Activities of the Council of Economic Advisers During 2015	381
B.	Statistical Tables Relating to Income, Employment, and Production	395

FIGURES

1.1.	Share of Income Earned by Top 1 Percent, 1975-2014	25
1.2a.	Share of Total, Labor, Capital Income Accruing to Top 1 Percent Based on Piketty-Saez Data	26
1.2b.	Share of Total, Labor, Capital Income Accruing to Top 1 Percent Based on Congressional Budget Office Data.	26
1.3.	Distribution of Household Wealth (Survey of Consumer Finances), 1989-2013	29
1.4.	Distribution of Household Wealth (Saez-Zucman), 1913-2012	30
1.5.	Intergenerational Earnings Mobility	32
1.6a.	The “Great Gatsby Curve” Within the United States	35
1.6b.	The “Great Gatsby Curve” Across Countries	35
1.7.	Change in Employment by Detailed Occupation, 1989-2015	37
1.8.	U.S. Union Membership & Top 10 Percent Income Share, 1917-2015	40
1.9.	Corporate Profits and Real Interest Rates, 1985-2015.	41
1.10.	Return on Invested Capital Excluding Goodwill, U.S. Publicly-Traded Nonfinancial Firms, 1965-2014.	41
1.11.	Share of Workers with a State Occupational License	43
1.12.	Real Construction Costs and House Prices, 1980-2013	45
2-1.	Unemployment Rate, 1975-2015	52
2-2.	Oil and Commodity Prices, 2014-2015	54
2-i.	North American Oil Rig Count and Oil Price, 2000-2015	56
2-ii.	Crude Oil Production and Net Imports, 1990-2015	57
2-3.	Federal Budget Deficit, 1950-2015	59
2-4.	Contribution of Government Purchases to Real GDP Growth, 2011-2015	59
2-5.	Government Purchases as Share of Nominal GDP, 1948-2015.	61
2-6.	Forecast of Federal Funds Rate at Year End 2015	61
2-iii.	Real State and Local Government Purchases During Recoveries, 1960-2015	62
2-iv.	State and Local Government Surplus as Percent of Nominal GDP, 1947-2015	63
2-v.	State and Local Pensions, Unfunded Liabilities, 1950-2015.	64
2-7.	12-Month Change in Nonfarm Payroll Employment, 2007-2015.	66
2-8.	Actual and Consensus Forecast Unemployment Rate, 2008-2020	67
2-9.	Unemployment Rate by Duration, 1990-2015	68
2-10.	Rates of Part-Time Work, 1960-2015.	69
2-11.	Alternative Measures of Labor Force Underutilization, 2007-2015	70
2-12.	Labor Force Participation Decomposition, 2009-2015	70
2-13.	Real Growth in GDP, Private Domestic Final Purchases (PDFP), and Gross Domestic Output (GDO), 2007-2015	73
2-14.	Personal Saving Rate, 2000-2015	75

2-15.	Consumer Sentiment, 2006-2015	75
2-vi.	Average GDP Revision, 1994-2013.	76
2-vii.	Average Output Growth by Calendar Quarter, 2005-2014 Estimates 3 Months After Quarter's End.	77
2-16.	Real Income Growth Over Next Year, 1978-2015	79
2-17.	Household Debt Relative to Disposable Personal Income (DPI), 1995-2015	80
2-18.	Consumption and Wealth Relative to Disposable Personal Income (DPI), 1950-2015	80
2-viii.	GDP Growth: Official Statistics and "Okun's Law" Prediction, 1991-2015	82
2-ix.	Contribution to Growth in Real Advertising, 1980-2013	83
2-19.	National House Price Indexes, 2000-2015.	85
2-20.	Housing Affordability Index, 1990-2015.	86
2-x.	Real Construction Costs and House Prices, 1980-2013	87
2-xi.	Zoning and Affordability in Select Metro Areas	88
2-21.	Single-Family and Multifamily Housing Starts, 2000-2015	90
2-22.	Average Annual Growth in Real Business Fixed Investment (BFI), 2010-2015	90
2-xii.	Business Fixed Investment Across Advanced Economies, 1990-2014	92
2-23.	Net Investment as a Share of the Capital Stock, 1940-2014	93
2-24.	Capital Services per Unit of Real Output, Private Business Sector, 1948-2015	93
2-25.	Total Payouts to Shareholders, Nonfinancial Corporate Businesses, 1952-2015	95
2-26.	Inventory-to-Sales Ratio, 2000-2005	95
2-27.	Contribution of Inventory Investment to Real GDP Growth, 2012-2015	96
2-28.	Foreign Real GDP and U.S. Export Growth, 2000-2015.	97
2-29.	Contribution of Net Exports to U.S. Real GDP Growth, 2000-2015	97
2-30.	Sources of Productivity Growth, 1952-2007 vs. 2007-2014	99
2-31.	Labor Productivity and Major Components, 1950-2014	99
2-32.	Nominal Wage Growth Over Past Year, 2003-2015	101
2-33.	Consumer Price Inflation, 2012-2015	101
2-34.	Energy and Import Price Inflation, 2005-2015.	102
2-35.	Long-Term Inflation Expectations, 2007-2015.	103
2-36.	Nominal 10-Year Treasury Yields, 1980-2015	105
2-37.	Nominal Long- and Short-Term Interest Rates, 2015.	105
2-xiii.	R-Squared from Trailing 20-Year Price-Price Phillips Curve Rolling Regression, 1978-2015	114
2-xiv.	NAIRU from Trailing 20-Year Price-Price Phillips Curve Rolling Regression, 1978-2015	115
2-xv.	Unemployment Rate Coefficient from Trailing 20-Year Price-Price Phillips Curve Rolling Regression, 1978-2015	116
3.1.	IMF World Real GDP Growth Forecast, 2010-2020	121
3.2.	Real Broad Trade-Weighted Dollar, 1973-2015	121
3.3.	Real GDP per Working Age Population (WAP), Pre- vs. Post-Crisis	122

3.4.	Percent Gap Between Actual and Projected (Oct-2010): Cumulative Real GDP Growth between 2010 and 2015	123
3.i.	Actual and Forecasted Working-Age Population by Region, 1950-2070	126
3.ii.	Actual and Forecasted Dependency Ratios by Region, 1950-2070 ..	126
3.iii.	Real GDP Growth and Demographic Trends, 1989-2013	127
3.5.	Current Account Balance as a Share of GDP, 2015	129
3.6.	Real GDP, 2008-2015	131
3.7.	Percent Gap Between Actual and Projected (Oct-2010): Cumulative Real GDP Growth between 2010 and 2015	132
3.8.	Euro Area Sovereign Interest Rate Spreads Over Germany, 2007-2015	132
3.iv.	U.S., European, and Chinese Volatility Indices	136
3.v.	U.S., European, and Chinese Stock Markets, 2015	137
3.9.	Measures of Industrial Activity in China, 2011-2015	141
3.10.	China's Foreign Exchange Rate and Trading Band, 2011-2015....	141
3.vi.	Change in Commodity Futures Prices, June to December 2015....	142
3.vii.	World Industrial Production and Commodity Prices, 2006-2015 ..	143
3.11.	Brazil's Current Account Balance.....	145
3.12.	U.S. Trade in Goods, 1992-2015	146
3.13.	U.S. Trade in Services, 1992-2015	146
3.14.	Composition of U.S. Exports, 2015	147
3.15.	Composition of U.S. Imports, 2015	147
3.16.	China's Foreign Exchange Rate and Trading Band, 2011-2015....	149
3.17.	China's Foreign Exchange Rate and Trading Band, 2011-2015....	149
3.18.	China's Foreign Exchange Rate and Trading Band, 2011-2015....	150
4.1.	Cognitive and Non-Cognitive Skills SES Gaps are Mostly Established by Kindergarten	157
4.2.	Official Poverty Rate for Households with Children by Householder Characteristic, 2014.....	158
4.3.	Likelihood of Scoring Very Low on Early Health Measures	160
4.4.	Household Food Insecurity Rates, 2014	161
4.5.	Disparities in Underlying Factors Behind Outcome Gaps	162
4.6.	Likelihood of Scoring Very Low on Measures of Cognition at Age 5, 2006	163
4.7.	Achievement Gap is Largely Set by Age 5.....	164
4.8.	Likelihood of Scoring Very Low on Behavioral Indexes at Age 5, 2006	165
4.9.	Mother's Time Spent on Child Care by Educational Attainment, 1965—2008.....	166
4.10.	High-Income Parents Spend More Time on Educational Activities with their Children, 2014.....	167
4.11.	Preschool Enrollment by Mother's Education, 2014	168
4.12.	Annual Cost of Juvenile Incarceration vs. Other Youth Investments	175
4.13.	Low Birth Weight by Maternal Socioeconomic Status, 1989—2011	177
4.14.	Increase in Income and Payroll Taxes Paid Through Age 28 from an Additional Year of Medicaid Eligibility in Childhood, 1996—2012.....	183

4.15.	Effects of WIC Participation on Birth Outcomes, 1994—2004	185
4.16.	Impact of Food Stamp Exposure on Metabolic Syndrome by Age of First Exposure	187
4.17.	Long-Term Impacts of Exposure to Food Stamps as a Child.	187
4.18.	Most Early Childhood Programs Have Positive Cognitive and Achievement Impacts	198
4.19.	Net Benefit Per Child of Perry Preschool Rises Over the Lifecycle. .	199
4.20.	Increase in Probability of Survival Past Age 60-80 Among Mothers' Pension Recipients, 1965—2012	204
4.21.	Average Annual Earnings in Adulthood Among Children Younger than 13 When Their Family Participated in MTO, 2008—2012	205
5.1.	Labor Productivity Growth, 1955-2010	208
5.2.	Quantity and Volume of Venture Capital Deals, 1995-2015	214
5.3.	Firm Entry and Exit Rates in the United States, 1977-2013	215
5.i.	Share of Workers with a State Occupational License, 1950-2008 . . .	216
5.4.	U.S. Job Creation and Destruction Rates, 1980-2012	219
5.5.	Federal and Nonfederal Research and Development as a Share of GDP, 1953-2015.	224
5.6.	Real Private Research & Development (R&D) Investment Growth, 2001-2015	224
5.7.	Federal Research and Development (R&D) Investment, 1980-2015	226
5.8.	Share of Research and Development (R&D) by Funding Source, 2011	226
5.9.	Gross Domestic Expenditure on Research and Development (R&D), 2013	227
5.10.	Percent of Patent Applications by First Time U.S. Patenters, 1976-2003	228
5.ii.	Trends in Patent Litigation, 1971-2014	229
5.11.	Estimated Worldwide Annual Supply of Industrial Robots, 2004-2014	233
5.12.	Estimated Annual Shipments of Industrial Robots by Main Industries, 2010-2012	234
5.13.	Robot Density: Automotive vs. Non-Automotive, 2012	235
5.14.	Patents with Robot Class, 2000-2014	235
5.15.	Probability of Automation by an Occupation's Median Hourly Wage	239
5.16.	Share of Information and Communications Technology (ICT) in Value Added, 2011	241
5.iii.	New York City Taxi Medallion Transactions, 2010-2015.	243
5.iv.	Chicago Taxi Medallion Transactions, 2011-2015.	244
5.17.	Household Income and Home Internet Use, 2014	246
6.1.	Composition of Public Spending on Water and Transportation Infrastructure as a Share of GDP, 1956-2014	255
6.2.	Public Gross Fixed Investment as a Share of GDP for G-7 Countries, 1981-2015	256
6.3.	Average Age of Public Structures, 1956-2014.	257
6.4.	Quality of U.S. Infrastructure, 2006-2015	257
6.5.	Government Bond Yields, 1965-2015	275

6.6.	Relationship between Output Growth and the Ratio of Maintenance Investment to New Infrastructure Investment	277
6.7.	Ratio of Public Spending on Operation and Maintenance to Public Spending on New Capital, 1956-2014	278

TABLES

1.1.	Increase in Income Share Accounted for by Inequality Within Labor Income	27
1.2.	Change in Market Concentration by Sector, 1997-2007	42
2-i.	Estimated Impact of Oil Price Declines on Output, 2014-2015	55
2-ii.	Job Growth Consistent with Unemployment and Participation Paths	72
2-1.	Selected Interest Rates, 2015	107
2-2.	Administration Economic Forecast	108
2-3.	Supply-Side Components of Actual and Potential Real Output Growth, 1953-2026	113
5.1.	Contribution to Average Annual Growth of R&D Investment	225
6.1.	Quality of Infrastructure in G-7 Member Countries	259
6.2.	Measures of U.S. Traffic Congestion	260
6.3.	Input-Output Effects of Infrastructure Investment	263
6.4.	Direct Contribution of the Public Capital Stock to Productivity Growth	270

BOXES

Box 1-1:	Macroeconomic Rebalancing	24
Box 2-1:	Private Domestic Final Purchases as a Predictive Indicator of GDP	45
Box 2-1:	Impact of Oil Price Declines on Spending and Production	55
Box 2-2:	Challenges in the State and Local Sector	62
Box 2-3:	Expectations for Future Job Growth	72
Box 2-4:	A Better Measure of Output: Gross Domestic Output (GDO)	76
Box 2-5:	Are Official Estimates of GDP Missing More Growth?	81
Box 2-6:	Constraints on Housing Supply	87
Box 2-7:	Slowdown in Investment Growth across Advanced Economies	92
Box 2-8:	Policy Proposals to Raise Output over the Next-Ten Years	110
Box 2-9:	Stable Inflation Rate of Unemployment	114
Box 3-1:	Changing Demographic Trends and Global Growth	125
Box 3-2:	Market Volatility in the Second Half of 2015	136
Box 3-3:	Commodity Prices and Inflation in the Global Economy	142
Box 3-4:	The Importance of the Trans-Pacific Partnership (TPP) for the U.S. Economy	150
Box 4-1:	Gender Differences in Early Outcomes and Responses to Investment	170
Box 4-2:	Types of Public Investment	173
Box 4-3:	Federal Early Childhood Programs: An Overview	178
Box 4-4:	Technological Innovation that Stimulates Learning during Out-of-School Time	189
Box 4-5:	Nutrition and Income Programs Help Sustain Human Capital Development throughout Childhood	201

Box 5-1:	Trade.....	211
Box 5-2:	Occupational Licensing.....	216
Box 5-3:	Major Research Initiatives.....	222
Box 5-4:	Patent Legislation.....	229
Box 5-5:	The On-Demand Economy.....	242
Box 6-1:	Clean Energy and Transportation Infrastructure.....	261
Box 6-2:	Elasticity of Output to Public Capital.....	267
Box 6-3:	The Interstate Highway System.....	272
Box 6-4:	21st Century Clean Transportation Plan.....	288
Box 7-1:	Former CEA Chair Laura D’Andrea Tyson (1993-1995).....	296
Box 7-2:	Former CEA Chair Christina Romer (2009-2010).....	304
Box 7-3:	Former CEA Chairman N. Gregory Mankiw (2003-2005).....	308
Box 7-4:	Former CEA Chairman Joseph Stiglitz (1995-1997).....	310
Box 7-5:	Former CEA Chairman Alan Greenspan (1974-1977).....	320
Box 7-6:	Former CEA Chairman Martin Feldstein (1982-1984).....	326