The Inexorable Forces Reducing U. S. Economic Growth

Robert J. Gordon, Northwestern University and NBER
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The U.S. Has Carved Out the Frontier of the World’s Standard of Living

• The standard of living in the U.S. has been the highest in the developed world since 1900.
  – “The standard of living” is typically measured by real GDP per person.

• In the late 19th and early 20th century the U.S. invented modern life – electricity and all its spin-offs, the assembly line that made possible inexpensive automobiles, and much else.

• Yet we now face the decline of the U.S. along many dimensions.

• This talk distinguishes the causes of declining U.S. growth and asks whether anything can be done to rescue the sinking ship.
Will Today’s Youth Be the First Americans Who Fail to Exceed Their Parents’ Standard of Living?

• The baseline is growth in output per person 2.0 percent per year from 1891 to 2007.
  – This is enough to double the standard of living every 35 years.
  – Each generation has become used to doubling the standard of living of its parents, ever since 1870

• But today’s college-age youth have no such assurance.
  – Sound familiar? We’re here today to learn why today’s youth face such a dismal future.

• Today we’re talking only about the U.S., not Europe, Asia, or anywhere else
Output per Person equals Output per Hour times Hours per Person

• U.S. productivity growth combines the role of innovations with educational advancement.

• Standard of living can grow faster than productivity if hours per capita increase. Or the reverse can happen.

• Example #1: Women enter the labor force

• Example #2: Baby-boomers retire.
  – This reduces the growth of our standard of living; someone has to pay the bill for the idle hours of the baby-boomers.

• Example #3: Obamacare cuts employment
First Headwind Reduces Hours Per Capita

- When baby-boomers retire, they are still in the population but are not working. Hours per capita declines.
  - This automatically means that the national standard of living grows slower than productivity growth.
- Anything that reduces hours per person harms future growth.
  - Declining hours per capita of adult men, adult women, and youth aged 16-24 (beyond what can be explained by schooling).
Prime-Age Male Participation Is Part of the Demographic Headwind

Figure 20: Employment per Capita and Labor Force Participation Rate, Males Ages 25-54, 1960:Q1-2012:Q3
Second Headwind: Education

• Percent of population in 1900:
  – High school degrees 10%, College degrees 3%
• A major driver of that epochal 20th century productivity achievement was education
  – High school completion today less than 1975 when GEDs are excluded, pervasive dropping out
  – Most people drop out of community colleges
  – The U. S. is the only developed country where the educational attainment of the 55-64 cohort is the same as 25-34 cohort
• U.S. has dropped from #1 to #16 in college completion as percent of population; same for high-school dropouts
• This will reduce future economic growth by -0.3 percent per year
Third Headwind: Inequality

• For 1993-2012 the gap between average real income growth of total vs. bottom 99% is -0.53 percent per year.

• This is continuing, it’s not over. Count the ways
  – CEO pay, sports and entertainment stars. (Jay Cutler)
  – Wage pushbacks – lower wages, two-tier wages, shaving pension and medical care benefits (Caterpillar, Boeing)
  – Firms pushing employees into part-time work (Wal-Mart)
  – The current debate about the minimum wage
Fourth Headwind: Eventually We Have to Raise Taxes and/or Cut Entitlement Spending Growth
Fiscal Fix Will Reduce Growth in Disposable Income

• This chart understates future growth in ratio because it is overly optimistic on future GDP growth
• Many state/local governments have huge pension liabilities
• Solutions at all levels of government will require faster growth of taxes and/or slower growth of benefits
Actual U.S. Economy in 2013 is 12% Below the Historic Trend and 5% Below the Pessimistic Trend
The Second Industrial Revolution vs. the Third Industrial Revolution

Figure 2.2: Annualized Growth Rates of Output per Hour, 1891-2012

- 1891-1972: 2.33%
- 1972-2012: 1.55%
Why Did Productivity Grow Faster In the Century Before 1972? The One-Time-Only Inventions

- Polluting flames for light >> instant on-off electric light
- Crude hand tools >> electric hand tools
- Factories steam engines and belts >> electrified
- Offices and home cold and hot >> air-conditioning
- Low density walk-ups >> elevators in hi-rise buildings
- Horses >> motor vehicles
- Railroads >> interstate highways and air travel
- Mainly rural 1870 >> mainly urban 1950
More One-Time Changes Before 1972

- Carrying pails of water >> running water
- Outhouses >> indoor bathrooms
- Sewage in streets >> sanitary sewer pipes
- Infant mortality 20% >> infant mortality 1%
- Child labor. 1890 almost half of 14-15 year old boys were in the labor force >> almost none after 1940
- Letter-writing >> telephone talking
- Player pianos >> phonograph listening
- Isolation >> world contact via radio >> TV
- Motion Pictures: Nickelodeon >> “Gone With the Wind”
More One-Time Changes Before 1972

- Death from infections >> antibiotics
- FDR’s paralysis >> Salk’s conquest of polio
- A mouthful of cavities >> flouridated water
- A boring diet of ham & hominy >> much greater food variety by 1930
- Two or three children per bedroom >> one each
- 60 hour weeks >> 40 or less
- Hot & dirty work conditions >> air conditioned office jobs
Summing Up, Why Was Productivity Growth Faster Before 1972 than After?

• The 2\textsuperscript{nd} IR consisted of at least five dimensions of Great Inventions
  – Each invention had spinoffs developed over 1890-1972

• In contrast the 3\textsuperscript{rd} IR has been limited to one dimension, the ICT revolution, the digital economy
  – Its productivity impact limited to 1996-2004
Summary of Subtraction from 2.0 to 0.2, Disposable Real Income per Capita of Bottom 99%
Implications for Future Growth

• 0.2 percent growth in disposable income of the bottom 99% implies

• 0.9 percent growth in economywide real GDP per capita (compared to historic 2.0)

• 1.3 percent growth in economywide real GDP per hour (compared to historic 2.2)

• Conclusion: growth is not “over” for the entire economy, but it will virtually disappear for the bottom 99%.
Interaction Demographics, Education, Inequality

• Charles Murray’s division of white population into Belmont (top 20%) and Fishtown (bottom 30%)

• Social stability in Belmont, not in Fishtown
  – Percent of children of women aged 40 living with both biological parents, change from 1960 to 2010:
    – Belmont 98% to 87%
    – Fishtown 95% to 35%

• Interaction with education: for a child to live without a father at home is a predictor of more high school drop outs in the future
Further Interactions Poverty, Education, and Inequality

- Proponents of subsidized early childhood education emphasize the vocabulary gap
  - Children in the top half arrive in kindergarten with 2 to 3 times the vocabulary of children coming from poverty families

- In the CPS last year, 20% of children were absent more than one month during the academic year
  - Only 12% went on to receive any college degree

- International OECD-run PISA test results for 2013 were released in early December
  - Of 38 developed countries, U.S. ranked #21 in reading, #24 in science, and #31 in math
Implications for Potential Output

• Has the Great Recession and Slow Recovery Dented America’s Capacity to Produce?
• The British consul’s remark, my question, and his response
• Superficially, manufacturing looks OK, with steady and rapid productivity growth
• However, manufacturing is fading away
Growth in Manufacturing Capacity per capita has Turned Negative

Annualized Five-Year Change in Manufacturing Capacity and Capacity per Capita, 1977-2013
Comments on the Techno-optimists

- Most big data is used in marketing, that is, stealing market share from competitors. Zero-sum game
- The *Economist* reported that ICT expenditure was growing 3X faster in marketing departments than any other part of large business firms.
- Slow productivity growth since early 2004 shows:
  - Unimportance of big data
  - Unimportance of smart phones
  - Unimportance of tablets
- These matter little for our service economy dominated by restaurants, bars, retail, education, and medical care
Are There Policy Solutions?

• Demographics: index the retirement age to life expectancy and sharply raise quotas for legal immigration
• Reduce the share of the population in prison by legalizing drugs
• Education: impose higher standards in secondary school while investing in pre-school to reduce the “vocabulary gap”
• Inequality: return capital gains and dividend tax rates to pre-1997 levels.
• Make medical care a right of citizenship, not tied to employment status
• More generally, look north of the border
Across Nations, Headwinds Are Not All Alike

• Tuition last year at U of Toronto = $5600 per year
• My cousin’s three e-mail comments:
  – “Canadians pay higher income and sales taxes. In return they get access to universal health care and reasonably priced university education.”
  – “The U.S. has a far larger percent of its population in jails than is the case in Canada”
  – “The political system in the U.S. has become dysfunctional”
• Assignment for our panel: Comment on all of the above.