Implications for Tax Policy
of Lower Trend Productivity Growth

PIIE conference on
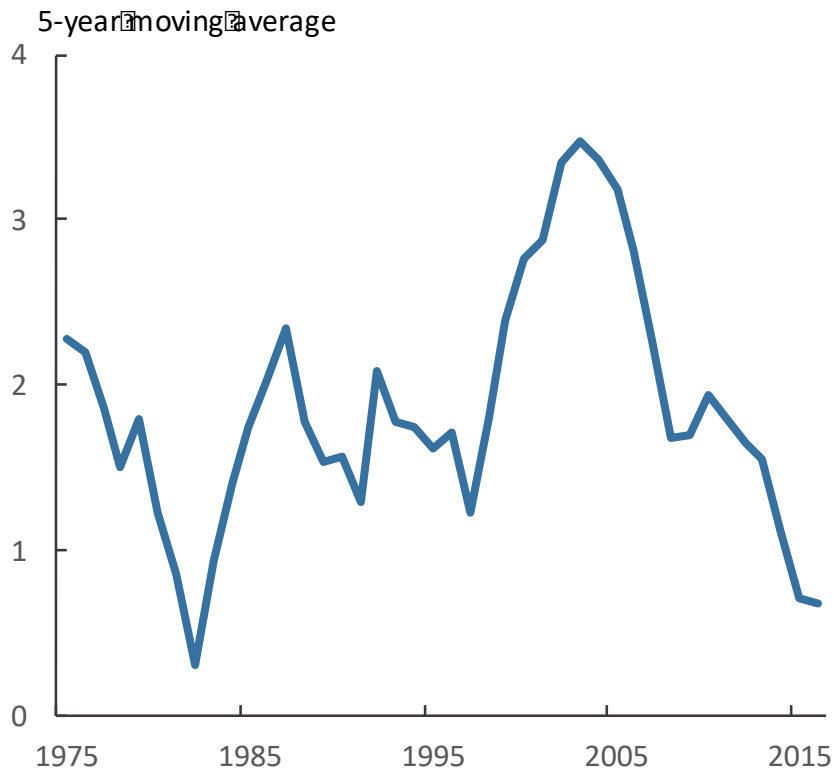"Policy Implications of Sustained Low Productivity Growth"

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Notes for the slides can be found at the end of the presentation

Motivation: Concerns that the limited productivity growth of recent years will persist
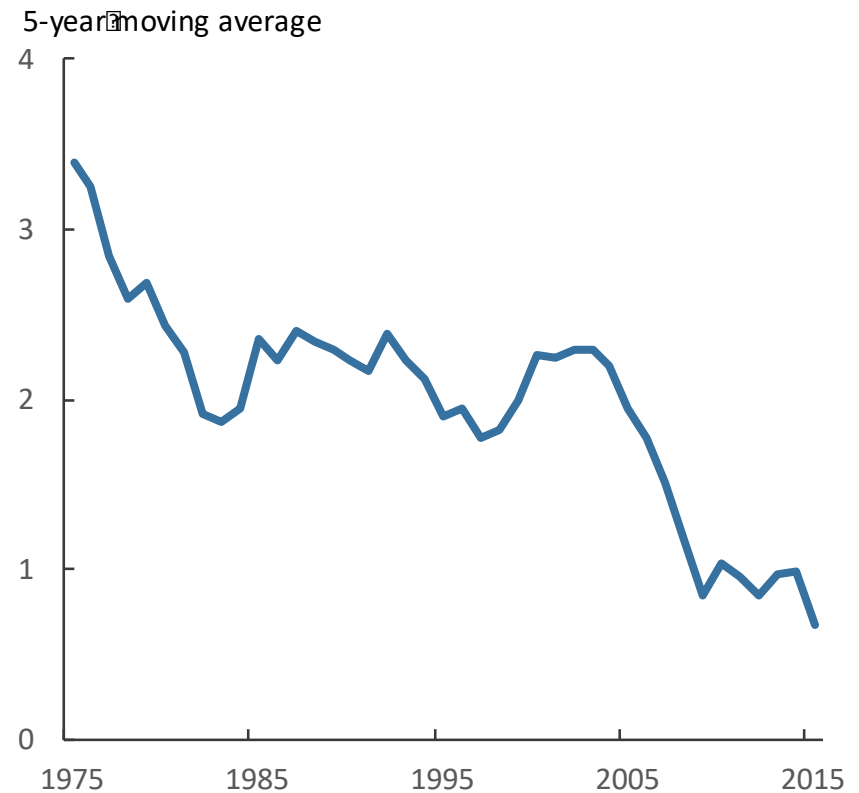
Labor Productivity Growth in the United States

Source. U.S. Department of Labor
Note: Nonfarm business sector.

Labor Productivity Growth in G-7 Countries

Source. OECD

What this paper does

Stipulates lower trend productivity growth

Discusses the key relevant economic implications

Considers how we should adapt tax systems, using the different objectives of tax policy as an organizing principle

[Will draw off large related literature on how to reform tax systems to boost productivity growth, but that topic is a different paper]

Lower trend productivity growth

Baseline scenario: labor productivity growth and total factor productivity growth settles at an annual pace a few tenths below historical norms

1.8% for labor productivity growth in the United States

Downside risk scenario: labor productivity growth and total factor productivity growth are ½ percentage point below the baseline

1.3% for labor productivity growth in the United States

Not far-fetched—25th percentile of Survey of Professional Forecasters projections is ½ pp below the mean!

Other factors that may come along with lower productivity growth

Lower interest rates

(Somewhat) lower inflation

Lower wage growth (maybe flatter lifetime income paths)

Less real bracket creep in the tax code

Lower growth and lower interest rates

The Ramsey model implies that *r* will decline with *g*, but the exact relationship depends on preferences:

$$r_{t+1} = \rho + \sigma g_{t+1},$$
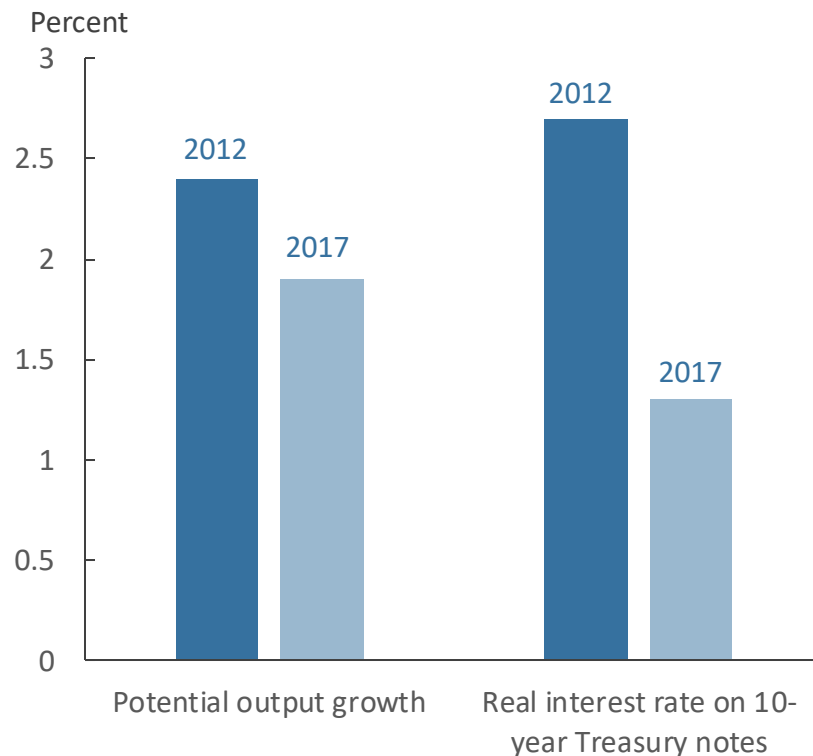
Inversely related to the discount rate

Inversely related to the intertemporal elasticity of substitution

Reasonable parameter choices can yield a one-for-one relationship or something close to that (CEA, 2015)

Lower growth and lower interest rates

CBO Economic Assumptions
(at end of 10-year projection period)

Percent

Source. Congressional Budget Office

CBO (for example)

Both *g* and *r* lower

But *r* down more than *g*

Other factors weighing on *r* — some longer-term (e.g. shifting demographics, higher income inequality) and some shorter-term (e.g. expansionary monetary policy)

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Less "real bracket creep" in the tax code

Real bracket creep

Tax systems are largely indexed for inflation, but real growth will increase effective marginal and average tax rates:

> Real growth subjects an ever-larger portion of income to higher tax rates

> Real growth pushes more taxpayers above the eligibility limits for certain tax credits (e.g. the EITC, the child tax credit)

Slower growth means less real bracket creep => with revenue implications (see Sheiner, 2017) but also implications for this exercise

Tax systems are designed to …

Collect revenues

Minimize disincentives for work

Minimize disincentives for saving

Redistribute income

Mitigate business cycle fluctuations

Minimize other distortions in resource allocation—
i.e. minimize tax-based distortions/correct for
externalities

Will think about implications of low productivity growth for each objective in turn

Collecting revenues

Population 65+ Relative to Working-Age Population

Percent

Japan

Germany

U.S.

Brazil

China
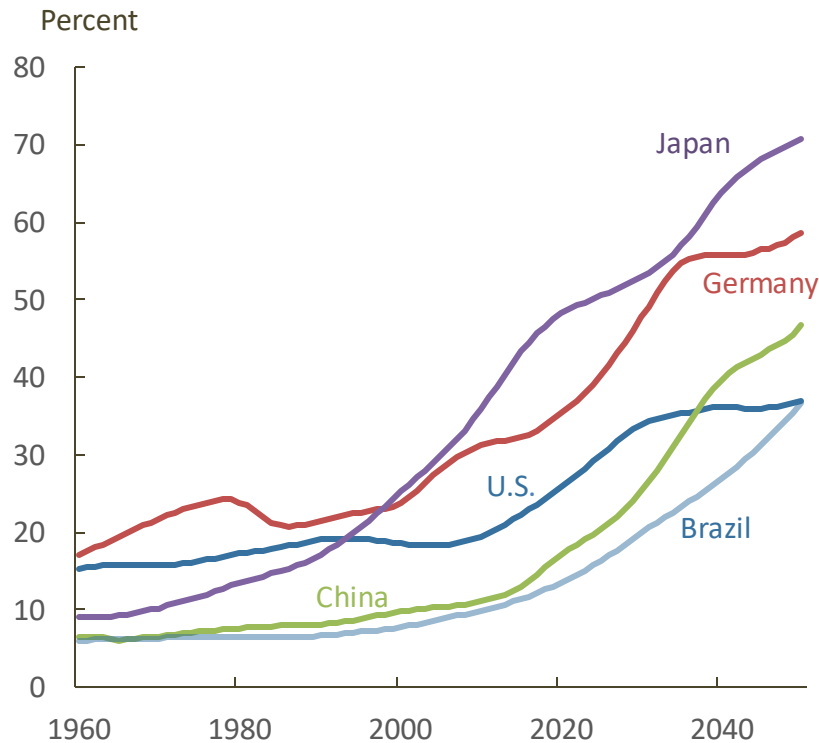
Source. World Bank.

Old age dependency ratios are rising around the world

Government social insurance programs that support the older population are on track to strain government budgets

A sustained period of low productivity growth would sharply worsen these budget challenges

Collecting revenues

U.S. Federal Debt Given Different Productivity Growth Assumptions

Percent of GDP
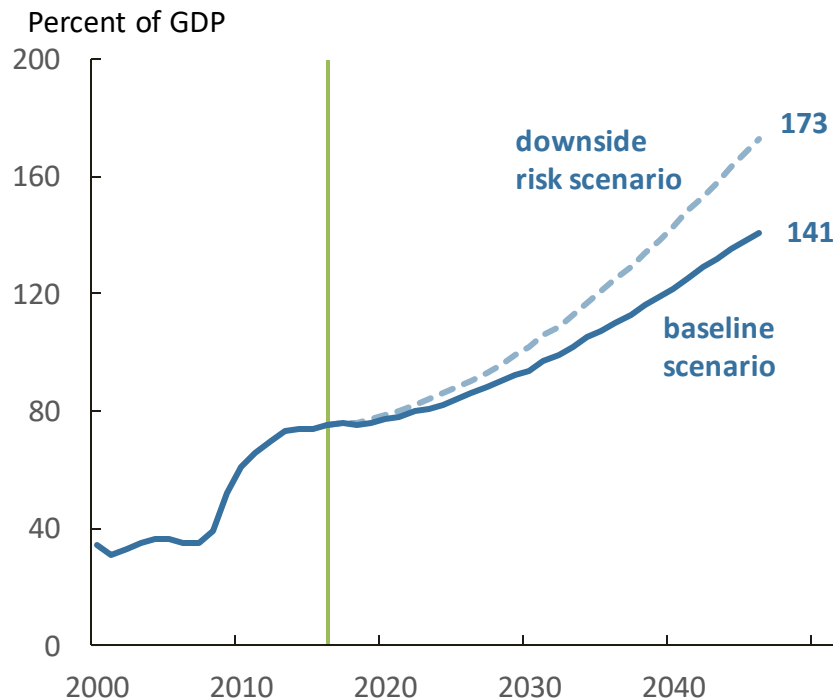
Source. Congressional Budget Office (2016)
Note. Assumes fiscal policy as of 2016.

Even under the baseline scenario (and taking into account lower interest rates), U.S. federal debt is projected to rise on an unsustainable path

The problem is considerably more severe if productivity growth is lower than in the baseline

Collecting revenues
Implications for tax policy

We will need a greater increase in taxes to pay the bills (though will also need to reduce spending)

Could need even more revenues than suggested by CBO's analysis if the decline in productivity growth …

Implies we should optimally increase national saving

Diminishes labor force participation

Changes redistributional goals such that we want to do more federal spending

WILL RETURN TO THESE ISSUES IN A MOMENT

Reducing disincentives for work

Lower wage growth reduces future wages, which reduces the incentive of people to work in the future—this may exacerbate the long-term decline in the labor force participation rate

Having high participation is important:

  Reduces fiscal pressures—both through higher tax revenue (all else equal) and through less need for social insurance

  Increases self-respect and engagement with society—particularly at the lower end of the income distribution

Reducing disincentives for work
Implications for tax policy

Tax incentives for work should be increased

Focus should be on groups with the most elastic labor supply:

Second earners (e.g. increase child care subsidies)

Less-skilled men (e.g. expand the EITC)

Real bracket creep considerations imply we need to do slightly less of the above than we would do otherwise because these incentives erode more slowly over time

Reducing disincentives for saving

It's not clear whether lower productivity growth warrants an increase or decrease in **national saving**

A standard Ramsey model finds that a change in g has an ambiguous effect on desired s …

The substitution effect argues for less saving because the rate of return is lower

The income effect argues for more saving because future generations are worse off than otherwise

Parameters used in Elmendorf and Sheiner (2016) imply a small increase in optimal s

Reducing disincentives for saving

Lower productivity growth probably warrants an increase in **individual saving**

Because of possibility of cut in benefits for older population

Moreover, flatter lifetime earnings profile means people should start saving for retirement earlier

Reducing disincentives for saving
Implications for tax policy

Unclear whether we want to raise or lower national saving, and the marginal tax rate is a blunt tool for doing so anyway

We probably want **more subsidies to encourage people to save** (and to start saving earlier)—e.g. tax breaks for firms creating well-designed plans

Real bracket creep considerations imply we need to do slightly less of this than otherwise since people lose eligibility more slowly for incentives with income-based thresholds

Redistributing income

For a given distribution of compensation growth around its average, **a lower average will lead more people to have zero or negative changes**

Harmful because people make fixed nominal commitments (harm exacerbated by low inflation)

Frustrating because people develop expectations—i.e. utility may be a function of (C_t – some benchmark)

Politically destructive because people expect "a fair shot"

So lower productivity growth implies a greater need for redistribution

Redistributing income
Implications for tax policy

The tax system should be made more progressive generally

The tax system should provide **more insurance against bad outcomes**—e.g. a tax-based wage insurance program

We should **raise tax subsidies for mechanisms that create opportunity**—e.g. tax incentives for firms that provide training

Real bracket creep considerations: (1) people move into higher tax brackets more slowly so we might want to do a little more on general efforts (2) people's incomes rise above eligibility thresholds for some credits more slowly so need slightly smaller subsidies for these credits than otherwise

Mitigating business cycle fluctuations

Lower productivity growth leads to lower real interest rates, which means central banks will hit the effective lower bound more frequently

> Growing skepticism about the ability of alternative tools to offset the inability to lower policy rates more substantially (Blanchard and Summers, 2017)

So the countercyclical power of monetary policy is blunted

Mitigating business cycle fluctuations
Implications for tax policy

We need stronger automatic stabilizers in the tax system

For example, could have automatic adjustments in payroll tax rates when the unemployment rate crosses a given threshold (coupled with automatic general revenue contributions to Social Security to make up for the foregone revenue)

Minimizing other distortions in resource allocation

There already is a long literature on features of current tax systems that lead to misallocation of resources and hold back productivity growth by …

distorting investment by industry and assets

distorting choice of financing for investment

distorting how businesses are organized and where they are located

not sufficiently correcting for spillovers / externalities

Minimizing other distortions in resource allocation
Implications for tax policy

Improving tax systems to address these problems would be important regardless of underlying productivity growth

But such changes are especially important when productivity growth is weak

Summary

The decline in trend productivity growth and the other economic implications of that decline affect all of the objectives of tax policy

Those effects of slower productivity growth can justify various changes in tax policy:

   collect more revenue

   provide a greater incentive to work (and maybe save)

   become more progressive

   offset business cycle downturns more vigorously

   improve resource allocation

Some final considerations

It would probably be worthwhile for tax systems to move in many of these directions even if productivity growth were to follow the baseline assumption of being only slightly below historical averages

It will matter how much any reduction in trend productivity growth changes income growth at different points in the distribution

Political feasibility is, of course, another important issue

Endnotes

Slide 1: Sources—U.S. Department of Labor for left panel and OECD for right panel
Slide 5: See Council of Economic Advisers (2015) *Long-term Interest Rates: A Survey*
Slide 6: Source—Congressional Budget Office; the 2012 assumptions were taken from The Budget and Economic Outlook: Fiscal Years 2012 to 2022; the 2017 assumptions were taken from the 10-year Economic Projections files available here
Slide 10: See Sheiner (2017) *The Effects of Low Productivity Growth on Fiscal Sustainability*
Slide 12: Source—World Bank
Slide 13: Source—Chapter 7 from Congressional Budget Office (2016) *The 2016 Long-term Budget Outlook*
Slide 17: See Elmendorf and Sheiner (2016) *Federal Budget Policy with an Aging Population and Persistently Low Interest Rates*
Slide 22: See Blanchard and Summer (2017) *Rethinking Stabilization Policy. Back to the Future*