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**SUPPLY-SIDE ECONOMICS AND  
THE 2017 TAX ACT**

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Global Health, and Study of Business Enterprise



# Supply-Side Economics and the 2017 Tax Act

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## About the Author

Clark Johnson, PhD, has worked for much of the past two decades in economic development in the Middle East and central Asia, including as a contractor, direct employee and team leader with the US State and Defense Departments in Iraq and Afghanistan. He has taught finance or international economics at Boston University, the University of Maryland, and American University in Kyrgyzstan; he worked previously in Treasury and FX operations at Chase and as a VP at Citibank. He is the author of *Gold, France, and the Great Depression, 1919-1932* (Yale, 1997), which received an award from the Association of American Publishers, and of a variety of published papers on monetary, economic development, and diplomatic issues. Of recent note are “Did Keynes Make His Case?” (2016), “Missing Economic Strategy in Iraq” (2016), and “Too Much Idealism? Ferguson, Kissinger, and the Vietnam War” (2016).

## Abstract

Several of the designers of the 2017 Tax Act were prominent as “supply side” advocates at the time of Reagan tax cuts during the 1980s. The economic argument for supply side tax rate reductions drew on a policy mix framework developed by Robert Mundell as early as 1962. Within that framework, the easy fiscal/ tight monetary policy solution was intended for circumstances of either pressure on reserves or the exchange rate (as during the Kennedy Administration) or of serious domestic inflation (as during the Carter and Reagan Administrations.) Tax cuts in the US since the 1980s have not had the intended stimulus effects because neither the currency weakness nor inflationary preconditions have existed. Absent such conditions, tax rate reductions will generate either domestic over-heating or a redistribution of income to those in higher brackets. Any argument in favor of the 2017 Tax Act should not fall back on Mundell’s policy mix advocacy. In contrast, the case for an easy fiscal/ tight money policy may have unexpected force in situations of fixed exchange rates, or where domestic monetary policy options are otherwise constrained or absent – as in Eurozone periphery countries.

**Keywords.** Supply side economics, Robert Mundell, Policy Mix classifications, 2017 Tax Act, Eurozone macroeconomics

**JEL.** B3, E3, E5, E6, F2

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<sup>1</sup> Author of *Gold, France, and the Great Depression, 1919-1932* (Yale, 1997).



## *I. A Look Backward*

An interesting item regarding the 2017 Tax Cuts and Jobs Act is that its lead whisperers, who were to some extent also its drafters, were advocates from the late 1970s Stagflation and early Reagan years: Stephen Moore, Art Laffer, Larry Kudlow, and Steve Forbes. All of them self-identify as “supply-siders”, a description that has lost favor. But in their minds, this is a supply-side tax bill, a victory for the view they have been advocating, and writing iterative op-ed columns about, for nearly 40 years. It will be useful to review both the conceptual framework of the supply-side “policy mix” and some history of its implementation.

The academic heavyweight of the cause was Robert Mundell, who won the 1999 Nobel Prize for work on international monetary theory. He joined the IMF Research Department in 1961; his first foray into policy-making came soon after. The then-new Kennedy Administration was concerned about a combination of slow US growth alongside an outflow of US gold reserves. The US was pursuing what was called a “neo-classical synthesis”, a policy mix of: 1) easy money, to encourage domestic growth; and 2) a budget surplus, to syphon off excess liquidity, and hence to reduce the outflow of US gold reserves. The policy was not working, as evidenced by a slow recovery from the 1960-1961 recession, a stock market plunge in mid-1962, and continued gold losses. Mundell proposed reversing the policy mix. At the end of 1962, Kennedy embraced the reversal, and announced tax reductions to spur the domestic economy and stiffer interest rate to protect the balance of payments.<sup>2</sup> This was a first round for the supply-side template that would be adopted again a couple of decades later. The tax cut, which reduced the top marginal rate from 91 to 70 percent, was passed in early 1964 (after Kennedy’s death) and probably strengthened recovery from the recession.

The improvement was temporary. The US budget swelled as the Vietnam War build-up began in 1965. The US resorted to accommodative monetary policy – which again put the dollar’s gold convertibility at risk. Inflationary forces gathered steam by 1968; lapsing again into the “neo-classical synthesis” view of 1961-1962, the US responded with continued monetary expansion combined with a tax surcharge. The result was a recession in 1969-1971 alongside growing inflation, and continued reserve pressure on the dollar. But the dollar’s gold convertibility and exchange value were unsustainable in any event. An international shortage of monetary gold meant there was a demand for US dollars as a substitute reserve; but the only way the US could provide dollar reserves was to continue running balance of payments deficits, which undermined credibility of the gold link. By the early 1970s, the postwar gold exchange standard had collapsed, major countries allowed their currencies to float, and years of worldwide inflation were underway.

By 1980 the US had an economic environment with parallels to where it had been at the beginning of the Kennedy Administration. Gold convertibility had long been abandoned, the dollar exchange was weak, and inflation was often running into double-digit annual rates; real

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<sup>2</sup> See account in Mundell (1999, Section II).

tax rates were rising due to “bracket creep”<sup>3</sup>, and real growth had slowed. The Carter Administration had in the late 1970s again followed the neoclassical synthesis of easy money combined with fiscal contraction. There was a widely-held view that the US needed a new macro-economic policy. Supply-side economics, as it by then came to be called, drove much of the Reagan Administration’s economic policy mix. The Economic Recovery Tax Act of 1981 lowered the top marginal rate from 70 to 50 percent; but the fiscal portion of the mix included deficit-financed (“demand side”) stepped-up defense spending. In 1986, the top individual rate was lowered to 28 percent, and the corporate rate was also lowered. Paul Volcker’s Federal Reserve subdued price inflation -- the latter at the cost of a sharp intervening recession during 1981-1983. Supply-siders<sup>4</sup>, including Mundell (1993, p. 120), criticized policy during the first Reagan term for: 1) spreading the tax cuts over a three-year period, which delayed their expansionary offset to the Fed’s tight money policy; and 2) not using a gold-link, or perhaps another fixed standard, more rapidly to stabilize expectations about the domestic and international values of the dollar. Economic growth resumed in the US in 1983, with much less inflation than during most of the 1970s.

## II. *Supply-Side Economics – Context*

Mundell argued that the advantage asserted for floating exchange rates by monetarists and others during the 1960s and 1970s is usually illusory. Movements in exchange rates are a problem, he thought, not a solution, as hopes for policy autonomy soon gave way to general inflation; another consequence of resort to currency depreciation was a breakdown in fiscal discipline. Still another was rising real tax rates, as a result of bracket creep, which took a growing wedge out of private sector revenues, and hence became a drag on investment and growth. Mundell (1971; p. 16) noted that the most successful post-WW2 economies, including Germany, Japan, and Italy, regularly lowered tax rates to offset drift into higher brackets; he similarly cites Canada’s decision in 1973 to index tax brackets to inflation as a supply-side success (Mundell, 1993; p. 117). Inflation also meant that nominal capital gains would be taxed – even in the absence of real capital gains, or even in the face of real declines in capital value (Mundell, 1993; p. 119). He argued that fiscal policy, including changes in tax regime, could be used to stabilize economic growth without resort to inflation or currency manipulation, and while avoiding major recession. He intended to “shift the Phillips Curve” (Mundell, 1999; Section III), by which he meant reducing the amount of inflation that would be associated with a given level of unemployment.

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<sup>3</sup> “Bracket creep” refers to interaction between progressive income taxation and inflation. Taxpayers move into higher tax brackets as price inflation brings about an increase in nominal taxable income – even in the event that real income is unchanged.

<sup>4</sup> Prominent supply siders included, among others, the four names listed at the outset, Bruce Bartlett, Paul Craig Roberts, and several members of the *Wall Street Journal*’s Editorial Page. Mundell had several often-recounted meetings with the last beginning in late 1974. Two *WSJ* writers went on to author important popular books on supply side economics, (Wanniski, 1978) and (Bartley, 1992).

I asked Mundell, probably in 1991, if he could recommend essential readings on supply-side economics. He said, a bit impishly, that it had a “mostly oral tradition”. That was not quite accurate, but it was the case that supply-side economics never gained more than limited academic circulation. In 1962, Mundell wrote “The Appropriate Use of Monetary and Fiscal Policy Under Fixed Exchange Rates” (Mundell, 1968; Ch. 16), an excursus into the geometry of monetary, fiscal, and capital flow variables -- which served as under-pining for the change in the Kennedy Administration’s policy. He then wrote “The Dollar and the Policy Mix: 1971”, which emphasized the importance of fiscal stimulus when gathering inflation constrained monetary policy remedies (Mundell, 1971).

Contours of his argument were captured in a chart, “Effective Market Classification and the Policy Mix”,<sup>5</sup> with four quadrants representing four possible states of macro-economic performance. The vertical axis summarizes monetary policy headings of exchange rate, reserve position, and price inflation; the horizontal headings pointed to real, internal factors – the rate of domestic economic growth and the level of unemployment. For each quadrant, Mundell identified an appropriate monetary-fiscal policy mix:

- 1) External (balance of payments) surplus, prices flat or declining; combined with slow domestic performance. Correct policy mix response: easier monetary policy, domestic tax cuts to boost investment
- 2) External surplus, prices flat or declining; domestic economy overheating. Policy mix: easier money to prevent currency from rising; tax increases or reduced government spending to slow domestic economy
- 3) External deficit, perhaps including rising prices; domestic economy over-heating. Policy mix: tighter money to stabilize prices and external position; tax increases or fiscal contraction to slow domestic economy
- 4) “External deficit, perhaps including rising prices; domestic economy under-performing. Policy mix: tighter money conditions to control inflation and stabilize external position; and a combination of domestic tax cuts to boost investment and deficit spending to boost demand. *This is the supply side policy mix.* (Tax cuts usually increase fiscal deficits, so the supply and demand aspects of this policy mix are intertwined.)”

Another macro-economic state is equilibrium: the point on the chart where the internal and external balance lines cross.<sup>6</sup> If the macro-economy is stable – if prices, the foreign position, and domestic growth and employment are about where they should be, ie, in something close to a sustainable equilibrium -- then no correction in macro policy is necessary. Indeed, the goal of effective monetary and fiscal policy is to sustain such equilibrium.<sup>7</sup>

Mundell argued that fiscal or tax policy had relatively more effect on the internal situation than on the exchange rate, while monetary policy had relatively more effect on the external balance.

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<sup>5</sup> Eg, (Salvatore, 1993); Figure 17-6. An earlier version of the chart appears in Mundell (1968; Figure 16-1).

<sup>6</sup> Point F in (Salvatore, 1993, Figure 17-6); point Q in (Mundell, 1968; Figure 16-1).

<sup>7</sup> Eg, targeting nominal GDP growth seeks directly to stabilize demand. Other approaches, including targeting money supply, the rate of inflation, and interest rates, seek indirect stabilization of demand.

The reasoning is that fiscal expansion (contraction) may be combined with monetary expansion (contraction) so as not to change the existing balance in the supply and demand for money. Fiscal intervention therefore need not bring a change in short-term interest rates, or in short-term international capital flows. In contrast, monetary expansion (contraction), used as a separate policy instrument, works *directly* through affecting the balance of supply and demand for money – hence it more directly affects interest rates, international capital flows, and the external balance. (Mundell, 1968; p. 236)<sup>8</sup>

By the time of his 1971 paper, Mundell used “external” balance more flexibly to include domestic price inflation – reserving “internal” balance to refer to such “real” factors as the rates of unemployment and economic growth. He elaborated: “Financial [monetary] instruments should be allocated to financial targets; real [fiscal] instruments to real targets” (Mundell, 1971; p. 17). Adding detail to the 1962 paper, he noted other channels through which fiscal expansion might work – intended both to boost demand in the Keynesian tradition and to boost the *supply* of goods and services. Looking at policy errors during 1968-1971, he summarized supply-side arguments.<sup>9</sup>

...[F]iscalists ... made costly errors in 1968. The fiscalists did not consider sufficiently the impact of the 1968 tax increase and later fiscal tightness on aggregate supply. They thought it would stop inflation; instead, it lowered the expansion rate of real output which aggravated inflation. (Mundell, 1971; p. 22)

Mundell drew attention to specific effects that lower taxes might have on costs and supply – particularly against inflationary backdrops. First, there would be a once-for-all effect whereby a tax break would encourage release of built-up inventory to realize profits at the lower rates. Second, lower taxes would lessen pressure from workers to increase pre-tax incomes, hence softening the cost-push feedback loop. (Mundell, 1971; pp. 26-27) A premise driving business and high-bracket tax cuts is that they could boost investment by raising after-tax profit margins -- that is, by “creat[ing] output incentives” (Mundell, 1999; Section III). The incentives from such tax reductions, again, are greater when taxes are being levied against inflation-bloated nominal profits.

Supply-side remedies are most effective where monetary expansion is not practical – ie, where either inflation is already strong or the central bank is losing foreign exchange reserves -- and the domestic real economy is weak.<sup>10</sup> Consider the case of the 1969-1971 recession:

[M]onetarists underestimated the significance of the fiscal tightness on the real economy, the tax drift [ie, bracket creep] due to the monetary inflation, and the impact of the tax increase on wage demands. As a result the monetary expansion adopted was more inflationary than realized.

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<sup>8</sup> Also summarized in (Salvatore, 1993; pp. 544-545).

<sup>9</sup> This bears emphasis because one sometimes hears that (Mundell, 1971) made only a “Keynesian” demand side argument. In fact, the argument that cutting (raising) taxes could increase (reduce) aggregate supply was already embedded in the 1971 paper.

<sup>10</sup> That is, where quadrant #4 conditions apply.

The *correct policy mix* was a reduction in the rate of monetary expansion ... combined with a tax reduction. This would have stopped the inflation rate without causing a depression. (Italics in original.) (Mundell, 1971; pp. 22-23)

The policy mix approach does not always call for tax reductions. When the monetary environment is stable, or even deflationary (eg, equilibrium, or quadrants #1 or #2), a fiscal- or tax-driven boost in profitability and investment will have one of two consequences:

- either the new profits boost demand in the direction of overheating the economy; or
- monetary policy is tightened to prevent an over-heating. In the latter case, higher after-tax profitability will redistribute wealth to those in higher income brackets – while monetary restraint constrains overall economic growth.

A tax reduction would not be useful under either of such macroeconomic circumstances.

Vietnam spending grew beginning in late 1965. The dollar's reserve position had by then somewhat stabilized from where it had been in 1961-1962, but remained precarious; unemployment and growth data were improving, and price inflation was mild. The macro-economic situation approached quadrant #3 conditions: danger of external reserve losses, combined with a strong domestic economy. Mundell observed that taxes should have been *increased* to prevent domestic over-heating in the face of a stepped-up war economy (Mundell, 1971; p. 24); meanwhile, tight money conditions should have been maintained to protect US reserves. Instead, the US (via the central bank) resorted to money expansion; the money expansion led to an increase in the GDP deflator to about 3 percent in 1966 and to 5 or 6 percent in 1969-1970. The US policy mix of easy money/ easy fiscal was wrong in both dimensions. These 1965 decisions played a role in ending the post-WW2 gold exchange standard and stoking worldwide inflation a few years later.

To bring this reasoning forward, gains in economic growth from the second Reagan marginal tax cut, the Tax Reform Act of 1986 are hard to parse from the data, although there is evidence of shuffling of income from one group to another as a result of reforms (Bartlett, 2017).<sup>11</sup> As economic growth was largely restored, with much reduced inflation rates, by the mid-1980s, the conditions that would call for the quadrant #4 policy mix of tight money/ easy fiscal no longer held. And consider the George W. Bush income and capital gains rate reductions of 2001 and 2003, which were also offered in the context of a fairly stable monetary situation – ie, with none of the exchange reserve or inflation pressures Kennedy and Reagan faced early in their tenures. By 2004 and 2005, the US economy was over-heating, in part because of the earlier tax cuts, which may have contributed to the gathering housing boom. The tax bills also contributed to what was a near-doubling of the US national debt during Bush's two terms (Amadeo, 2017). The macro-economic situation during Bush's first term did not call for a fiscal boost.

An even more interesting case is the capital gains tax cut signed in August 1997. Supply-siders have credited the rate reduction with stimulating the economic boom and strong stock market of the late 1990s. They were not wrong – but other factors were also in play. The Asian financial

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<sup>11</sup> Bartlett (2017A) cites (Auerback and Slemrod, 1997).

crisis hit in July 1997, and was followed by crises in Russia and Latin America the following year. Currencies were devaluing against the dollar, and systemic deflationary pressures were strong. The Greenspan Fed was right to provide international dollar liquidity; but a consequence was easy monetary conditions in the US, and without inflationary pressure. The best historical parallel to the late 1990s was the boom of the late 1920s – another period of international deflation combined with a strong US gold position, easy domestic monetary conditions, and a rising stock market. Both situations fit a quadrant #2 macro-economic scenario: strong external balance combined with a very strong domestic economy. The correct policy mix position, in both cases, would have been to continue with easy monetary conditions – but combined with a tighter fiscal stance to constrain over-heating.<sup>12</sup> The 1997 capital gains cut did the opposite, it added fuel to the fire. It no doubt contributed to the subsequent run-up in technology stock prices, which some have called a “bubble”.<sup>13</sup>

### III. *The 2017 Tax Act*

Impressed by evidence from the Kennedy and Reagan tax cuts, some supply-siders have since wanted to deploy the tight money/ tax cut policy mix (quadrant #4) *all the time*: to wit, they implicitly assert that taxes can never be too low and the currency is never too strong. I believe that remains, in 2018, the view of, the *Wall Street Journal's* Editorial Page; and Forbes of *Forbes* magazine says “gold standard” and “flat tax” (at the lower possible rate) whenever the opportunity arises. (Erstwhile supply-sider and Reagan advisor Bruce Bartlett, in contrast, frequently appears on television to say that macro-economic challenges now are quite different from what they were in 1962 or 1980. He has been a scathing critic of the 2017 Tax Act. (Bartlett, 2017A))

This facile supply-side view embraces much of what is in the 2017 Tax Act. The Trump Administration and Republican Congress have proceeded as though the domestic macro-economic position were weak. It includes significant corporate and high-bracket tax cuts, including expanded use of lower-rate pass-throughs. These are to be financed through additional government debt issue over the next decade – the higher fiscal deficit is usually a feature of an easy fiscal/ tight monetary policy mix.<sup>14</sup> As it shifts income to those in high tax brackets, it will

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<sup>12</sup> Regarding the earlier period, the US instead moved to tighter money by 1928, and maintained it until 1933. France, the other gold reserve-rich country at the time, became a source of systemic deflation as early as 1927. Meanwhile, US fiscal policy was quite easy, as the sharply-lowered tax regime introduced a few years earlier by Treasury Secretary Andrew Mellon remained in place. These factors, especially the monetary policies, played a determinant role in bringing on the Great Depression. (Johnson, 1997)

<sup>13</sup> I am not aware that Mundell ever offered this policy mix analysis for the late 1990s. I do recall a comment at the AEA convention in January 2001, during a session recognizing Mundell's Nobel award – a combination *Fest* and roast. A past colleague (whose name I have lost, unfortunately) remarked that, while Mundell was best known for advocacy of the easy fiscal/ tight money policy mix, the post-financial crisis situation appeared to call for the opposite: tight fiscal policy and easy money. So the observation above is not original with me.

<sup>14</sup> If lower tax rates were indeed to generate higher tax revenues, then fiscal deficits might not be part of the package.

also result in reduced federal and state government contributions to infrastructure, health, and education budgets.<sup>15</sup> (The package also includes higher standard deductions intended to benefit middle income earners; these are to some extent offset by reduced deductions for home mortgage interest and state and local tax payments for those able to itemize. There is also a case for some reduction in corporate marginal tax rates to equalize after-tax rates of return with lower tax foreign jurisdictions, regardless of where we are in the business cycle. `These changes perhaps have some merit as “reforms” – but they are apart from the macroeconomic policy mix logic that energized support for the supply-side policy mix.<sup>16</sup>) In fact, however, the macro-economic situation in 2017 very likely did not call for such a policy mix. Consider three competing diagnoses.

- 1) By 2017, domestic US unemployment was low, the stock market strong and rising, and the dollar steady in the \$1.15 - 1.20 per euro range, a level higher than during much of the last several years. This depiction resembles quadrant #2, an economy with nearly-stable prices but nevertheless low unemployment and over-heated financial markets. The correct policy mix for quadrant #2 is steady, or perhaps easier, monetary policy, combined with fiscal constraint to prevent overheating. A strong macro-economy does not call for deliberately raising fiscal deficits!
- 2) An alternative diagnosis is that both external and internal balances look fine, and sustainable. In this case, equilibrium best describes the macro-economic situation; no change is required in either fiscal or monetary policy. This diagnosis is probably most likely to be accurate for the US in 2017. (It might be the case, of course, that the economy would benefit from other policy changes, eg, an improved legal or regulatory environment.) Under neither of these first two characterizations is the macro-economy underperforming; both domestic inflation and unemployment and inflation are well-behaved by historical standards.
- 3) A contrasting diagnosis of the 2017 macro-economy acknowledges that the dollar is strong and inflation is controlled, even below target – but looks at falling work force participation level (as opposed to the improved unemployment rate or soaring stock market) to conclude that the domestic real economy remains weak.<sup>17</sup> If we accept this diagnosis, we are closer to quadrant #1, for which the appropriate policy mix would then be easier money combined with fiscal loosening. *This is the only diagnosis of the 2017 macro-economic situation that can support the case for supply-side tax cuts or, indeed, for any fiscal stimulus.*

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<sup>15</sup> Tax Policy Center (2017), Scott and Chang (2017), and Matthews (2017).

<sup>16</sup> The House GOP put out a paper in June 2016 outlining details of a tax reform plan – one that appears not to use the term “supply side” and is intended to be revenue-neutral (US House of Representatives, 2016). It is outside the scope of this study to evaluate the Republican blueprint, but for a favorable review, see Goodman and Kotiloff (2017).

<sup>17</sup> (BLS, 2017). The US labor force participation rate reached a high point of around 67 percent during 1999-2000, then dropped steadily from about 66 percent in 2007 to about 62 ½ percent in 2015; it has since steadied, and has even risen slightly to about 63 percent.

But even here, the case for tax cuts is weak. First, unlike the stronger supply-side scenario depicted in quadrant #4, where the policy mix demands monetary constraint, the policy response for quadrant #1 includes monetary expansion. Second, a soft economy combined with a persistently rising stock market suggests that corporate profits are driven at least in part by redistribution upward -- to shareholders -- rather than by strongly expanding aggregate demand. A tax cut under such circumstances would aggravate regressive distributional consequences. A preferable policy response – in the somewhat unusual event of a weak economy combined with a strong stock market (particularly where inflation is under control and the currency is stable) -- might be to emphasize the role of monetary expansion in boosting aggregate demand.

Considerations of policy mix and where we are in the business cycle aside, a defense offered for the sharp corporate tax reduction – from 35 to 21 percent – is that some of the new cash flow will finance higher wages. That is doubtful. From a static consideration, both S&P 500 and Dow Industrial stock indexes are up 20x (nominally) since 1980, indicating healthy growth in profitability and expectation of more. But below higher bracket incomes, wages and salaries have risen much less; many earnings categories have been essentially flat.<sup>18</sup> This pattern suggests that corporate profits have not much correlated with wage levels; in the face of immigration and foreign out-sourcing, the effective supply of labor has been fairly elastic, and the market price for it fairly stable. Whatever the theory, we know that wages did not increase after enactment of the 1986 tax cuts: on balance, they seem instead to have fallen over the subsequent decade (Bartlett, 2017B).

A more dynamic argument is that higher corporate cash flows might boost investment and hence bring more innovation and higher productivity. Maybe -- but the economics of productivity are complicated, and their conclusions disputed. Despite lots of access to finance, profits, and gains in higher income brackets since the 1980s, there has been relatively little payoff in terms of productivity gain. Indeed, according to Robert Gordon's recent study, productivity -- measured by total factor productivity – increased by historic proportions during the 1930s and WW2 not because of high returns on corporate investment, but rather as what appears an effort to reverse downward pressure on them. (Gordon, 2016; Ch. 16)

Arguably, government support for education and for R&D spending can also contribute to productivity improvements; but the Tax Act implicitly intends to discourage such discretionary spending – through both the constraint of higher fiscal deficits and deliberate squeezing of state budgets. US data indicate a decline in US high school graduation rates since 2000, as well as poor US secondary school achievement rankings relative to those in other countries. Meanwhile, tuition inflation and growing tuition debt, alongside very much reduced state-level spending on higher education, have made it harder for those of lower and middle income backgrounds to complete college. Gordon (2016; pp. 624-627) concludes that problems with US education, including under-investment, have become a “headwind” against productivity improvement.

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<sup>18</sup> *Inter alia*, see charts in (Mishel, Gould and Bivens, 2015).

Still another hypothesis (contrary to the view that productivity improvements follow mostly upon greater after-tax profits) points to the role of labor organization in stabilizing work forces, and hence in improving work conditions, compensation, and productivity. According to one explanation:

The shift to the eight-hour day must have had a direct effect in boosting productivity... However, the main upward stimulus to productivity must have come from the impetus of higher hourly wages, particularly during the late 1930s, that led firms to economize on the use of labor. This helps us to understand the explosion of productivity during World War II. (Gordon, 2016; p. 543)

By extension, the relative decline of labor unions in the private sector, and the expansion of contract and part-time work suggest a lessening of such earlier practices.<sup>19</sup>

It is possible, of course, to agree that the above policy mix quadrants accurately describe policy choices, but to argue also that even in macro-economic equilibrium the US economy has too large a role (or too small a role) for the government in infrastructure, health and education.<sup>20</sup> Indeed, the best way to understand the position of Moore, Laffer, Kudlow and Forbes, despite their invoking of Kennedy- and Reagan-era parallels, is that they believe the government's present role in these areas is too large. From a policy mix consideration, 2017 has more in common with circumstances of the later years of the 1980s and the second Bush's first term. If a general case is to be made for smaller government and less taxation, it should be made without overlaying it with policy mix macroeconomics.

#### *IV. Takeaways, and Looking Forward*

As the gold-linked post-WW2 standard broke down and systemic inflation took hold in the 1970s, Mundell played an important role in thinking through the limitations of Keynesian, monetarist, and rational expectations models and responses. A portion of that response was to use aggressive fiscal stimulus in situations where monetary policy was constrained – the supply-side policy mix. There is some evidence that fiscal expansion, including tax rate cuts aided economic recovery in situations where monetary expansion was impractical – that is, for the 1964 and 1981 tax cuts. Evidence for the economic growth impact of tax cuts is weaker where they have been implemented in other macro-economic environments.

Circumstances in the US have not called for a quadrant #4, easy fiscal/ tight money remedy since systemic inflation was diminished during the early years of the Volcker Fed.<sup>21</sup> It is ironic that monetary policy, which Mundell proposed should be used to secure external balance, is now directed mostly toward stabilizing internal variables of growth rate and unemployment level. Fed Chairmen Greenspan and Bernanke wrote memoirs that scarcely mention the dollar's foreign

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<sup>19</sup> For one interpretation of evidence, see (Eisenbrey, 2007).

<sup>20</sup> One could also conclude that the role of government is too small.

<sup>21</sup> Volcker was appointed Federal Reserve Chairman in 1979 and served into 1987.

exchange value.<sup>22</sup> But exchange rate management has a higher priority in economies that have linked their currencies to an outside standard. Under such currency frameworks, the supply-side policy mix may come to have unexpected applications. It has played an important role, even if it is scarcely acknowledged, in improving economic performance in the Eurozone.

### *Policy Mix in the Eurozone*

The Eurozone macro-economy since 2009 points to suitability of combining inevitable monetary rigidity with an easy fiscal stance, particularly in euro-periphery countries (beginning with Greece) that have experienced sharp contraction and depression-level unemployment. The Eurozone's stagnation trap has often been attributed to the single currency zone – that is, to the inability of periphery economies to escape contraction through devaluation. In fact, improved Eurozone performance since 2015 suggests that earlier stagnation might better be attributed to 1) overall restrictive ECB monetary policy; and 2) resistance by the ECB and the European Commission (sometimes endorsed by the IMF) to authorizing sovereign debt write-downs.<sup>23</sup>

Roll-over of un-serviceable debt kept affected economics locked for years into primary fiscal surpluses. As summarized by the *Financial Times*' Martin Sandbu:

Europe had embraced fiscal austerity with unseemly enthusiasm in the crisis. The motivation had been the fear of public debt stocks rising from already high levels. The turn to austerity was the logical twin of the taboo on default: an obsession with squeezing the flow of new debt rather than cutting the stock of outstanding debt. The result was to kill off the recovery, worsening debt burdens further and straining the financial integrity of the Eurozone as a result. (Sandbu, 2015; p. 155)

Write-down of sovereign debt would allow affected countries to move from contractionary primary fiscal surplus to an “easier” primary balance or even deficit – either through increased public spending or tax cuts. Aggregate demand and capital inflows would then begin to recover. Indeed, this shift to debt write-down has permitted an easier fiscal stance to be (slowly) implemented since 2012, and it has been an important factor in improving economic outcomes in the Eurozone periphery. While unrecognized as such publicly, it is an almost-textbook use of the policy mix Mundell advocated in his 1962 paper, and which led to the Kennedy tax cut – where externally-driven monetary constraint should be paired against fiscal expansion (Mundell, 1968).<sup>24</sup>

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<sup>22</sup> Greenspan (2007); Bernanke (2017). For an argument that exchange rate management should have been a higher priority in US policy during the financial crisis and recession of 2007-2009, see Johnson, (2017), Section 3: Financial Crisis.

<sup>23</sup> For detail, see Sandbu (2015).

<sup>24</sup> Mundell has been called the “father of the euro”, which correctly suggests his embrace of fixed-exchange rate frameworks. My conclusion that the euro-zone periphery needed a tight money/ easy fiscal solution draws on analysis in Mundell (1968 and 1971); but I am not aware that Mundell himself has linked his earlier work to the more recent euro-zone issues in the way presented here.

### *Political Context of 2017 Tax Act*

In 1960, there was much public concern about how to adopt a policy mix that would allow the US to prosper without losing international reserves. By 1980, the burden of price inflation had risen, likely by enough to have contributed to Reagan's election. More than three decades later, inflation is no longer a pressing concern. The most visible public economic issue has instead become increasing domestic income and wealth disparity in the context of a world economy of growing inter-connectedness. While voting patterns are complicated, it seems a safe inference that resentments resulting from increasing income dispersion contributed to Trump's election in 2016. Further, reflecting growing inequality and structural rigidity, a recent United Nations report noted "the US now has the lowest rate of social mobility of any of the rich countries." The report goes on to estimate that budgetary consequences of the 2017 Tax Act are likely to weaken what there is of any American safety net. (United Nations, 2017) Of the trimming of public benefits likely to result from the Act, Pulitzer Prize-winning historian Joseph Ellis comments: "This is a repudiation of the social contract that Franklin Roosevelt announced at the New Deal." (Goodman, P and Cohen, P, 2017).

These are adequate grounds for caution about introducing tax policies likely disproportionately to benefit those in higher tax brackets – *especially absent a compelling macro-economic policy mix rationale for doing so*. Perhaps the US should look for a different sort of policy mix to boost economic growth while *reducing* inequality. For example, it may be time to consider deregulation of entry barriers, zoning practices, intellectual property and patent law, and occupational licensing – all of which have created rigidities in the working of the market economy.<sup>25</sup> Any tax changes required in order to implement such deregulation would presumably not require the regressive changes implicit in the 2017 Tax Act.

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<sup>25</sup> Consider Lindsey and Teles (2017).

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