Fiscal Stimulus & the Output Gap: A messy art form

Fiscal stimulus refers to the increase in government consumption, transfers, or lowering of taxes to increase economic growth. Since the onset of COVID-19 and the 08' Financial Crisis which preceded it, our government has injected unprecedented stimulus into our domestic market. The 2009 American Recovery and Reinvestment Act spent **$840B** through direct aid, tax credits, and infrastructure investments aimed to preserve and create new jobs. In 2020, over **$3T** was spent between the CARES Act and other legislation in response to the COVID-19 crisis. Most recently, Congress passed The American Rescue Plan Act of 2021 authorizing another **$1.9T** of spending and direct aid to combat the fallout of COVID-19.

Podcast Theme: why does the government spend huge sums of money during economic crises and how do they determine how much to spend?

<u>First, let us discuss how we got here.</u>

Three individuals who changed the course of fiscal policy in America:

Herbert Hoover - ran on "Rugged Individualism" / Individual self-reliance / Small government / Balanced budget / No intervention into markets

Franklin Roosevelt - New Deal (relief to unemployed, recovery through federal spending, & reform of capitalism through social welfare program. Established the precedent of "deficit - spending" to promote economic recovery.

John Maynard Keynes - British economist who advocated for government intervention into the economy to achieve full employment and price stability. Argued that counter-cyclical policies were necessary to combat falling demand and rising unemployment.

<u>A short fiscal history of the US:</u>

- Prior to the Great Depression, fiscal orthodoxy subscribed to the belief that balancing the federal budget would instill confidence in consumers, business, and the markets which would encourage investment and economic expansion. (1)
- Historically, deficits were only run during wartime to finance the war effort with balanced budgets or surpluses during peacetime to reduce government debt levels.
- The severity of the Great Depression along with Herbert Hoover's reluctance to provide government aid changed the prevailing fiscal orthodoxy forever! Here is the sequence of events (2):

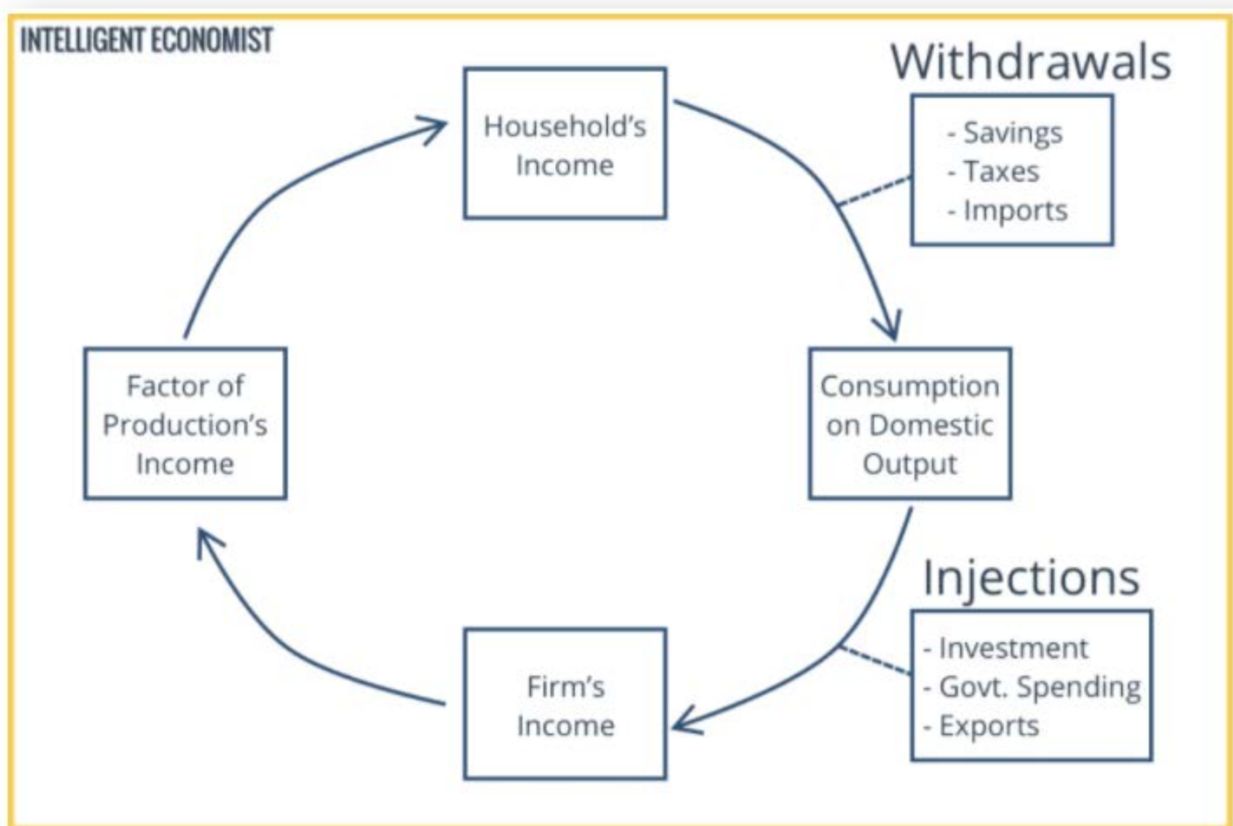
1. Herbert Hoover was elected in under the slogan of "Rugged Individualism" or a belief that the individual should be totally self-reliant outside of state or government.
2. Hoover's ardent embrace of his campaign promise was antithetical to any notion that massive government intervention was the antidote to assuage the dire economic situation unfolding in 1929 & 1930. In fact, his 1931 budget cut federal spending and raised taxes to balance the budget, which ultimately worsened the crisis.
3. Hoover capitulated in 1932 by creating the Reconstruction Finance Corporation which provide loans and financed public works projects but stopped short of providing **direct aid** to American families. Even though Hoover was a philanthropist, he believed the dole would stifle initiative and be ruinous for the morale of the country edging us closer to socialism. Past governments had never resorted to such schemes and Hoover resisted growing calls for government intervention. Unfortunately, Hoover, and his advisors failed to grasp the severity of the Great Depression and the implications of their austerity policies.
4. Franklin Roosevelt was elected in a landslide victory over Hoover in 1932 promising a "new deal" for the American people. His economic platform was based on **relief** through direct aid to families, **recovery** through federal spending, and **reform** through the creation of new social welfare programs.
5. Roosevelt was the first to adopt the emerging theories espoused by John Maynard Keynes or "Keynesianism." **Keynes abandoned the orthodoxy of balanced budgets in favor of activist counter-cyclical policies to combat high unemployment and economic contraction. Keynes believed the state needed to step in and spend when no one else would because the market was not self-correcting as many believed. The radical idea of deficit-spending was born, and the rest is history. (3)**

Why is deficit spending needed?

Simple….my spending is your income, and your spending is my income! When you and I do not spend income falls and unemployment rises. Household spending provides income to firms through the market for goods and services (i.e., what you and I consume). Firms then provide income to households through resource markets (e.g., wages, rents, profits, dividends). When they cycle breaks down (falling demand), the government injects stimulus (spending) to keep income from falling and reignite the circular flow between business and households.

When the Congress runs a deficit, they direct the Treasury Department to sell bonds to investors to finance the shortfall. The sale of bonds acts as a mechanism to pull savings from the financial system so the government can spend it in the economy via direct purchases and transfers. Government spending provides income for households and businesses who can then provide spending through product markets (goods and services) and resource markets (labor, capital, land).

Circular Flow Model:



Source: https://www.intelligenteconomist.com/circular-flow-model/#:~:text=Circular%20Flow%20Model%20Definition,-The%20circular%20flow&text=It%20shows%20how%20household%20consumption,gross%20domestic%20product%20(GDP).

<u>How does the government determine when and how much stimulus is needed?</u>

Introduction to the Output Gap

Let's get acquainted with some terms:

1. **Potential output -** The theoretical output (GDP) an economy can produce when it fully employs all available resources. Think of potential output as the ***"safe speed limit"*** for sustainable economic growth. At the safe speed limit, output is not below capacity resulting in idle labor & equipment, but it is not above capacity resulting in inflationary pressures.
2. **Actual output** - The actual observed level of output that an economy produces, as measured by real GDP.
3. **Output gap** - The difference between potential output and actual output.
4. **Output gap direction -**
    a. Negative output gap = spare capacity or slack due to weak demand. Idle resources.
    b. Positive output gap = demand outstripping economy's productive limits which can lead to inflation.

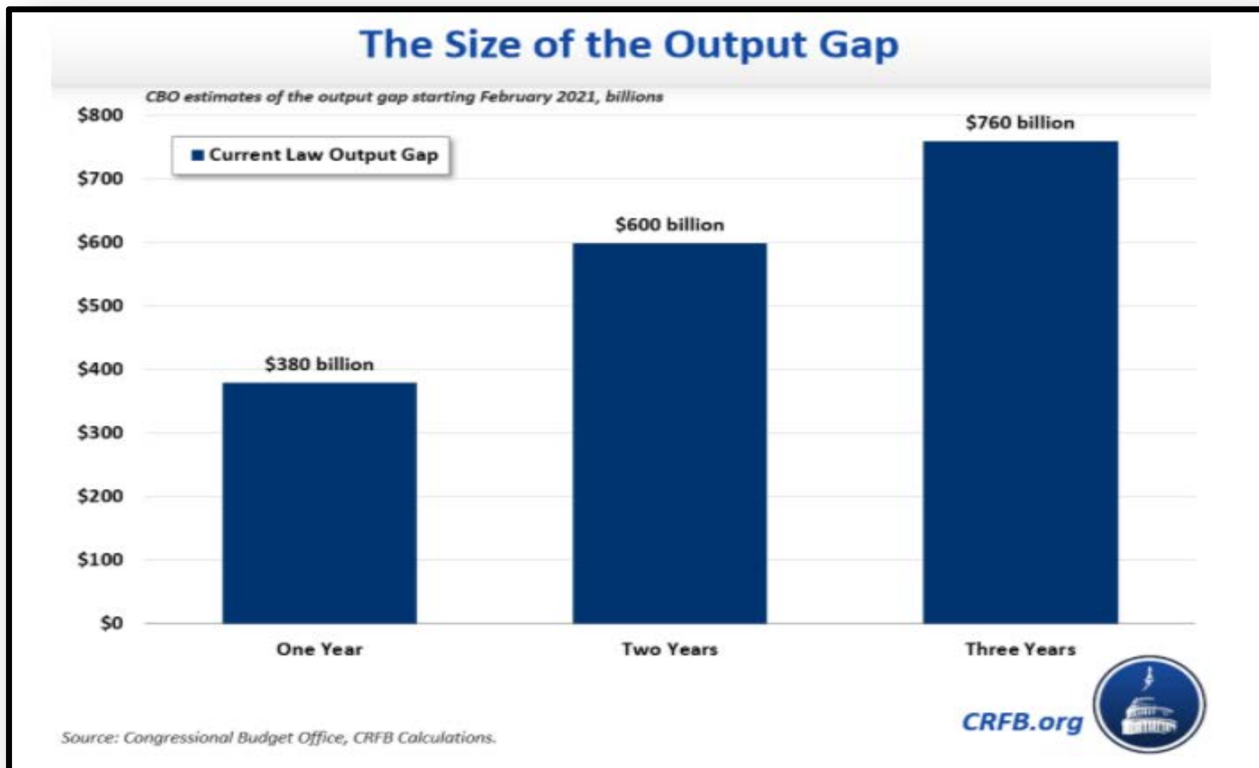
The Congressional Budget Office (CBO) prepares estimates of potential GDP using advanced statistical models. Potential GDP is a theoretical construct and cannot be observed directly. Consequently, the process is prone to estimation errors which can lead to policy overshoots or undershoots when considering the size of stimulus required.

What is the size of the output gap now?

Source: https://fred.stlouisfed.org/series/GDPPOT#0 Date 03/18/2021

CBO Output Gap estimate on October 1st, 2020 (6)

CBO revised Output Gap to reflect <u>significant improvement</u> in February 2021 (7)



<u>How big should the stimulus package be?</u>

The chief purpose of fiscal stimulus is to shrink the output gap and return the economy to its potential level of output. An efficiently designed stimulus bill will produce **$1 or more** of output for every **$1** of stimulus indicating no waste. Unfortunately, consumers balance demands between spending, saving or reducing debts. This affects their **marginal propensity to consume** limiting the return on stimulus dollars. The effectiveness of the stimulus package ultimately rests on the following three pillars:

1. What spending policies are the most appropriate to address the problem?
    a. stop the spread of disease and death and provide financial aid.
2. Fiscal multiplier associated with that spending?
    a. how much is spent vs. saved (marginal propensity to consume MPC)
3. General level of interest rates and unemployment?
    a. low interest rates and high unemployment will usually result in higher multipliers per dollar spent.

The estimation of the fiscal multiplier is critical in determine the correct size of the overall stimulus package. Here is a basic example assuming perfect information:

Output Gap	**$500 Billion**				
Fiscal Multiplier	0.50	0.75	1.00	1.25	1.50
Size of Stimulus Package	$ 1,000	$ 667	$ 500	$ 400	$ 333

Past Multipliers (6)

Fig. 1: Abridged Table of Fiscal Multipliers, As Estimated by CBO

Policy	Multiplier
COVID Relief (2020)	
Paycheck Protection Program	0.36x
Enhanced Unemployment Insurance	0.67x
Recovery Rebates for Individuals	0.60x
Coronavirus Relief Fund for States	0.88x
American Recovery and Reinvestment Act (2015)	
Infrastructure Spending	0.4x to 2.2x
Payments to State & Local Governments	0.4x to 1.8x
Payments to Individuals	0.2x to 2.1x
Individual Income Tax Cuts	0.1x to 1.5x
Corporate Tax Cuts	0.0x to 0.4x
Effects of Policy Options (2010)	
Aid to the Unemployed	0.7x to 1.9x
Payroll Tax Cuts	0.3x to 1.3x
One-Time Social Security Bonus Payment	0.3x to 0.9x
Infrastructure Spending	0.5x to 1.2x
Aid to States	0.4x to 1.1x
Tax Cuts and Refundable Tax Credits	0.1x to 0.9x

Biden's Current Stimulus Plan: The American Rescue Plan Act of 2021 (8)

TABLE 1.

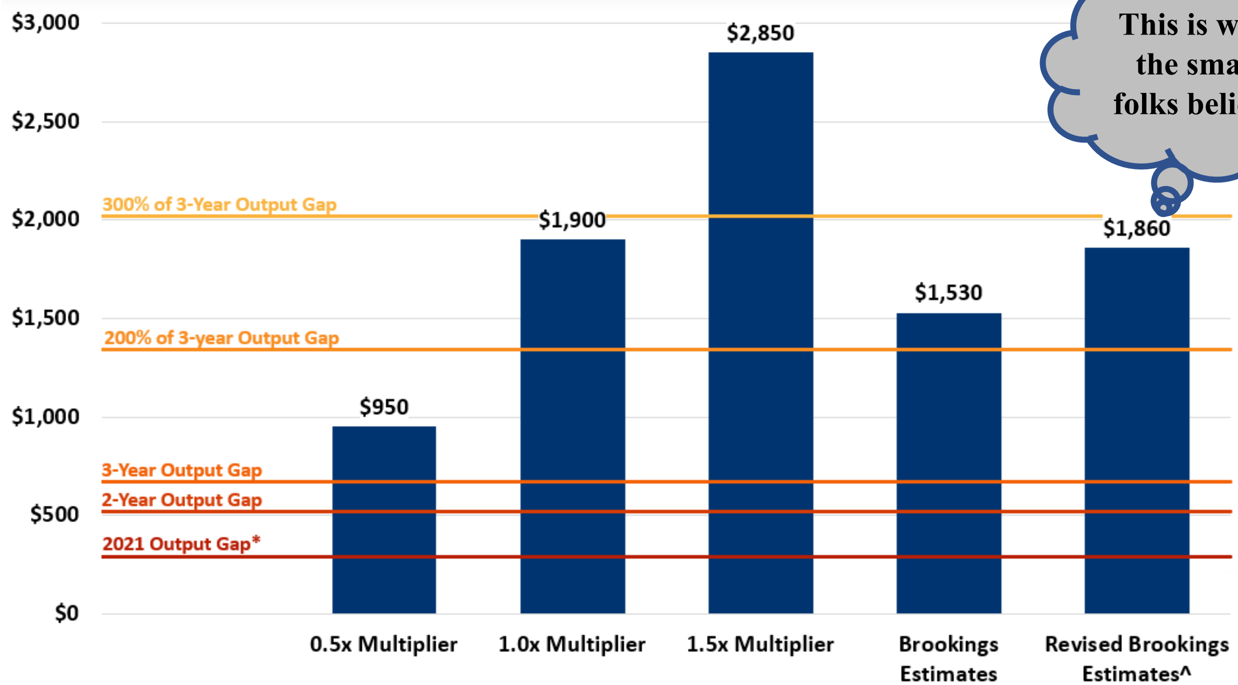
Federal Outlays of Major Categories of Policies

	Total outlays (in billions)	Policies included in each category
All five categories together	$1900	
COVID-19 containment and vaccination; aid to state and local goverments; federal spending	$750	Aid to tribal, state, and local governments; child care block grant; COVID-19 containment and vaccination; federal IT; public transit; reopening schools; VA and mental health
Direct aid to families	$600	Child care; child tax credit; EITC; rebate checks; tuition aid
Aid to financially vulnerable households	$400	Health insurance subsidies; housing assistance; SNAP; TANF; Unemployment Insurance; WIC
Aid to businesses	$150	Child care providers; grants to small businesses; loans to businesses; paid sick leave

Source: Authors' calculations.

Biden's spending priorities are allocating direct government purchases, aid to families with a high marginal propensity to consume (MPC) and state aid. All 4 areas are associated with high multipliers. Compound this with low interest rates and high unemployment suggest a high multiplier will be realized.

Biden's Multiplier Effect and the risk of an overshoot (9)



Implications of an overshoot

- Temporary boom in economy, rising markets
- Higher inflation (Fed prefers and overshoot and will manage with monetary policy tools)
- Misallocation of resources – stimulus causes businesses and households to make long-term investments based on a short-term boost in income.
- Short term growth above trend leading to and economic decline when the stimulus fades. Lawmakers may be inclined to enact more stimulus resulting in a vicious cycle of an economy perpetually reliant on stimulus.

Implications of an undershoot

- Prolonged levels of high unemployment & human suffering
- Slow economic recovery
- Idle resources and business closures
- Rising bankruptcies and defaults.

Source List:

1. https://www.fdrlibrary.org/budget
2. https://www.ushistory.org/us/48d.asp
3. https://www.imf.org/external/pubs/ft/fandd/2014/09/basics.htm
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5. https://www.gilderlehrman.org/history-resources/spotlight-primary-source/herbert-hoover-great-depression-and-new-deal-1931%E2%80%931933
6. https://www.crfb.org/papers/comparing-fiscal-multipliers
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8. https://www.hamiltonproject.org/blog/the_macroeconomic_implications_of_bidens_1.9_trillion_fiscal_package
9. https://www.crfb.org/blogs/how-much-would-american-rescue-plan-overshoot-output-gap