



The Suitability of Government Interventions on Markets in Modern Era

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Abstract: This paper discusses different types of economic policy. In recent years of economic unrest since the Great Recession of 2008 and 2009 to the current global virus outbreak crisis of COVID-19 pandemic, the public and academia raised the long-debated question again: should, and to what extent government should intervene the market. The major focus of this paper is on the use of regulatory policy, monetary policy, fiscal policy, and their applications in real world, with examples that spanned different time periods of time. The first part of the paper we will first explain the three policies that government or central bank usually uses, which include the introduction of the specific tools each type of policy would use and discuss its benefits and shortcomings. In the next part of this paper, we discussed the various type of policy responses made by the US government and Federal Reserve during the COVID-19 era to illustrate how these policies discussed in this paper could be implemented to help the economy. In the last part of paper, we made the conclusion on the topic: even though government intervention sometimes distorts the market, but we believe the various kinds of policies are necessary to restore the normality of economy under turmoil time.

Keywords: Economic Policy, Regulatory Policy, Monetary Policy, Fiscal Policy

1. Introduction

Accompanied by the profound progress was brought about through scientific innovation and guidance of the free market principle. In connection to this, humans accomplished unprecedented wealth and development in the history of civilization. However, concerns arose that claimed that the laissez-faire economic mechanism should be revamped – those free of regulation types. The tug of war then stretched almost a century, which formed two major schools. One is old-fashioned, which believed the market could correct itself, chasing personal happiness and maximizing social welfare, also known as the freshwater economists. On the other hand, "saltwater" economists abide by government intervention and its necessity and benefit to the economy. In my opinion, I would choose the side of the interventionists as I believe the beneficial aspects of government intervention outweigh its costs.

To conduct the cost-benefit analysis, we need first to discern the main tools a government can utilize to manage its economy. By the means and corresponding entities, there are

three main types of policies a government can use: Fiscal policy, monetary policy, and regulatory policy.

2. Policies

2.1. Regulatory Policy

To begin with a Regulatory Policy, a government establishes rules to have an impact on a market and its participants. One major use of regulatory policy is to fix externality issues. In our modern world, individuals are facing conflicts between development and polluting the environment all around the globe. Certainly, companies would not care about pollution under a totally free market, which induces market failure. Hence, to tackle this problem, a government will set regulatory policies. Common methods include quotas on production and pollution taxes. Pigouvian taxes, which tax quantity of emissions from production lead to factories having an incentive to reduce pollution or to switch to a cleaner process of production. [1]

However, like other regulatory policies, a pollution tax has

shortcomings and unintended consequences. The issue with this tax is the measurement problem. We do not truly know what the optimal output is for society, and therefore we cannot develop an accurate tax level to achieve it. Moreover, authorities do not have accurate information on these factories' marginal costs. This inadequacy of information also hinders governments from implementing the right level of taxes. Additionally, if the tax is too high, it can worsen companies' international competitiveness. Companies will have incentives to move their production to locations (states, countries) that have fewer regulations. This outsourcing of production can further cause structural unemployment. This is not uncommon in our real world; Nike, Adidas, and major apparel companies tend to have their production centers in underdeveloped Southeast Asia, where the regulatory policy is eased for the sake of economic benefits. Some pointed out the pollution tax like Pigouvian tax, cannot solve the externality problem in long-run as the firms as firms would produce the same output as in the pre-tax situation to minimize the average cost that tax imposed on them. [2]

Therefore, authorities these days tend to use "Cap and Trade" to solve the pollution problem, which sets up an emission goal for the industry and companies to trade permits within the industry. Using market companies can allow for finding the optimal output for themselves and the overall ideal level of output which can then be achieved. This Tradable performance standards have earned increasing popularity as a regulatory tool, especially at the sectoral level. One big advantage of cap-and-trade system is that the polluting firms could allocate the allowances through auctioning to prevent profit losses by regulations. Allowing 100% of allowances might even overcompensate the industries.[3] However, the use of a price-based alternative, the introduction of price controls to a TPS, and features of the TPS policy itself have been less frequently studied. Moreover, the idea of a price floor to establish a lower bound on prices has yet to be introduced in a real-world TPS. [4]

Another example of regulatory policy is leverage limit. Leverage limits restrict the amount of debt that institutions can borrow relative to their asset values. Such regulations are usually imposed on institutions that provide financial services in order to protect the interests of shareholders being damaged by the use of excessive leveraging. However, imposing such a limit may come at the expense of these institutions lost their capability as efficient intermediation [5], for example, the lending institutions. It could be observed that non-bank lending institutions like Business Development Companies would use regulatory slacks in order to comply with the policy. [6] These actions include overreporting the loan value to boost up the asset values. The overreporting would lead to obscure material information regarding too many investments. This phenomenon suggests that sometimes a policy that intends to protect the shareholders and investors, in fact harming their interests. In bad times they would just cut off lending, which could be disastrous for small and middle companies in the market as they are unlikely to find substitutes on time. Such an effect could also increase systematic risk if not handled well

by the authorities. [6] Therefore, we should remind that regulatory policy sometimes could easily cause an adverse effect if the policy is not well-designed.

2.2. Fiscal Policy

Another powerful tool usually implemented by the government is fiscal policy. A fiscal policy is usually enacted and enforced by a central government. A common fiscal policy is either defined as automatic stabilizers or discretionary fiscal policy. Automatic stabilizers are the fiscal tools that will automatically execute once a certain condition is "triggered." When the economy is booming, personal income will increase, and hence people will have more tax expenses from a progressive tax system. With less disposable income, they will have less consumption. Governments will spend less on transfer payments, such as unemployment insurance, which will decrease the budget deficit, and the pace of real GDP will increase so that an economy can avoid the state of being overheated. On the contrary, when the economy is in a recession, lower taxes and transfer payments can serve as remedies to combat a recession. for example, Auerbach and Feenberg (2000) find that progressive income taxation serves as stabilizer of the aggregate output through its effect on labor supply and aggregate demand.[7] Moreover, automatic stabilizer also alters the prescription for the optimal monetary policy. [8]

Discretionary fiscal policies are the policies that governments explicitly enact to stabilize the economy. Governments will depose spending to fund public projects that create jobs and reduce the level of unemployment. Through these spending tools, governments can fund infrastructure development that can boost economic growth. The high-speed railway network in China and Japan can serve as a prominent example. As the network stretches along with different regional hubs, the fast and reliable interchange channel henceforward facilitates economic growth.

There are some drawbacks to fiscal policies. It is difficult to discern the timing of the fiscal policies. Sometimes economists can be incorrect about the economic situation and thus develop wrong predictions. Policies under incorrect assumptions will not help the economy. This is a so-called recognition lag. Even if economists make correct predictions, there can be law-making lags and impact lags, which in turn make fiscal policies not as effective as expected. Another point also worth noting is that increased government spending will demand more funds and therefore cause an increase in interest rate, which "crowds out" private investments. Under such situations, the decrease in the size of private investments will offset a government's effort to stimulate the aggregate demand. Another unintended consequence is that fiscal policy increases the budget deficit and therefore increases the tax burden, which discourages potential entrepreneurs and workers.

Also, through the rather activist fiscal measure, many developed countries have significantly increased their public debt level. Such a situation raised many questions regarding the suitability of fiscal policy. The effectiveness of fiscal

policy would rely on many criteria. One way to look at it is the fiscal multiplier. The deficit-financed government spending multiplier is significantly larger than the tax-financed one; The response of monetary policy is crucial for the effectiveness of the fiscal stimulus. [9]

2.3. Monetary Policy

The third tool is the monetary policy, which is mostly enforced by a nation's central bank, in America's case, the Federal Reserve Bank. The intuition of monetary policy is control over either money supply or policy rate to achieve stability of the economy. One tool from a monetary policy is to change the Federal Funds rate. This rate somewhat reflects whether the monetary policy is expansionary or contractionary. When a central bank practices expansionary policy, the Federal Fund rate is low, and banks have a lower cost of raising capital, and therefore will have more capital to lend, which decreases the interest rate. A central bank can also change the reserve requirement. Under the expansionary policy, a central bank will lower the requirement, and thus banks will have more money to give as loans, which causes interest rates to decrease. Another way to alter the interest rate is through Quantitative Easing. Central banks will inflow money supply into the market through buying government bonds and MBS securities, which lead to a decrease in interest rate. When the interest rate decreases, people tend to invest since the cost of capital is low, and the price of assets will decrease because the discount rate is lower. Moreover, the decrease of the interest rate will depreciate the currency because of the outflow of foreign capital. The depreciation will help to increase the competitiveness of a nation's export. Through the increase in investment, net exports, and the inflation rate, employment rates accelerate and boost the increase of the GDP. Through the recovery process from the damage caused by the pandemic, The FED recently signaled it would hold US interest rates at historic low levels until at least the end of 2023.

Sometimes we might not achieve desired results from a monetary policy. For instance, through decreasing money supplies, central banks are setting a goal of increasing long-term interest rates and decreasing inflation. This target will lower people's perception of expected inflation rates, which is a part of long-term bond yields. Therefore, the long-term interest rate (return on long-term bonds) will decrease as well. The decrease of long-term interest rates will further stimulate the economy, which negates the central bank's contractionary policy.

Another example is "Abenomics," a series of expansionary monetary policies by Abe Shinzo, Japan's former Prime Minister. However, the policies did not work as effectively since Japan is in a liquidity trap. Despite the level of money supply, people would prefer to hold cash than to invest. Even banks have ample money supply to provide loans, but they are still discouraged from lending due to fear of default. Under such conditions, the expansionary policy is not as effective in fixing the residual effects of the recession. In general, monetary raised about 1% of GDP growth of 2013, but the

policy was unable to close Japan's output gap. [10] Moreover, the long-run effect is depending on several political factors as well; the independence of Bank of Japan always was coerced by political pressure. [11] When the central bank could not ensure the objectivity, it is hard to guarantee the effectiveness of its monetary policy.

When exercised with fiscal policy, the situation could get even more complicated as monetary and fiscal policy sometimes offset each other.

For example, after the Great Recession, there were many attempts to revitalize the economy. However, the scope of the money remains rather limited. Moreover, the underperformance of the monetary policy met with activist fiscal policy, which furtherly halted the revival of the global economy. [12]

3. Policy Response on COVID-19

Since the outbreak of the COVID-19, the pandemic has already made a drastic impact on the global economy. Unlike the recession during 2007~2009, this recession, caused by the spread of the viruses could generate a demand-driven slump and lead to an even worse stagnation trap. [13] The limitation of the in-person activities caused an economic shutdown, and many businesses had to close and thus lost their cash flows. Several studies have shown there are direct proportional relationships between the length of lockdown and GDP loss. [14] It is estimated that the lockdown policy attributed to 15% of the GDP loss. [15] Moreover, the stop of economic actions resulted in an increase in the unemployment rate, and the rate was as high as that of the peak of the Great Recession. Tens of millions of workers had to lay off and stay at home without pay. At the peak of the unemployment wave, in May 20 million workers were unemployed. The unemployed workers were mainly in the service industry, as the service industry accounted for almost half of the total unemployed workforce. The situation got even worse as the pandemic cases resurged a couple of times during 2021. Also, the new, more contagious, and deadlier variants (Delta, lambda) presented new challenges and difficulties for government to lift the regulations and reopen the economy.

There are several targets of fiscal policies and monetary policies. However, these targets should be treated with different level importance. Some researchers argued that the priority of the policies should be providing relief and avoid furthermore recession caused by uncertain and massive layoff. The fiscal and monetary stimulus should be launched after the situation is stabilized. [16]

To prevent further recession and economic turmoil, The Federal Reserve has executed several policies packages. "We are deploying these lending powers to an unprecedented extent, enabled in large part by the financial backing from Congress and the Treasury. We will continue to use these powers forcefully, proactively, and aggressively until we are confident that we are solidly on the road to recovery." Said Jerome Powell, chair of the Federal Reserve Board of Governors, in April 2020. So, what monetary policy and fiscal policy had Federal Reserve

and US federal government implemented to help the US economy during the pandemic era?

3.1. Zero-interest Rates

The Fed has decreased the target for federal funds rate by a total of 1.5 percentage points, lower the target range for the federal funds rate to 0 to 0.25 percent. The near-zero interest rate will be set to lower the cost of loans and mortgages. Such a low rate would also discourage saving as the interest income is almost zero, providing additional liquidity to the market. On November 05, 2020, the Federal Reserve announced forward guidance that it would keep the interest rate low level until labor market conditions get better and an inflation target of 2% could be realized. This announcement would have an impact on long-term rates as well.

3.2. CARES Act

In order to provide direct relief to the layoff workers, the US government passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act at the end of March 2020. It enables the government to provide direct benefits up to \$1200 to every taxpayer. This act could solve some problems regarding the public's lack of credit to pay the loan and mortgages. In late December, Congress passed another bill that supposes to use up \$900 billion, which consisted of more direct checks and unemployment benefits. The federal government also fund the various important program in order to fight the COVID-19: vaccination program, COVID-19 screening. We would expect more stimulus programs by the Fed and federal government as the economy slowly goes back on track.

3.3. Buyback Securities

During the pandemic, the Federal Reserve bought trillions of dollars' worth of securities. On March 15, 2020, Fed said it would buy at least \$500 billion in Treasury securities and \$200 billion in government-guaranteed mortgage-backed securities. At the beginning of the pandemic, the prices of these securities fluctuated violently; thus, it was hard for sellers to strike a deal on them. The purchasing actions by Fed served as a Quantitative Easing; it provided needed liquidity into the securities market and increased market stability as the prices were eventually stabilized. From the Fed's statistics, Fed's account of securities held grew from \$3.9 trillion to nearly doubled, \$6.6billion, between March and early December. At the beginning of the pandemic, the prices of these securities fluctuated violently; thus, it was hard for sellers to strike a deal on them. Through these purchases by Fed, the public's confidence was restored to some extent, which resulted in the overall improvement of the whole financial system.

3.4. Increase Credit Supply

On March 17 of 2020, to support the credit needs of households and businesses, the Federal Reserve Board on Tuesday announced it would establish PDCF (Primary Dealer Credit Facility). The PDCF will offer overnight and term

funding with maturities up to 90 days and will be available on March 20, 2020. It will be in place for at least six months and may be extended as conditions warrant. This allowed Fed to offer low-interest rate loans to the large financial institutions (primary dealers) and receive investment bonds, investment-grade securities as collateral. In general, the goal of such a program is to prevent the credit market from dysfunction. Similar measures were implemented to provide lending to banks. The Fed provided loans that only charged 0.25%. These loans also had extended terms to 90 days. Again, such measures would ensure banks performing as effective intermediation: with enough capital, they could make new loans and keep the credit flow, without concerns of bank run.

The Fed not only executes programs to help the big players, but they also initiate several programs to help the business directly. Paycheck Protection Program is a supportive program designed for small businesses. The total PPP volume from 2020 to 2021 is about 793 billion dollars. Along with many other programs that were aiming for different sizes of the company, they helped businesses to keep their employees during the pandemic and thus prevent the recession from furtherly evolving.

3.5. Modification of Regulatory Policy

As we discussed in the part of regulatory policy, leverage limit could endanger lending agencies' ability to distribute credit during bad times. Therefore, the Federal Reserve was temporarily relaxing some requirements to support lending. For example, the Fed eliminated the bank's reserve requirement. Moreover, the Fed announced the technical change to TLAC (Total Loss-absorbing Capacity), enabling banks to make loans from their capital buffers, a regulatory requirement of extra insurance capital that prevent possible bankruptcy. During the pandemic, the Fed also imposed some regulations. In order to preserve capital, dividends and share buybacks of bank holding companies were strictly prohibited (already lifted in June 2021).

3.6. Support of Non-profit Organizations

The Fed also ensures non-profits institutions, such as hospitals, schools could keep themselves healthy financially by expanding the Main Street Lending Program to them. Not only is the economy important, to keep such institutions functioning is vital to fight the virus. From the past year, we've seen many hospitals from different regions experienced medical emergencies that are over their maximum capacities. Therefore, the Fed provided loans for five years to help them function normally, which in other words, to keep hundreds of thousands of infected people alive.

4. Conclusion

We used to believe that sometimes government interventions could cause inefficiency of market distribution mechanism. However, such thinking might be obsolete in today's modern world. Economic transactions nowadays

become increasing sophisticated nowadays that we need to reconsider whether laissez-faire doctrine still applies today. The real-world examples shows that society welfare could not reach the maximum level if the government does not intervene on matters such as externality. Moreover, we are in a globalized world that one could easily influence another. Countries could gain advantages easily by implementing protective policy. In today's most countries, government intervention is preferred over free trade.

Through the past year's pandemic, we could also reach the conclusion that governmental actions are important and crucial for the general well-being of society. The efforts of government officials at the federal, state, and local level helped to prevent the spread of the virus that would be far worse. As we can see in many other countries, a nation without an effective central government performed poorly on pandemic and suffered heavy economic losses.

Citing the evidence above we reached the conclusion that government should be actively involved in making appropriate economic policy to obtain optimal result in domestic social welfare and international trades.

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