Research on the Impact of Sources of Government Expenditure on Social Economy

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Abstract. In reality, a government funds its own expenditure mainly by taxation, borrowings, and fees and charges. Additional sources of government revenue include seigniorage, natural resource revenues, and foreign aid and grants. The specific mix of revenue sources and their relative importance varies from one government to another based on factors such as the country's economic structure, tax policies, natural resources, and external financial assistance. Suppose a government ends taxing and funds its own expenditure purely by borrowings. In that case, it may lead to an inefficient market, a turbulent economy, social and economic inequality, and reduced social productivity and welfare.

Keywords: Government finance, taxation, monetary loosening, Excessive inflation.

1. Introduction

Taxation is the main component of government revenues. From October 2022 to April 2023, U.S. Federal Government collected $1.41 trillion individual income taxes and $221 billion in corporate income taxes, making up 61% of total revenue.[1] Contemporaneously, payroll taxes have collected $923 billion, which made up another 34%.[2] However, the $2.69 trillion total revenue still cannot meet the federal spending of $3.35 trillion for the same period, leading the government to borrow money to finance these deficits.[3] In 2020, the COVID-19 pandemic put additional pressure on the fiscal deficit by increasing the federal debt-to-GDP ratio to 14.9%--which was the largest on record since World War II.[4]

Taxation is not only an important source of government revenue but also plays a crucial role in the economy. First, taxes can be used to fund public goods and services such as basic research, police force, national defense, education, healthcare, infrastructure, anti-poverty programs, and many others. Without government intervention, profit-maximizing firms would be unwilling to produce public goods as they are non-rivalrous and non-excludable.[5] Second, taxes can be used to redistribute wealth. The French economist Thomas Piketty argues for a global progressive income tax and suggests that such a system could help reduce income inequity by redistributing wealth from the wealthier segments of society to the less wealthy ones.[6] Third, taxes help maintain economic stability. Governments can stimulate the economy and business by decreasing taxes when the economy needs a boost. Alternatively, a tight fiscal policy of increasing taxes can help stabilize prices, reduce inflation, and prevent economic overheating. For example, according to the data provided by the International Bureau of Fiscal Documentation (IBFD), many countries such as the United States, United Kingdom, China, Canada, Germany, and Australia implemented deferred taxation as a response to COVID-19's turbulence to the economy and reduced rates of major taxes such as personal income tax, corporate income tax, and consumption tax.[7] Fourth, taxes can be used to manage externalities. In an early study, Goulder (1995) found that the carbon emission tax helps discourage activities that harm the environment.[8] The former Chief Economist of the World Bank and the founder of global climate change policy, Nicholas Stern, emphasizes the importance of policy interventions such as carbon taxes could reduce carbon emissions and reduce the social costs due to climate change, environmental damage, and adverse health effects.[9] A modern economy would face significant difficulties functioning without taxation.

2. Created funds from the central bank.

When central banks create money, this newly created money is not created out of thin air or without any underlying assets or liabilities. Central banks can inject new money through a process known as open market operations, in which it buys municipal and government securities from banks, financial institutions, or authorized dealers on the open market and reduces their federal funds to provide liquidity and ensure market functioning.[10] The open market securities purchases represent debts of the government. Similarly, to using taxation revenues, government borrowings are spent to finance public expenditures, redistribute resources, and stabilize the economy.[11] In practice, when purchases Treasury bonds from banks, the Federal Reserve pays for them by crediting the reserves of the selling banks and therefore expands the lending capacity of the selling banks.[12]

Government borrowing can influence interest rates. The ratios of reserve requirements are subject to change over time based on the Federal Reserve's monetary policy decisions and economic conditions. In 2002, the marginal reserve requirement equaled 10 percent of a bank's demand and checking deposits.[13] However, decades later, the Federal Reserve decided to reduce the reserve requirement ratios to zero in March 2020 and remain zero till 2022.[14] The zero reserve requirements aim to respond to the economic recession caused by the pandemic and provide banks the opportunity to utilize their entire deposit for lending, which may enable banks to offer more competitive interest rates on loans and other financial products. As the Federal Reserve announced in March 2020, "the Board eliminated reserve requirements for all depository institutions. [The goal of this change] was to support the flow of credit to households and businesses and thereby promote [the Fed's] maximum employment and price stability goals".[15]

Government borrowing can smooth economic cycles. Government borrowing can provide flexibility to manage finances and address immediate needs.[16] Borrowing can be used to adjust government expenditures based on economic circumstances and policy priorities. However, the government should also pay attention to large budget deficits, which may pose challenges in terms of debt accumulation and sustainability. Similarly, Ramey and Zubairy (2018) investigate government spending multipliers in the U.S. from 1947 to 2014 and find that facilitated through borrowing, government spending stimulates economic activity and outputs in both expansions and recessions.[17]

Besides open-market purchases of government securities, central banks have other ways to create money for the economy. In response to the COVID-19 pandemic and its impact on the economy, the Federal Reserve implemented various quantitative easing measures to support financial markets, promote liquidity, and provide economic stimulus. The Federal Reserve expanded its asset purchase programs, targeting a wide range of assets, including agency mortgage-backed securities and corporate bonds. According to the Report on Federal Reserve's Balance Sheet released on August 2020, between mid-March and mid-August 2020, within six months after the lockdowns and stay-at-home orders, the Federal Reserve released a total of $2.8 trillion in currency after the epidemic, of which $2.46 trillion (94%) was issued through securities purchases.[18] In addition, the Federal Reserve established the Municipal Liquidity Facility, launched the Main Street Lending Program, and revived the Commercial Paper Funding Facility. The aims of these actions are to provide liquidity to help these governments manage cash flow challenges during the pandemic, encouraging lending to support business operations and maintain employment. Therefore, government debts and monetary policy are correlated. Coordination of fiscal and monetary policies is vital in managing government debt and maintaining macroeconomic stability.[19]

3. Monetary loosening

If a government solely relies on the central bank's credits and never pays them back, it may trigger irresponsible borrowing and imprudent debt management. Easy access to central bank financing without constraints creates an illusion of affordability for governments. Barro (1979) argues that current fiscal policy decisions, such as government spending and taxation, affect the burden of debt that future generations will face.[20] When governments have a guarantee of unlimited central bank

financing without repayment, they may engage in risky and irresponsible behavior.[21] For example, instead of making difficult policy choices, governments may opt for short-term fixes or temporary measures, relying on borrowing to postpone the need for substantive reforms. This can result in a buildup of unsustainable debt levels, potentially leading to fiscal crises or economic instability in the long run.

Figure 1. U.S. venture capital investment, company formation and the Digital Economy's share of GDP (The data is from SVB' company announcements, summaried by Minsheng Securities' Research Group.)

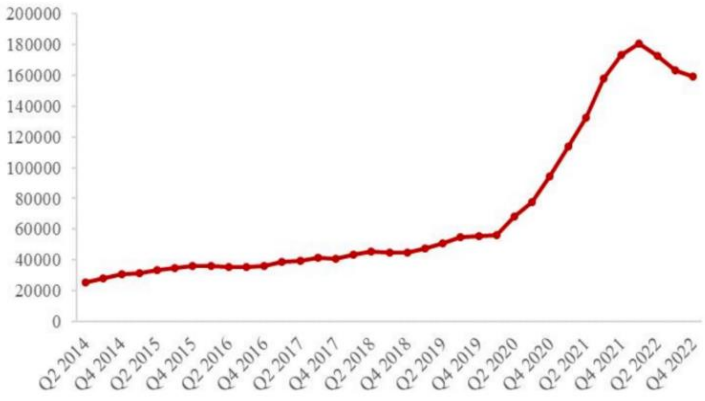

Figure 2. The deposit scale of Silicon Valley Bank (Unit: billions of U.S. dollars) (The data is from Bloomberg, summaried by Minsheng Securities' Research Group.)

The bankruptcy of Silicon Valley Bank (SVB for short hereafter) provides a real-world example of how fiscal illusion harms the business and economy. Amidst the post-pandemic loose monetary environment, low financing costs, and the trend of working from home, American startup technology companies have rapidly developed, resulting in a significant increase in funds for customers targeted by SVB (see Figure 1).[22][23] With the upsurge of venture capital activities, the deposit scale of SVB grew, leading to a significant expansion of SVB's balance sheets. Bloomberg data shows that the deposit on SVB's balance sheet was $55.8 billion in the fourth quarter of 2019 (see Figure 2). The deposit scale was rising rapidly and reached $180.6 billion at the peak of the first quarter of 2022, which reached $159.2 billion by the fourth quarter of 2022. SVB invested most of the new deposits in 1-5 year risk-free Treasury bonds, which is reflected in the high growth of the "held-to-maturity (HTM) securities" and "available-for-sale (AFS) securities" subjects in the balance sheet.[24] When the Federal Reserve embarked on one of its most aggressive campaigns to raise interest rates in March

2022, Silicon Valley Bank incurred losses on a large number of Treasury bonds purchased after the epidemic, resulting in "unrealized losses." [25] The Federal Reserve's tightening monetary policy has also led to a "cold winter" in the technology industry and venture capitals, initial public offerings were shut down for many startups, and private fund-raising was more costly than before.[26] This has led to the continuous withdrawal of deposits at SVB. SVB had no choice but to cut its holdings of losing making assets to alleviate its liquidity crisis. According to Reuters' news, SVB sold a $21 billion bond portfolio mainly consisting of U.S. Treasuries to fund redemptions and recognized a $1.8 billion loss.[27] Unfortunately, this "self-help" behavior triggered greater panic in the market, and SVB's customers withdrew their capital in succession. SVB, the 16th largest bank in the U.S., was insolvent and finally declared bankruptcy. The bankruptcy of SVB triggered market fear and revealed the systemic risk within the banking sector.

4. Excessive inflation

Excessive inflation is indeed one of the potential disadvantages of irresponsible borrowing and imprudent debt management. Sargent and Wallace (1981) proposed the fiscal dominance theory, suggesting that if a government sets its current and future primary deficits and surpluses and imposes, the central bank sets money creation under the constraints that revenues must be raised either through bond sales or seignorage, the fiscal policy takes precedence over monetary policy.[28] As a result, the central bank's ability to conduct independent monetary policy is compromised and can lead to hyperinflation, loss of central bank credibility, and macroeconomic instability (Noh, 2019; Falcetti and Missale, 2002; Garriga, 2016).[29] Giordano and Tommasino (2011) refer to evidence that more independence of a central bank leads to lower budget deficits and more sustainable debt.[30] Bernanke and Reinhart (2004) point out that unintended consequences, such as excessive inflation or financial market disruptions, could occur due to large-scale asset purchases.[31] What's more, this excessive money creation can result in a rapid and uncontrolled increase in the general price level, leading to hyperinflation.

Figure 3. Inflation, GDP deflator (annual %)-Zimbabwe

One real-life example is Zimbabwe, which experienced excessive issuance of currency, leading to hyperinflation. Figure 3 shows that Zimbabwe's inflation rate reached 95.4% in 2009 and that from 2018 onwards, its inflation rates reached astronomical levels of over 200% in 2018 and 2019 and 605% in 2020.[32] The Zimbabwean government engaged in excessive currency issuance to finance its budget deficits and meet its financial obligations. The more money printed, the higher the inflation rates in Zimbabwe. The hyperinflation in Zimbabwe resulted in severe economic consequences, including widespread poverty, a collapse of the financial system, shortages of essential goods, and social unrest.[33] The Zimbabwean case is a cautionary example of the detrimental effects of excessive money creation without prudence, but it is not the only case. Countries such as Germany experienced hyperinflation during and after World War I. [34]

Other disadvantages of unlimited government borrowing include market inefficiency and bureaucracy. Cochrane (2011) argues that government spending programs as a tool for economic stimulus often suffer from inefficiencies, bureaucracy, and misallocation of resources, which can hinder economic growth.[35] Empirical studies show that government debt overhang creates uncertainty and reduces incentives for private investment, depress aggregate demand, slower GDP growth, and leads to long-term economic stagnation (Reinhart and Rogoff, 2010; Eggertsson and Krugman, 2012).[36]

5. Summary

In summary, when a government solely relies on the central bank's money creation to finance its expenditures and stops relying on taxation, it implies government borrowing. This approach can have both advantages and disadvantages. This approach could benefit the government with immediate funding, flexibility in managing its finances, and feasibility of funding public goods such as infrastructure projects. However, the disadvantages of this approach are not neglectable. Overreliance on borrowing can lead to a rapidly growing debt burden for the government. Without taxation, the fiscal position is imbalanced. The persistent deficits can lead to potential default risks and economic instability. As Thomas Jefferson, the third President of the United States, states, "A private central bank issuing the public currency is a greater menace to the liberties of the people than a standing army. We must not let our rulers load us with perpetual debt".[37] In my opinion, weighing the advantages and disadvantages, governments should not fund their operations and programs entirely through debt issuance without any revenue collection from taxes.

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