

The Impact of Fiscal Policy Uncertainty on Fiscal Sustainability—Based on China’s Empirical Data

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Abstract

Fiscal policy uncertainty refers to unpredictability in government taxation and spending decisions, affecting economic planning, investment, and consumer behavior, leading to market volatility and potential economic slowdowns. In this research, we intend to analyze the impact of uncertain fiscal policies on fiscal sustainability in China, utilizing empirical data. We aim to elucidate how fluctuations in government expenses, budget uncertainties, and tax collection affect fiscal sustainability, with potential mitigating effects explored through financial sector development indicators. This study employs Panel Vector Auto regression (PVAR) to analyze the association between uncertain fiscal policies and fiscal sustainability in China. PVAR facilitates the examination of dynamic interactions among variables across multiple time series and cross-sectional units. This investigation demonstrates that fiscal policy uncertainty resulting from government expenses, budget uncertainties, and tax collection has a significant negative influence on China's economic development. However, financial development measures such as the ratio of liquid expenses and loans to the business community have a moderating influence. These findings highlight the significance of improving the growth of the financial sector to mitigate the negative implications of unpredictable fiscal policy and encourage sustainable fiscal increases over a longer period.

Keywords: *Fiscal Policy Uncertainty, Fiscal Sustainability, Empirical Analysis, China.*

INTRODUCTION

Fiscal policy is the government's use of expenditure and tax regulations to influence macroeconomic conditions and the state of the economy as it functions. The greatest crucial tool that the Chinese government uses to aid in the growth of its target sectors is fiscal policy, and changes in this area might have a huge impact on the net cash flow from investments made by corporations in innovation. These include employment, inflation, economic growth, and the total demand for goods and services. Financial policy involves the actions implemented by monetary authorities to influence the quantity of credit and money accessible to an economy [1]. Global challenges like sustainable development need for a range of responses, including fiscal policy, environmental preservation, and the use of renewable energy. Competitiveness, productivity, and economic growth may all be improved by renewable energy. Fiscal policy has distinct perspectives and problems in emerging nations; it may also support economic growth. For instance, depending on how income is produced and allocated, fiscal policy may have both beneficial and bad effects on present and future generations. In addition, lacking institutional problems, tax bases, and a dearth of studies on the best fiscal positions make it difficult for developing nations to mobilize domestic resources and implement efficient expenditure plans [2]. In addition, there is disagreement among economists over how fiscal policy and economic growth are connected. The government's medium- objective of reducing its debt, which aims to provide space for inevitable future expenditures on potential obligations, including the large number of failed loans in the banking sector, and the necessity for higher social expenditure as longevity increases, has largely shaped monetary policy.

The achievement of sustainable development in underdeveloped nations is contingent upon fiscal sustainability. It could benefit countries that are developing by mobilizing social wealth in addition to assisting them in reducing financial gaps, reducing debt, and freeing up finances for public policy objectives, including the Sustainable Development Goals (SDGs). To promote inclusive sustainable development and stability in the economy, fiscal sustainability can help the China countries that are developing to lessen the impact of

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international shocks [3]. Assessing risks, vulnerabilities, and debt sustainability are all part of fiscal sustainability. The fiscal sustainability and its effects on economic growth have drawn more attention from developing-nation authorities. It is crucial to assess public debt and budget deficits that allow for appropriate economic growth to meet development objectives. Public financial reforms have been enacted in several developing nations; these include lowering deficits, enhancing taxation, and boosting transparency and responsibility. Significant changes were carried out by China, with an emphasis on increasing revenue through expanded tax bases, better collection, and fewer exemptions, including those for the informal sector, and fighting tax cheating, particularly in the shadow economy [4]. Even though the changes were intended to enhance people's lives and generate jobs, more was required to guarantee economic development and budgetary sustainability.

COVID-19 has an impact on the world economy. Lower energy prices have caused a slump in the economy and heightened levels of anxiety. With more employment prospects and rising consumer confidence, the global economy is starting to show signs of revival. A wider surge in financial activity has also been facilitated by the introduction of vaccination programs. There can be a rise in the need for resources like energy. After COVID-19, there is the expectation of a rise in the market for energy, metal, and petroleum natural resources. There is a chance that demand may drive up costs and slow down the rate of expansion of the world economy. Global economic conditions have been significantly impacted by COVID-19, resulting in shifts in energy prices, recessions, and heightened uncertainty [5]. The epidemic has accelerated the transition towards energy derived from sustainable financial plans and energy from renewable sources as recovery objectives. This is a wonderful time for fiscal policies that support sustainable development and environmental innovation when economic activity picks back up, emphasizing the necessity for a strong economic structure that can withstand such uncertainty and the susceptibility of developing and less developed nations to shocks to resource pricing. Expanding energy sources has more implications for the environment and the economy. We assess a sustained economic recovery, fiscal policy, and innovation to determine tax benefits for low-energy-consuming enterprises that support invention [6].

Tax income is the primary source of government funds used to support public spending and maintain fiscal stability. Investments and economic policies drive economic growth and income generation, which affects budgetary sustainability. Interest rates impact borrowing expenses and debt servicing, both of which are critical to fiscal health. Money supply changes have the potential to influence inflation rates and economic stability, thus affecting fiscal sustainability through impacts on government spending and financial stability. Figure 1 describes the affecting factors of Fiscal sustainability.

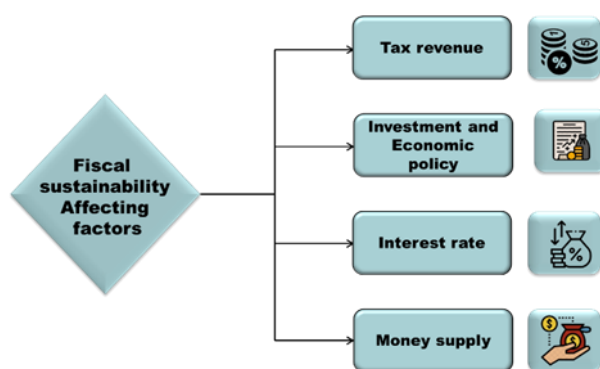


Figure 1: Fiscal sustainability affecting factors

Fiscal sustainability and revenues are positively correlated. The fiscal sustainability index raises in proportion to revenue growth rates. If public spending growth rates exceed the growth in public revenue, there is a negative correlation between public spending and fiscal sustainability. This means that there is a greater chance that the government will lose its fiscal solvency and be unable to maintain fiscal sustainability [7]. Fiscal policy uncertainty is declining as the new energy sector level of innovation increases. The fiscal policy's sustainability has been significantly enhanced, in contrast to the substantial increase in fiscal and economic uncertainty. It is hypothesized that the increased excitement of the removal of ambiguity around fiscal policy leads to the creation of new energy companies for creative endeavours. In the new energy sector, commercial initiatives to innovate

carry more hazards and a key strategy for lowering operational and investment risk in innovation is stability in fiscal policy.

An investment opportunity might be thought of as an option that the company has, and the value of the choice to remain is increased by the uncertainty surrounding economic policy. As a result, businesses often respond to high levels of policy uncertainty by cutting back on or delaying investments. Considering a risk-averse perspective, the company operates in an environment where expectations are unclear and low due to a high degree of policy uncertainty in the economy. The company lowers operational risk by cutting down on investment [8].

Fiscal sustainability is directly impacted by interest rates, which are an economic element. A higher rate of interest raises the amount of interest that needs to be repaid on loans, whether they are external or internal, placing more financial demand as well as ability on the debt service team. Due to the need to satisfy its internal and foreign debt, the federal government is unable to preserve its financial stability. Businesses and investors are disinclined to provide while fiscal policies are uncertain, which hinders economic development and lowers tax revenues that are two important aspects of fiscal wellbeing maintenance. Moreover, elevated interest rates result from elevated supposed risk, which also drives up the cost of government borrowing and redirects money away from vital services toward debt repayment. The study emphasizes how important it is to support long-term economic growth and fiscal sustainability by enhancing the financial sector's expansion and reducing the detrimental effects of uncertain fiscal policy [9].

Money supply is the total amount of money that circulates in the economy, including money, demand deposits, and other liquid resources. Variations in the money supply have a large impact on fiscal sustainability as they influence inflation, rates of interest, and overall financial stability. Expansionary monetary measures, such as increasing the supply of cash, can enhance economic growth, but can also lead to inflation and undermine fiscal sustainability if not managed carefully. Restrictive monetary policies, on the contrary, strive to keep inflation under control while potentially limiting economic growth and altering fiscal sustainability processes [10]. The study goal was to examine the impact of uncertain fiscal policies on fiscal sustainability in China.

Related Works

Research [11] investigated how fiscal decentralization affected China's sustainability quality from both a theoretical and empirical standpoint. Based on the salient features of China's fiscal decentralization, a neoclassical model was constructed. To experimentally validate, a two-equation regression model was used with provincial panel data for the years 1995-2015. Study [12] examined how non-linear fiscal decentralization and energy costs together affect carbon emissions when institutional quality and Gross Domestic Production (GDP) were included in the prototype. From 1990 to 2018, the highest seven fiscally autonomous Organisations for Economic Cooperation and Development (OECD) countries, such as Spain, Germany, Switzerland, Belgium, Austria, Canada, and Australia, were analyzed using advanced statistical panel methods. Paper [13] stressed fiscal decentralization's importance in promoting sustainable development. The study investigated both linear and nonlinear aspects of monetary independence as potential factors for carbon dioxide production to disprove all previous studies regarding how financial decentralization impacts the ecological condition. Study [14] examined the effects of uncertainty around climate policy on the use of renewable and non-renewable energy sources in the US through quarterly data from 2000Q1 to 2021Q3. Two more control variables were introduced to the energy consumption functions: economic growth and crude oil prices. Article [15] expanded on previous research in this area by creating a new model that connects from 1985 to 2014, the BRICS governments' CO₂ emissions were influenced by macroeconomic (fiscal and macroeconomic) regulations, per capita internal consumer expenditure, and the use of petroleum and coal and energy from renewable sources. Study [16] investigated, in the instance of China, the effects of technical innovation and decentralization of finances on CO₂ emissions about GDP and globalization between 2005 and 2018. Find that globalization, GDP, fiscal decentralization, and technological innovation all have a significant role in explaining China's CO₂ emissions when applying time series econometric methods. Study [17] emphasized how important financial flexibility was in promoting global stability. This study examined elements of tax decentralization as possible determinants of carbon dioxide emissions, filling a gap in the analysis of the way financial devolution impacts

environmental sustainability. Study [18] provided an extensive cross-national database on fiscal space, which was generally understood to be the amount of finances at a nation's disposal for satisfying its obligations. Thirty fiscal space variables were included in the data set, which is divided into four categories: access to markets, sustainability of debt, financial risk, along with outside and insider credit-related concerns as possible sources of contingent liabilities. Study [19] offered a fresh viewpoint on how financial inclusion and fiscal decentralization affect energy and carbon intensity and whether natural resource availability and reliance interact. Study [20] examined the factors that influenced monetary and fiscal policy during the COVID-19 pandemic. Compared to lower-income nations, high-income countries declared more expansive budgetary programs. It was also discovered that the primary factor influencing a nation's budgetary spending during the epidemic was its credit rating. Because their interest rates were historically low when high-income nations entered the crisis, they were more inclined to employ unconventional monetary policy methods. Study [21] used state-level data from 1980–81 to 2017–18 in India to investigate budgetary sustainability. The findings were obtained using dynamic ordinary least squares and co-integration methods, demonstrate good budgetary sustainability for the majority of governments. The findings further support the notion that states in the north, west, and south were more financially viable than ones in the east. Study [22] presented knowledge about the significance of fiscal policy in responding to global warming and mitigating its economic implications. In the model, adaptation refers to the extent to which public actions reduce the negative impact of warming temperatures on the asset's degradation rates. Apply the overlapping generational (OLG) paradigm to a tiny open society. The study looked at Chinese A-share-listed businesses that operate in the field of clean energy between 2007 and 2019. They provided a fresh insight into the relationship between corporate innovation investment and the unpredictability of fiscal policy. Notable empirical results include three main ones. First, the investment in innovation undertaken by new energy enterprises was adversely affected by the unpredictability of fiscal policy. Because government support has lessened its incentive effect on innovation investments. Study [23] explored the relationship between trade openness, financial development, foreign direct investment, labor force participation, urban population, gross capital creation, and CO₂ emissions in the context of globalization. There were 105 nations in the panel data set from 1990 to 2016. Both linear and nonlinear panel data techniques, such as completely modified ordinary least squares and panel threshold regression, were used to estimate the empirical findings. Study [24] proposed a model that was analyzed using the autoregressive distributed lag of pooled mean group (ARDL-PMG) technique, as indicated by the study. The findings demonstrated the long-run co-integration between the research variables and the model's validity for the G20 nations. The findings also demonstrated a favorable relationship between fiscal policies and CO₂ emissions.

MATERIALS AND METHODS

This analysis includes data in 208 Chinese A-share businesses in the emerging energy industry, which have operated at the Shenzhen and Shanghai stock markets to create a sample of time for yearly statistics from 2007 to 2019. After eliminating all observations with missing values, an assortment of information spanning the 2026 fixed year results. These emerging energy firms of fiscal information comes from the China Stock Market, the Wind Finance Terminal, and Accountancy Research databases [25]. The determination of new energy enterprises was based on their involvement in new energy-related activities. This study uses the stocks that make up the energy-related index. The measure of fiscal policy uncertainties is a key source of data for the study. The index was created by looking for terms associated with uncertainty in fiscal policy in the leading Chinese mainland media. The ranking assesses the volatility, instabilities, ambiguity, and inconsistency of fiscal policy. The uncertainty increases with the value. Since empirical data indicates that the measuring technique has substantial reliability with time variations, this research uses the indicator to examine the fiscal difficulties affecting creative energy enterprises in China. In this research, the fiscal approach's uncertainty component is divided by 100 to make determining regression coefficients easier.

Conceptual Approach

The flexibility of a resource grows with the number of sectors which utilize the material. As a result, the asset's reversibility score may be determined by adding up the weights of all industries which is used. Specifically, the asset-level metric is:

$$Rev_{bs} = \sum_{j=1}^m I_{bis} \times \frac{value_{js}}{\sum_{j=1}^m Value_{js}} \quad (1)$$

Here, Rev_{bs} represents an asset's reversibility score s ; I_{bis} is a 0–1 dummy variable and the value 1 denotes the scenario when asset A is distributed according to the industry i and s ; $Value_{js}$ symbolizes the might of industry i and s , illustrating the significance of industry i in the asset of the trading market and m is the number of industries. Specifically, $value_s$ correspond to 1 when the weight of each industry remains constant throughout time, and $value_{js}$ is the industry's production of percentage i and s across the economy's overall production to understand their varied significance. Essentially, the first phrase $\sum I_{bis}$, reflects asset A's salability across industries, and the second term, $value_{js}/\sum_{j=1}^m Value_{js}$, illustrates an asset's saleability across industries. Furthermore, the asset's reversibility score is unaffected when an industry employs a small percentage of asset. As a result, we define the dummy variable (0–1) I_{bis} as:

$$I_{bis} = \begin{cases} 0, & VQ_{bis} \leq VQ^* \\ 1, & VQ_{bis} > VQ^* \end{cases} \quad (2)$$

Where VQ_{bis} is the amount that industry I_{bis} spent on an asset in the period I_{bis} relative to the total amount spent on asset in the economy, and VQ^* is the cut-off point for asset allocation. If VQ_{bis} makes up a tiny fraction that is less than VQ^* , we set I_{bis} to 0, and otherwise, I_{bis} equals 1. Variables that affect an asset's reversibility at the industry level are the reversibility scores of assets that are dispersed throughout the sector. We compute the asset reversibility across industries using the asset-level reversibility scores that are produced by Equation (3) across assets:

$$Rev_{is} = \sum_{b=1}^m Rev_{bs} \times x_{bis} \quad (3)$$

Here, Rev_{is} represents the asset reversibility for industry i and s ; x_{bis} is the proportion of industrial spending i and s on assets relative to its overall spending. Therefore, a country's economic growth depends on the function of people and physical resources to identify its dynamic analysis along with other underlying components for study purposes.

Empirical Frameworks

The growth model is modified to create the empirical model, which aims to determine if the rise of the financial sector may have a growth-reducing influence on the economy. To investigate the impact of liquid expenses and loans to the business global economic policy on China's industrial economic growth, the PVAR model has been modified. Variations in liquid prices can impact the need for industrial production and investors' perspectives might shift due to uncertainties in economic policies. Furthermore, by affecting the probable threats to the environment and the anticipated supply-demand connection, shocks to the expenses of liquid and loans to the business community have a moderating influence on economic growth. The PVAR technique was developed by a simulator and become the industry standard for analyzing the mechanism behind the liquid price shock. A PVAR model is an economic model that may regard each variable as endogenous, circumventing limitations, and used to describe the linear interdependencies across numerous time series. The association between PVAR prices and economic indicators has been determined and analyzed using PVAR models. The PVAR model's adaptability and ease of generalization are its primary characteristics. To allow for endogenous relationships among Financial Variables (FV), economic Policy Uncertainty (EPU), and Government Policy Responses (GPR), the study used the PVAR technique, which assumes every factor is endogenous at an identical period. This technique provides a precise estimate by taking into consideration the cross-sectional shape of our specimen. It is currently demonstrated that integrating PVAR with Generalized Method of Moments (GMM) evaluation produces accurate figures in analytical frameworks and improves comprehension of the dynamic causality link between FV, EPU and GPR. Random identification notions are infrequent in the PVAR approach,

which allows for the presentation of driven-by-data factual solutions. The PVAR approach offers an additional advantage of considerably increasing the analysis's efficacy and effectiveness. As a consequence, interpreting undiscovered variation among individuals as fixed influences among banks leads to more effective estimations. The PVAR paradigm can be stated numerically as follows.

$$z_{j,s} = B_0 + B(K)z_{j,s} + e_j + \varepsilon_{j,s}, j = [1, \dots, M]; s = [2007, \dots, 2019] \quad (4)$$

Where firm value, the EPU, and the GPR index are the two-dimensional vectors of endogenous variables represented by $z_{j,s}$, stands for the diagonal matrix of time-invariant fixed effects; e_0 is a constant vector; where e_j signifies a matrix of coefficients, $\sum_i^o \beta_i FV_{j,s-i}$ represents a polynomial matrix of delayed coefficients, and $\varepsilon_{j,s}, j$, stands for idiosyncratic errors. Using our variables, we can rewrite equation (5, 6, 7) as follows:

$$FV_{j,s} = \alpha_0 + \sum_i^o \beta_i FV_{j,s-i} + \sum_i^o \beta_i EPU_{j,s-i} + \sum_i^o \beta_i GPR_{j,s-i} + e_j + \varepsilon_{j,s} \quad (5)$$

$$EPU_{j,s} = \alpha_0 + \sum_i^o \beta_i EPU_{j,s-i} + \sum_i^o \beta_i FV_{j,s-i} + \sum_i^o \beta_i GPR_{j,s-i} + e_j + \varepsilon_{j,s} \quad (6)$$

$$GPR_{j,s} = \alpha_0 + \sum_i^o \beta_i GPR_{j,s-i} + \sum_i^o \beta_i FV_{j,s-i} + \sum_i^o \beta_i EPU_{j,s-i} + e_j + \varepsilon_{j,s} \quad (7)$$

By computing the impulse response functions (IRFs) in addition to the panel VAR model, we improve our analysis. We can better assess in one dependent/endogenous variable responds to another endogenous variable with the aid of supplementary analysis.

Monetary and Governmental Policies

The government provides securities to Bond Traders (BT) to fulfil its unique budgetary limitations. We take into account that a lump-sum tax imposes an active monetary and passive fiscal regime, stabilizing the debt-to-output ratio. The three principles that regulate the endogenous evolution of government spending are *gt*, labor, and capital taxes (*τwt and τkt*). The monetary authority sets short-term interest rates that adjust for shocks to uncertainty, observable output gaps and variations in inflation from the steady state. We look at the findings that the consequences of actual estimates of inflation and interest rates are different. $M(0, 1)$ process governs the monetary policy shock Δt . Smoothing parameters φR are employed to capture the gradual movements of interest rates; $\varphi \Pi$ and $\varphi \gamma$ capture the interest rate's responsiveness to deviations from the output gap and from inflation from its trend; and $\varphi \sigma$ capture the monetary authority's response to shocks causing uncertainty.

Model Specification

The objective of the research impacts the specification of the econometric equations that follow equations (8, 9, 10).

$$GDP = f(GR, GE, BU, Taxc, Liqu, LN) \quad (8)$$

$$GDP = \beta_0 + \beta_1 GR + \beta_2 GE + \beta_3 BU + \beta_4 Taxc + \beta_5 Liqu + \beta_6 LN \quad (9)$$

$$\ln GDP = \beta_0 + \beta_1 \ln GR + \beta_2 \ln GE + \beta_3 \ln BU + \beta_4 \ln Taxc + \beta_5 \ln Liqu + \beta_6 \ln LN \quad (10)$$

Where, GDP indicates the Gross Domestic Production, GE depicts Government Expenses, GR represents Government Revenue, BU specifies the Budget Uncertainty, Tax collection designates the *Taxc*, Liquid liabilities describes the *Liqu*, and Loan illustrates the *LN*.

GDP is computed as a person in the presented approach. According to previous studies, net domestic credit to the private sector is utilized as a proxy for economic growth. To utilize China's total revenue as the substitute

for revenue. To use expenditure as a replacement for fiscal policy and responsible governance to ensure the legitimacy of Chinese organizations.

Statistical Analysis

To assess the impact of fiscal policy uncertainty on fiscal sustainability, a chi-square test was utilized to look at the link between levels of fiscal policy uncertainties and fiscal sustainability outcomes. The study gathered data on economic uncertainty indicators and fiscal sustainability indicators over a given period. We used the chi-square test to contrast the observed rates of various degrees of fiscal policy uncertainties to the anticipated proportions under the null assumption of no association. The results showed a statistically significant relationship between increasing fiscal policy uncertainties and more severe levels of financial sustainability. A greater degree of uncertainty was linked to an increased risk of fiscal instability and unsustainable spending patterns. This demonstrates how fluctuations or ambiguity in fiscal policy decision-making can endanger fiscal sustainability efforts. The results highlight the need to address and decrease fiscal policy uncertainties to promote fiscal stability and sustainability of public finances.

Experimental Findings

An increasing characteristic of time series information is the presence of stochastic trends, which are investigated using the Phillips-Perron (PP) test and the Augmented Dickey-Fuller (ADF) test to identify the stationary parameters. Table 1 provides the individual series' order of integration. Stationarity analyses indicate that GDP, growth in the economy, financial growth, revenues, democratic reliability, and government spending are stationary with an initial differential I (1).

Table 1: ADF and PP unit root tests

Variable	ADF	PP
GDP	1(1)	1(1)
GE	1(1)	1(1)
GR	1(1)	1(1)
BU	1(1)	1(1)
Taxc	1(1)	1(1)
Liqu	1(0)	1(0)
LN	1(0)	1(0)

Table 2 displays the standard variations of many variables with varying degrees of importance. For example, the standard variation for GDP is -5.946 at the 1% significant level, indicating excellent precision. As the significance level climbs to 5% and 10%, the standard deviations become less precise (-6.752 and -7.259). Similar interpretations may be made for the other elements in table. Figures 2 and 3 show the standard levels of every variable.

Table 2: Variables standard level

Variable	Standard at 1% Level	Standard at 5% Level	Standard at 10% Level
GDP	-5.946	-6.752	-7.259
GE	-14.20	-15.20	-16.25
GR	-8.865	-4.265	-9.258
BU	-24.66	-25.66	-26.25
Taxc	-8.993	-9.365	-7.256
Liqu	-9.54	-6.147	-9.85
LN	-8.25	-9.45	-9.99

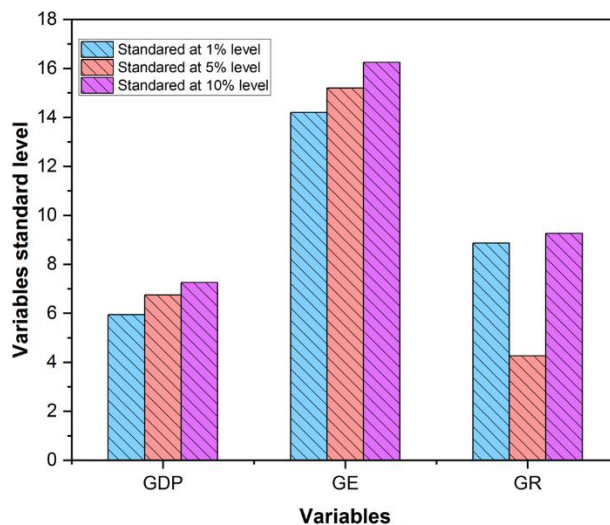


Figure 2: Variable standard level of GDP, GE, and GR

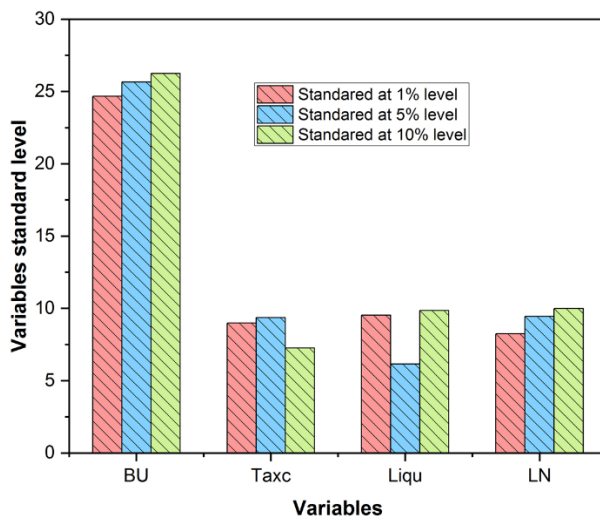


Figure 3: Variable standard level of BU, Taxc, Liqu, and LN

PVAR Findings

This study details the PVAR technique's estimating approach, demonstrating its whole execution procedure. The study generated PVAR models using seven variables (GDP, GE, GR, BU, Taxc, Liqu, and LN). To estimate a PVAR, first, use the lag recognition criterion, as indicated in Table 3, to determine the right lag ordering. The PP analysis is used to determine variance linearity. Due to space limits, the results of unit root analyses aren't released; however, they are available upon demand. The following table displays the PVAR lag arrangement options. The data show that an extra one percent in delaying GE causes a 1.2% boost in GDP over time. The framework is log-linear, so its coefficients must be augmented entirely.

This research implies that big increases in GE have a beneficial impact on GDP. On the other hand, GR has a significant negative effect on GDP. Based on log-linear democracy, a 2% growth in GR can result in a 0.4% reduction in GDP. Despite the low coefficient, the investment appears to have a favorable influence on the economy. It can be attributed to the fact that numerous emerging nations engage in non-stimulating businesses that may be labor-absorptive in terms of increasing economic growth. The study found a tiny but substantial

positive relationship between employment and fiscal sustainability. Table 3 shows the PVAR reliability tests. Figure 4 depicts the roots of relationship structure.

Table 3: PVAR Reliability Test

Eigen Function		
Real	Imaginary	Modulus
0.8948437	0.0872534	0.8981178
0.8948437	0.0872534	0.8981178
0.678231	0	0.678281
0.3863739	0.1935462	0.4283697
0.3863739	0.1935462	0.4283697

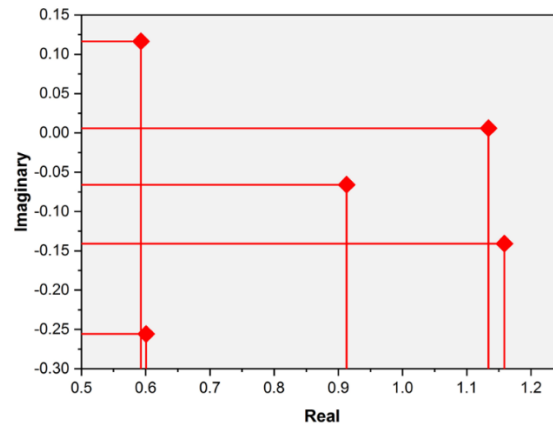


Figure 4: Roots of relationship structure

Assessing fixed effects (FE) and random effects (RE) validates PVAR findings. FE and RE frameworks are extensively used for financial modeling to explore linkages between factors. The FE examines the relationship among predictors and results in a panel setting. Personal traits in a panel can affect predictor variables such as the effect of different nations' political structures on economic performance. Consequently, FE considers that certain fundamental features inside people can influence or produce bias in the endogenous or explanatory fluctuating, which must be controlled for and adjusted appropriately. The FE aims to isolate the influence of explanatory factors of an endogenous variable by removing time-invariant features. The FE implies that time-invariant qualities vary between nations and are not associated with other individual attributes. Table 4 determines the outcomes of empirical factors.

Table 4: Outcome of empirical factors

Variables	PVAR	RE	FE
GE	10.09	7.6	17.54
GDP	-10.3	0	0
GR	3.52	4.1	35.81
BU	3.15	32.12	-13.14
Taxc	18.9	5.11	-9.64
Liqu	3.12	10.62	12.1
LN	3.18	20.22	7.28

The Impulse Response Functions (IRF)

IRF estimate measures the adaptability of endogenous variables to novel shocks in the framework. The goal of calculating the IRF is to determine the impact of revolutionary disturbances on intrinsic factors in the framework (Figure 5). The study proposes that innovation disruptions in GDP have an immediate effect on current GE, GR, BU, Taxc, Liqu, and LN, these elements, have an impact on GDP in future. IRF confidence intervals are constructed using the expected PVAR. The IRF figure in the fifth panel shows that a positive surprise shock from the GE causes a substantial positive response in GDP, implying that fiscal policy stimulation boosts GDP growth. Unexpectedly, GE responds well to the innovative disruption of GDP. The

current unanticipated shock in GE has a positive but short-term impact on both GE and GDP. These incidents frequently fade away after a few years.

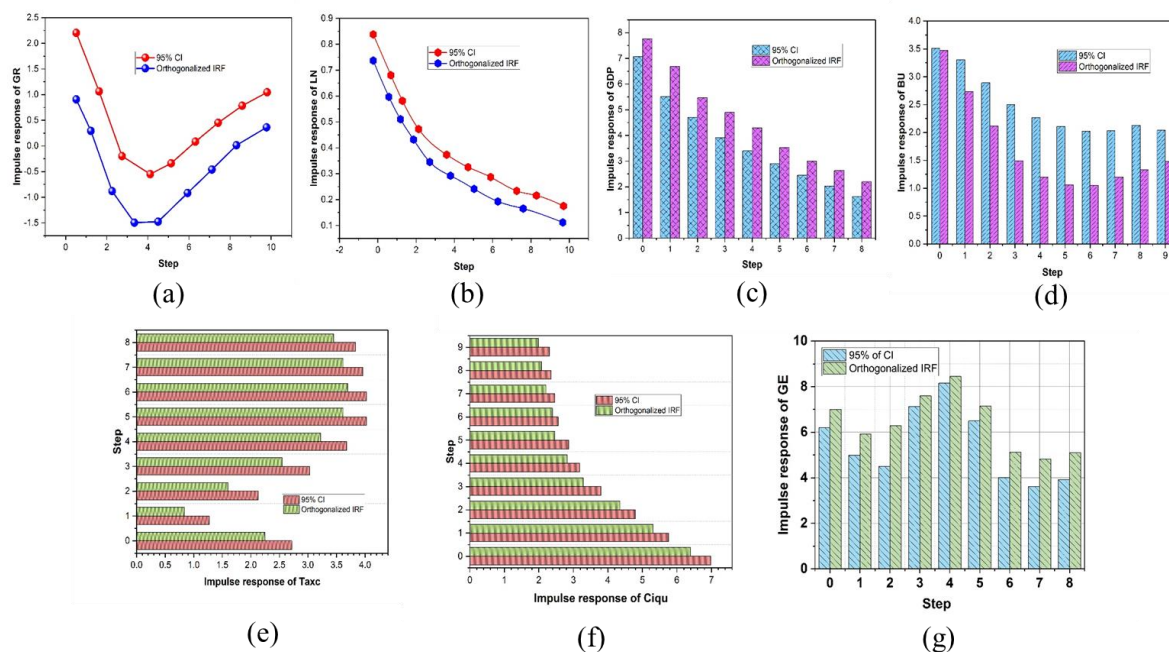


Figure 5: Impulse Responses

Finally, GE provides a positive, although temporary GDP shock. This unexpected shock in PD has direct fiscal implications. Shocks from all factors have a big economic impact. However, these novel shocks diminish overseveral years timeframe. The IRF findings seem credible and in line with the PVAR calculations.

CONCLUSION

Research demonstrates an empirical connection between unpredictable macroeconomic conditions and economic expansion because politicians typically blame financial instability for disrupting the long-term viability and stability of economic growth. Financial stability appears to have a critical influence on the growth of the economy. China's GDP growth was affected between 2007 and 2019 by the moderating consequences of fiscal strategy uncertainties on financial development. In the future, by 2026, risky policy decisions that were made in error will be caused by the financial environment's unpredictability as a result of unstable fiscal policy. The research shows thatthe risk collected from budget uncertainty, government expenditures, and revenue collection has a significantly negative impact on revenue generation and that financial growth can reduce these negative consequences by using the PVAR approach to cointegration. Uncertainty about unreasonable expenditures by governments hinders economic expansion and creates a significant burden for optimal fiscal imbalances. Securing a safe investment portfolio with liquid assets that yield high equity returns is the factor that makes liquid liabilities relevant in reducing uncertainty.The experimental findings reveal that GDP, economic expansion, government expenditure, and other variables are stable at I(1). According to the PVAR model, a 1% rise in government spending raises GDP by 1.2%, whereas a 2% increase in growth rates lowers GDP by 0.4%. The study also discovered a small but significant positive relationship between employment and fiscal sustainability. The IRF findings confirm these effects by indicating strong but short-lived fiscal repercussions from disruptions. The development of financial services has been determined to be essential to reducing the burden on the public budget and to operate in tandem to mitigate the impacts of uncertainty. Furthermore, the economy has suffered greatly as a result of fiscal policy failures such as tax evasion, massive debt servicing, and needless government spending. By managing risk behavior, the degree of irreversibility, and expandability of theexpenditure and growth, the financial sector's reconciliation influences the global economic situation and lessens the risky impacts of economic uncertainty. Particularly, the unstable budget is caused by

the fiscal policy's inability to generate revenue as a result of tax avoidance, a limited tax foundation, and its reliance on servicing debts to satisfy its expenditure.

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