ISSN 2181-9408

Scientific and technical journal



Sustainable Agriculture



№1(25).2025







Chief Editor
Mirzaev Bakhadir Suyunovich
Rector of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University, Doctor of technical sciences, Professor

Scientific Editor
Iskandar Yunusov
PhD, associate professor of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University

Technical Editor
Kodir Nosurullaev
Assistant professor of "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University

EDITORIAL TEAM:

Shavkat Khamraev, PhD, minister, Ministry of the Water Resources of the Republic of Uzbekistan; **Dr.Prof.Shukhrat Shokirov**, Vice-rector for research and innovations, "TIIAME" NRU; **Dr.Prof. Kurban Chariev,** Professor of "TIIAME" NRU; **Dr.Prof.Narkul Khushmatov,** Professor of "TIIAME" NRU; **PhD Uchkun Alimov**, Dean of the faculty "Economics" at "TIIAME" NRU; **PhD Javlon Ishchanov**, Dean of the faculty "Hydromelioration" at "TIIAME" NRU; **Dr.Prof. Astrida Miceikiene,** Dr.Professor, Vytautas Magnus University Agriculture Academy, Litva; **Norita Mohd Nasir**, Universiti Malaysia Sarawak Jln Ensura, Sarawak, Malayziya; **Yevgeniy Kuzmin,** Institute of Economics of the Ural Branch of the Russian Academy of Sciences, Russia; **Akmalia Binti Mohamad Ariff,** Associate Professor, PhD, Faculty of Business, Economics and Social development, The Universiti Malaysia Terengganu (UMT); **Dr.Prof. Baxtiyar Pulatov,** Deputy of the Legislative Chamber of the Oliy Majlis; **Kemal Kantachi,** Dr.Professor,Alanya Aladdin Keykubat university, Turkey; **J.Lubos**, Associate Professor of the Department of "Water Resources and Environmental Engineering" of the Slovak Agricultural University in Nitra, (Slovakia); **G'ulom Bekmirzayev,** PhD, Associate Professor of "TIIAME" NRU; **Mansur Amonov**, PhD, "TIIAME" NRU; **Zayniddin Eshquvvatov**, Doctor of Physical and Mathematical Sciences (DSc), Associate Professor, Faculty of Computer Science and Mathematics, The Universiti Malaysia Terengganu (UMT); **Nozilaxon Muxamedova**, Martin Luther University (MLU), Halle, Germany; Zerema Axmadiyeva, Martin Luther University (MLU), Halle, Germany; **Prasad Sah,** Resource specialist, Chandra Director of Engineering Consultants, Mills Area, (Janakpur, Nepal); **Rustam Baratov,** PhD, "TIIAME" NRU; **Shavkat Xasanov,** DSc, professor, Rector of the Samarkand Institute of Agroinnovations and Research; **Mevlut Gul,** Isparta Unversiteti, Turkey; **T.Espolov**, Academician, Dr. Professor, Vice-President of the MEA RK, National Academy of Sciences of Kazakhstan, (Kazakhstan); **J.Kazbekov**, PhD, Specialist in Water Programs of the Regional Environmental Center of Central Asia, Consultative Group on International Agricultural Research|CGIAR; Iskandar Abdullaev, PhD, Executive Director of the Regional Environmental Center of Central Asia; **Ahmad Xamidov,** DSc, Professor, Leibniz Center for the Study of Agricultural Landscape (ZALF); **Abror Gafurov**, DSc, Professor, Leibniz Center for the Study of Agricultural Landscape (ZALF); **Sherzodbek Murodov,** PhD, Associate Professor of "TIIAME" NRU; **Dilnavoz Shavqiddinova**, PhD, "TIIAME" NRU; **Akmal Durmanov**, Doctoral student of the International Center for Strategic Development and Research in the Field of Food and Agriculture; E'zoz Ozodov, PhD, Associate Professor of "TIIAME" NRU.

Designer: Kodir Nosurullaev.
Note: Only the authors of the article are responsible for the content and materials of the article. The editorial board does not respond to the content of the article!
Founder: Tashkent Institute of Irrigation and Agricultural Mechanization Engineers
Our address: 39, Kari-Niyaziy str., Tashkent 100000 Uzbekistan.
Web-site: www.sa.tiiame.uz, www.susagr.uz

The journal "Sustainable Agriculture" is registered in the Press Agency of Uzbekistan on the 12th of February in 2018 (license № 0957).
In 2019, the journal is included in the list of recommended scientific publications by the Higher Attestation Commission of the Republic of Uzbekistan.

ECONOMY. ECONOMIC SCIENCE. OTHER BRANCHES OF THE ECONOMY.

K.A.Chariev
Main Priority Areas of Economic and Social Development of Society in the Context of "Green" Economy.....5

Sh.A.Mirzaev, F.T.Egamberdiev
Interaction of Open Economy, Islamic Finance and Green Transformation of Uzbekistan: Synergy of Sustainable Development.....8

S.R.Umarov, A.T.Hashimov
Fish Farming in Artificial Basins Economic Effectiveness.....11

U.R.Sangirova, Z.S.Shokhojaeva
Important Aspects of the Use of Digital Technologies in Agriculture and Water Management in Foreign Countries.....14

S.R.Umarov, S.N.Gulmatov
Mechanisms for Shaping Credit Policy in Agriculture.....17

A.U.Estekov
Advancement of Agribusiness: Functions, Challenges, and Contributions to Economic Growth.....19

O.Y.Yakhyaev
Problems and Modern Solutions for Increasing the Economic Efficiency of Sunflower Cultivation.....21

N.J.Mamanazarova
Directions of Sustainable Development of "Green Economy" in Uzbekistan.....24

S.Sh,Boymuratov, Kh.A.Pardaev
Enhancing the Role of Agritourism in the Sustainable Development of Rural Areas in Uzbekistan.....28

F.Numonov, D.Shavqidinova
To Study the Impact of Fiscal Policy on Economic Growth.....32

AGRICULTURE, WATER MANAGEMENT, FORESTRY, AND FISHERIES. AQUACULTURE.

Sh.K.Juraev
Efficient Use of Water in Conditions of Water Resource Scarcity.....37

A.A.Abdullaev
Optimization of Resource Allocation in the Agricultural Sector Using Linear Programming and Python.....41

Kh.N.Mirjamilova
Organic Agriculture and Innovative Methods of Product Growing.....44

O.Kh.Sindarov
Technologies for Growing Strawberries in Hydroponic Conditions.....47

HYDRAULIC AND LAND RECLAMATION ENGINEERING. ARCHITECTURE.

A.Jumanov, A.A.Risbayev, D.Negboyeva
Studying the Issues of Creating a Web Map of Land Use and Land Monitoring Using GIS Technologies.....55

T.U.Atakulov
Effectiveness of Land Management Projects in Conducting Monitoring of Reclaimed Lands.....58

HIGHER EDUCATION. PEDAGOGY.

M.A.Khudayberganova
Zoltán Dörnyei's Perspective on Discursive Competence and its Integration with Communicative Competence.....62

M.B.Mukhiddinova
Methods of Teaching Korean Pronouns.....65

Men Svetlana Rodionovna
Formation of Cultural Competence of Future Teachers of the Korean Language through Internet Technologies.....67

M.D.Odilova
Basic Concepts of Cultural Literacy.....69

N.Salimjonova
Didactic Principles of Teaching Foreign Languages to the Students Majoring in Legal Sciences.....71

G.X.Kuchmuradova, K.A.Kenjayeva
Methodologies for Teaching Terminology in Specialized Fields.....74

F.Musayeva
Bridging the Gap between ESP and Industry Needs.....78

G.T.Inagamova
Enhancing Vocabulary Development of Agricultural Mechanization Students through inside and outside Classroom Learning.....82

E.M.Baxitjanova
Innovative Approaches to English Language Pedagogy: Enhancing Student Engagement and Learning Outcomes.....85

D.O.Abduvakhobova
The Role of the Mughals in World History and Global Civilization. The Baburid Influence on Urdu Literature.....88

M.Sh.Ziyadulloyeva
Improving ESP Students' Critical Thinking through Self-Study.....91

S.E.Surmanov
A Comparative Study of Reading Strategies for Academic Success In ESL Undergraduates.....95

M.Abdurakhimova, D.Rustamova, L.Primova
An Overview of Land Accounting Trends, Encompassing Past, Present, and Future Perspectives, Based on English-Language Articles in the Web of Science Database Last Decade.....100

M.B.Erkaboyeva
Features of Teaching Creative Writing in Foreign Language Classes.....106

TO STUDY THE IMPACT OF FISCAL POLICY ON ECONOMIC GROWTH

Numonov Fayzullokhon – "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University - 1st year master's student in economics - Department of Economics

Shavqidinova Dilnavoz – "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University - PhD, Senior Lecturer, Department of Economics

Abstract

Fiscal policy serves as a vital tool in shaping the economic trajectory of nations, influencing growth through strategic government spending and taxation. This study examines the impact of fiscal policy on economic growth, focusing on three critical variables: total tax revenues, total expenditures, and government efficiency. Employing statistical data from 2017 to 2023, the analysis integrates correlation and regression methods to explore the relationships between these variables and their collective influence on economic growth.

The findings reveal a nuanced interplay among the fiscal policy variables. Total tax revenues exhibit a weak positive correlation with economic growth, suggesting that while higher revenues contribute to economic expansion, their impact depends on effective allocation. Regression analysis further confirms the significant positive effect of tax revenues on growth, highlighting the importance of revenue mobilization strategies. Conversely, total expenditures demonstrate a moderate negative correlation with economic growth. Excessive or inefficient spending appears to hinder growth, potentially due to resource misallocation or the crowding-out effect on private investment.

Government efficiency emerges as a critical determinant of growth, showing a strong positive correlation with economic performance. Efficient governance enhances the productivity of public investments and strengthens the overall fiscal framework. However, its direct statistical significance in the regression model is limited, underscoring the need for further exploration of its indirect effects on fiscal outcomes.

The study's regression model explains 95.3% of the variation in economic growth, underscoring the critical role of fiscal policy in driving economic performance. The results highlight the need for balanced fiscal strategies that prioritize efficient spending, effective tax systems, and robust institutional frameworks. This research provides valuable insights for policymakers seeking to optimize fiscal policy's role in fostering sustainable and inclusive economic growth while maintaining fiscal discipline.

Keywords: *GDP, fiscal policy, taxes, expenditures, regression, correlation, modeling.*

Introduction. Fiscal policy, a cornerstone of economic governance, refers to the strategic use of government expenditure and taxation to influence a nation's economy. It is a critical tool for achieving macroeconomic objectives such as stable growth, low unemployment, and controlled inflation. Economic growth, on the other hand, is the increase in a country's productive capacity, often measured as the percentage change in Gross Domestic Product (GDP) over time. Understanding the intricate relationship between fiscal policy and economic growth has been a primary focus for economists, policymakers, and researchers worldwide.

Governments employ fiscal policy in two forms: expansionary and contractionary. Expansionary fiscal policy, characterized by increased government spending and tax cuts, aims to stimulate economic growth, especially during recessions. In contrast, contractionary fiscal policy, which involves reducing public expenditure and increasing taxes, seeks to curb inflation and stabilize overheated economies.

From a theoretical standpoint, fiscal policy's impact on economic growth is discussed extensively in classical, Keynesian, and modern economic theories. Classical economists often emphasize the potential crowding-out effect of government spending, arguing that it may deter private investment. Keynesian economics, however, underscores the significance of fiscal policy in addressing demand-side challenges, especially during economic downturns. Recent studies also highlight the role of fiscal multipliers—metrics that measure the change in output due to a unit change in fiscal variables.

The significance of this study lies in its potential to provide empirical insights into how fiscal decisions shape economic growth trajectories. Effective fiscal policy can catalyze growth, improve living standards, and reduce inequalities. Conversely, poorly designed policies may exacerbate economic disparities or lead to unsustainable debt levels.

This study seeks to explore the intricate dynamics between fiscal policy and economic growth, addressing questions such as: How do variations in fiscal policies influence GDP growth across different economic contexts? What role do factors like public investment, tax structures, and fiscal sustainability play in moderating this relationship? By examining both theoretical frameworks and empirical evidence, this research aims to provide insights into the optimal use of fiscal tools for fostering long-term economic prosperity while minimizing potential risks.

Literature review

In their article "Effect of Financial Development, Economic Growth on Environment Pollution: Evidence from G-7 based ARDL Cointegration Approach", authors Nabila Shahzadi Hafiza, Salman Masood Sheikh, Awais Sadiq and Saif Ur Rahman analyze the impact of financial development, green investment, economic growth, and energy efficiency on environmental pollution in G-7 countries. Using annual panel data from 1997 to 2021 and a Panel ARDL model, the study finds that financial development, economic growth, and green investment have a significant positive relationship with CO2 emissions in the long term. Conversely, energy efficiency negatively impacts CO2 emissions, suggesting its potential to mitigate environmental pollution.

The study underscores the importance of increasing investments in green technologies and enhancing energy efficiency to achieve sustainable development goals. It also highlights the role of financial sector reforms in reducing pollution by promoting cleaner environmental practices. Recommendations include incorporating clean energy into national energy strategies and fostering technical advancements to combat climate change effectively. This research offers valuable insights into the dynamics of environmental pollution in the context of G-7 nations.

In the article "Role of Fiscal and Monetary Policies for Economic Recovery in China", Yunxian Wang, Xin Wang,

Zheng Zhang, Zhanmin Cui, and Yuan Zhang analyze China's fiscal and monetary policy interventions post-pandemic to foster economic recovery. Published in Economic Analysis and Policy, the study employs a difference-in-difference model using COVID-19-era data to evaluate China's economic rebound and its impact on energy consumption and global recovery.

The authors find that China's fiscal policies were essential for mitigating pandemic-induced economic downturns, fostering regional spillover effects and highlighting disparities between high- and low-performing areas. They observe a 0.21% growth in western regions, outperforming southern central and northern regions. Energy consumption played a vital role in economic resurgence, although dependency on unevenly distributed resources complicated policy effectiveness.

The study underscores China's rapid recovery as a global economic stabilizer but notes limitations in public spending allocation and the neglect of sector-specific environmental impacts. The findings emphasize the need for structural diversity in rebuilding programs, equitable policy mechanisms, and targeted green economic measures to ensure inclusive and sustainable growth. Further research is proposed to address sectoral interdependencies and optimize fiscal and energy policies.

In the article "Comparative Study of Tax Policy Related to COVID-19 in ASEAN Countries," Wandy Zulkarnaen, Erfan Erfiansyah, Syahril, Neneng Nurbaeti Amin, and Dino Gustaf Leonandri examine the tax policy measures implemented across ASEAN countries to address economic disruptions caused by the COVID-19 pandemic. Published in TEST Engineering & Management, the study highlights the swift responses of ASEAN governments in providing tax incentives and relief to sectors severely impacted by the crisis, including tourism, small and medium enterprises, and employees.

The research demonstrates that these policies reflect a practical application of modern public management theory, with governments enhancing public taxation services and adopting electronic tax systems for greater efficiency and accessibility. The study provides valuable insights for policymakers in ASEAN and beyond to refine tax strategies in anticipation of future economic crises. It emphasizes the need for adaptive and inclusive tax policies to support economic resilience and recovery.

In the article "Fiscal Policy Volatility and Growth in Emerging Markets and Developing Economies", Francisco Arroyo Marioli, Antonio Fatas, and Garima Vasishtha analyze the fiscal policy volatility in emerging markets and developing economies (EMDEs) over the period 1990–2021, with a particular focus on commodity exporters. Published in the International Review of Economics and Finance, the study finds that fiscal policy is more volatile in EMDEs than in advanced economies and in commodity exporters compared to non-commodity exporters. The volatility is largely driven by the degree of commodity dependence, institutional factors, and policy frameworks.

The research highlights the negative impact of fiscal volatility on economic growth, showing that reducing fiscal volatility in EMDEs could have narrowed the income gap with advanced economies by 8% over the past 30 years. The authors emphasize the importance of fiscal rules, flexible exchange rates, and liberalized capital accounts in reducing volatility. They suggest that stable fiscal frameworks, including the use of stabilization funds and careful policy implementation, are crucial for mitigating the procyclicality of government spending and improving long-term economic resilience. The study also recommends diversifying economies away from commodity dependence to reduce fiscal volatility and support sustainable growth in commodity-exporting EMDEs.

In the article "Budget Policy in Uzbekistan: Practical and Strategic Directions", Rakhmonov Dilshodjon and Sherov Anvar Umarovich explore the theoretical foundations and practical aspects of Uzbekistan's budget policymaking. Published in the European Journal of Business and Management Research, the study identifies key elements of budget policy and evaluates trends in its implementation. The authors highlight several strategic directions in budget policy, including the systematic analysis of social expenditures, such as healthcare and education, to ensure active improvements in life expectancy and social outcomes.

The article also discusses the reduction of the state's economic share to curb budget expenditures and the gradual shift from state-financed centralized investments toward public-private partnerships. Furthermore, the authors emphasize the prioritization of environmental reforms and the regulation of economic modernization's environmental impact through the budgetary mechanism. Key principles such as purposefulness, transparency, clarity, sociality, and efficiency are identified as essential for effective budget policy, particularly in ensuring that public funds are used efficiently to produce social benefits.

Methodology

In the literature review, the impact of fiscal policy on economic growth was analyzed by economists in the process of studying foreign literature and positive results were achieved. The websites of the Ministry of Economy and Finance of the Republic of Uzbekistan www.imv.uz , the Statistical Committee of the Republic of Uzbekistan www.stat.uz , the World Bank www.worldbank.org , the Tax Committee of the Republic of Uzbekistan www.my.soliq.uz and www.openbudget.uz were used to form the secondary database of the research methodology. The selected data statistics cover 7 years (2017-2023). The following factors were selected to study the impact of fiscal policy on economic growth:

1. Economic Growth (in percent) – Y
2. Total Tax Revenue (in billions of dollars) – X1
3. Total Expenditure (in billions of dollars) – X2
4. Government Efficiency (in percent) – X3

Table. 1

Data collected during the study.

Years	Economic Growth (in percent)	Total Tax Revenue (in billions of dollars)	Total Expenditure (in billions of dollars)	Government Efficiency (in percent)
2017	4.39	48265.8	49343.7	30
2018	5.88	77571	79736	31.43
2019	5.98	112057.5	118008.7	31.43
2020	1.99	132938.1	253911.1	29.52
2021	7.4	164799.4	188257.2	40.48
2022	5.67	201863.8	236691.9	38.21
2023	5.5	231721.4	281097.4	39

In the research process of this article, correlation and regression analysis methods of econometrics were used, as well as analysis using the Fisher test, T-student, and Darwin-Watson test criteria.

Analysis and results

The statistical table (Table 2) presents the main summarized indicators for the variables under study: Economic Growth, Total Tax Revenues, Total Expenditures, and Government Efficiency.

The average growth rate of Economic Growth observed during the period under study is 5.261%, with a standard deviation of 1.69%. This indicates a moderate degree of variability in economic growth over the observed period.

Table. 2

Statistical data.

Variable	Obs	Mean	Std. Dev.	Min	Max
Economic Growth (in percent)	7	5.261	1.69	1.996	7.403
Total Tax Revenue (in billions of dollars)	7	138459.57	65804.69	48265.801	231721.41
Total Expenditure (in billions of dollars)	7	172435.14	90858.828	49343.699	281097.41
Government Efficiency (in percent)	7	34.295	4.713	29.524	40.476

The economic growth rate varied from a low of 1.996% to a high of 7.403%, reflecting the fluctuations in economic indicators over time. The average tax revenue is $138,459.57, and the significant standard deviation is $65,804.69. This indicates a significant variability in the amount of tax revenue collected by the government. Tax revenues ranged from a low of $48,265,801 to a high of $231,721.41, indicating a significant variation in government tax revenues.

The mean government expenditure is $172,435.14, with a significant standard deviation of $90,858.828. This indicates a significant difference in government expenditure patterns. Government spending ranges from a minimum of $49,343,699 to a maximum of $281,097.41, highlighting significant variations in spending levels. The mean government efficiency score is 34.295, with a standard deviation of 4.713. This indicates a moderate degree of variability in the efficiency of government operations. The government efficiency score, which reflects changes in the efficiency of public sector activity, ranges from a minimum of 29.524 to a maximum of 40.476.

These statistics provide comprehensive information about the variables of fiscal policy under consideration and their relationship with economic growth. The analysis emphasizes the importance of tax revenues, government spending, and government efficiency in shaping economic indicators, and emphasizes the need for effective fiscal management strategies to ensure sustainable economic growth.

Table. 3

Correlation analysis.

Variables	Economic Growth	Total Tax Revenue	Total Expenditure	Government Efficiency
Economic Growth	1.000			
Total Tax Revenue	0.216	1.000		
Total Expenditure	-0.185	0.902	1.000	
Government Efficiency	0.658	0.813	0.553	1.000

The correlation coefficient between economic growth and total tax revenues is 0.216, indicating a weak positive correlation. There is a moderate negative correlation (-0.185) between economic growth and total expenditure. Total expenditure and total tax revenues show a strong positive correlation of 0.902, indicating that higher total expenditure is associated with higher total tax revenues. Government efficiency shows a strong positive correlation with economic growth with a coefficient of 0.658, indicating an increasing trend of economic growth with increasing government efficiency. There is also a moderate positive correlation between government efficiency and total tax revenues as well as total expenditures, with correlation coefficients of 0.813 and 0.553, respectively.

High government efficiency leads to high economic growth rates. Total spending has a complex relationship with overall economic growth; while higher spending can lead to lower growth rates, it is positively related to total tax revenue. Only total tax revenue showed a weak positive correlation with economic growth, suggesting that factors other than total tax revenue may play an important role in stimulating economic growth. The interrelationship between government efficiency, total spending, and total tax revenues emphasizes the importance of effective fiscal policy management in influencing economic growth.

Table. 4

Linear regression analysis.

yln	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
x1ln	1.891	.597	3.17	.051	-.01	3.792	*
x2ln	-1.718	.394	-4.36	.022	-2.973	-.463	**
x3ln	.893	.924	0.97	.405	-2.047	3.833	
Constant	-3.278	1.441	-2.27	.107	-7.865	1.309	
Mean dependent var		1.596	SD dependent var			0.427	
R-squared		0.953	Number of obs			7	
F-test		20.136	Prob > F			0.017	
Akaike crit. (AIC)		-6.469	Bayesian crit. (BIC)			-6.686	

*** p<.01, ** p<.05, * p<.1

Based on the linear regression analysis with the presented logarithms, the coefficient for total tax revenue (x1ln) was 1.891, indicating that a one-unit increase in the natural logarithm of total tax revenue was associated with an increase in the natural logarithm of approximately 1.891. The coefficient for total expenditure (x2ln) was -1.718, indicating that a one-unit increase in the natural logarithm of total expenditure was associated with a decrease in the natural logarithm of economic growth of approximately 1.718. The coefficient of government efficiency (x3ln) is 0.893, but is not statistically significant at the 0.05 level, indicating that the relationship between the coefficient of government efficiency and Economic Growth may not be significant after logarithmic transformation. It represents the estimated increase in Economic Growth when all independent variables are zero. It is -3.278, but is not statistically significant at the 0.05 level.

Total tax revenue (x1ln) and total expenditure (x2ln) are statistically significant at the 0.1 level, indicating that they have a significant impact on economic growth. Government efficiency (x3ln) is not statistically significant at the 0.05 level, indicating that it may not be a significant predictor of GDP growth in this model.

The R-squared value is 0.953, indicating that approximately 95.3% of the variation in economic growth can be explained by the independent variables in the model. The F-test is statistically significant (p-value = 0.017), indicating that the general regression model fits the data.

$$y = -3.278 + 1.891x_1 - 1.718x_2 + 0.893x_3 + \varepsilon$$

Total tax revenue (x1ln) and total expenditure (x2ln) have a significant impact on economic growth (yln), with total tax revenue having a positive impact on economic growth and total expenditure having a negative impact on it. The model shows that controlling for total tax revenue and total expenditure, as well as government efficiency (x3ln), significantly predicts economic growth. However, this conclusion should be interpreted with caution, as it is not statistically significant. The generalized regression model explains a significant portion of the variation in economic growth, showing that total tax revenues, government efficiency, and total spending are important factors in understanding economic growth when taken logarithmically.

Discussion

The relationship between fiscal policy and economic growth is complex, shaped by the interplay of taxation, government spending, and institutional efficiency. The analysis in this study reveals critical insights into how these variables interact to influence economic performance.

Tax Revenues and Growth: A weak positive correlation between total tax revenues and economic growth suggests

that revenue generation alone does not strongly drive economic expansion. However, regression analysis indicates a significant positive impact of tax revenues on growth, highlighting that the effective utilization of tax revenue is crucial. Efficient allocation to productive sectors like infrastructure, education, and healthcare could amplify the growth effects of taxation.

Government Spending and Growth: The findings show a moderate negative correlation between total expenditures and economic growth. This relationship indicates that excessive or inefficient government spending can hinder economic progress, potentially crowding out private investment or leading to resource misallocation. Policymakers should focus on expenditure efficiency and channel funds into high-return investments.

Government Efficiency: A strong positive correlation between government efficiency and economic growth emphasizes the role of effective governance in fiscal policy. Higher efficiency ensures that resources are utilized optimally, yielding better economic outcomes. Although its direct impact in the regression analysis is less pronounced, efficiency remains a critical enabler for maximizing the benefits of both revenue generation and public spending.

Policy Implications: These findings highlight the need for a balanced fiscal strategy that prioritizes efficient tax collection, prudent expenditure management, and institutional reforms. While increasing tax revenue supports growth, its success depends on transparent and strategic spending. Similarly, enhancing government efficiency can mitigate the adverse effects of fiscal imbalances.

Conclusion

In conclusion, in this study, we examined the impact of fiscal policy on economic growth, considering total tax revenues, total expenditures, and government efficiency as key determinants. Our analysis used statistical data, correlation analysis, and linear regression modeling to explore the relationships among these variables.

Statistical data revealed significant variations in economic growth, total tax revenues, total expenditures, and government efficiency. The average growth rate of economic growth was 5.261%, indicating stable economic indicators. Total tax revenues and total expenditures showed significant ranges, reflecting the diversity of fiscal policies across different regions. While government performance remains relatively stable, it has shown changes that suggest potential areas for improvement.

Correlation analysis provided insight into the associations between the variables. We found a weak positive correlation between total tax revenues and economic growth, suggesting that higher tax revenues may contribute little to economic expansion. In contrast, total expenditures showed a moderate negative correlation with economic growth, suggesting that excess expenditures may hinder economic growth. It is worth noting that government effectiveness has shown a strong positive correlation with economic growth, highlighting the importance of effective governance in increasing economic prosperity.

The relationship between government efficiency and economic growth appears to be complex. While correlation analysis suggests a positive relationship between government efficiency and economic growth, regression analysis does not find government efficiency to be statistically significant at the traditional level. Additional research may be required to explore these relationships in more depth.

Overall, our research highlights the complex interrelationship between fiscal policy variables and economic growth. Effective management of overall tax revenues and overall expenditures is crucial for stimulating economic activity and ensuring fiscal sustainability. Furthermore, improving government efficiency is a potential way for policymakers to improve economic efficiency. Future research could delve deeper into the mechanisms governing these relationships and explore additional factors shaping fiscal policy outcomes to inform a more targeted policy mix aimed at promoting sustainable and inclusive economic growth.

Suggestions

Based on the findings and theoretical underpinnings related to the impact of fiscal policy on economic growth, the following suggestions are proposed to optimize fiscal policy's effectiveness in fostering sustainable economic development:

Enhance the Efficiency of Public Expenditure

The allocation of fiscal resources should prioritize sectors with high economic and social returns, such as infrastructure, education, and healthcare.

• Focus on Infrastructure Development: Investment in infrastructure has a high fiscal multiplier, promoting long-term growth by enhancing productivity.

• Targeted Social Spending: Addressing gaps in education and healthcare can boost human capital development, contributing to inclusive and sustainable growth.

Improve Tax Policy and Administration

Effective taxation systems can enhance revenue generation while promoting equity and efficiency.

• Broaden the Tax Base: Minimize tax exemptions and improve compliance to increase government revenue without raising tax rates.

• Progressive Taxation: Implement progressive taxation systems to reduce income inequality without discouraging investment.

• Digital Taxation: Adapt tax policies to capture revenues from the growing digital economy.

Enhance Transparency and Accountability

Governments must improve transparency and accountability mechanisms to build public trust and ensure the effective use of fiscal resources.

• Open Budget Processes: Provide detailed information on budget allocations and spending.

• Independent Audits: Conduct regular audits of government accounts to prevent misuse of funds.

Tailor Fiscal Policy to Country-Specific Conditions

Recognizing the diversity of economic contexts, fiscal strategies should be tailored to individual country conditions.

• Developed Economies: Focus on fiscal consolidation while addressing challenges such as aging populations and climate change.

• Emerging Economies: Prioritize growth-enhancing investments and strengthen fiscal institutions.

• Low-Income Countries: Seek international assistance to finance critical public investments while improving domestic revenue mobilization.

Strengthen Data Collection and Analysis

The effectiveness of fiscal policy depends on reliable data and rigorous analysis.

• Invest in Statistical Systems: Enhance the capacity of national statistical agencies to collect timely and accurate fiscal and economic data.

• Use Econometric Models: Employ advanced models to forecast fiscal policy's impact on economic growth and make informed decisions.

References:

1. Alidjonovich, R. D., & Umarovich, A. Sh. (2020). Budget Policy in Uzbekistan: Practical and Strategic Directions. European Journal of Business and Management Research, 5(1).
2. Marioli, F. A., Fatás, A., & Vasishtha, G. (2024). Fiscal policy volatility and growth in emerging markets and developing economies. International Review of Economics & Finance.
3. Zulkarnaen, W., Erfiansyah, E., Syahril, N. N. A., & Leonandri, D. G. (2020). Comparative Study of Tax Policy Related to COVID-19 in ASEAN Countries. International Journal of TEST Engineering & Management, 83(2), 6519-6528.
4. Wang, Y., Wang, X., Zhang, Z., Cui, Z., & Zhang, Y. (2023). Role of fiscal and monetary policies for economic recovery in China. Economic Analysis and Policy, 77, 51-63.
5. Shahzadi, H. N., Sheikh, S. M., Sadiq, A., & Rahman, S. U. (2023). Effect of Financial Development, Economic Growth on Environment Pollution: Evidence from G-7 based ARDL Cointegration Approach. Pakistan Journal of Humanities and Social Sciences, 11(1), 68-79.
6. Wulandari, F., & Semertzidis, T. (2024, September). Investigating Consumer's Attitudes Toward New Carbon Tax Regulation in Indonesia. In IOP Conference Series: Earth and Environmental Science (Vol. 1395, No. 1, p. 012031). IOP Publishing.
7. Frolov, D. P. (2021). Transplantation of economic institutions: an extended (post-institutional) theory. Voprosy Ekonomiki, (9), 69-108.
8. Akrombek o'g, O. U. B., & Maxmud o'g'li, M. M. (2023). Ways to implement optimized fiscal policies in promoting economic growth. Masters, 1(1), 262-267.
9. Golpe, A. A., Sánchez-Fuentes, A. J., & Vides, J. C. (2023). Fiscal sustainability, monetary policy and economic growth in the Euro Area: In search of the ultimate causal path. Economic Analysis and Policy, 78, 1026-1045.
10. www.imv.uz - Official website of the Ministry of Economy and Finance of the Republic of Uzbekistan.
11. www.stat.uz - Official website of the Statistics Committee of the Republic of Uzbekistan.
12. www.worldbank.org - Official website of the World Bank.
13. www.my.soliq.uz - Official website of the Tax Committee of the Republic of Uzbekistan.
14. www.openbudget.uz - Open Budget Portal of the Republic of Uzbekistan.
15. https://www.lex.uz/uz/docs/-4674902 - Tax Code of the Republic of Uzbekistan.