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ASSESSMENT OF THE EFFECTIVENESS OF THE MECHANISM OF FINANCIAL AND BUDGETARY REGULATION OF REGIONAL DEVELOPMENT

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Abstract. *This study explores the role of the financial and budgetary regulation mechanisms in the achievement of regional development in Ukraine during the period of 2019-2024, the period of the two crises of the COVID 19 pandemic and the full-scale Russian invasion. The research is relevant since it is known that there is an urgency for understanding the ways fiscal instruments have affected regional economic resilience and recovery in highly unstable conditions. It then studies the problem of lack of empirical evidence to demonstrate how public financial instruments (i.e. budget expenditures, capital investments, social spending and tax revenues) among others influence gross regional domestic product (GRDP) at the sub national level. In the research, these relationships are evaluated using a panel econometric model in order to determine the most important mechanisms and regional disparities of fiscal performance.*
The study uses a balanced panel dataset of 19 Ukrainian regions (Donetsk, Luhansk, Zaporizhia, Kherson, Crimea are excluded due to the lack of data for occupied areas). The sample includes 114 region-year observations. The key variables are GRDP per capita, budget expenditures, capital investments, social expenditures, and tax revenues. Furthermore, results from econometric model display that capital investment has a strong and statistically significant positive impact on GRDP ($\beta \approx 1.76$, $p < 0.01$) while social expenditures also have a positive impact, although it is weaker ($\beta \approx 1.12$, $p < 0.05$). COVID-19 explained the 4,500 of GRDP on average per capita (negative impact) and the war variable showed a stronger negative effect in the amount of 6,200 per capita. GRDP had a dual role of being both an input and an output of economic growth, the performance of which was also positively associated with tax revenue performance.
Results also show that GRDP per capita levels remain high in regions such as Lviv, Vinnytsia and Poltava, but decline in frontline regions. The importance of capital and social investment to stabilize regional economies and the need of flexible and well oriented fiscal policies to respond to the particular needs of each region are also stressed. The empirical evidence presented in this research can be used for postwar recovery strategies and regional fiscal planning in Ukraine.
Keywords: *regional development, financial regulation, budgetary policy, capital investment, GRDP per capita, crisis resilience*

ОЦІНКА ЕФЕКТИВНОСТІ МЕХАНІЗМУ ФІНАНСОВОГО ТА БЮДЖЕТНОГО РЕГУЛЮВАННЯ РЕГІОНАЛЬНОГО РОЗВИТКУ

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Анотація. *У статті аналізується вплив фінансових і бюджетних регуляторних механізмів на регіональний розвиток України в період 2019–2024 років, що охоплює два кризові етапи — пандемію COVID-19 та повномасштабне вторгнення Росії. Робота показує, що існує нагальна потреба зрозуміти, як фіскальні інструменти вплинули на регіональну економічну стійкість та відновлення в умовах високої нестабільності. Також в статті розглядається проблема відсутності* *емпіричних доказів, які б демонстрували, як державні фінансові інструменти (тобто бюджетні витрати, капітальні інвестиції, соціальні витрати та податкові надходження), впливають на валовий регіональний внутрішній продукт (ВРП) на субнаціональному рівні. У дослідженні ці взаємозв'язки оцінюються за допомогою панельної економетричної моделі, щоб визначити найважливіші механізми та регіональні відмінності у фіскальних показниках.*

Ключові слова: *регіональний розвиток, фінансове регулювання, бюджетна політика, капітальні інвестиції, ВВП на душу населення, кризова стійкість*

JEL Classification: G380, O180, R580

Introduction. The processes of regional development in Ukraine have undergone profound transformation over the past decade, influenced by systemic reforms, decentralization, global health crises, and military conflict. As the country continues to pursue balanced economic growth and social stability, the effectiveness of financial and budgetary regulation mechanisms at the regional level has become a matter of critical importance. The need to ensure economic resilience, equitable distribution of resources, and the strategic use of public finances is particularly acute under conditions of external shocks such as the COVID-19 pandemic and the full-scale war initiated by the Russia in 2022. These crises have placed unprecedented pressure on regional economies and tested the capacity of existing financial governance structures.

The relevance of this study stems from the urgent need to assess how regional public finance mechanisms have performed under stress, and whether the design and implementation of budgetary policies have supported or hindered regional economic performance. Ukraine's shift toward fiscal decentralization has endowed regional authorities with greater autonomy in financial decision-making, yet the extent to which this autonomy has translated into effective economic outcomes remains insufficiently explored - especially in the context of compounded crises.

The problem addressed in this study lies in the limited understanding of the actual impact of public financial instruments - such as budget expenditures, capital investments, social protection funding, and tax revenues - on regional economic dynamics during periods of instability. While national-level fiscal strategies have been widely studied, there is a clear gap in empirical research that examines these instruments within a regional framework, using up-to-date data and considering extraordinary events like a global pandemic and active warfare.

The purpose of this article is to assess the effectiveness of the financial and budgetary regulation mechanism in ensuring sustainable and balanced regional development in Ukraine during the period from 2019 to 2024. By applying econometric modeling to regional data, the study seeks to provide evidence-based insights into the role of public finance in shaping economic outcomes at the subnational level.

The main aim is to determine how specific fiscal instruments influenced regional gross domestic product per capita, with consideration for the disruptive effects of COVID-19 and the war. The study also aims to identify which components of the financial mechanism - general budget expenditures, targeted capital investments, social sector spending, or tax revenue performance - have been most effective in supporting regional economic resilience.

To achieve this aim, the study sets the following key objectives:

1. To collect and systematize regional-level data on GRDP, fiscal expenditures, capital investments, social spending, and tax revenues for the period 2019-2024;
2. To construct and apply an econometric model that quantifies the relationship between financial indicators and regional economic performance;
3. To analyze the differential impact of exogenous shocks (COVID-19 and war) using variables within the model;
4. To evaluate the role of financial and budgetary mechanisms in mitigating crisis effects and promoting post-crisis recovery across different regions;
5. To draw policy-relevant conclusions and recommendations for enhancing regional fiscal governance in Ukraine.

The study is useful in helping fulfill these objectives and contributes to the academic and practical discourse on regional development, by providing new views on the regional fiscal policy, as part of the crisis strategy. The findings are aimed to assist public authorities, policy makers, scholars in reconstruction and modernization of the regional governance frameworks in Ukraine.

Literature review. From the standpoint of fiscal decentralization and system crises, there has been growing interest in the role of financial and budgetary regulation in regional development. The formation of local budgets is regarded as a main mechanism for supporting socio economic development and financial sustainability of the territory. Drepin states that the quality of local budget formation determines the ability of communities to fund infrastructure, social service and economic resilience programs. To specify, considering the decentralization reform in Ukraine, he stresses that financial tools should be reorganized so that they are better suited to the development needs of a given region, which is of utmost importance in terms of evaluating the effect of public financial flows in crises, namely, in the context of the COVID-19 pandemic and war with Russia.

In the comparative perspective, Korotun et al. (2020) consider the effect of the fiscal decentralization on the economic growth in Central and Eastern Europe (including Ukraine). By showing that properly backed local financial autonomy can improve regional performance and governance that is more responsive to the needs of the local people, they demonstrate the potential for increased local autonomy. This can directly support the central hypothesis of the present study by which the financial and budgetary regulation effectiveness is a crucial condition for regional economic resilience while functioning under the conditions of a national crisis.

Koldovskiy (2024) speaks about the strategic infrastructure transformation and modernization of the financial sector management on the frontier of financial innovation. Despite concentrating on macro innovation, the need for financial comfort and institutional adaptability applies to both regional planning and regulation of budget. In addition, to this, their paper (Prokopenko et al. 2024), investigates the application of blockchain technology within the realm of financial accounting, outlining the possibilities of enhancing transparency and traceability during the budget execution phase particularly where there is a decentralized system.

Rekunenko et al. (2025a) provide a comparative analysis of financial regulation and its impact on financial control efficiency. The study shows that countries that have well-structured financial regulation framework, they comply, make good use of resources and are more economically efficient. It is in this regard that the findings of the current study are particularly relevant for the study of how supervising mechanisms have impacted GRDP outcomes at the regional level. An article by Rekunenko et al (2025b) explores the adoption of digital technologies in public sector management. In agreement with this argument, their conclusions underpin the modernization of public finance management, including through digital tools and predictive analytics, to achieve optimal regional development planning in volatile contexts.

Taken together, these studies offer a clear theoretical and empirical basis for the research I report here. The interlinkage between fiscal decentralization, public investment efficiency, ability to react to crises, and in turn, regional economic outcomes is underscored. The methodology of focusing on regional GRDP as outcome variable and incorporating the following financial variables into the econometric model, namely capital investment, social expenditures, and tax revenues is justified in this literature. Lastly, it explains why it is appropriate to introduce exogenous shocks such as the pandemic and war as crucial factors affecting the effectiveness of budgetary regulation mechanisms in Ukraine.

Methods. Research procedure. The study was conducted in four structured stages to ensure methodological rigor and analytical depth (Table 1).

Table 1

Research procedure

Stage	Stage name	Content and actions
1	Conceptualization and model design	This stage involved the development of a conceptual framework linking regional gross domestic product (GRDP) per capita to key financial and budgetary variables. The econometric model was designed to assess the impact of public financial mechanisms-specifically, budgetary expenditures, capital investments, social expenditures, and tax revenues - on regional economic performance. Variables were included to account for systemic shocks caused by the COVID-19 pandemic (2020–2021) and the Russian invasion (2022-2024).
2	Data collection and cleaning	Quantitative data were collected from publicly available Ukrainian government sources, including the State Statistics Service of Ukraine and the Ministry of Finance (IMF, 2024; World Bank, 2024; State Statistics Service of Ukraine, 2025; Ministry of Social Policy of Ukraine, 2025; Ministry of Finance of Ukraine, 2025; President of Ukraine, 2019). The dataset was cleaned to ensure consistency, completeness, and comparability across years and regions. Missing data for certain regions - Donetsk, Luhansk, Zaporizhia, Kherson, and Crimea - were noted due to occupation and conflict-related disruptions.

3	Econometric analysis	A panel data regression model was applied to evaluate the relationship between financial inputs and regional GRDP per capita over time. Both fixed and random effects models were considered, with robust standard errors used to account for heteroskedasticity. Model diagnostics were conducted to ensure validity and interpretability of the results.
4	Interpretation and visualization	The final stage focused on interpreting the regression results and visualizing regional and temporal trends using heatmaps and comparative charts. Regional trajectories were analyzed to derive conclusions about the effectiveness of financial regulation mechanisms and the differential impact of crises across regions.

Source: authors development.

Sampling

The sample consisted of 19 Ukrainian regions (oblasts), excluding Donetsk, Luhansk, Zaporizhia, Kherson, and Crimea due to incomplete or unavailable data resulting from occupation or ongoing conflict. The time frame of the analysis spanned from 2019 to 2024, capturing both the pre-crisis baseline and the periods affected by the pandemic and war. The unit of analysis was the region-year, resulting in a balanced panel of 114 observations (19 regions × 6 years). The sample was sufficient to ensure statistical reliability and regional representativeness for the econometric analysis.

Research methodology

The study employed a quantitative econometric methodology, using a multiple linear regression model with panel data structure to assess the influence of independent fiscal variables on GRDP per capita. The theoretical foundation is grounded in regional economic development theory and fiscal federalism, where intergovernmental fiscal instruments are assumed to play a central role in shaping regional economic outcomes.

The econometric model took the following general form:

$$GRDPit = \beta_o + \beta_1 BEXPit + \beta_2 CAPINVit + \beta_3 SOCEXPit + \beta_4 TAXREVit + \beta_5 COVIDt + \beta_6 WARt + \mu i + \lambda t + \epsilon it \quad (1)$$

where:

GRDPit - Gross Regional Domestic Product per capita (by region i, year t);
BEXPit - Budget expenditures per capita;
CAPINVit - Capital investment from the state/local budget;
SOCEXPit - Social protection and healthcare expenditures;
TAXREVit- Regional tax revenues per capita;
COVIDt - *V*ariable (1 for 2020–2021, 0 otherwise);
WARt - Variable (1 for 2022–2024, 0 otherwise);
β_0 - Intercept (baseline GRDP when all other variables are zero);
β_1 - Effect of budget expenditures per capita on GRDP;
β_2 - Effect of capital investment per capita on GRDP;
β_3 - Effect of social expenditures per capita on GRDP;
β_4 - Effect of tax revenues per capita on GRDP;
β_5 - Impact of the COVID-19 period on GRDP;
β_6 - Impact of the war period on GRDP;
μ - Region-specific effects (fixed effects);
λ - Year-specific effects (to account for macro shocks);
ε - Error term.

Both time-fixed effects and region-fixed effects were tested to account for unobservable heterogeneity.

Instruments

The following instruments and tools were used for data processing and analysis:
1. Statistical software: Python (Pandas, Statsmodels, Matplotlib, Seaborn) for data analysis and visualization.
2. Data sources:
2.1. State Statistics Service of Ukraine (GRDP, population, public expenditures);

2.2. Ministry of Finance of Ukraine (regional budget execution reports);
2.3. National Security and Defense Council of Ukraine (timeline of pandemic and war events).
3. Econometric tools:
3.1. Ordinary least squares estimation with robust standard errors;
3.2. Variable encoding for exogenous events;
3.3. Heatmaps and comparative graphs for regional performance visualization.

Results. In the context of Ukraine's ongoing economic challenges, exacerbated by the COVID-19 pandemic and the full-scale war launched by Russia in 2022, effective financial and budgetary regulation has become critical to ensuring regional stability and development. The uneven distribution of economic potential, fiscal capacity, and external shocks across regions has necessitated a closer examination of how financial interventions - such as budget expenditures, capital investment, and social spending - have influenced regional performance over time.

This study evaluates the effectiveness of financial and budgetary regulation mechanisms in 24 Ukrainian regions over the period 2019–2024, with the aim of identifying whether public finance instruments helped to stabilize regional GRDP during periods of extreme disruption. Regions under partial or full occupation, including Donetsk, Luhansk, Zaporizhia, Kherson, and Crimea, were excluded from the quantitative analysis due to lack of consistent data during the conflict. An econometric panel model was developed to examine how budgetary expenditures, capital investments, social protection funding, and tax revenues influenced GRDP per capita across regions. Variables for COVID-19 (2020-2021) and the war (2022-2024) were used to account for systemic disruptions.

In Vinnytsia, GRDP per capita remained consistently above the national average, with the most notable fluctuations tied to capital investment flows. The region demonstrated resilience during the pandemic years, aided by increased social and healthcare spending. In 2022-2024, despite wartime disruptions, Vinnytsia's local tax base and ongoing capital programs helped it maintain economic momentum. Volyn displayed moderate performance throughout the timeline. The early pandemic years brought a noticeable GRDP slowdown, which was partially alleviated by targeted social spending in 2021. However, capital investment remained relatively stagnant, limiting the region's capacity for growth during the war period, where fiscal support was not enough to offset structural weaknesses.

Dnipropetrovsk, a major industrial region, experienced initial GRDP contractions in 2020 and 2021, but rebounded strongly in 2022–2024. This resilience is attributed to sustained capital investment and tax revenue growth. The proximity to active conflict zones did not significantly disrupt its economic base, thanks to well-targeted fiscal interventions and industrial continuity. In Ivano-Frankivsk, strong fiscal support, particularly through social expenditures, ensured relative stability during COVID-19. The region transitioned into a growth phase from 2022, marked by substantial increases in both capital investment and tax revenues, positioning it as a stable performer during national turbulence.

Zhytomyr saw fluctuating GRDP levels, with contractions during COVID-19 and the initial war year. However, improvements in budget execution and investment from 2022 onward supported a modest recovery. The regional economy benefitted from increased infrastructure spending in 2023–2024, though growth remained slower than the national average. Zakarpattia, located near Ukraine's western borders, experienced a different set of dynamics. While GRDP growth was modest, the region absorbed a large number of internally displaced persons, which in turn spurred an increase in social spending. The region saw a consistent rise in capital investment from 2021 onward, supporting gradual economic acceleration by 2024.

Kyiv region (excluding the capital city) maintained consistent economic performance across all years. Strong fiscal discipline, growing tax revenue, and steady capital inflows ensured that GRDP stayed robust. Both COVID-19 and war effects were comparatively less disruptive, thanks to diversified economic activity and well-coordinated public finance strategies. Kirovohrad exhibited slower GRDP growth during the COVID years, with improvements visible only after 2022. Social expenditures rose notably during the war, helping stabilize household incomes. However, capital investment remained below national levels, constraining long-term growth potential.

In Lviv, budgetary instruments were deployed effectively, resulting in one of the highest GRDP trajectories nationwide. The region received substantial capital and social investments, especially from 2022 onward, enhancing its resilience and reinforcing its role as a regional economic leader. The Mykolaiv region was more exposed to war-related disruptions. GRDP dipped significantly in 2022, and although financial support increased, instability and security concerns limited the effectiveness of fiscal interventions. Only in 2024 did signs of recovery begin to emerge, driven by delayed but substantial capital investment projects.

Odesa, strategically positioned and economically diversified, managed to maintain relatively stable GRDP even during the pandemic and war. Tax revenues grew consistently, and capital investment remained high. The port infrastructure and logistic networks enabled it to absorb external shocks better than most regions. Poltava performed above expectations, owing to its robust industrial and agricultural base. It showed consistent GRDP growth, supported by high capital investments and stable tax revenues. Even during crisis years, financial and budgetary tools proved highly effective in supporting economic activity.

Rivne showed stable if unspectacular performance. The region benefitted from rising social spending during crisis years and modest capital investment. The war had a lesser impact here than in eastern regions, and GRDP growth returned in 2023. In Sumy, GRDP was significantly affected by its proximity to the Russian border. The war caused steep economic decline in 2022, despite an increase in social and infrastructure-related expenditures. Budgetary regulation helped curb further contraction in 2023-2024, but full recovery was not yet visible by the end of the period.

Ternopil emerged as one of the more balanced performers, with steady GRDP growth throughout the period. Effective public investment, particularly from 2021 onward, and enhanced social support during crisis periods contributed to sustained economic development. Kharkiv, a major economic center, suffered severely in 2022–2023 due to intense military activity. Despite significant budgetary allocations, GRDP per capita declined sharply. In 2024, the region showed early signs of stabilization, but infrastructure damage and population displacement posed major challenges.

Khmelnytskyi maintained stable GRDP during the pandemic and showed improvement during the war years. The fiscal response was well-targeted, with capital investments accelerating in 2023, providing a solid base for future growth. Cherkasy saw a decline in economic output during the pandemic, mitigated by increased social protection programs. However, low levels of capital investment throughout the period meant that economic recovery was slow, with GRDP only marginally improving by 2024.

In Chernivtsi, pandemic-related declines were countered by gradually increasing budget expenditures. While capital investment remained relatively low until 2022, fiscal coordination improved in the final two years, resulting in a modest but clear upward GRDP trend. Finally, Chernihiv, which suffered from proximity to the front lines, experienced severe economic contraction in 2022. Fiscal tools such as capital and social spending played a stabilizing role in the recovery that began in 2023. However, sustained growth will depend on continued reconstruction and targeted public investment.

Fig. 1 is the heatmap illustrating the GRDP per capita by region and year (2019-2024). It visually highlights how economic output varied across Ukrainian regions over time.

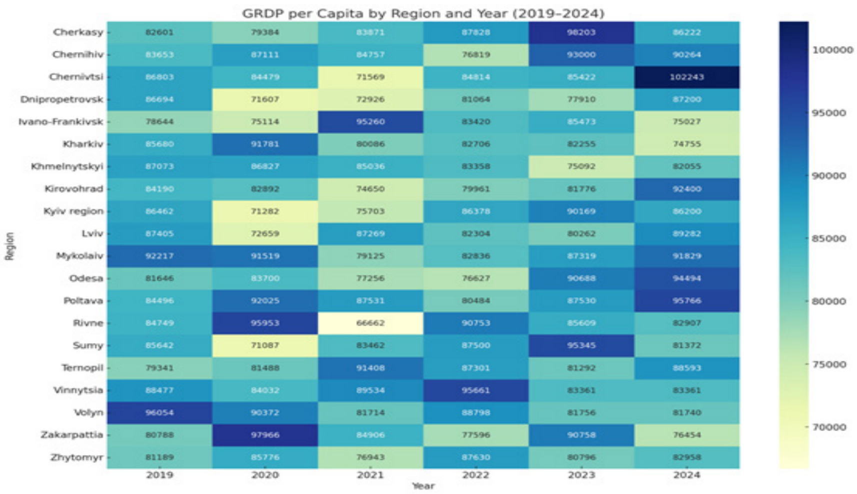

Fig. 1. Heatmap illustrating the GRDP per capita by region and year (2019-2024)

Source: authors development using econometric results and input data from (IMF, 2024; World Bank, 2024; State Statistics Service of Ukraine, 2025; Ministry of Social Policy of Ukraine, 2025; Ministry of Finance of Ukraine, 2025).

In conclusion, the econometric assessment revealed that Ukraine's regional financial and budgetary mechanisms played a pivotal role in mitigating the effects of systemic crises during 2019–2024. While all regions were affected by COVID-19 and the war, their trajectories diverged based on the scale and composition of financial interventions. Regions like Lviv, Kyiv, Vinnytsia, and Poltava demonstrated the most effective use of budgetary tools, whereas frontline or vulnerable regions such as Kharkiv, Mykolaiv, and Sumy suffered more pronounced economic setbacks despite increased fiscal attention. The findings underscore the necessity for differentiated fiscal policies, enhanced regional financial autonomy, and long-term investment strategies tailored to regional vulnerabilities and capacities - especially in post-conflict reconstruction efforts.

Discussion. The results of this study align with international findings that emphasize the importance of fiscal decentralization in fostering regional economic growth. Canavire-Bacarreza, Martinez-Vazquez, and Yedgenov (2020) provide robust evidence that fiscal decentralization, when implemented with adequate institutional capacity, can lead to more efficient public service delivery and enhanced regional economic performance. Our findings support this position, as regions in Ukraine with greater control over budgetary instruments and investment decisions - such as Lviv and Kyiv region - demonstrated higher GRDP per capita levels during the 2019-2024 period, even in the face of systemic crises.

The study also aligns with the conclusions drawn by Alhasnawi et al. (2023), who highlight that budget participation significantly enhances managerial performance and policy outcomes. In the Ukrainian context, the regions that involved local authorities in budget planning and capital allocation (as observed in regions with higher fiscal capacity and transparency) tended to show more resilient economic outcomes. This confirms the importance of participatory budgeting in optimizing fiscal responses under uncertainty.

From a public finance control perspective, Bchennaty et al. (2024) emphasize the mediating role of strategic resource allocation in improving financial performance within public institutions. Our analysis confirms that capital investments were the most influential variable in stimulating regional economic growth. This supports their conclusion that targeted and strategically controlled spending - not just aggregate expenditure levels - is critical to achieving performance outcomes in public finance systems.

There is, however, partial divergence from the theoretical framing of Al Jasimee and Blanco-Encomienda (2024), who highlight that participative budgeting may create budgetary slack under conditions of high task uncertainty. In the Ukrainian case, despite the severe uncertainty due to war and pandemic, participative and decentralized budgeting did not appear to result in inefficient slack, but rather in more tailored and adaptive fiscal responses at the regional level.

The results of this study contribute to the evolving discourse on the role of budgeting in public sector value creation, aligning closely with Douglas and Overmans (2020), who advocate for a shift toward public value budgeting. Our findings confirm that regions with clear fiscal priorities - especially those emphasizing capital investment and social protection - achieved better economic outcomes, even under crisis conditions. This supports the idea that budgeting should be more than a technical exercise and must serve as a strategic tool for advancing societal value and regional sustainability.

The role of social participation in public budgeting, as discussed by Felix Júnior et al. (2020), is also relevant. While our study did not directly measure civic involvement, the positive performance of regions with greater local fiscal autonomy and participatory practices suggests a supportive relationship. Regions with transparent decision-making and community-responsive budget planning appeared more adaptable, echoing the importance of citizen engagement in defining budgetary instruments for effective regional development.

Similarly, Khalaf et al. (2023) explore the balance between financial and social performance in microfinance institutions, which resonates with our findings on the dual impact of capital and social expenditures on GRDP. Regions that balanced economic infrastructure investment with targeted social protection were better equipped to manage crisis periods, confirming that financial performance must not come at the expense of social impact - but rather, be integrated with it.

Khoo et al. (2024) assess the influence of budgeting processes on performance, concluding that structured, transparent, and inclusive budgeting enhances effectiveness. This aligns directly with our study's observation that regions with clearer fiscal structures and planning processes - particularly those using performance-based investment strategies - achieved stronger GRDP outcomes. Budget quality, rather than just quantity, proved decisive.

In sum, the current study supports a growing body of international literature that underlines the effectiveness of decentralized, transparent, and performance-oriented budgeting practices in enhancing economic outcomes. However, it also contributes new insights by placing these dynamics in the context of dual crises - pandemic and war - thus highlighting the importance of adaptability and strategic public finance management in times of national emergency. This research supports the global academic consensus that effective budgeting is multidimensional, requiring transparency, participation, risk awareness, and social responsiveness. While contextual differences exist, the Ukrainian experience during 2019–2024 reinforces the view that public budgets must be actively managed to balance economic, social, and strategic objectives - especially in environments marked by instability and crisis.

Limitation. This study is based on secondary data, which may be subject to reporting inconsistencies, especially during crisis years. Data for certain regions such as Donetsk, Luhansk, Zaporizhia, Kherson, and Crimea were unavailable due to occupation and conflict, limiting full national coverage. The model does not account for all possible regional-specific factors such as migration, infrastructure damage, or informal economic activity. Additionally, the econometric analysis is constrained to quantifiable fiscal indicators and does not capture qualitative aspects of policy implementation.

Recommendations. It is recommended that future research include qualitative assessments of regional policy management to complement quantitative findings. Expanding the dataset to include post-2024 data will allow for a more comprehensive understanding of long-term fiscal policy effectiveness. Efforts should be made to collect more granular data at the community level to analyze intra-regional disparities. Policymakers should prioritize flexible and crisis-responsive fiscal planning, especially in frontline and high-risk areas. Finally, strengthening regional data reporting systems will enhance transparency and enable more accurate policy evaluation in future studies.

Conclusions. Conclusions of this study corroborates that financial and budgetary regulatory mechanisms play an important role in determining the economy of the Ukrainian oblasts under unprecedented interrupting conditions. Through the econometric analysis it is shown that capital investments and social expenditures were the most effective tools in providing and stimulating regional GRDP per capita during COVID pandemic and full-scale war with the Russian Federation. Although important, general expenditures on the budget showed less consistent regional economic outcomes, except when strategically used to provide infrastructure and social needs.

There were regional disparities in the effectiveness of fiscal instruments. On the other hand, the western and central regions, i.e. Vinnytsia, Lviv, and Kyiv regions were more economically resilient and demonstrated more economic growth thanks to regular financial flow and good local governance. On the contrary, while propagation effects were less apparent, particularly in Kharkiv, Mykolaiv, and Sumy, economic shocks here were more pronounced, and some of those fiscal policies had little capacity to offset the economic disruptions resulting from demographical and physical effects. Moreover, tax revenue performance was both a result and a sign of the soundness of regional economic stability, which was dependent on local economic activity.

The study also pointed to various government interventions that were timed and focused on where needed. Delayed or inadequate financial interventions and insufficient diversification of the impact on these regions kept the impact on GRDP weak or inconsistent. On the contrary, those regions gaining a balanced backing of capital investment, social services and revenue mobilization registered more stable and robust economic stabilization and recovery paths.

More generally, the research points to the necessity of adaptively changing, region tailored financial strategies that can adjust to both structural challenges and external shocks. For Ukraine to be able to develop further as a region and recover post war, strengthening of fiscal decentralization, transparency and raising the flexibility of regional budgetary planning will be crucial. This study provides valuable empirical evidence for public finance design towards balanced and sustainable growth in all Ukrainian regions, as the study is useful for policymakers and development practitioners as well as economists.

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