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DISPROPORTIONS OF THE REGIONAL FINANCIAL SPACE OF UKRAINE: THE BALANCE OF LOCAL BUDGETS AND FINANCIALLY RESPONSIBLE BEHAVIOR

ABSTRACT

The process of fiscal decentralization in Ukraine has faced systemic challenges, amplified by the military aggression, leading to a profound asymmetry and polarization within the regional financial space. The study addresses the critical issue of escalating differentiation in the financial capacity of territorial communities, which creates a systemic risk to fiscal resilience. The purpose of this research is to conduct a quantitative diagnosis of the fiscal sustainability of territorial communities and to empirically verify the key budgetary determinants influencing their level of grant dependence (subsidisation), which is crucial for forming effective financial and managerial solutions. To achieve this, a differentiated multiple linear regression analysis was performed on two polarized groups of communities: those with critically low and those with high financial capacity. The principal results reveal that the grant dependence mechanism is driven primarily by financial flows rather than expenditure efficiency. For communities with critically low capacity, the share of transfers is the dominant, highly significant positive determinant. Conversely, the expenditure structure was found to be statistically insignificant. For highly capable communities, the positive impact of transfers is significantly attenuated. Critically, the analysis identified a counterintuitive positive correlation between the share of own taxes and grant dependence in both groups. Furthermore, capital expenditures were found to have a significant positive impact only in capable communities, indicating their success in attracting external investment-related transfers. The main conclusions are that the current financial disparity is rooted in the structure of budgetary revenues, rather than the efficiency of operational spending. Addressing this requires a shift from focusing solely on quantitative factors (transfers) to incorporating qualitative factors, such as enhancing the financial accountability and managerial behavior of local authorities. This necessitates developing differentiated financial and management solutions tailored to the specific fiscal capacity level of each territorial community.

Keywords: regional financial space, territorial community, financial accountability, financial behavior, regional economy, local budgets, state aid, entrepreneurial activity, sustainable development, territories

JEL Classification: G3, H77, H71, R11

INTRODUCTION

The process of fiscal decentralization in Ukraine, which aimed at increasing the financial autonomy and sustainability of territorial communities (TCs), faced unprecedented challenges caused by the full-scale military aggression. Under the martial law conditions, a profound transformation of the state's fiscal model is taking place, accompanied by an asymmetric impact on the financial space of the regions. These processes shape a new fiscal reality, characterized by both temporary splurges (or spikes) of local budget revenues (linked, for instance, to military payments and an increase in PIT (Personal Income Tax) revenues), and significant long-term structural imbalances in the regional financial space.

Data on the financial capacity of Ukraine's territorial communities, presented on the Decentralization website, Kaziuk (2025), indicate an intensification of the differentiation

process among territorial communities in Ukraine and a corresponding reinforcement of the unevenness of the regional financial space. The highest concentration of communities with a high level of capacity is observed in the Kyiv, Dnipropetrovsk, and Poltava regions (these are, as a rule, regional centers and their satellites). At the same time, communities with a critically low level of capacity predominate in the Zakarpattia, Chernivtsi, Rivne, and Ivano-Frankivsk regions, which points to the existence of deep structural and geographical problems within the regional financial space in Ukraine.

Between 2021 and 2024, the number of communities with high (+59) and critical (+49) levels of capacity increased, which indicates polarization and underscores the structural fragility of the fiscal sustainability of territorial communities in Ukraine. Furthermore, almost a third of communities (29.8 %) belong to the lowest capacity categories, which creates a systemic risk for their fiscal resilience and the stability of the regional financial space (Decentralization, 2023).

The critical widening of the gap between financially capable and critically incapable communities poses a threat to ensuring equal access of citizens to public services, which directly contradicts the fundamental principles of the decentralization reform. Consequently, a rather complex dilemma arises: how to support the development of communities through subsidies (or grants), given the limited resources of the state budget. Addressing this problem requires the development of a differentiated approach to the management of local finances, based on the scientific comprehension and empirical verification of factors that would contribute to reducing the grant dependency of communities by increasing the efficiency of their expenditure of funds. To solve this task, a regression analysis of the subsidy level (or grant level) was conducted for both the most developed communities and the communities with a critically low level of capacity.

Additional justification is required for the analysis of such internal factors as the management's financial behavior and the level of financial responsibility of local authorities. After all, the disparities in the regional financial space are a consequence not only of objective external factors (war, macroeconomic conditions) but also a reflection of the differentiated efficiency of budget funds utilization resulting from ineffective management decisions. Under conditions of financial constraints, development driven by quantitative factors is extremely difficult, which necessitates an emphasis on qualitative factors – ensuring the maximum possible effective utilization of funds provided to local budgets, which entails the need for qualitatively new management decisions and approaches. Thus, the study of financial behavior as an independent variable becomes key for the development of differentiated financial and management solutions aimed at increasing the transparency and accountability of local self-government bodies as a guarantee of efficient fund utilization.

LITERATURE REVIEW

A significant number of scholarly works devoted to the issues of regional financial sustainability and the impact of war on local budgets indicates considerable attention to these matters. Classical works on intergovernmental fiscal relations (particularly by foreign economists such as W. Oates) form the hypothesis of the «fiscal illusion» or the «flypaper effect», where transfers increase local budget expenditures more than the growth of own revenues, potentially deepening grant dependence (or subsidy dependence).

In a collective scholarly work by specialists from the M. I. Dolishniy Institute of Regional Studies, a systemic assessment was conducted on the effectiveness of reforming the administrative-territorial structure of Ukraine, fiscal decentralization, and related sectoral reforms through the prism of the results achieved and their correspondence to declared goals. Attention is focused on the prospects and risks of strengthening the economic capacity of territorial communities as the basic units of the local self-government system (Kravtsiv, 2017).

The analysis of financial sustainability and the accumulation of fiscal resources across four typological clusters of territorial communities (frontline, de-occupied, anchor, and rear/hinterland) was conducted by Voznyak et al. (2023). The experts identified destructive changes in the functioning of the local self-government system, empirically verified through: an increase in the financial dependence of TCs on intergovernmental transfers; the intensification of regional disparities based on the tax capacity index; and the erosion of the economic potential of communities that were historically concentrated in economically developed regions. A system of cause-and-effect relationships that determines these negative trends in financial indicators was established. Given the specificity of the risks of disrupting regional sustainability for each type of community, the need to apply separate approaches to territorial development management and the critical importance of modernizing the institutional mechanism of intergovernmental equalization of community financial capacity were substantiated, which serves as a strategic guideline for economic growth recovery in the post-conflict period.

The scientific discussion regarding ensuring the financial capacity of local self-government and the development of approaches to improving the process of adopting management and organizational decisions aimed at increasing the accountability (or responsibility) of local self-government bodies (LSGBs) is currently a central theme of research, especially in the

context of decentralization. This topic is addressed in the works of scholars such as Krysovaty and Tkachyk (2021), Desyatnyuk et al. (2024), and Onyshko (2025). The work by Belinska and Yasenetsky (2025) demonstrates the critical financial imbalance of local budgets in Ukraine under the conditions of a full-scale war, necessitating the development of strategies to overcome the “negative economic cycle” and ensure the financial capacity of communities. The experts scientifically substantiated the conceptual model of the community's “Financial DNA”, which integrates financial potential (revenue mobilization) and institutional capacity (effective resource management) to ensure their sustainability. Their conclusions prove that success depends on the synergy of three strategic directions: diversification of revenue sources, strengthening institutional capacity, and minimization of risks through financial security instruments.

A significant portion of scholarly works (for example, the papers by Kaziuk et al. (2025)) focus on the development of integral indicators and methodologies for assessing the financial capacity of territorial communities, typically through the ratio of own revenues to expenditures and the level of grant dependency (or subsidy dependency). These studies form the basis for the empirical grouping of communities. Contemporary domestic scholars Desyatnyuk et al. (2024), Yefimenko (2023), Lunina (2022), Liutyi & Spasiv (2019), Storonianska (2018), Voznyak & Patytska (2023), Koliada (2024), Pautova (2024), scholars from USAID, and Potapenko et al. (2023) from NISD emphasize the transformation of financial sustainability indicators of territorial communities under conditions of external military-economic shocks. They confirm that the war has caused a structural asymmetry in budgetary revenues, which necessitates the revision of traditional models of financial planning.

Based on the concept of territorial communities' capacity as the ability to generate an adequate volume of revenues to provide public goods and services, domestic scholars Abramova (2017), Demianchuk (2021; 2022), Pasichnyi and Obukhov (2024), and Tkachyk (2022) emphasize the critical significance of local taxes and fees within the structure of community financial resources. This approach is fundamental for strengthening the financial autonomy of local self-government bodies. Tsymbaliuk et al. (2022) investigated the tax component of the region's fiscal space. To develop scientifically grounded recommendations regarding the expansion of tax powers of local self-government bodies and the increase of TC financial sustainability (TCFS), a comparative analysis of local taxation in Ukraine and other countries was conducted. Specifically, the types of local taxes and their specific weight in the Gross Domestic Product (GDP) were studied, which served as an empirical basis for optimizing financial administration and accelerating the socio-economic development of territorial communities.

With the aim of searching for effective mechanisms to strengthen financial capacity through tax instruments, Shokalo & Savychuk (2022) developed a specialized methodology for the quantitative measurement of the capacity of territorial communities in Ukraine. This methodology includes ten indicators, and its application allows for a comprehensive assessment of the dynamics of financial resource volumes of individual TCs over a specific time interval. Furthermore, it provides the opportunity to compare the subsidy levels (or grant levels) of communities and the volumes of capital investments in local infrastructure.

Despite the considerable attention paid to issues of territorial financial sustainability and the impact of war on local budgets (Martynenko & Myskin (2021)), the existing body of research contains a number of conceptual and methodological gaps that directly relate to the consideration of factors such as the quality of management behavior and the level of accountability/responsibility for adopted decisions as determinants in the formation of the financial space of Ukraine's regions. Specifically, the issue of the qualitative and quantitative differentiation of the influence of key budgetary determinants (revenues, transfers, operational/management, and capital expenditures) on the subsidy level (or grant level) of communities, broken down by categories of financial capacity, remains insufficiently studied. In the scientific literature, there is a lack of a systemic approach that would clearly identify the vector for streamlining fiscal relations as a systemic basis for adopting effective and financially responsible management decisions at the territorial community level. In particular, existing studies fail to ensure a clear link between the level of communities' financial capacity, the state of the regional financial space as their development environment, and the necessity of increasing the financial accountability of local self-government bodies, which lies in the domain of a fundamental change in management behavior.

Addressing these unresolved parts of the scientific problem requires the integration of financial-economic and managerial-behavioral approaches, which will allow for a shift from stating the fact of disparities to the development of targeted, scientifically grounded financial and management solutions.

AIMS AND OBJECTIVES

The purpose of this research is to diagnose the fiscal sustainability of territorial communities in Ukraine under current military-economic challenges, empirically verify the key budgetary determinants (revenues, transfers, expenditures) defining their level of grant dependence, and based on this, to develop differentiated financial and managerial solutions aimed at reducing fiscal disparities and enhancing the financial accountability of local self-government.

METHODS

The empirical basis of the research was formed using open data and statistical information, which ensures the verifiability and relevance of the results obtained. The initial indicators for conducting econometric modeling and assessing the factorial dependence of the subsidy level (or grant level) of territorial communities were formed based on official statistical data on the execution of local budgets in Ukraine for 2021, 2023, and 2024. These data include indicators of revenues (own revenues, transfers), expenditures (operational/management, payroll, capital), and the population size of the territorial communities.

Also utilized were the results of the comparative analysis of the financial capacity of territorial communities, regularly published by specialized domestic scientific institutions and governmental portals (specifically, the "Decentralization" portal and the Ministry of Finance of Ukraine), to determine the ranking positions of communities and their distribution by capacity levels ("high", "optimal", "satisfactory", "low", "critical"). The analysis of the regional financial space was carried out considering the current budgetary legislation of Ukraine and the Government's macroeconomic forecasts for 2025–2026, which define the vector for streamlining fiscal relations at the regional level.

To achieve the set goal and fulfill the research objectives, a complex of general scientific and special methods was used, ensuring a systemic and quantitative analysis (Table 1).

Method Group	Method	Purpose
Empirical and Analytical Methods	Systemic approach, comparative and dynamic analysis	Used to assess the dynamics of changes in the ranking positions of territorial communities and to identify regional disparities in the financial space under wartime conditions.
Quantitative and Statistical Methods	Grouping and classification	Applied for the typology of territorial communities based on five levels of financial capacity, serving as the foundation for subsequent differentiated modeling.
Econometric Modeling	Multiple Regression Analysis	The key method for the quantitative measurement of interrelationships between financial indicators and the subsidy level (or grant level) of territorial community budgets. This allowed for the identification of determinants and the assessment of the strength and direction of their influence for each capacity group.
Methods of Logical Generalization	Induction and Deduction	Used for the interpretation of the obtained econometric coefficients and the formation of differentiated financial and management solutions and recommendations, which define the vector for streamlining fiscal relations at the regional level.

The key analytical instrument is multiple linear regression analysis (Table 2). The General form of the regression model is:

$$D = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \xi$$

Variable	Notation	Description	Expected Impact (Classical Theory)
Dependent Variable	D	Grant Level (or Subsidy Level) of the local budget (share of grants/subsidies in the general fund budget, %).	-
Independent (Factor) Variables	X_1	Share of operational/management expenditures in the general fund expenditures, %.	Negative (efficient management → lower dependence).
	X_2	Share of payroll expenditures in the general fund expenditures, %.	Negative (control of operating costs → lower dependence).
	X_3	Share of capital expenditures in the general fund expenditures, %.	Negative (investments → development of own revenue base → lower dependence).
	X_4	Share of transfers in the revenue side of the general fund, %.	Positive (direct correlate of formal subsidization, "flypaper effect").
	X_5	Share of local taxes and fees in the revenue side without transfers, %.	Negative (fiscal autonomy → lower dependence).

Assessment Procedure

1. *Grouping*: The sample was divided into two main subgroups: territorial communities (TCs) with a critically low level of financial capacity (for Model 1) and TCs with a high level of capacity (for Model 2).
2. *Coefficient Estimation (β)*: The coefficients were estimated separately for each subgroup using the Ordinary Least Squares (OLS) method.
3. *Adequacy Check*: The statistical significance of the model as a whole was assessed (using the F-statistic and p-value), as well as the individual significance of each coefficient (using the t-statistic and p-value at = 0.05). Additionally, the quality of approximation (coefficient of determination, R^2) and the absence of multicollinearity were evaluated.

Differentiated modeling allowed for the empirical capture (or empirical fixation) of the polarity of fiscal processes in different groups of communities (for example, the counter-intuitive positive relationship of X_3 with D only for capable communities). This provides the basis for developing differentiated financial and management solutions for communities with varying levels of capacity.

RESULTS

To determine the key factors that positively or negatively influence the subsidy level (or grant level) of territorial communities, we conducted a regression analysis of subsidization for communities located at polar points — those with high and critically low levels of competitiveness (or capacity).

The results of the analysis are presented in Table 3.

Table 3. Coefficients of the regression dependence of subsidization for communities with a critically low level of financial capacity. (Source: calculated using data from Comparative analysis of the financial capacity of territorial communities, 2024)								
Variable (Implied)	Coefficients	Standard Error	t-Statistic	P-Value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Y-Intercept	-0.42218	0.161826	-2.60883	0.010212	-0.7425	-0.10185	-0.7425	-0.10185
X_1 (0.413)	-0.01603	0.012031	-1.33233	0.185215	0.03984	0.007785	-0.03984	0.007785
X_2 (0.806)	0.123067	0.182766	0.673359	0.501982	0.23871	0.48484	-0.23871	0.48484
X_3 (0.052)	0.008318	0.27775	0.029946	0.976159	-0.54147	0.558107	-0.54147	0.558107
X_4 (0.265)	1.009234	0.088937	11.34774	7.34E-21	0.833188	1.185279	0.833188	1.185279
X_5 (0.310)	0.269674	0.097127	2.776518	0.006354	0.077418	0.461931	0.077418	0.461931
Regression Statistics					Value			
Multiple R					0.806391			
R-squared					0.650266			
Adjusted R-squared					0.633206			
Standard Error					0.077299			
Observations					130			
Analysis of Variance (ANOVA)								
	df	SS	MS	F	SignificanceF			
Regression	6	1.366502	0.22775	38.11594	7.43E-26			
Residual	123	0.734949	0.005975					
Total	129	2.101451						

We conducted an analysis of the obtained data for territorial communities (TCs) with a critically low level of financial capacity. The performed multiple linear regression assessment for communities with a critically low level of financial capacity showed that the selected model is statistically significant overall, $F = 38,12$; $p < 0,001$. The coefficient of determination $R^2 = 0,6503$ indicates that 65.03% of the variance in the dependent variable – the level of grant dependence (or grant-dependency) – is explained by the variation in the five included independent variables. Thus, the model has high explanatory power.

Key Determinants and Interpretation of Significant

Coefficients Share of transfers in the budget's revenue side (X_4): This variable has the strongest and highly significant positive impact on the level of grant dependence. An increase in the share of transfers by one percentage point leads to an increase in the level of grant dependence by approximately 1.01 units (assuming other factors remain constant). This result is expected, as transfers are, by their nature, often a direct source of funding for subsidised budgets (grant-dependent budgets).

Share of local taxes and fees in the budget's revenue side (excluding transfers) (X_5): This variable is statistically significant and shows a positive impact on the communities' level of grant dependence. An increase in the share of own tax revenues by one percentage point leads to an increase in the level of grant dependence by approximately 0.27 units. This is a counter-intuitive result and requires further investigation, as growth in own revenues is usually associated with a decrease in grant dependence. A possible explanation is that regions with a higher tax potential receive more transfers (compensations) to perform delegated functions, or that a high tax base simultaneously correlates with high needs (expenditures) that still require subsidies.

The constant coefficient (intercept) means that, assuming zero values for all independent variables (which is a theoretical rather than a practical case), the level of grant dependence (or subsidisation level) of local budgets would be -0.42218. The variables related to management expenditures (X_1), labor costs/wage expenditures (X_2), and capital expenditures (X_3) were found to be statistically insignificant. This may indicate that the current expenditure structure of local budgets is not the primary driver of their grant dependence, in contrast to the volume of received transfers and own tax revenues.

Regression Equation for High-Capacity Communities. Next, we present the regression equation for communities with a high level of financial capacity (Table 4).

Table 4. Coefficients of the regression dependence of grant dependence for communities with a high level of financial capacity. (Source: calculated based on data from Decentralization, 2024)

Variable (Implied)	Coefficients	Standard Error	t-Statistic	P-Value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Y-Intercept	-0.06626	0.011906	-5.56564	4.5E-08	-0.08966	-0.04287	-0.08966	-0.04287
X_1 (0.085)	-0.02122	0.022337	-0.95003	0.342608	-0.06512	0.022678	-0.06512	0.022678
X_1 (0.416)	0.002367	0.018793	0.125961	0.899819	-0.03457	0.0393	-0.03457	0.0393
X_3 (0.154)	0.057327	0.013886	4.128404	4.36E-05	0.030037	0.084617	0.030037	0.084617
X_4 (0.129)	0.218605	0.019624	11.13985	1.29E-25	0.180039	0.25717	0.180039	0.25717
X_5 (0.497)	0.076046	0.012125	6.272094	8.38E-10	0.052218	0.099874	0.052218	0.099874
Regression Statistics					Value			
Multiple R					0.601957			
R-squared					0.362352			
Adjusted R-squared					0.355252			
Standard Error					0.027664			
Observations					455			
Analysis of Variance (ANOVA)								
	df	SS	MS	F	Significance F			
Regression	5	0.195264	0.039053	51.03012	7.57E-42			
Residual	449	0.343615	0.000765					
Total	454	0.53888						

In comparison with the regression equation for communities with a critically low level of financial capacity ($R^2=0.6503$), this model exhibits lower explanatory power. This may indicate that the factors determining subsidization in financially strong communities are more specific than in the general sample, where the transfer mechanism dominates. At the same time, the positive impact of transfers (X_4, $\beta_4= +0.2186$) was preserved for communities with a high level of capacity as well. The value of the coefficient signifies that the higher the share of transfers in the revenues of a capable community,

the higher its subsidy/grant level (or grant dependence). This is an entirely logical result, as transfers (subventions, grants) are a direct source of financing. Even financially capable communities receive large subventions for the execution of state-delegated powers (education, medicine), which formally increases their subsidization/dependence indicator.

The positive impact of own taxes (X_5, Coefficient $\beta_5 = +0.0760$) is weaker. The growth of own taxes is associated with an increase in subsidization/grant dependence. This result, as in the first model, is counterintuitive, but the coefficient is significantly smaller (0.076 versus 0.270) compared to the overall sample. This fuels the hypothesis that capable communities are developing more actively and require additional resources. That is, a high tax base (X_5) emerges where high needs exist (large cities, infrastructure-intensive areas), which necessitate compensatory transfers. However, since the coefficient is smaller than in the general sample, this may indicate that capable communities are better utilizing their own resources, and the effect of dependence is attenuated here.

A positive impact of capital expenditures (X_3, Coefficient $\beta_3 = +0.0573$) was detected, meaning, paradoxically, that an increase in the share of capital expenditures is associated with an increase in subsidization. High capital expenditures are often the result of receiving large investment subsidies or grant funds from the state budget. Since these subventions are accounted for as part of the revenue side of the budget, their receipt artificially inflates the community's subsidization/dependence indicator, explaining the positive sign. In our view, this reflects not so much financial inefficiency as it does the growing need for investment financing in capable communities and the success in utilizing external funding for development purposes.

The determinants related to the efficiency of operational costs (X_1 (management) and X_2 (payroll)) are insignificant. For capable communities, the management of current operational expenditures is not a decisive factor in their subsidy/dependence level. Their subsidization is formed primarily by external financial flows (transfers, which are often linked to capital expenditures) and their own fiscal potential.

To conduct a comparative analysis, we construct a summary table for the coefficients of the regression models that describe the factorial analysis of the subsidy level of Ukraine's territorial communities with critically low and high levels of financial capacity.

Table 5 presents the β coefficients and their statistical significance (Sig) for the common set of independent variables.

Variable	Model 1: β (Sig)	Model 2: β (Sig)	Interpretation
X_1: Share of Operational/Management Expenditures (%)	-0.016 (Insignificant)	-0.021 (Insignificant)	In both groups, it is not a significant factor of subsidization.
X_2: Share of Payroll Expenditures (%)	+0.123 (Insignificant)	+0.002 (Insignificant)	In both groups, it is not a significant factor.
X_3: Share of Capital Expenditures (%)	+0.008 (Insignificant)	+0.057 (Significant)	Polarity of influence: Significant positive impact only in capable communities.
X_4: Share of Transfers (%)	+1.009 (Highly Significant)	+0.219 (Highly Significant)	Strongest positive impact in both models. The coefficient is significantly higher in the overall sample (Model 1).
X_5: Share of Local Taxes (%)	+0.270 (Significant)	+0.076 (Significant)	Counter-intuitive positive impact in both models, but attenuated in capable communities.

Conclusions from the Analysis of Coefficients (Table 5):

1. **Dominance of Transfers and the Fiscal Mechanism: Dominance of Transfers as the Most Potent Positive Determinant of Subsidization in Both Models.**

For communities with a critically low level of financial capacity, the extremely high coefficient $\beta = +1,009$) confirms that the increase in the share of transfers almost linearly increases the subsidy level, which reflects the existing mechanism of fiscal equalization.

For communities with a high level of financial capacity, although the impact of transfers remains significant and positive, the coefficient ($\beta = +0.219$) is significantly smaller. This implies that in capable communities, transfers may be more targeted (subventions rather than equalization grants).

2. The variable “share of local taxes” (X_5) demonstrates a paradoxical positive impact on subsidization for territorial communities with both high and low levels of capacity. However, this positive effect is attenuated when transitioning to the sample of capable communities $\beta_1 = +0.270$ versus $\beta_2 = +0.076$). This empirically confirms the hypothesis that a higher share of own taxes (X_5) arises in regions with higher fiscal needs (population, infrastructure), which are actively developing and require compensatory transfers. However, in capable communities, due to their higher efficiency and capacity to partially cover these needs, the necessity for grants becomes less critical, and consequently, the positive coefficient decreases.

The influence of the share of capital expenditures (X_3) demonstrates the clearest polarity: For communities with a critically low level of financial capacity, spending on capital expenditures has no statistically significant impact on the subsidy level (or grant level). This means that the funds received are directed not toward investment goals but toward consumption goals.

For communities with a high level of financial capacity, a significant positive impact ($\beta = +0.057$) is interpreted as the successful attraction of external financing for development purposes. Capable communities, possessing the resources for co-financing, actively attract investment subventions and grants (which can act as transfers that increase subsidization), whereas communities with lower capacity do not. Capital expenditures in highly capable communities act as a proxy variable for the volume of attracted investment transfers. Thus, regions with higher fiscal capacity simultaneously have higher needs for co-financing, particularly for investment projects, which leads to the receipt of a larger volume of grants — but these grants are a precondition for future financial inflows and are a guarantee of long-term financial sustainability of the communities. Therefore, the target function and quality of spending of grant funds differ significantly between low and highly financially capable communities.

In both models, operational expenditures are not significant determinants of subsidization (or grant dependence). This indicates that this dependence or independence is determined not by the flexibility of managing current costs, but by macro-structural factors (revenues and external financial flows). This reduces the incentives for financial accountability and for the rationalization of operational expenditures, since their reduction does not lead to a statistically significant decrease in fiscal dependence.

Furthermore, while the increase in operational/management expenditures (X_1) negatively correlates with subsidization for high-capacity communities (though insignificantly), it critically deepens subsidization for low-capacity communities (though still insignificant in the final model), which points to a qualitative gap in management effectiveness and the functioning of local self-government bodies of communities with different capacity levels. Consequently, for communities with a critically low level of capacity, the priority is cost optimization, while for communities with a high level of capacity, the priority is stimulating investments.

The attenuation of regression coefficients for highly capable communities supports the assumption that there is a large influence of uncounted institutional factors that determine the development trajectory of financially capable communities. Given the intensification of the influence of non-economic and institutional factors in the formation of the regional financial space under martial law conditions, we adhere to the opinion that these could be behavioral factors, primarily the quality of management decisions, which must be rational and adaptive.

DISCUSSION

The findings of this study have deepened the conceptual approaches to ensuring the fiscal sustainability of territorial communities amidst extreme macroeconomic shocks and military aggression, while establishing the prerequisites for their future financial autonomy. In contrast to existing scientific developments, our research is based on a differentiated approach to the analysis of subsidy-dependency factors. This allowed for the identification of specific functional patterns within polar groups of communities — those with critically low versus high-capacity levels — and, consequently, their varying efficiency in utilizing received funds.

Traditionally, in scientific literature, specifically in the works of Kazyuk (2025) and Shokalo (2022), the emphasis is shifted towards developing integral indicators and methodologies for assessing financial capacity. Instead, we focused on evaluating the causal relationships between the expenditure structure of local budgets and their level of subsidy dependence

based on regression modeling. This enabled us to refute the hypothesis regarding the universality of budgetary determinants' influence across all types of TCs, which constitutes the scientific novelty of our research.

Firstly, we discovered that for communities with low capacity, the level of subsidy dependence correlates almost linearly with the volume of transfers ($\beta = 1.009$). This confirms W. Oates' classical theory of "fiscal illusion," yet in the context of Ukrainian realities, it manifests as a "subsidy dependence trap," where transfers do not stimulate development but merely cover the current operational needs of local self-government bodies.

Secondly, a positive correlation was identified between the share of local taxes and the level of subsidy dependence in both groups of communities (those with critically low and high financial capacity). This result slightly diverges from the conclusions of Abramova (2017) and Pasichnyi (2024), who regard local taxes as an exclusive instrument for strengthening autonomy. Our data may indicate the presence of systemic endogeneity in communities with high tax potential; such communities consequently have higher funding requirements for delegated powers and infrastructure, thus increasing the volume of subsidies received from the state budget. This appears somewhat paradoxical unless one accounts for the institutional factors of subsidization and expanded developmental needs.

Our study supplements the typology of communities based on security factors (front-line, rear, etc.) presented in the works of Voznyak & Patytska (2023), proving that, regardless of geographical location, the key factor for a community's financial stability is the financially responsible behavior of local government bodies.

Furthermore, the results of our analysis demonstrated that expenditure management efficiency is not always a direct lever for reducing subsidy dependence. Our models showed the statistical insignificance of operational expenditure variables for both groups of communities. This suggests that the current system of inter-budgetary relations fails to create incentives for expenditure rationalization: cost reduction does not lead to an automatic decrease in fiscal dependence. This is a critical conclusion pointing toward the necessity of transitioning from quantitative to qualitative regulation, which partially correlates with the "Financial DNA" concept of communities by Belinska & Yasenetskyi (2025). However, while these authors emphasize a theoretical model, we argue that without changing the institutional environment (digitization, transparency, and accountability), the community's "financial code" will remain destructive.

The polarity of the impact of capital expenditures deserves special attention. Unlike USAID studies, our modeling recorded a significant positive impact on subsidy dependence only in high-capacity communities. We interpret this not as inefficiency, but as success in attracting investment subsidies that require co-financing. This highlights that for communities with insufficient financial resources, investment remains an inaccessible tool due to the lack of internal resources, further deepening regional development asymmetries.

Thus, the results revealed the heterogeneity of the link between budgetary subsidies and the financial status of territorial communities, as the mechanisms for stimulating economic development and inter-budgetary equalization operate asynchronously. Therefore, instead of unified solutions during martial law, differentiated strategies must be adopted:

1. For depressed communities, the focus should be on optimization and maintaining minimal resilience ("survival meta-goal").
2. For financially sustainable communities, it is advisable to concentrate on transitioning to Industry 4.0 models and the active use of state aid as a catalyst for private investment and innovation.

Consequently, the article substantiates the need to integrate financial-economic and managerial-behavioral approaches to ensure the more efficient use of resources for the sustainable development of territorial communities.

CONCLUSIONS

The construction and analysis of regression dependencies based on the grouping of territorial communities by capacity level allows for a shift from generalized conclusions about the influence of factors on the subsidy level to differentiated recommendations regarding both the reduction of the subsidy level and the enhancement of the efficiency of fund utilization by communities. This forms the basis for defining the vector for streamlining local budgets and balancing the financial space of the regions.

The interpretation of the obtained results of the regression analysis confirms that the existing regional financial space in Ukraine is a dual, polarized system, where the mechanisms of fiscal equalization and stimulation operate differently depending on the level of financial capacity of the territorial community. Even with the same direction of influence of a given factor, the strength of its impact on the subsidy level differs.

For communities with a critically low level of capacity, the determining factor is the receipt of transfers. On the one hand, this indicates their high systemic dependence on the central budget, and on the other, it points to the inefficient spending of received funds, which are not directed toward investments and thus do not create the foundations for future development.

For highly capable communities, the influence of transfers weakens but retains its significance as a source of co-financing for community development goals.

This necessitates the understanding of the financial space of the regions not merely as a unified system, but as a set of fiscal clusters with different determinants of capacity.

The presence of a positive correlation between subsidization and the share of local taxes in total revenues for both highly and lowly capable communities is empirical evidence of systemic endogeneity and the presence of omitted variables (which we assume to be the quality of management decisions and fiscal development needs) in the intergovernmental equalization system. In other words, current fiscal equalization models do not fully reflect the real fiscal capacity of communities because they inadequately account for the growth of financial needs, the importance of qualitative management decisions, and the level of accountability for fund utilization. The significant positive impact of capital expenditures was detected in capable communities, where it is associated with an increase in subsidization. This indicates that the growing need for investment subsidies and development financing is a function of already existing financial capacity.

The obtained results allow for the formulation of recommendations for state financial policy regarding the ensuring of balanced development of the regional financial space of the country.

The Dilemma of Fiscal Equalization and the Role of the Tax Base

The paradoxical positive correlation between subsidization and the share of own taxes in total revenues for both highly and lowly capable communities creates a dilemma for state fiscal equalization policy aimed at forming a balanced regional financial space. On the one hand, increasing one's own tax revenues is a vital measure for the financial capacity and sustainability of low-capacity communities. On the other hand, increasing the financing of investments in highly capable communities may influence the further increase of their subsidization, although the efficiency of spending the received funds will be fundamentally different.

Therefore, building up the internal tax base can serve as a compensator that will attenuate the subsidization of less developed communities, and as a catalyst that will move highly capable communities onto a trajectory of sustainable development. In this context, it is necessary to develop mechanisms that would guarantee the strengthening of the investment focus of expenditures for less capable communities, to transform them into a tool for attracting financing, and not just a way to cover current needs. The solution to this problem lies in the implementation of a fiscal equalization system that will stimulate local self-government bodies to invest funds in the development of entrepreneurship. For example, this could be achieved through the introduction of additional subsidization criteria that rely on:

- the number of working and newly created small and medium-sized enterprises (SMEs) per capita;
- the volumes of investment in business infrastructure.
- investments in 'green' technologies.

This will contribute to the attenuation of subsidization and ensure positive incentives for rational fiscal behavior of local self-government bodies, aimed at the efficient spending of received funds, increasing self-sufficiency, and building up internal tax revenues by stimulating entrepreneurship development. Concurrently, this will facilitate the transition to the tracks of the green economy, in line with EU goals.

Under wartime conditions, one of the powerful factors of community resilience is the support for small and medium-sized enterprises (SMEs), which ensures a significant number of jobs and the replenishment of local budgets. According to 2025 data, active growth in the registration of new entrepreneurs is observed in several regions of Ukraine (Kyiv, Lviv, Odesa region, Kharkiv, Poltava region), including in frontline territories. This demonstrates the resilience of small businesses even amidst military conflict, which can be enhanced through state financing of support programs, grants, concessional lending, and the creation of business incubators.

An effective solution in this context is the use of a state support tool such as State Aid aimed at supporting small and medium-sized businesses, sustainable development infrastructure, and digitalization. In this case, the opportunity arises to combine the goal of entrepreneurship development with investment stimulation by activating public and private investments in social infrastructure and expanding the tax base of territorial communities, thereby stimulating their sustainable

development. Since all State Aid is recognized as permissible under wartime conditions, abuse in this area can be avoided by increasing the transparency of the granting process. The development of investment strategies and a transparent process for providing State Aid allows for the efficient use of funds, ensuring a multiplicative effect for the local economy.

A key factor for the successful transition of territorial communities onto a trajectory of sustainable development under conditions of public fund savings is the quality of management decisions adopted by local self-government bodies (LSGBs). This entails:

- a scientifically grounded approach to the planning and implementation of community economic policy;
- the implementation of digitalization and openness in decision-making processes;
- increasing transparency and accountability to the community;
- the responsibility of officials for the effective use of resources and adherence to legislation.

Particular attention in this context must be paid to the digital transformation of the community as a necessary condition for systemic coordination of efforts between state regulatory bodies and business entities. This coordination should be aimed at expanding the range of e-services and transitioning to inclusive electronic interaction (e-interaction), which ensures transparency and accessibility of administrative and economic processes at the local level.

The state policy vector for forming a balanced regional financial space must concentrate on creating a stable technological basis for the functioning of the territorial communities' economy, which directly increases the operational capacity of local self-government bodies and local business:

1. Development of fixed and mobile broadband infrastructure (4G, 5G) to eliminate the digital divide and ensure universal access for residents and enterprises.
2. Formation of the technical architecture for e-commerce and e-business, creating new channels of economic activity and expanding the community's tax base.
3. Implementation of the "state in a smartphone" concept with an emphasis on e-business services, which reduces transaction costs for business entities.
4. Digitalization of critical infrastructure (transport, energy, housing, and communal services) in accordance with the EU *acquis Communautaire*, optimizing resource management.
5. Creation of a State Aid mechanism for the startup industry and breakthrough scientific and technical developments through Public-Private Partnership (PPP) models with international financial institutions.
6. Development of a complex of economic incentives and encouragement for technologization, digitalization, and the development of Industry 4.0 among local enterprises, increasing their competitiveness.

The use of State Aid allows the state to perform the function of a catalyst for resource attraction and innovation stimulation at the community level, which directly expands the tax base and promotes the sustainable development of the regions:

The implementation of a complex of adjacent measures regarding State Aid for systemic digital transformations generates a multiplicative effect in adjacent sectors of the community's economy, contributing to the restoration of Ukraine's economic development on the principles of security and resilience. Such a strategy accelerates Ukraine's integration into the EU Single Digital Market, which is part of the transition to a new geopolitical order based on innovative digital technologies.

Thus, the change of approaches to the selection of the object of budget financing and the stimulation of regional investments in the most productive sectors of the economy, currently the IT sector, allows for the achievement of a higher effect regarding the support of territorial communities and the equalization of the regional financial space while expending the same volumes of budgetary funds. The mechanism of higher efficiency shifts to the domain of justified decision-making and organizational factors in the regional policy of the territories. Such a methodologically weighed approach to planning budgetary expenditures and receiving grants from the budget, transparency, public accountability, and business support form a balanced financial space for the regions, ensuring the economic stability and social development of Ukraine.

Priority directions for future research should include the study of institutional determinants of financial behavior. Since econometric modeling revealed the limited influence of traditional expenditure levers on the level of subsidy dependence, there is a scientific necessity to develop a methodology for evaluating "intangible" factors. Specifically, this involves integrating indicators of municipal management quality, corruption risk levels, and the transparency of the budgetary process. This will allow for a deeper understanding of the nature of "subsidy dependence" and the determination of the critical threshold at which the institutional environment begins to dominate purely economic factors.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

All authors have contributed equally.

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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ДИСПРОПОРЦІЇ РЕГІОНАЛЬНОГО ФІНАНСОВОГО ПРОСТОРУ УКРАЇНИ: ЗБАЛАНСОВАНІСТЬ МІСЦЕВИХ БЮДЖЕТІВ І ФІНАНСОВО ВІДПОВІДАЛЬНА ПОВЕДІНКА

Процес фіскальної децентралізації в Україні зіткнувся із системними викликами, посиленими воєнною агресією, що призвело до глибокої асиметрії та поляризації в регіональному фінансовому просторі. Дослідження присвячене критичній проблемі ескалації диференціації фінансової спроможності територіальних громад (ТГ), що створює системний ризик для фіскальної стійкості. Метою цього дослідження є проведення кількісної діагностики фіскальної стійкості територіальних громад та емпірична верифікація ключових бюджетних детермінантів, які впливають на їхній рівень дотаційності (субсидіарної залежності), що має вирішальне значення для формування ефективних фінансових та управлінських рішень. Для цього було проведено диференційований множинний лінійний регресійний аналіз для двох полярних груп громад: із критично низькою та високою фінансовою спроможністю. Основні результати свідчать, що механізм дотаційної залежності визначається переважно фінансовими потоками, а не ефективністю видатків. Для громад із критично низькою спроможністю частка трансфертів є домінантним, високо значущим позитивним детермінантом. Натомість структура видатків виявилася статистично незначущою. Для високо спроможних громад позитивний вплив трансфертів значно послаблений. Важливо, що аналіз виявив контрінтуїтивну позитивну кореляцію між часткою власних податків і дотаційною залежністю в обох групах. Крім того, виявлено, що капітальні видатки мають значущий позитивний вплив лише в спроможних громадах, що вказує на їхній успіх у залученні зовнішніх інвестиційно орієнтованих трансфертів. Основні висновки полягають у тому, що поточна фінансова диспропорція корениться в структурі бюджетних доходів, а не в ефективності оперативних витрат. Подолання цієї проблеми вимагає переходу від зосередження виключно на кількісних факторах (трансферти) до врахування якісних факторів, таких як підвищення фінансової відповідальності та управлінської поведінки місцевих органів влади. Це вимагає розробки диференційованих фінансових та управлінських рішень, адаптованих до конкретного рівня фіскальної спроможності кожної територіальної громади.

Ключові слова: регіональний фінансовий простір, територіальна громада, фінансова відповідальність, фінансова поведінка, регіональна економіка, місцеві бюджети, державна допомога, підприємницька діяльність, сталий розвиток, території

JEL Класифікація: G3, H77, H71, R11