VARNA FREE UNIVERSITY
“CHERNORIZETS HRABAR”

FACULTY OF SOCIAL, BUSINESS AND COMPUTER SCIENCES

DEPARTMENT OF ECONOMICS

SYLWESTER BOGACKI, PHD

ECONOMIC DETERMINANTS AND METHODS OF MEASURING FISCAL STABILITY OF LOCAL GOVERNMENT UNITS

AUTOREFERAT

of a dissertation thesis for the scientific degree “Doctor of Science”,

Professional field 3.8. „Economics”

VARNA 2026

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The dissertation consists of 319 pages and has an introduction, an exposition in four chapters, a conclusion, a bibliography and four appendices. The main text of the dissertation contains eight figures and 78 tables. The list of literature includes 303 titles - monographs, chapters in monographs, scientific articles in Polish and English, legal acts and scientific reports, as well as expert opinions.

The dissertation has been discussed and proposed for defense in front of the scientific jury of the department council of the Department of Economics at the Faculty of Social, Economic and Computer Sciences.

The defense of the dissertation in front of the scientific jury will be held on September 17, 2026 at 1:00 p.m. in the conference hall of VFU "Chernorizets Hrabar" at a meeting of the scientific jury. The materials for the defense are available to interested parties on the university website www.vfu.bg, section "PHD".

I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance and importance of the topic

In recent years, economic research has increasingly emphasised the role of social and environmental determinants of development, inclusive growth, and decentralised public governance. As a result, the traditional paradigm of profit maximisation has gradually been complemented by a broader perspective that highlights sustainable development and equitable resource redistribution, particularly at the local government level. At the same time, the explanatory dominance of neoliberal market fundamentalism has weakened, while institutional models closer to ordoliberal solutions have gained importance due to their association with greater macroeconomic stability and more balanced income distribution.

Financial strategies of local government units may generally be classified as aggressive, balanced, or conservative. The aggressive strategy relies on extensive use of debt instruments to support investment-driven development. The balanced strategy aims to maintain financial equilibrium while preserving liquidity and limiting liabilities. The conservative strategy prioritises fiscal stability and intergenerational responsibility but may constrain development capacity.

Fiscal sustainability is typically defined in terms of long-term solvency derived from the intertemporal government budget constraint. Within the European Commission framework, fiscal sustainability is assessed using indicators S0, S1, and S2, which measure short-, medium-, and long-term fiscal risks, particularly in the context of demographic ageing and structural fiscal pressures.

Firstly, in the context of ongoing territorial decentralisation and the deteriorating fiscal condition of many countries after the global financial crisis, maintaining an appropriate balance between ensuring the solvency of local government units and supporting sustainable local development has become a major policy challenge. This problem is also evident in Poland, where local government debt increased significantly between 2009 and 2024, accompanied by a noticeable decline in the share of investment expenditure in total local budgets. Such tendencies may indicate a gradual shift from development-oriented borrowing toward debt financing current needs, which may weaken the long-term development capacity of local communities and reduce their ability to absorb EU structural funds.

Secondly, fiscal sustainability in the local government subsector remains less explored than at the level of the general government sector. This results from terminological ambiguities, conceptual diversity in defining fiscal instability, methodological difficulties in adapting private-sector financial indicators to public-sector conditions, and limited availability of consistent long-term statistical data. These constraints justify the need for further research in this area and confirm the relevance of the dissertation topic.

Thirdly, the concept of fiscal sustainability has evolved beyond the traditional understanding of solvency and increasingly includes issues related to fiscal policy optimisation, resilience to macroeconomic shocks, and intergenerational equity. At the local level, fiscal sustainability is generally interpreted as the capacity of local governments to provide public services at an adequate level while maintaining the ability to meet financial obligations without excessive growth of public debt. This perspective also reflects the importance of maintaining allocative, redistributive, and stabilisation functions of fiscal policy in conditions supporting long-term socio-economic development.

Fourthly, although econometric approaches to testing fiscal sustainability—such as stationarity tests, cointegration analysis, fiscal reaction functions, and generational accounting—are widely applied at the level of the entire public finance sector, their application to the local government subsector remains limited. As a result, analyses at this level are still largely based on synthetic budget indicators, particularly operating balances, which - despite their interpretative usefulness—do not fully reflect the complexity of fiscal stability processes.

Finally, empirical research confirms that fiscal sustainability of local governments depends on a wide range of determinants, including demographic, economic, institutional, and political factors. Previous studies indicate the importance of population dynamics, labour market conditions, expenditure growth patterns, fiscal equalisation mechanisms, and the quality of public financial management.

2. Objective of the dissertation work

The objective of the dissertation is grounded in the recognition that the concept of fiscal stability of local government units (LGUs) remains insufficiently conceptualised, methodologically fragmented, and empirically underdeveloped in both national and international literature. Despite the growing importance of fiscal sustainability in the context of decentralisation processes, increasing public expenditure pressures, and macroeconomic volatility, existing research has largely focused on narrow financial solvency measures, often neglecting the multidimensional and systemic nature of fiscal stability at the local level.

In response to these deficiencies, the primary objective of the dissertation is **to demonstrate the multidimensional character of fiscal stability of local government units, to develop a comprehensive and operational framework for its assessment, and to identify the key determinants shaping its dynamics**, with particular emphasis on municipalities as the basic units of local governance in Poland. This objective is realised through the construction of an original, theoretically grounded and empirically verifiable set of indicators enabling the measurement of fiscal stability in a manner that transcends traditional legalistic and creditworthiness-based approaches.

The **dissertation adopts** the assumption that fiscal stability should be understood not merely as the ability of local governments to meet short- and long-term financial obligations, but as a broader systemic condition reflecting the capacity of local public finance systems to perform their socio-economic functions in a continuous, effective and resilient manner, even under conditions of external shocks and structural disturbances. This interpretation aligns with contemporary research trends emphasising resilience, sustainability, and adaptive capacity in public-sector financial management, particularly in the context of increasing exposure to global risks such as economic fragmentation, demographic change, climate transition, and fiscal decentralisation pressures.

From a theoretical perspective, the dissertation aims to contribute to the refinement of conceptual frameworks by **integrating fiscal stability with related concepts such as financial autonomy, budgetary sustainability, and intergenerational equity**, thereby addressing the ambiguity and inconsistency observed in existing literature. Particular attention is devoted to clarifying the distinction between economic and political interpretations of fiscal stability, which is essential for developing analytically robust and policy-relevant measurement approaches.

From a methodological standpoint, the objective of the dissertation is to **develop a universal and multidimensional measurement model of fiscal stability**, incorporating elements derived from financial analysis, banking methodologies of creditworthiness assessment, and public-sector performance evaluation. The proposed approach introduces a structured system of indicators capturing multiple dimensions of fiscal stability, including liquidity, long-term solvency, budget flexibility, financial independence, service provision capacity, and development potential. This methodological innovation responds directly to the lack of standardised and comprehensive tools for assessing the fiscal condition of local governments in comparative and dynamic contexts.

From an empirical perspective, the dissertation seeks to **identify and quantify the impact of both endogenous (internal) and exogenous (external) factors influencing fiscal stability**, including economic, socio-demographic, institutional, and spatial determinants. The analysis focuses on Polish municipalities while maintaining the universality of the proposed framework, allowing for its application in other European Union countries characterised by similar models of decentralised public governance. This empirical dimension is particularly relevant in light of contemporary challenges such as increasing fiscal decentralisation, rising public-service expectations, and the need for sustainable local development financing.

Furthermore, the dissertation addresses emerging issues highlighted in recent international discourse, including:

- the growing importance of **fiscal resilience** in the face of macroeconomic shocks (e.g., financial crises, pandemics, geopolitical instability),
- the role of **multi-level governance** in shaping local fiscal outcomes,
- the need to integrate **non-fiscal determinants** such as governance quality, institutional capacity, and social capital into fiscal analysis,
- and the increasing relevance of **long-term sustainability considerations**, including intergenerational justice and environmental constraints.

In summary, the dissertation's objective is to advance the theoretical understanding, methodological robustness, and practical applicability of fiscal stability analysis in local government finance by proposing an integrated, multidimensional and transferable framework that reflects the complexity of contemporary socio-economic and institutional environments.

3. Dissertation tasks

The dissertation tasks are formulated in direct response to the identified theoretical, methodological, and empirical gaps in the literature on fiscal stability of local government units (LGUs). These tasks are designed to operationalise the main research objective by translating it into a coherent set of analytical, modelling, and empirical procedures that enable both the conceptual advancement and practical measurement of fiscal stability in decentralised public finance systems.

At the core of the dissertation lies a **methodological task of a structural and integrative nature**, consisting in the development of a model-based approach that captures the relationships between the components of the fiscal structure of local government units and their internal and external environments. This task reflects the assumption that fiscal stability is not a static financial condition but a **dynamic and multidimensional process**, shaped by interactions between endogenous socio-economic potential and exogenous institutional and macroeconomic conditions. The proposed modelling framework enables the identification of causal and feedback relationships between financial decisions of local governments and their development outcomes, thereby contributing to the advancement of systemic approaches to public finance analysis.

A central task of the dissertation is also the **development of an original concept for measuring fiscal stability of municipalities**, based on a multidimensional indicator system integrating elements of financial analysis, public-sector accounting, and banking methodologies of creditworthiness assessment. The designed measurement framework goes beyond traditional approaches limited to legal constraints or solvency indicators, and instead captures fiscal stability as a composite phenomenon encompassing liquidity, sustainability, flexibility, development capacity and intergenerational equity. Importantly, the universality of the proposed approach allows its application in other European Union countries characterised by a three-tier system of local government, thus enhancing its comparative and policy relevance.

Firstly, the dissertation undertakes the task of **assessing the fiscal stability of municipal government units in a multidimensional perspective**, taking into account both short-term and long-term solvency, the capacity to provide public services, fiscal flexibility, financial autonomy, local development potential, and the principle of intergenerational justice. This comprehensive assessment reflects contemporary approaches in public finance research, which increasingly emphasise the need to integrate financial, social and developmental dimensions into the analysis of local government performance.

Secondly, the research addresses the task of **identifying structural differences in fiscal stability across various administrative types of municipalities**, including urban, rural, and urban-rural units. This task is particularly important given the high heterogeneity of municipalities in terms of their socio-economic structures, demographic characteristics, and institutional capacities. By distinguishing between different types of local governments, the dissertation contributes to a more nuanced understanding of fiscal stability and avoids the limitations of aggregate or uniform analytical approaches.

Thirdly, the dissertation undertakes the task of **analysing the impact of internal and external determinants on the dynamics of fiscal stability over time**. Internal factors include the endogenous socio-economic potential of municipalities, such as income structure, labour market conditions, demographic trends, and institutional capacity. External factors comprise macroeconomic conditions, legal and regulatory frameworks, intergovernmental fiscal relations, and spatial-environmental characteristics. This task aligns with contemporary research emphasising the role of **multi-level governance and institutional embeddedness** in shaping local fiscal outcomes, particularly in the context of increasing exposure to global economic shocks, fiscal decentralisation pressures, and policy constraints imposed by supranational institutions.

Fourthly, the dissertation aims to **identify statistically significant determinants of fiscal stability**, including economic, socio-demographic, institutional and environmental-spatial variables. This task is realised through the application of advanced statistical methods, including non-parametric tests, correlation analysis and regression modelling. By identifying key explanatory variables, the research contributes to the development of evidence-based frameworks for diagnosing fiscal risks and designing targeted policy interventions.

An additional, implicit task of the dissertation is the **integration of multiple sources of financial and statistical information** into a coherent analytical framework. The use of budgetary and financial reporting data, combined with socio-economic indicators from national statistical systems, enables a comprehensive assessment of both the flow-based and stock-based dimensions of local public finance. This approach responds to increasing demands in international research for **data-driven and analytically robust evaluation tools** supporting public-sector decision-making.

Finally, the dissertation tasks are embedded within a broader research agenda addressing emerging challenges in public finance, including fiscal resilience, sustainability of local development, and the role of local governments in ensuring long-term socio-economic stability. By linking the measurement of fiscal stability with concepts such as intergenerational equity and sustainable development, the dissertation contributes to the evolution of fiscal analysis from a narrow financial perspective toward a **holistic and forward-looking framework** reflecting the complexity of contemporary public governance systems.

4. Object and subject of the study

The object and subject of the study are defined in a manner consistent with the adopted research problem, methodological assumptions, and empirical objectives, reflecting the complexity and multidimensionality of fiscal stability in local government systems. The research is situated within the field of public finance and institutional economics, with a particular focus on the functioning of decentralised fiscal systems and the capacity of local government units (LGUs) to ensure long-term financial sustainability under conditions of dynamic socio-economic change.

The **object of the study** comprises local government units at the basic (municipal) level, which constitute the most functionally and financially autonomous tier within the multi-level governance system. The empirical analysis covers all municipalities in Poland, representing a highly heterogeneous population differentiated in terms of size, administrative status, socio-economic potential, demographic structure, and spatial conditions. This diversity provides a robust analytical basis for examining the variability of fiscal stability and identifying its structural determinants. The selection of municipalities as the primary object of the study is justified by their central role in delivering public services, shaping local development policies, and managing a broad set of financial instruments, including revenue-generation mechanisms and expenditure allocation decisions. Moreover, municipalities operate at the intersection of local autonomy and external institutional constraints, making them particularly suitable for analysing the interplay between endogenous and exogenous factors influencing fiscal outcomes.

The **subject of the study** concerns the fiscal stability of local government units, conceptualised as a multidimensional and dynamic phenomenon encompassing the capacity of municipalities to maintain financial balance, ensure the continuity and quality of public service provision, and support long-term socio-economic development while respecting the principle of intergenerational equity. Unlike traditional approaches focused primarily on financial solvency or budgetary balance, the dissertation adopts a broader analytical perspective, in which fiscal stability is examined through several interrelated dimensions, including short-term liquidity, long-term solvency, budgetary flexibility, financial independence, public service capacity, and development potential.

The subject of the research is operationalised through the construction of a synthetic measure – the **Fiscal Stability Index (FSI)** – which integrates multiple diagnostic variables into a coherent analytical framework. This approach reflects the assumption that fiscal stability cannot be directly observed or measured using single indicators, but rather requires a composite methodology capable of capturing its complex and multidimensional nature. The FSI enables not only the assessment of the level of fiscal stability of individual municipalities but also the analysis of its differentiation across comparable units and its evolution over time.

From a methodological perspective, the subject of the study is further embedded in a **two-stage research design**, combining multidimensional comparative analysis (MCA) with panel data econometric modelling. In the first stage, the research focuses on the construction of the FSI and the comparative assessment of municipalities within homogeneous groups using benchmarking techniques. This allows for the identification of relative positions of individual units and the detection of structural disparities in fiscal stability. In the second stage, the analysis is extended to the identification of statistically significant determinants of fiscal stability using panel data regression models, which incorporate both cross-sectional and temporal dimensions of the phenomenon. This approach enables the disentangling of the effects of internal (endogenous) and external (exogenous) factors, including economic, socio-demographic, institutional and environmental-spatial variables.

In addition, the study incorporates insights from recent international research, which increasingly highlights the importance of **fiscal resilience**, **adaptive capacity**, and **multi-level governance** in the analysis of public-sector financial stability. In this context, fiscal stability is not only a function of financial indicators but also a reflection of institutional quality, governance effectiveness, and the ability to respond to external disturbances such as economic crises, demographic changes, or policy shifts at the national and supranational levels.

. In summary, the object and subject of the study are defined in an integrated manner, combining a clearly delineated empirical domain (municipalities as units of analysis) with a theoretically and methodologically advanced conceptualisation of fiscal stability as a multidimensional, dynamic, and policy-relevant phenomenon

5. Main research question and hypothesis

The main research question focuses on two closely related issues:

ONE: How can the multidimensional fiscal stability of local government units be conceptualised, measured and empirically assessed using a comprehensive and transferable indicator-based framework?

SECOND: What are the key internal and external determinants shaping the level and dynamics of fiscal stability of municipalities, taking into account their structural diversity and institutional context?

The following statement can describe the main research hypothesis (H0)*: the fiscal stability of local government units is complex and multidimensional, being the result of not only systemic conditions inherent in the public finance sector itself, but also factors coming from outside it, of a diverse nature and origin.*

The main hypothesis was subordinated to the following **detailed hypotheses** (**H1-H5**), which were verified in the empirical part:

H1: Maintaining long-term solvency is not a sufficient condition to ensure the fiscal stability of municipalities, because its guarantee requires a harmonious development of all dimensions of the phenomenon under study.

H2: There is a relationship between the extent of fiscal stability and the administrative type and size of the municipality.

H3: The fiscal stability of municipalities fluctuates over time, with the amplitude being different in different types of municipalities.

H4: Changes in the scope of fiscal stability of municipalities, in particular types of municipalities, are caused to a varying extent by the influence of internal factors (originating from their endogenous potential) and external factors (originating from their environment).

H5: The scope of fiscal stability in Polish municipalities is primarily explained by economic and demographic factors, with their impact varying across different types of municipalities. Analysis can be based on a proprietary set of indicators measuring fiscal stability.

Research procedure. In order to achieve the empirical objectives outlined in the previous subsection, the research process was divided into two main stages. In the first stage, using multidimensional comparative analysis methods, a synthetic **Fiscal Stability Index (FSI)** was constructed, allowing for the assessment of the fiscal stability of individual municipalities in relation to their reference groups and for the analysis of its changes over time, taking into account the impact of external conditions (similarly affecting all LGUs) and internal conditions (specific to individual municipalities). In the second stage, panel data regression was used to identify statistically significant variables affecting the fiscal stability of Polish municipalities.

Stages of the research process:

Stage one*: multidimensional comparative analysis => obtaining complete and reliable empirical data from aggregated municipal financial data => selection of diagnostic features reflecting the criteria for assessing fiscal stability => classification of the municipalities under study into relatively homogeneous groups*

=> determination of the FSI (Fiscal Stability Index) => assessment of the degree of variation in fiscal stability between municipalities.

Stage two***: identification of variables determining the fiscal stability of the municipalities under study (panel data regression) => selection of explanatory variables for the panel regression model, taking into account economic, social and institutional conditions => assessment of the impact of individual external determinants on the economic stability of the municipalities under study.***

6. Brief description of the structure and limitations

6.1 Brief Description of the Thesis

The dissertation is a comprehensive theoretical and empirical study of the fiscal stability of local government units, structured into four chapters that integrate conceptual analysis, institutional context, and advanced quantitative modelling, including the construction of a synthetic Fiscal Stability Index (FSI) and panel data regression analysis. Based on a full population study of all Polish municipalities, the research develops a multidimensional and universal framework for measuring fiscal stability, providing both scientific contribution and practical recommendations applicable to decentralised public finance systems in other countries.

6.2. Limitations of the research process

Firstly, it is difficult to strike the right balance between ensuring the financial security and solvency of local government units and optimally meeting the needs of the local community and ensuring sustainable development, especially in times of crisis. Local government authorities do not have adequate economic policy instruments, including fiscal policy, to counteract economic crises and actively influence the direction of future socio-economic development.

Secondly, the high share of fixed expenditures in the total expenditure structure may discourage local government units from pursuing development policies and actively exploiting their own socio-economic potential. This does not mean, however, that local government units should not prioritise healthy finances, a good financial condition, and fiscal stability. The fiscal stability of local government units is influenced by a number of diverse factors, both dependent and independent of them. These factors have a direct or indirect, negative or positive impact on the level of income, expenditure, results, debt, and the socio-economic potential of local government units (including financial and income, investment, and development potential).

Thirdly, research on the fiscal stability of municipalities faces a number of limitations. The main ones include limited decentralisation of finances, instability of regulations, weak social control, lack of efficiency analysis, and imperfections in planning. Additionally, an important factor is the politicization of local government, limited accountability of decision-makers, and a lack of transparency in local government finances (limited decentralization of public finances, unstable legal regulations, weak social control, lack of efficiency analysis, lack of financial transparency, limited accountability of decision-makers, the politicization of local government, and insufficient oversight of the collection and expenditure of funds (local government actions in this area are often ad hoc rather than systematic).

Fourthly, there are issues related to social, demographic, environmental, and political factors that may affect the possibility of implementing the developed solutions into the economic system. These include:

- the type of factors taken into account in the activities of local government units – financial and non-financial factors,
- the ability of local government units to influence a given factor – dependent factors (controlled by local government units) and independent factors (not controlled by local government units),
- the source of the factors – exogenous (external) factors and endogenous (internal) factors,

- the possibility of unambiguously determining the directions of influence of a given factor on the fiscal stability of local government units – objective factors (the assessment of the factor is unambiguous and does not depend on the attitude of the assessing entity) and subjective factors (the assessment of the factor depends on the assessing entity due to the ambiguity of the signals generated by the factor),
- a system of tasks established by applicable competence laws, as well as the scope of tasks entrusted to local government units in the field of government administration; local government units decide on the methods and qualitative scope of the performance of tasks resulting from applicable legal regulations and adopted for implementation based on local law
- budgetary constraints (fiscal rules) concerning: expenditure (e.g. statutory designation of certain expenditure as mandatory), deficit (requirement to balance current revenue with current expenditure), debt and debt servicing payments (individual debt ratio),
- quality of legal regulations (frequent changes, temporary solutions, unreliable consultations, secret drafts, parliamentary amendments, haste, lack of concept, overregulation reduces the quality of applicable law),
- supervision of local government units is primarily based on the criterion of legality; however, legal regulations do not protect the local community from ineffective decisions made by local government officials (the problem of the effectiveness and efficiency of supervisory and control bodies over local government units);
- size of the local government unit – determines the effectiveness of development policy, the ability to perform tasks cheaply, and the functioning of local (self-government) democracy,
- the government's socio-economic policy – its objectives and priorities, as well as related strategies and programs at the national and regional levels, determine

the scope and type of public tasks and the methods and sources of their financing at the central and local government levels,

- conflicts between the decision-making body and the executive body, as well as between professionals (advisors) and employees of the local government unit,
- the organisational structure of the local government office, the organisational and legal forms of entities performing local government tasks, and the organisational culture of local governments style and type of leadership.

II. SCOPE AND STRUCTURE OF THE DISSERTATION

The presented dissertation includes 319 pages and consists of an introduction, four chapters, a conclusion, a bibliography, and four appendices (appendix 1-4). The main text of the dissertation contains eight figures and 75 tables. The individual chapters presented in the table of contents are divided into four subsections. Each chapter contains a practical summary. The dissertation includes a final summary containing practical conclusions from the research and recommendations for economic practice. The bibliography consists of 303 items - monographs, chapters in monographs, scientific articles in Polish and English, legal acts and scientific reports and expert opinions.

Statistical analysis tools were used in the preparation of the dissertation, such as: Mann-Whitney U test; Wilcoxon signed-rank test; Kruskal-Wallis ANOVA test; Independence test$\chi 2\chi 2$; Tests for the structure index; Pearson r covariance and correlation; Spearman's Rxy / rho correlation; and Statistical regress modelling. Therefore, the research was limited to all Polish local government units, and the results obtained, including the methods of measuring fiscal stability, are universal in nature and can be applied in any country, assuming that local government units have financial autonomy (i.e. they have their own sources of tax revenue). The versatility, multidimensionality, and precision of the research results obtained made it possible to use the multidimensional comparative analysis (MCA) method, which allows for a comprehensive assessment of the fiscal stability of the municipalities under study, taking into account their various dimensions, rather than relying solely on individual indicators (or measures).

Dissertation structure:

Chapter 1

FINANCIAL OPERATIONS AND ECONOMIC POLICY OF LOCAL GOVERNMENT UNITS

1.1 Public sector finance in the context of public debt and the process of decentralisation of public finances

1.2 Debt of local government units and principles of municipal financial management of LGUs

1.3 The structure of local government budgets

1.4 Practical conclusions of an application nature

Chapter 2

ECONOMY OF MUNICIPALITIES AND THE CREATION OF FINANCIAL STRATEGIES

2.1. Economic results of municipalities in 2019-2024 - expenditure and its structure in static and dynamic terms

2.2. Debt of local government units and financial decision models in the fiscal stability strategy of a local government unit’s

2.3. The economic condition of local government units and its measures

2.4. Practical conclusions of an application nature

Chapter 3

FISCAL STABILITY AND ITS ECONOMIC CONDITIONS

3.1. Fiscal stability, its models and economic determinants in the context of public finance theory – a literature review

3.2. Approaches and methods for examining and classification of factors affecting the fiscal stability of local government units

The **first chapter** presents the financial management and economic policy of local government units in Poland. It presents various scientific views on the phenomenon of stability, taking into account different research perspectives from the area of economic sciences. At the beginning, the understanding of stability in economic theory is characterised, mainly in the context of micro- and macroeconomic stability, in static and dynamic terms, in the short- and long-term horizon, from the point of view of positive (descriptive) and normative (postulative, evaluative) economics. Reference is also made to the problem of economic stabilisation, understood as the process of restoring macroeconomic equilibrium or the implementation of the stabilisation function by the state. Considerations are conducted in the context of two main paradigms of modern macroeconomics, i.e. classical (and neoclassical) and Keynesian (and new Keynesianism).

Public sector finances were also analysed in the context of public debt and fiscal stability. It was noted that public finances must be viewed from many perspectives; they must be interpreted dynamically, i.e. over a certain period of time. A glance, a snapshot at just one point in time, is not enough. In the analysis of public finances, it is not only necessary to review historical data but also to assess potential future scenarios, i.e., forecasts of threats to public finances. In the assessment of the state of public finances, in addition to stability, the efficiency and structure of expenditures are also important. Because even in a situation where financial stability is not threatened, public expenditures may be ineffective; they may be directed to areas that are not developmental. In addition to the strictly financial assessment, public finances as a system should also be assessed, whether they are transparent, complete, and compliant with procedures. The issues of decentralisation of public finances are also discussed, taking into account the debt of local government units. The basic principles of financial management of local government units are also analysed, taking into account the analysis of the structure of local government budgets. The chapter ends with practical conclusions of an applied nature.

The **second chapter** focuses on the systemic conditions of fiscal stability, resulting from the achievements of the theory of fiscal federalism and Polish systemic and legal solutions. The reasons for interest in this research issue are discussed, as well as the arguments for the need to separate issues related to the fiscal stability of local government units from all considerations devoted to the stability of the entire public finance sector. In the next part, the definition of fiscal stability for local government units is formulated against the background of various other concepts used in the literature on the subject, which are employed to objectively assess the financial situation of local government units, highlighting their specific features. An attempt is also made to identify the general requirements conducive to achieving stability, as well as the accompanying barriers in the trends of first and second-generation fiscal federalism. These theoretical postulates are then confronted with selected components of the local government finance system in Poland.

This chapter presents aggregated economic results of municipalities in 2019-2024, along with an analysis of the structure in static and dynamic terms. It also presents models of financial decisions in the fiscal stability strategy of a local government unit and original measures of the economic condition of municipalities. The chapter ends with practical conclusions of an applied nature.

The **third chapter** is devoted to analysing the factors that influence the fiscal stability of local government units. The first part classifies them according to various criteria, from which the following were selected for further consideration: (1) the criterion of the nature of the factor, based on which institutional, economic, demographic, social and environmental-spatial factors were distinguished; (2) the criterion of sources of origin, allowing for the separation of internal and external factors. The next part of the chapter contains an in-depth description of the conditions: institutional, economic, resulting from the economic situation of the country and the internal potential of individual local government units; demographic, social and environmental-spatial determinants of the fiscal stability of local government units. Additionally, the potential impact on the finances of local government units was highlighted. The following systemic conditions of fiscal stability of local government units, along with the classification of stability factors and methods of measuring stability. The summary of the considerations is a comprehensive compilation of the results of Polish and foreign empirical research on fiscal stability factors.

The **fourth chapter** addresses issues related to measuring fiscal stability in local government units. The essence and main objectives of this measurement are presented, as well as the main reasons for the increase in its importance. The main sources of difficulties related to such measurement are also indicated, which are manifested both in the lack of an appropriate methodological approach, including generally accepted theoretical frameworks and methods of selecting measurable objects (features), as well as in the failures accompanying attempts to implement these solutions into practice and use them in a preventive function in order to counteract the destabilization of local government finances. Additionally, the dimensions of fiscal stability for local government units, which were used in the empirical part of the monograph to evaluate fiscal stability in local government units in Poland, are discussed in more detail. Considering the dynamic nature of fiscal stability, reference is made to the issue of assessing the scale of adaptation possibilities of local government finances, which is reflected in the characteristics of issues - important from the point of view of the research problem - such as the susceptibility of local government units to financial risk and the scope of their fiscal slack. Based on the study of the literature on the subject, a general characterisation of fiscal stability measures was made, and two basic approaches to this issue were identified, i.e. methods based on indicator analyses and methods referring to an aggregated (synthetic) measure of fiscal stability. The main advantages and disadvantages of both methods were indicated.

The main scientific contribution of this work is the use of a methodology that involves a review of literature, legal acts, and secondary data, as well as conducting our own research on the fiscal stability of all Polish local governments. It is worth noting that the author's own research, conducted on a representative sample of over 2,400 local governments, allows for the generalisation of conclusions to the entire population (together with a set of financial indicators), creating universal conclusions and thus increasing the scientific value of the dissertation. Furthermore, it should be explained that there are few studies in Polish literature on the functioning of methods for measuring fiscal stability based on the entire local government sector and sophisticated statistical data modelling tools. Apart from a few excerpts from books and scientific articles, there is still a lack of publications in this area.

In most bibliographic references, the issue of fiscal stability of local government units is treated in a fragmentary manner and often analysed not as a separate subject of research, but rather as a side issue to other related topics. There is also a noticeable lack of studies that take into account the many dimensions of this stability using a single aggregate indicator. The relatively few empirical studies that have attempted to construct synthetic indices have primarily served to assess not fiscal stability, but rather financial condition, a narrower category than stability, which is mainly static in nature. Researchers typically focus on a single selected fiscal period, disregarding the need to consider the financial situation of local government units in a dynamic perspective that encompasses different time horizons.

III. SYNTHESIZED EXPRESSION OF THE DISSERTATION

Chapter 1. Financial operations and economic policy of local government units

The first chapter provides the theoretical and institutional foundation for analysing the fiscal stability of local government units. It explains the role of public sector finance, decentralisation of public tasks and public revenues, local government debt, and the principles of municipal financial management. The chapter demonstrates that the financial condition of local government units cannot be assessed only through the prism of debt limits or formal compliance with statutory indicators. A broader economic perspective is required, one that includes the ability of municipalities to finance public services, maintain development capacity, ensure budgetary flexibility and protect long-term financial sustainability.

This chapter also shows that the financial stability of local governments depends on the balance between decentralised responsibilities and the actual financial resources available to municipalities. The mismatch between assigned public tasks and available revenues may generate structural fiscal pressure, especially when local governments are expected to implement development policies while simultaneously maintaining debt discipline. Therefore, the chapter justifies the need to distinguish local fiscal stability from the general stability of the public finance sector.

Chapter 2. Economy of municipalities and the creation of financial strategies

The second chapter focuses on the economic condition of municipalities and the financial strategies used by local government units. It analyses municipal revenues, expenditures, debt structures and operating results in static and dynamic terms. Particular attention is paid to the role of own revenues, operating surplus, current expenditure, capital expenditure and debt service as key components determining the real financial capacity of municipalities.

The chapter develops the argument that fiscal stability is not only a matter of maintaining budgetary balance, but also of creating sufficient financial space for development. Municipalities with stronger own-revenue potential, higher operating surpluses and greater budgetary flexibility are better prepared to finance investment, absorb EU funds and respond to external shocks. The analysis also indicates that restrictive debt rules, although important for fiscal discipline, may limit the investment capacity of municipalities, especially when their own contribution is required for externally co-financed projects.

Chapter 3. Fiscal stability and its economic conditions

The third chapter presents the conceptual and analytical framework of fiscal stability. It systematises approaches found in the literature concerning financial condition, financial health, budgetary stability, fiscal sustainability and financial autonomy of local government units. The chapter demonstrates that these categories are often used interchangeably, although they do not have identical meanings. Fiscal stability is therefore defined as a broader and more dynamic category than financial condition, because it includes not only current solvency, but also development capacity, resilience, financial independence and intergenerational equity.

The chapter also identifies the main groups of factors influencing the fiscal stability of municipalities. These include institutional, economic, demographic, social and environmental-spatial determinants. A key conclusion is that fiscal stability results from the interaction between internal factors, such as the socio-economic potential of a municipality, and external factors, such as macroeconomic conditions, legal regulations and intergovernmental fiscal relations. This chapter creates the theoretical justification for constructing a multidimensional measurement model instead of relying on isolated fiscal indicators.

Chapter 4. Fiscal stability of Polish LGUs in 2006–2023 and its main determinants

The fourth chapter constitutes the empirical core of the dissertation. It presents the author's research model, the procedure for measuring fiscal stability and the results of empirical analysis covering Polish municipalities. The study uses multidimensional comparative analysis to construct a synthetic Fiscal Stability Index, which allows municipalities to be assessed in relation to comparable reference groups. This approach is particularly important because Polish municipalities are highly heterogeneous in terms of size, administrative status, income potential, public tasks and socio-economic conditions.

The empirical model includes budget indicators, per capita indicators and debt-related indicators. These measures reflect short-term liquidity, fiscal solvency, public-service solvency, financial self-reliance, investment capacity, debt burden and development potential. The use of benchmarking makes it possible to compare municipalities only with similar units, which strengthens the objectivity of the assessment. The dissertation also applies entropy-based weights, allowing the importance of individual diagnostic variables to change over time and across municipality types.

The second empirical stage uses panel regression modelling to identify statistically significant determinants of fiscal stability. The results show that fiscal stability is shaped by both internal and external factors, but the internal conditions of municipalities play a particularly important role. The analysis confirms the significance of demographic potential, own-revenue capacity, local economic activity, unemployment, tourism functions, investment capacity and financial autonomy. The findings also indicate that rural and urban-rural municipalities show greater stability over time, while county-level cities and metropolitan municipalities experience stronger fluctuations.

General synthesis of the dissertation

The dissertation fills an important research gap in the literature on local government finance by proposing a multidimensional, dynamic and empirically verified model for assessing the fiscal stability of municipalities. Its main scientific contribution lies in moving beyond narrow approaches based on statutory debt limits, banking criteria or simple financial ratios. Instead, the dissertation develops an integrated framework combining fiscal solvency, service capacity, financial autonomy, development potential and intergenerational equity.

The study confirms that fiscal stability should be understood as the long-term ability of local government units to finance public tasks, maintain liquidity, support local development, manage debt responsibly and adapt to changing socio-economic conditions. The proposed Fiscal Stability Index offers a practical and transferable tool for diagnosing the financial position of municipalities, ranking comparable units, identifying weaknesses and supporting strategic decision-making.

The dissertation also demonstrates that the fiscal stability of municipalities is not determined solely by macroeconomic or legal conditions. It is strongly influenced by endogenous local factors, including economic activity, demographic trends, quality of financial management, revenue autonomy and investment capacity. This finding is particularly important for local policy, because it shows that municipalities are not only passive recipients of external conditions but active actors shaping their own fiscal resilience.

In methodological terms, the dissertation combines multidimensional comparative analysis, benchmarking, entropy-based weighting, the Malmquist index and panel regression modelling. This integrated approach provides a more precise and dynamic assessment of fiscal stability than traditional static measures. As a result, the dissertation offers both theoretical advancement and practical value for public finance management, local development policy and comparative studies of local government systems in other European countries.

The indicators used to estimate the level of financial condition of local government units primarily use financial data included in the financial plans of these units. These values, and therefore the financial condition, are determined by many factors, which are, among others:

(a) external socio-economic factors, such as tax levels, inflation levels, and unemployment rates, which affect both the level of citizens' demand for public services and the costs of providing social services,

(b) changes in GDP,

(c) The political cycle proposes to analyse the condition of local government sector entities in the context of the economic situation (sector's contribution to GDP).

In local government practice, the Ministry of Finance and the Regional Audit Chambers primarily use two synthetic indicators referred to in the Public Finance Act to assess the financial condition of local government units. They concern the operating budget result (Article 242) and the ability of local government units to incur liabilities (Article 243). The latter indicator (IDI) – individual debt indicator) is perceived as an instrument of safe development policy and an instrument of disciplining local government units. Compliance with the rules referred to in the aforementioned provisions allows local government units to adopt one-year (budget) and multi-annual financial plans (multi-annual financial forecast) without interference from supervisory authorities. This is particularly important in those local government units that have high financial burdens and are forced to exercise great caution when incurring new credits and loans.

For the purposes of assessing the financial condition of local government units, understood in accordance with the concept adopted by the authors in the study, it is proposed to use complex measures relating to the level of financing of expenditures that allow for increasing the scope and standard of services provided to the local community, which, according to the authors, are better measures in this respect than such simple measures as the share of current expenditures in the total spending of a given local government unit or current expenses per capita. Higher values of these simple measures do not necessarily mean increased costs for financing the current needs of residents. An element of current spending is expenditures for servicing the debt of a local government unit, which generate long-term liabilities incurred for investments implemented with the next generations in mind, as well as those resulting from employment contracts with local government employees.

For this purpose, processed and aggregated series of values from the budgets of the given units were used, such as:

- income: current, own (including shares in state taxes), from the general subsidy, from the share in personal income tax revenues, from subsidies for own tasks;
- expenses: current, including labour costs, debt service, and subsidies.

The indicated data were obtained from the official statistics of the Central Statistical Office (GUS), i.e. the Local Data Bank (BDL), from 2023. The author is aware that the values of the calculated W2 indicators are contaminated with the error of the lack of precise data for calculating the partial values included in the formula for calculating this measure, which are available only in the reports on the budget execution of individual local government units.

The method employed was a descriptive analysis of selected values, which was then further explored through statistical analysis. For the indicators proposed in this study, four value classes were established, reflecting the level of financial condition of the local government units studied. Then, based on the obtained values of indicators for a statistical commune (city with county rights, county), they were classified taking into account their location in a given voivodeship.

Four typological groups were distinguished, defining the boundaries of the ranges based on the arithmetic mean $\overline{xi}$ of the standard deviation (Sxi) of individual measures. In accordance with the adopted procedure, a comparative analysis of the examined local government units was performed based on the obtained values of individual indicators, assessing their financial condition. The results of this arrangement (by voivodeship) for the years 2010 and 2024 are presented in Tables 3 and 4 (take a look into dissertation)

Based on our own research and calculations of reference indicators (Annex 2): *Indicators developed for evaluating the financial situation of local government units*), a set of indicators was developed for individual local government units, within specific types and categories, thanks to which they will be able to compare their financial situation with the economic crisis of other units. The indicators were defined in the following groups: budget indicators, indicators per capita, and indicators for liabilities according to debt titles. The study also analysed the budgets of local government units, divided into current and capital activities.

For the purposes of this study, it is assumed that four key components in the local finance system determine the fiscal stability of local government units, which affect the absorption capacity of a local government unit as a beneficiary of EU aid funds. Interesting information on changes in the finances of the Polish local government subsector in recent years is provided by the analysis of Eurostat statistical data (Eurostat Database, 2020-2024. On this basis, it can be stated that the Polish local government subsector is characterised by a certain specificity compared to other EU member states.

In recent years, there have been many significant changes in the local government revenue system, resulting in the destabilisation of the local (regional) finance system, primarily in the context of the systematically limited revenue independence of local government units.

In the context of local government units as beneficiaries of EU aid funds, as well as the previously defined financial stability requirements (fiscal efficiency, counter cyclicality and stability), the following determinants seem to be of key importance: limited stability and efficiency of local government revenues, imposing additional tasks on local governments without appropriate financial compensation, and a restrictive system of local debt rationing.

Own revenues are a strategic element in the local government finance system, not only from the point of view of the scope of financial independence of local government units, but also in the context of the possibility of applying for EU funds. The resources of local government units' own budget resources determine the possibility of using other, i.e. supplementary sources of financing. The limited stability of local governments' own revenues in Poland and Bulgaria is determined, among other factors, by frequent changes in legal regulations that directly or indirectly affect the local government revenue system. Examples include changes in the structure of income taxes (e.g. introduction of unspecified tax preferences, changes in the amount of the tax-free amount, etc.), resulting in a reduction of local government budget revenues due to its share in revenues from these taxes. In turn, the low efficiency of local tax sources is primarily a consequence of the anachronistic property taxation system in force in Poland, in which the basis for taxation is the area, not the value. In turn, the aforementioned efficiency of local government revenue sources is primarily influenced by macroeconomic factors, including fluctuations in the economic situation. The local finance crisis observed in Poland since approximately 2009 is largely the result of the weakening of the fiscal efficiency of many sources of local government revenue, which are particularly sensitive to the effects of economic recession.

Another important factor destabilising local government finances is the recent common practice of the state burdening local government units with additional tasks, omitting the financial compensation required by applicable legal regulations. Even though this study emphasizes the revenue side, not the expenditure side, of the local finance system, it is worth emphasizing here that the effect of imposing additional tasks on local government units by the central administration is primarily an increase in local government current expenditure. Consequently, the need to limit capital expenditure, including investment expenditure, also co-financed from EU aid funds.

Another important issue from the point of view of the absorption capacity of local government units is the introduction of new debt limits, i.e. the so-called individual debt indicators (IDIs), to the Polish local government finance system from January 2014, established in art. 243 of the Public Finance Act of 2009. The new indicators are based on the category of operating surplus and are much more restrictive than the previously applicable regulations limiting the debt of local government units. Considering the fact that repayable instruments (credits, loans, municipal bonds) are treated by local governments as absorption tools, all mechanisms regulating debt are, at the same time, mechanisms regulating the absorption capacity of local government units. In the context of the tightening of local government debt regulation mechanisms, some local government units may probably have difficulties in applying for financial resources from the European Union, primarily due to the lack of ability to incur liabilities that would allow them to supplement the so-called own contribution. For this reason, among others, in 2013, the Public Finance Act was amended, changing the scope of exclusions applicable to determining the IDI indicator. According to the new regulations, both liabilities incurred to finance the project, subject to reimbursement by the European Union, and liabilities incurred to provide the own contribution are subject to exclusion. These exclusions are extremely important in determining the level of debt of local government units. According to them, a loan incurred for own contribution is excluded from the debt indicator along with interest during the entire repayment period, provided that the level of co-financing is at least 60%. In the case of lower co-financing, exclusion from the debt indicator of a loan incurred for own contribution applies no longer than 90 days after the completion of the project and receipt of the refund.

Contrary to popular opinion, according to which Polish local government units get into debt mainly "for EU purposes", the presented data do not confirm this thesis. Currently, the share of such debt in total debt does not exceed a dozen or so per cent. It should also be noted that over 90% of local government unit liabilities due to credits and loans related to the use of EU funds are accumulated in cities with county rights and communes. Symptomatically, these units are also the largest investors in the Polish public sector. Important determinants of stability in terms of the financial situation of local government units are general and operational budget results. As mentioned earlier, the construction of individual debt indicators is based on operational results, and specifically on the category of operating surplus.

Empirical research has demonstrated a correlation between selected indicators reflecting the level of development of municipalities and their financial outcomes. A high positive correlation was found between the level of financial autonomy of municipalities and the number of economic entities per 1,000 working-age inhabitants (correlation coefficients exceeded rxy = 0.6 in 2024). In addition, a high positive correlation was observed between the level of financial autonomy (in particular, quantified by the amount of own revenue per capita) and the number of accommodation places per 1,000 inhabitants. For many small towns (especially those located in the southern and northern regions), tourism is a key factor in socio-economic activation. As a result, it contributes to reducing unemployment, developing technical and social infrastructure, improving the living conditions of the local community, and ultimately leads to economic growth.

Therefore, small towns that are economically developed with a negligible agricultural function (which has a positive impact on the labour market and, as a result, on the local government unit's income from personal income tax), as well as those performing tourist functions, have a higher level of financial autonomy. The research also revealed a statistically significant correlation between the level of financial independence (specifically, as quantified by the amount of own revenue per capita) and the demographic potential of small towns (measured by population density and migration balance per 1,000 inhabitants). The higher the positive migration balance, the higher the level of financial autonomy of municipalities.

The financial condition of municipalities, including the level of their own income potential, determines their economic autonomy, translates not only into their development, but also into the development of the surrounding areas and vice versa. The ability to generate one's own sources of income is one of the most critical factors determining both the current level of satisfaction of local communities' needs and their development opportunities and competitive position in relation to other local government units.

The dissertation presents that small municipalities in Poland are characterised by the lowest level of financial autonomy (quantified by the amount of own revenue per capita and its share in total revenue), but also by the highest diversity of these entities in this respect. However, the disparities in the level of financial autonomy of small towns in relation to urban municipalities as a whole (excluding cities with county rights) were relatively small and decreased during the period under review. This is because small municipalities were distinguished by the highest real growth in per capita own revenue in the 10 years under review.

Municipalities vary regionally in terms of financial autonomy. The highest level of this phenomenon is found in small towns in the Northern and Southern Macroregions, and the lowest in small towns in the Eastern Macroregion. However, in the period under review, small towns in the Eastern Macroregion were distinguished (right after small towns in the Northern Macroregion) by the highest growth rate of their own real income per capita. As a result, the disparities in the financial autonomy of small towns with urban municipality status in the Eastern Macroregion, compared to small towns in Poland as a whole, have decreased.

The level of financial autonomy of municipalities results from many socio-economic conditions. A high level of financial independence certainly distinguishes many municipalities located in the immediate vicinity of larger urban centres, benefiting from the so-called location rent and serving as bedroom communities for larger urban centres. A high level of own income potential, and as a result, financial autonomy, also distinguishes economically developed municipalities that serve as tourist destinations and have a marginal agricultural function.

In the research model, LGUs' fiscal stability is a direct consequence of the financial decisions made by local governments within the limits of their financial autonomy. The financial decisions of local government units can be classified according to various criteria. The most important of these, from the point of view of measuring and assessing fiscal stability, is the distinction between short- and medium-term (current) and long-term (strategic) decisions.

The rationale for using the multidimensional comparative analysis (MCA) method is that it allows for a comprehensive assessment of the fiscal stability of the municipalities under study, taking into account its various dimensions, rather than relying solely on individual indicators (or measures). This method is particularly useful when it is necessary to rank the objects under study, which are not homogeneous, and their specific attributes must be taken into account, and the phenomenon under study cannot be measured directly. Although it is mainly used in economics to assess the socio-economic development of local units or regions, it has recently gained popularity in the context of analyzing various aspects of the financial situation of Polish LGUs.

The rationale for using the multivariate comparative analysis method (MCA-WAP) is that it allows a comprehensive assessment of the fiscal stability of the municipalities under study, taking into account its diverse dimensions, and not just based on single indicators (or measures). This method works especially well when it is necessary to prioritise the objects under study, which are not homogeneous, and their specific attributes must be taken into account, and the phenomenon under study cannot be measured directly. Although in the economic sciences it is mainly used to assess the socio-economic development of local units or regions, it has recently gained popularity also in the context of analysing various aspects of the financial situation of LGUs.

It should be noted that multidimensional comparative analysis is successfully used to assess the financial condition of private sector entities, for example, against other companies considered to be the best in a particular industry. The main advantage of this method is that the diagnosis of the state of the phenomenon under study in a particular entity is made by comparing it with others, so that judgments can be formed about the equality, similarity or superiority of this entity over the others. Given the considerable heterogeneity of Polish municipalities in the analysis of the variation in their fiscal stability, it was assumed that its assessment can retain the value of objectivity only if LGU's of similar size and type are compared. This is because it is difficult to juxtapose such heterogeneous objects as cities with county rights and small urban municipalities, which not only differ in size but also perform different public tasks and have different income potential. For this reason, it was decided to use the benchmarking method in the construction of the aggregate measure of fiscal stability (FSI), according to which the values of the sub-indices established for each municipality are determined in a relative manner as the differences between the actual magnitudes of the measure under study in a specific TSU and its average value calculated for all municipalities belonging to a homogeneous generic category shared with the unit.

Benchmarking in the local government sector is primarily used to assess the efficiency of implementing various local services. Recently, it has also gained popularity in studies evaluating the financial condition and differentiation in the degree of development of local government units. The main advantages of benchmarking include: better opportunities to recognise the situation of a particular local government against the background of comparable LGUs; the possibility of revealing the weaknesses of a particular unit, defining the conditions for success and identifying the necessary improvement measures (goals and objectives) and the resources needed for this. It should be noted that the primary motivation for employing this approach in analysing the fiscal stability of Polish municipalities was the absence of universally accepted standards (norms) for this assessment. The benchmarks used in benchmarking analyses are created on the basis of relative measurement of the state of finances of other similar local governments, which allows not only to assess the stability of the finances of a given local government in comparison with local governments with similar characteristics (forming a common generic category with the studied LGU), but also to determine the place of a given LGU in the ranking of local governments comparable to it.

The research approach used in this chapter extends traditional MCA methods with panel data modelling, which allows for the combination of two dimensions: temporal and cross-sectional.

Panel modelling is relatively often used for analyses conducted on public sector entities, including, for example, countries that are members of the same economic organisation (e.g., EU, OECD) or territorial-administrative regions within one or more countries, as well as local government units at different levels. These entities, despite being separate research objects, function in significant interconnection with each other, as a result of which the behaviour of each of them (in addition to individual factors, arising solely from their specifics) is also affected by "common" factors, determining the activities of all objects in the same way. The rationale for the use of panel models, in particular, is the possibility of conducting a cross-sectional analysis aimed at isolating differences between the subjects under study, which are the result of the action of these specific "common" conditions. For this reason, the heterogeneity of entities is an essential assumption of the research approach in question.

Econometric models estimated from panel data generally assume that the formation of the explanatory variable is influenced (in addition to the explanatory variables) by unmeasured, time-constant and object-specific factors called group effects and/or time-constant relative to object-specific factors called time effects.

It is worth noting that certain populations are associated with measuring and evaluating the fiscal stability of local government units over a longer time horizon.

First, fiscal stability is - unlike financial health, which is quite often analysed in the literature - dynamic in nature, and one of its manifestations is the ability of local government units to adapt to impulses and signals coming from the environment. In practice, this means that it is necessary to take into account the dynamic nature of the various diagnostic characteristics used to assess fiscal sustainability, the rank and importance of which are subject to change and with the dynamics of the environment. In the research approach adopted, this problem was solved by using time-varying weights for each of the financial indicators analysed.

Secondly, an important issue is the need to distinguish the determinants of the fiscal stability of a local government unit, which have their source inside the local system, constituting its specific opportunities and/or barriers, from external determinants, which create comparable operating conditions for all local governments and create similar opportunities and threats for them. To achieve this, the so-called Malmquist index was employed, which is primarily used in the literature for analysing changes in efficiency or productivity over time.

According to the adopted research procedure, the first stage of the research involved obtaining complete and reliable empirical data, which were used to determine the set of diagnostic variables used to construct the synthetic Fiscal Stability Index (FSI). The analysis first considered data from municipal budget and financial operations reports published by the Ministry of Finance, as well as from the consolidated balance sheets of municipalities. In particular, reliance was placed on LGU's budget reporting and reporting on total financial operations, mainly accounts receivable and accounts payable, mainly in terms of:

- the level and structure of local government revenues: own revenues, subsidies and earmarked grants, as well as the effects of concessions and exemptions granted, write-offs of tax arrears and instalment of tax arrears, reduction of upper tax rates - on Rb-27S reports (reports on the implementation of the budget income plan of the local government unit),
- the level and structure of local government expenditures, including current and property expenditures, debt service costs and other selected categories of spending - on Rb-z8S reports (i.e., reports on execution of the budget expenditure plan of the local government unit),
- the level of current income and current expenditures and property income and expenditures, the development of the budget result, the size and structure of budget revenues and spending - on Rb-NDS reports (i.e., reports on the surplus/deficit of the local government unit), the level and structure of budget receivables - on Rb-N report (i.e. report on the state of receivables and selected financial assets), the level and structure of financial liabilities, according to maturity and debt title - on Rb-Z reports (i.e., reports on the state of liabilities by debt titles and sureties and guarantees).

In the search for a potential set of diagnostic characteristics for constructing the synthetic *Index of Fiscal Stability*, the initial version also referred to empirical data contained in the consolidated balance sheets of municipalities. The consolidated balance sheet is a representation of the property and financial situation of the entire local government unit, i.e. both entities of the so-called budget economy, as well as entities of the extra-budgetary sphere related in various ways to the budget, included in the public finance sector (including those with legal personality of independent public health care institutions or cultural institutions), but also entities of the private (market) sector, i.e. municipal companies'. From the consolidated balance sheets of municipalities, data were obtained primarily on the size and structure of the LGUs' assets and liabilities, as well as the entities subordinate to the respective local government.

In selecting the analytical measures used to build the synthetic Index of Fiscal Stability, substantive, formal and statistical considerations were taken into account. The first consideration was the requirement to capture the most relevant characteristics of the analysed phenomena reflecting all the fiscal stability criteria discussed in chapter three, as well as: simplicity and precision of the measures used and the possibility of expressing them in absolute (similarity in magnitude) or relative (similarity in structure) terms - substantive criteria; measurability of the characteristics, their large range of variability and representativeness with respect to the rejected characteristics - formal criteria; statistical criteria, such as the absence (or weak) correlation of the characteristics among themselves and their strong correlation with variables not included in the study, positive or negative relationship with the constructed output variable and linearity of the relationships between the variables. The final selection of variables was mainly the result of data availability and the author's arbitrary decisions following a review of the Polish and foreign literature. The selected set of diagnostic characteristics is not of an optimal or universal nature; rather, it is primarily a substantive set of variables that operationalise the fiscal stability of municipalities in a research sense.

In addition, each of the proposed indicators was assigned to one of the following categories: stimulants (variables whose growth positively affected fiscal stability), destimulants (variables whose decline was a positive trend in the development of budgetary stability) and nominants (variables whose values within a certain numerical range were desirable from the point of view of fiscal stability, while values outside the accepted range could affect it negatively, as exemplified by measures of financial liquidity, among others). Labels were assigned to individual diagnostic traits on the basis of substantive criteria, with the matrix of correlation coefficients between all the variables included in the study and the size of the synthetic indicator, constructed after the calculation of the aggregate measure of fiscal stability, confirming the correctness of the original classification of traits into the categories of stimulants, destimulants and nominants.

The diagnostic features studied refer to the main criteria of fiscal sustainability, described in Chapter Four, i.e. short-term solvency (liquidity), fiscal solvency, public service solvency and long-term solvency, as well as the LGU's ability to promote economic development with equity (intergenerational equity). The fiscal solvency criterion addressed the attributes of flexibility, self-reliance and sustainability (self-sustainability).

The next step in the research procedure was to normalise the diagnostic characteristics using the method of zero-centred unitization. Its purpose was to obtain variables with a standardised range of feature values, defined by the difference between maximum and minimum values. It made it possible to reduce the destimulants and nominants to the form of stimulants, while bringing their values to comparability according to the following formulas:

- for stimulants:

$$zik = \frac{xik - mini\,\{xik\}}{maxi\,\{xik) - mini\,\{xik\}}$$

- for destimulants:

$$zik = \frac{\max\{xik\} - xik}{maxi\ \{xik) - mini\ \{xik\}}$$

- for nominants

$$zik \begin{cases} \dfrac{xik - mini\ \{xik\}}{c0k - mini\ \{xik\}} \\ \dfrac{\text{x}\,i\,k - maxi\ \{xik\}}{c0k - mini\ \{xik\}} \end{cases}$$

Form: xik < c0k and xik > c0k

Where:

i – object number (i = 1,2,…,n)

k – diagnostic feature number (k = 1,2,…,n)

cok – nominal value of the diagnostic feature.

The specificity of the applied research method required grouping the studied municipalities (objects) into relatively homogeneous subsets. Such classification allowed for the creation of a standard (reference point) for the assessment of individual dimensions of fiscal stability of a specific territorial unit, which consisted of average values of selected diagnostic features calculated for the local government units comparable to the studied municipality and belonging to the same generic class. The following were adopted as the main criteria for distinguishing comparative groups:

- the administrative-territorial criterion, based on which the surveyed municipalities were classified into cities with county rights, urban municipalities, city municipalities and urban-urban municipalities,
- the population criterion, according to which, based on the median value of the population number, the classes of municipalities separated according to the administrative-type criterion were further divided into two additional subsets, as a result of which eight categories of municipalities were created, viz. : municipalities with a population up to the median level, comprising category o (cities with county rights), category i (urban municipalities), category z (urban municipalities) and category 3 (urban municipalities); municipalities with a population above the

median, comprising category A (cities with county rights), category 5 (urban municipalities), category 6 (urban municipalities) and category 7 (rural-urban municipalities).

The formation of comparative groups of LSUs allowed the construction of a synthetic Index of Fiscal Stability, which is the sum of normalised values of sub-indices, determined separately for each of the variables defined in the framework characterised in the table based on eight dimensions. According to the research approach adopted, the fiscal stability of the i-th municipality in fiscal year t was the sum of the weighted sub-indices (fsi) for the differences in the normalized magnitudes of the diagnostic characteristic fi for that municipality and the normalized benchmark values (b) (so-called benchmarks), i.e. the average normalized levels of this variable, calculated for all municipalities belonging to the generic category p according to the formula:

$$FSI_p^t = \sum_{k=1}^{n} w_{kp}^t \, x \, fsi_{kp}^t \, x \left(z_{ik}^t - b_{kp}^t \right); k = 1, \ldots, n$$

Where:

w_{1p}^t ; – weighting coefficients of the importance of individual diagnostic variables in a given generic category of commune sw_{2p}^t in fiscal year t, established in such a way that: +…+ = 100$w_{1p}^t + w_{2p}^t w_{np}^t$

fsi_{kp}^t- partial indicators illustrating the impact of the difference between the normalized value of the diagnostic feature in the municipality on fiscal stability and the normalized reference value b, i.e. the average level of this feature established for all municipalities in the generic category *p*,

b_{kp}^t — mean normalized values of the diagnostic feature for communes of the generic class p.

The higher the value FSI_p^t, the higher the fiscal stability of a given commune. Background other communes from a given generic class. In turn, the higher the value of fsi_{kp}^{t}, the more feature k affected the fiscal stability of a specific municipality belonging to category p.

The following algorithm was used to calculate the sub-indices:

$$f = si_{kp}^{t}(d_{ik}^{t}) = \frac{d_{ik}^{t} - w_{kp}}{B_{kp}^{t} - w_{kp}}$$

Where:

$$d_{ik}^{t} = z_{ik}^{t} - b_{kp}^{t},$$
$$W_{kp} = min_{i,t}\{z_{ik}^{t} - b_{kp}^{t}\},$$
$$B_{kp} = max_{i,t}\{z_{ik}^{t} - b_{kp}^{t}\}.$$

A crucial issue from the perspective of constructing the Fiscal Stability Index was determining the importance of individual diagnostic features by assigning them weighting coefficients. In contrast to many previous empirical studies, which assumed equivalent treatment of all variables describing the financial situation in this research approach, it was assumed that the weights for the various diagnostic attributes used in the model construction varied.

Moreover, it was assumed that the weighting coefficients for these attributes are subject to change over time due to modifications in the internal and external conditions in which individual local governments operate. This is because the impulses and stimuli coming from the municipal environment trigger the need to adjust the nature and instruments of fiscal policy pursued by local governments accordingly.

Another assumption was that these weights are different for municipalities belonging to different generic categories. To take into account the above circumstances, a method was used to determine the weighting coefficients, which uses Shannon's concept of entropy of information and allows for the objectification of the weights assigned (as opposed to the so-called subjective weights used quite often, which are determined by decision-makers or experts and usually reflect their subjective feelings and preferences). According to this approach, the weights for individual diagnostic variables were estimated based on the information they carried. The weight of the diagnostic variable k in year t for the generic category of municipalities p was determined as: $w_{kp}^{t} = 100\ x\ \frac{1-E_{kp}^{t}}{n-\sum_{k=1}^{n} E_{kp}^{t}}$

Where: $E_{kp}^{t}$is an indicator of entropy.

If all territorial units had identical partial indicators of fiscal stability for the diagnostic characteristic k, then $E_{kp}^{t} \approx 1$, while $w_{kp}^{t} \approx 0$. This would indicate that the diagnostic variable k was not sufficiently useful in explaining variation in fiscal stability across local government units. Correspondingly, higher weighting coefficients are assigned to those variables that carry more information about the variation in the budgetary stability of LGUs. The calculations are included in Annex 3).

The estimation results of the panel regression model for urban municipalities are very similar to the results obtained for urban-rural municipalities. Although the influence of macroeconomic variables on the fiscal stability of the local governments of urban municipalities turned out to be slightly weaker than in urban-rural municipalities, the direction of this influence remained the same. The only certain exception is that in urban municipalities, the variable related to the development of the public finance sector balance for many remained statistically insignificant. This may have been influenced by the relatively high share of general subsidies in the structure of budget revenues of these municipalities, since this category of transfers is allocated on the basis of objective criteria and is mandatory in nature, and therefore seems less susceptible to fluctuations in the condition of the public finance sector.

The fiscal stability index remained the most stable over time for rural and urban municipalities, and fluctuated the most in county-level cities and metropolitan municipalities. Analysis of annual increments in the aggregate Malmquist fiscal stability index further showed that budgetary stability is driven more by the internal conditions and resources of these local government units than by the impact of the external environment. This is also confirmed by the very positive correlation between the annual increase in fiscal stability of the Malmquist index and its component due to conditionality, and the very weak negative correlation between the annual increase in fiscal stability and the change in external factors.

In addition to assessing the determinants of annual fluctuations in fiscal stability (in terms of the *Malmquist index*), a panel regression model was used to identify selected statistically significant variables of different types, which are the most critical factors affecting the extent of fiscal stability of municipal government units in Poland (measured by the value of the FSI aggregate measure). Despite the differences observed between different types of municipalities, this study allowed us to identify some common key determinants of stability, which were found to have a similar strength and direction of influence across all municipal government units.

The model for assessing the fiscal stability of rural communes developed as part of this study indicates the following findings (similar results were obtained by the author of the dissertation based on the analysis of Polish LGUs):

- The financial situation of local governments located in rural areas is sensitive to the number of inhabitants, the income of the inhabitants and the unemployment rate. The assessment indicates that it is essential to consider the impact of various external factors and the effectiveness of the administration in order to enhance the financial management of local authorities.
- External factors and the macro environment do not predetermine the level of fiscal discipline, which means that fiscal discipline is a function of the quality of the financial and operational management of a municipality's finances.
- There is a statistically significant relationship between the individual components of fiscal discipline and specific indicators of municipalities – demographic, social, economic and administrative. In other words, it is possible to construct a profile of municipalities in which the risk of negative impact of the external environment is higher than in other municipalities.
- The correlation analysis shows that there is no significant relationship between fiscal discipline and the size of the municipality, i.e. compliance with budgetary discipline does not differ between urban and rural municipalities. The willingness

to comply with fiscal discipline is a problem of financial management and does not depend on the type and size of the municipality.

- Finally, the analysis shows that the current methodology adopted by the Ministry of Finance for the purposes of assessing the implementation of the municipal budget does not take into account the level of fulfilment and the value of financial indicators; it only takes into account compliance or non-compliance without taking into account the value of the indicators, and this constitutes a significant omission.

IV. DISSERTATION CONTRIBUTIONS

1. Scientific theoretical contributions

The dissertation makes a contribution to the development of the theory of local public finance by providing new empirical evidence on the nature, structure, and determinants of fiscal stability of local government units. The study moves beyond the dominant approach in the literature, which typically equates fiscal sustainability with debt sustainability or long-term solvency, and demonstrates that fiscal stability is a multidimensional phenomenon shaped by several mutually interacting fiscal dimensions.

One of the most important original findings is the empirical verification that long-term solvency alone is not a sufficient condition for achieving high fiscal stability. The analyses demonstrate that municipalities characterised by the highest levels of fiscal stability do not derive this stability primarily from low indebtedness, but from a balanced configuration of multiple dimensions, including budget flexibility, operating surplus generation, financial self-reliance, service provision capacity, and intergenerational equity. This finding challenges the traditional debt-centred interpretation of fiscal sustainability and supports a systemic understanding of local public finance.

A second important contribution concerns the identification of the internal structure of fiscal stability. The research demonstrates that municipalities with the highest fiscal stability exhibit a relatively balanced contribution of all stability dimensions, whereas municipalities with lower fiscal stability depend on only a limited number of dominant fiscal characteristics. This finding introduces a new theoretical perspective suggesting that fiscal stability should be interpreted as a state of fiscal equilibrium among several financial capacities rather than the maximization of a single indicator.

The dissertation also provides new empirical evidence regarding the hierarchy of determinants influencing fiscal stability. The results show that budget sustainability, budget flexibility, and intergenerational equity exert a stronger influence on overall fiscal stability than long-term debt solvency. Consequently, the ability to generate operating surpluses, maintain low fiscal rigidity, ensure effective revenue collection, and limit excessive debt burdens emerges as more important than debt indicators alone. This conclusion contributes to the ongoing international debate on the adequacy of traditional fiscal sustainability measures.

Another original finding is the demonstration that the determinants of fiscal stability differ substantially across administrative categories of municipalities. The research confirms that fiscal stability is not governed by a universal set of factors. Large cities with county rights, urban municipalities, urban-rural municipalities, and rural municipalities display distinct fiscal structures and development mechanisms. This finding provides a theoretical basis for differentiated approaches to fiscal monitoring and local government financial management.

The study further contributes to the literature by empirically confirming the existence of a strong relationship between municipal size, administrative status, and fiscal stability. Larger municipalities and cities with county rights systematically achieve higher fiscal stability than smaller local government units. This result indicates the presence of structural advantages associated with scale, revenue diversification, and broader fiscal autonomy, which have not been sufficiently incorporated into previous theoretical explanations of local fiscal sustainability.

The dissertation develops and empirically verifies a comprehensive conceptual framework linking fiscal stability with local development capacity. The findings demonstrate that fiscal stability should not be treated solely as a financial outcome but as a prerequisite for maintaining long-term developmental potential, resilience to external shocks, and sustainable provision of public services. This expands the theoretical understanding of fiscal stability from a narrow financial category to a broader concept embedded in sustainable local development theory.

Key Scientific Contributions

- It was demonstrated that a high level of fiscal stability is not determined primarily by a low level of debt, but rather by a balanced configuration of multiple dimensions of municipal financial performance.
- The study revealed the limited diagnostic value of long-term solvency as a standalone measure of fiscal stability, thereby challenging the dominant debt-centred approach frequently adopted in the fiscal sustainability literature.
- For the first time, based on a full-population study covering all Polish municipalities, it was empirically confirmed that budget sustainability, budget flexibility, and intergenerational equity exert a stronger influence on fiscal stability than debt indicators alone.
- The research demonstrated the heterogeneous nature of fiscal stability determinants, showing that the factors shaping fiscal stability differ significantly among county-level cities, urban municipalities, urban-rural municipalities, and rural municipalities.
- The existence of a scale effect in local public finance was empirically confirmed, indicating that larger municipalities systematically achieve higher levels of fiscal stability due to stronger revenue diversification, greater financial autonomy, and broader development capacity.
- The dissertation extends the theory of local fiscal stability by incorporating a developmental perspective, demonstrating that fiscal stability should be

understood not merely as a budgetary or accounting category, but as a fundamental prerequisite for long-term development capacity, effective absorption of external funding, resilience to economic shocks, and sustainable provision of public services.

- The study provides empirical evidence that endogenous local factors—particularly revenue autonomy, demographic potential, economic activity, investment capacity, and quality of financial management—play a more significant role in shaping fiscal stability than previously assumed in the literature.
- The research advances fiscal stability theory by demonstrating that fiscal stability constitutes a multidimensional equilibrium state involving liquidity, budgetary sustainability, financial autonomy, service provision capacity, development potential, and intergenerational responsibility, rather than a simple condition of debt solvency.
- The dissertation establishes a new conceptual link between fiscal stability and fiscal resilience, showing that financially stable municipalities are better equipped to adapt to economic crises, demographic changes, and external institutional shocks.
- The findings provide evidence that fiscal stability is a dynamic and developmental capability of local governments, reflecting their ability not only to maintain financial balance but also to create conditions for sustainable socio-economic growth over the long term.

2. Scientific applied contributions

The dissertation makes a significant contribution to the practical advancement of local public finance management by developing a comprehensive and transferable fiscal governance framework that can support strategic decision-making, fiscal monitoring, risk management and performance evaluation within decentralized public finance systems.

The principal applied contribution lies in transforming the concept of fiscal stability from a descriptive analytical category into an operational management instrument. Existing approaches used in many European countries focus primarily on legal debt limits, budget balance requirements or selected financial indicators. The proposed framework enables a substantially broader assessment of municipal financial performance by integrating financial, developmental, demographic and institutional dimensions into a single decision-support architecture.

A major practical innovation consists in the development of a standardized fiscal assessment methodology capable of evaluating the overall financial capacity of local governments rather than merely their debt position. This approach allows decision-makers to identify hidden structural weaknesses that remain undetected under traditional fiscal monitoring systems. Consequently, fiscal stability becomes a measurable management variable that can be incorporated into strategic planning, investment programming and fiscal supervision procedures.

The research also provides a practical framework for constructing national and regional fiscal monitoring systems. The proposed methodology enables continuous observation of changes in local government fiscal stability, identification of emerging vulnerabilities and prioritization of corrective interventions. In contrast to traditional supervisory mechanisms, which frequently react only after financial difficulties become visible, the proposed framework supports preventive and anticipatory governance.

An important applied contribution is the development of a methodological architecture supporting evidence-based fiscal policymaking. The framework enables public authorities to distinguish between temporary fiscal deterioration caused by cyclical shocks and structural weaknesses resulting from long-term institutional, demographic or economic conditions. This distinction substantially improves the quality of policy responses and reduces the risk of implementing ineffective corrective measures.

The dissertation further contributes to the modernization of local government performance assessment systems. The proposed approach creates a foundation for integrating fiscal sustainability, development capacity and service delivery effectiveness into a unified evaluation framework. Such integration is particularly important in contemporary public management systems, where financial outcomes increasingly need to be assessed together with broader socio-economic development objectives.

A further practical innovation involves the development of a scalable benchmarking architecture applicable to local governments of different sizes and administrative structures. The proposed methodology enables municipalities to evaluate their performance relative to comparable entities, identify best practices and support organizational learning processes. This solution significantly enhances the practical usefulness of comparative fiscal analysis and creates opportunities for systematic improvement of local financial management practices.

The research also establishes methodological foundations for the creation of multidimensional fiscal early-warning systems. The developed framework enables the identification of fiscal vulnerabilities at an early stage of their emergence, thereby supporting proactive interventions and reducing the probability of severe financial distress. Such solutions may significantly improve the effectiveness of fiscal oversight exercised by ministries of finance, regional supervisory institutions, supreme audit institutions and local authorities.

Particularly important from an international perspective is the universal nature of the proposed framework. The methodology is based on financial, budgetary and socio-economic variables commonly collected within European statistical systems and public finance reporting frameworks. Consequently, the model may be adapted and implemented in municipalities operating under different legal, institutional and fiscal arrangements without requiring fundamental methodological modifications.

The dissertation therefore provides not only a tool for assessing local fiscal stability but also a comprehensive governance model supporting strategic management, fiscal resilience, sustainable development planning and public-sector performance improvement. This substantially expands the practical applicability of fiscal stability research beyond the traditional boundaries of public finance analysis.

Most Important Applied Innovations

Fiscal Governance and Management

- Development of a comprehensive **Fiscal Stability Governance Framework** supporting strategic financial management in local governments.
- Transformation of fiscal stability from an analytical concept into an operational management tool.
- Creation of a multidimensional system supporting evidence-based fiscal decision-making.

Monitoring and Early Warning Systems

- Development of a methodology for continuous fiscal monitoring of municipalities.
- Creation of a multidimensional fiscal early-warning model enabling proactive intervention.
- Development of diagnostic procedures supporting preventive fiscal supervision.

Benchmarking and Performance Evaluation

- Creation of a benchmarking architecture enabling objective comparisons among structurally similar municipalities.
- Development of a framework supporting identification and transfer of best fiscal management practices.
- Integration of financial performance assessment with local development capacity evaluation.

International Transferability

- Development of a methodology applicable within decentralized public finance systems across the European Union.

- Compatibility with commonly available budgetary, financial and socio-economic datasets.
- Possibility of implementation by ministries of finance, supervisory authorities, regional audit institutions and local governments.
- Applicability in international comparative studies of municipal fiscal resilience and sustainability.

Long-Term Practical Impact

- Support for modernization of local government fiscal governance systems.
- Improvement of public resource allocation efficiency.
- Strengthening of municipalities' resilience to economic and demographic shocks.
- Support for sustainable local development and long-term public investment planning.

The dissertation goes beyond the development of a new financial indicator by proposing a comprehensive and transferable fiscal stability governance framework for local government units. The framework integrates multidimensional diagnosis, fiscal monitoring, benchmarking, risk assessment, early-warning mechanisms, and strategic decision-support processes into a coherent management system. Its methodological architecture is based on universally available budgetary, financial, and socio-economic data, making it applicable across diverse local government systems within the European Union. As a result, the proposed framework is not constrained by the institutional or legal specificities of the Polish local government sector and offers a scalable solution for improving fiscal governance, resilience, and sustainable local development in decentralized public finance systems.

3. Future Research Directions

The findings of the dissertation demonstrate that fiscal stability constitutes a multidimensional and dynamic category shaped by the interaction of financial, economic, demographic, institutional and developmental factors. Consequently, future research should focus on extending the proposed Fiscal Stability Governance Framework beyond the national context and verifying its applicability across different European systems of fiscal decentralization. Such studies would enable the assessment of the external validity, robustness and transferability of the proposed model and contribute to the development of a standardized European methodology for measuring local fiscal stability.

The empirical results also indicate that fiscal stability is closely associated with financial autonomy, development potential and socio-economic capacity. Future research should therefore concentrate on identifying the causal mechanisms linking fiscal stability with long-term local development, investment activity, competitiveness and public service performance through the application of advanced dynamic and spatial econometric models. This would significantly strengthen the theoretical foundations of local public finance and fiscal sustainability research.

An important scientific challenge concerns the integration of fiscal stability and fiscal resilience into a unified analytical framework. Recent economic, demographic and geopolitical shocks have demonstrated that long-term fiscal sustainability alone is insufficient to explain the adaptive capacity of local governments. Future studies should therefore focus on developing models capable of simultaneously measuring fiscal stability, resilience and vulnerability to external disturbances.

Further research should also incorporate institutional variables, including governance quality, administrative capacity, transparency and strategic management effectiveness, which remain insufficiently explored in existing fiscal stability models. Such an approach would contribute to the development of a more comprehensive theory of local fiscal governance.

Finally, the demonstrated predictive potential of the identified determinants creates favourable conditions for the development of advanced forecasting models based on artificial intelligence, machine learning and predictive analytics. This research stream may lead to the construction of next-generation fiscal early-warning systems capable of identifying financial distress before it becomes observable through traditional budgetary and debt indicators.

Collectively, these research directions create the foundations for the development of a generalized theory of fiscal stability and a standardized European analytical framework for measuring, monitoring and forecasting fiscal sustainability, resilience and development capacity of local government units.

V. PUBLICATIONS RELATED TO THE DISSERTATION RESEARCH

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2. **S. Bogacki S**., Nowoczesne formy relacji z klientem, Innovatio Press, Lublin 2021, ISBN: 978-83-65159-89-1, p. 212.
3. **S. Bogacki S**., Kompetencje menedżerskie, Innovatio Press, Lublin 2021, ISBN: 978-83-66168-83-1, p. 190.
4. **S. Bogacki**, Fundamentals of economics, Innovatio Press, Lublin 2021, ISBN: 978-83-66160-85-3, s.220.

V.2 Articles in scientific journals:

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