



The role of local government units in financing the protection and care of monuments

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Abstract

Motivation: As a result of legal modifications, changes have occurred in the management of cultural heritage in Poland. The tasks related to the protection and care of monuments have been decentralized. Currently, they are financed not only by the government sector but also by the local government sector, i.e. municipalities (communes), counties, and voivodeships.

These entities have various financing options for this task: through current or investment funds, as well as through own expenditures or grants allocated to entities outside the public finance sector

Aim: to determine how different types of local government units (LGUs) allocate funds for the protection and care of historic monuments.

Results: The system of financing monument protection in Poland is highly concentrated among large local government units (LGUs): voivodeships and cities with county rights

(CCR). Smaller LGUs, especially rural communes, have limited capacity to finance heritage protection, despite often having many valuable sites in need of support. This structure can lead to underfunding of monuments in rural areas and smaller towns. Over the long term, there has been an increase in total spending on cultural heritage, national and local government policies playing a key role.

Keywords: local government tasks, monument protection, care of monuments, own tasks of municipalities, own tasks of provinces

JEL: H72, H76, Z18, O21

1. Introduction

Monuments can play an important role as “strategic” resources for sustainable local development. A necessary condition is the appropriate conservation of cultural heritage, and the public sector plays a crucial role in this process. According to Barnes (2022, pp. 8–12), there is a negative quadratic relationship (inverted U-shaped) between public expenditure on the protection of cultural and natural heritage and per capita tourism revenues. This means that in the earlier stages of economic development, an increase in expenditure on heritage protection brings an increase in tourism revenues, while in more developed countries these effects decline until reaching a peak, which none of the countries studied has yet reached. The literature has not examined in detail the results of the actions of public entities involved in implementing the policy of protection and care of monuments (Finocchiaro Castro et al., 2011, p. 2). Few studies show a change in the approach of local authorities to culture (expenditures on culture and monuments are often presented together), which is reflected in perception of this sphere of the economy as a potential factor in the development of the commune, rather than an unnecessary budget expenditure (Suchecky, 2019, p. 43).

The evolution of cultural heritage management in Poland, resulting from the decentralization of responsibilities and the partial assignment of these tasks to local government units, has led to the emergence of a new formula for financing the protection and care of historic monuments. This new approach enables local government units to finance these activities in various ways. The identified research gap stems from the fact that although the Act enabling the financing of such activities has been in force for more than 20 years (having been adopted in 2003), no studies have so far examined the scale of these expenditures, the preferred financing schemes, or the differences between the various tiers of local government units—communes, counties and regions—as well as between different types of units within a given tier (rural, urban and urban–rural communes, as well as rural coun-

ties and cities with county rights). This research gap is addressed by the present article. Its aim is to determine how different types of LGUs allocate funds for the protection and care of historic monuments. In line with this objective, the main research hypothesis was formulated: the expenditure on the protection and care of cultural heritage sites differs both in quantitative and structural terms between various types of local government units.

The study distinguishes six types of local government units (description of the Polish local government structure – see Sekuła, 2015, pp. 916–917):

- rural communes (RC),
- urban communes (UC),
- urban-rural communes (URC),
- rural counties (also: rural districts RD),
- cities with county rights (CCR),
- voivodeships (V), also: regions or provinces.

To achieve the research objective, the following methods were used: descriptive statistics to compare the expenditures in the researched period, Kruskal-Wallis analysis to examine expenditure patterns, and single-variable linear regression to assess the impact of budget size on monument protection spending and its competition with other priorities were used. The study covers the years 2014–2023 (with 2014 as the first year of the EU's multiannual budget planning period and 2023 as the last year for which data were available at the time of collection) and includes all local government units. The research utilized data published on the Ministry of Finance website, originating from the Besti@ information system used for submitting financial reports by local government units.

The structure of the article aligns with its objectives and the verification of the research hypothesis, and includes:

- a discussion of the responsibilities of local government units (LGUs) at various levels in monument protection and care; a description of the financing principles for monument protection outlined in current legislation (Section 2).
- the research methodology, descriptive statistics, Kruskal-Wallis analysis for independent samples, and single-variable linear regression (Section 3).
- presentation and discussion of the results (Sections 4 and 5).

The findings address the question of how much and in what way financial resources are allocated by different types of Polish LGUs for monument protection. In practice, these results may assist public authorities in determining whether the current level and methods of funding are sufficient to maintain monuments in good condition.

2. Literature review

2.1. Implementation of tasks in the field of monument protection and care for historic monuments by Polish local government units

Monuments are the most important elements that constitute the tangible cultural heritage. The definition of a “monument” was formulated in the Act on the Protection and Care of Monuments (Act of July 23, 2003). This definition does not require that recording an object in the register of monuments to be recognized as a monument, which was previously the case (Antoszczyzyn, 2017, p. 3).

At the international level, most of the principles and guidelines regarding the treatment of monuments have been developed by two organizations: UNESCO (the United Nations Educational, Scientific and Cultural Organization) and ICOMOS (the International Council on Monuments and Sites) (Ahmad, 2006, pp. 292–300). In international legal documents, the term “monument” is not defined; instead, the broader concept of “cultural heritage” is used.

The Act on the Protection and Care of Monuments incorporated local government units into the monument protection system. The previous Act on the Protection of Cultural Property assigned monument protection tasks exclusively to the central government administration. Currently, the main sources of financing for the protection and care of monuments are the state budget and the budgets of local government units (Ofiarska, 2018, p. 12). Within local government, the difference concerns the scale:

- communes’ tasks, according to the principle of subsidiarity (Geertjes 2023, pp. 291–292), cover issues related to the protection and care of monuments of local significance,
- counties’ tasks also include the protection and care of monuments, but at a supra-commune level,
- the regional (voivodeship) government performs tasks related to the protection and care of monuments of regional significance.

A description of the tasks involving the protection and care of monuments is included in the Act on the Protection and Care of Monuments. The tasks listed there are preceded by the phrase “in particular,” which means that the list is not closed and other activities serving these purposes may also be undertaken.

2.2. The Polish system of financing the protection and care of monuments

Monuments in public space have many functions: artistic, symbolic, commemorative, social, political, religious and marketing (Cudny & Appelblad 2019, p. 286). The analysis of expenditures on monument protection provides information on which local government units contribute to the preservation of cultural heritage and to what extent, utilizing it as a developmental resource. The practice of financing the protection and care of monuments depends on two factors:

1. These are own tasks of municipalities, counties, and regional (voivodeship) governments;
2. The current system of monument financing that is defined in the Act on the Protection and Care of Monuments.

The first issue can be summarized by stating that matters related to culture, including monuments, are own tasks of LGUs, and therefore, their implementation should be financed as much as possible from their own resources. This approach is consistent with the theory of fiscal federalism, which concerns the allocation of functions, revenues, and fiscal relations among different tiers of government. It postulates that each level of local government should have legally assigned and independent sources of revenue, which directly feed their budgets and can be autonomously managed in terms of collection and structure (Sekuła & Basińska, 2016, p. 244). Furthermore, according to public choice theory, excessive public spending may lead to a fiscal crisis, since – as Oudenampsen (2025, p. 4) notes – democracies have “an inherent tendency to overspend,” and “the overload of the state by the demands of interest groups leads to a fiscal crisis.”

The second premise arises from the principles of financing the care of monuments, according to which the holder of a monument (a natural person or an organizational unit with legal title to the monument) is, on the one hand, responsible for its maintenance, but on the other hand, may receive a grant from the commune, county, or regional government for its upkeep. The origin of grants provided from local government budgets for tasks carried out by entities outside the public finance sector should be linked to the EU principle of subsidiarity (Faludi 2015, pp. 23–43).

Expenditures incurred by LGUs for activities related to the protection and care of monuments are classified, from the perspective of their purpose, as either current (related to the ongoing maintenance of the object) or investment (with a developmental purpose). According to the guidelines for the classification of expenditures, they are recorded in the following budget paragraphs:

- §272: targeted grants for financing or co-financing renovation and conservation works on historic objects for entities outside the public finance sector (PFS), e.g., foundations or associations;
- §273: as above, but granted to entities within the PFS e.g., other communes, counties, or voivodeships;
- §434: purchase of renovation and conservation services for historic objects used by budgetary units of communes, counties, and voivodeships;
- §656: targeted grants for financing or co-financing investment tasks for historic objects for entities in the PFS;
- §657: as above, for entities outside the PFS;
- §658: investment expenditures related to historic objects used by budgetary units of municipalities, counties, and voivodeships.

As the analysis of the above § shows, they can be divided according to their nature (current or investment) and the type of entity receiving the funds: entities outside the PFS (mainly third-sector organizations, i.e., associations and foundations) and those belonging to the PFS, further divided into “own” (budgetary units) and other communes, counties, or voivodeships. This classification is illustrated in Table 1.

3. Methods

The aim of the article is to identify how different types of LGUs allocate funds for the protection and care of historic monuments. It is assumed that each type of LGU follows a specific expenditure pattern for monument protection and care. Accordingly, the main research hypothesis states that expenditure on the protection and care of cultural heritage sites differs, both quantitatively and structurally, between various types of LGUs.

To achieve the research objective, the analysis covered all Polish LGUs in the years 2014–2023, with 2014 as the first year of the EU multiannual budget period and 2023 as the last year for which data were available at the time of collection. The study used data published on the Ministry of Finance website, originating from the Besti@ information system, which is used by LGUs to submit their financial reports. Expenditures related to the protection and care of monuments were identified based on the relevant budget classification paragraphs (§272, §273, §434, §656, §657, §658), distinguishing between current and investment spending, as well as between transfers to entities inside and outside the public finance sector.

Six types of LGUs were analysed: rural communes (RC), urban communes (UC), urban–rural communes (URC), rural counties (RD), cities with county rights (CCR) and voivodeships (V). The analysis was conducted in two dimensions: the absolute value of expenditures on monument protection and care, and their share in LGU budgets. This made it possible to compare both

the scale and the relative priority of heritage-related spending across LGU types.

The empirical strategy combined descriptive and inferential methods commonly used in studies of cultural activities and public sector expenditures, as reflected in the literature (Logan VanBlarcom & Kayahan, 2011; Sodangi et al., 2015; Prieto Ibáñez et al., 2017; Hailemeskel Teshome Abebe, 2019; Mekonnen et al., 2022; Tahoon et al., 2024; Hatice et al., 2024). These studies utilized quantitative analysis (descriptive statistics, budget analysis, comparative analysis), supplemented by correlation analysis and economic indicators. Linear regression was the dominant method for modeling the economic aspects of monument protection, although it often yielded low R^2 values ($<40\%$) due to the complexity of socio-economic factors. Analysis of variance was mainly used for the preliminary verification of hypotheses regarding the impact of categorical variables (e.g., type of LGU) on the condition of monuments.

In the methodology applied in the article, first, descriptive statistics and budget analysis were applied to characterise the level and structure of spending on monument protection and care across LGU types and over time.

In the next step, non-parametric methods were applied to compare expenditures on monument protection and care between LGU types. The distributions of both expenditure levels and budget shares were highly skewed and displayed heteroscedasticity across groups. Therefore, the Kruskal-Wallis test for independent samples was used as a rank-based test that does not require normality or homogeneity of variances (Schmidt et al. 2017, Montalto et al. 2019). When the global Kruskal-Wallis test indicated statistically significant differences between LGU types, post-hoc pairwise comparisons were conducted using Dunn's test with appropriate multiple-comparison adjustment (Dunn, 1964). To complement significance testing, effect sizes were reported using Glass's rank biserial correlation coefficient (Glass, 1965), which facilitates the interpretation of the substantive magnitude of differences between selected LGU categories.

Finally, single-variable linear regression (Fisher, 1922) was used to assess the impact of LGU budget size on expenditures related to monument protection and care, both in absolute terms and as a share of total spending. The choice of a single-variable rather than a multivariable regression model was deliberate. The primary aim was to identify the marginal effect of budget size on heritage-related expenditures and to present results that remain comparable across all types of LGUs. Including a broader set of socio-economic covariates would likely generate high multicollinearity and low, unstable R^2 values—an effect frequently reported in empirical studies on cultural and heritage-related spending (e.g. Vanblarcom & Kayahan, 2011). In line with the broader methodological literature (Gelman, Hill, 2006; Long, Freese 2006), which emphasises that modest coefficients of determination are typical and acceptable in complex social-science settings as long as effect directions and significance are interpretable, single-variable linear regression

was adopted as a transparent tool to capture the relationship between LGU budget size and both the scale and structure of expenditures on monument protection and care.

4. Results

In the period 2014–2023, both investment and current expenditures of the local government subsector on monument care were highly unstable (Chart 1). Expenditure trajectories do not follow a smooth trend but rather a sequence of expansions and contractions, which reflects the combined impact of economic conditions, legal changes and evolving funding mechanisms. Periods of accelerated spending coincide with increased availability of external support and special programmes dedicated to cultural heritage (mainly in 2018–2019 and 2021–2022, such as the Government Program for the Restoration of Monuments), whereas periods of fiscal consolidation or regulatory tightening are associated with marked slowdowns in outlays on monuments.

A particularly strong driver of this volatility was the changing availability of central government programmes targeted at heritage protection. When local government units (LGUs) could access sizeable investment schemes (e.g., through programs like Monument Restoration or regular competitions by the Ministry of Culture and National Heritage) – especially in 2018–2019 and 2021–2022 – investment expenditures on monuments increased sharply, in some cases by close to 100% year on year in 2018 and by around 75% in 2021. These funds were primarily channelled into major renovation projects and cultural infrastructure, such as comprehensive restoration of historic buildings or the adaptation of heritage sites for cultural and tourism functions. In contrast, in years with fewer external calls or more restrictive fiscal conditions, investment expenditures declined, sometimes quite abruptly. This pattern indicates that investment in monument protection is highly sensitive to programme-based financing and cannot be regarded as a stable, routine component of local investment policies.

Current expenditures on monument care also exhibited considerable fluctuation, although the mechanisms behind these changes were partly different. While external programmes play a role, current spending is more closely linked to LGUs' own revenues and their prioritisation of ongoing maintenance tasks relative to other statutory responsibilities. Over the decade, despite temporary increases in some years, current expenditures in 2023 remained roughly one third below the level recorded in 2014. This suggests that the capacity of LGUs to fund routine conservation activities, such as minor repairs, basic maintenance or smallscale restoration works, has diminished in relative terms, even as investment projects experienced episodic boosts.

Regulatory changes further contributed to these dynamics. The tightening of tax relief provisions for monuments as of 2023, which restricted eligible expenditures and postponed tax deductions until the completion of investments (Błaszczuk et.al., 2023), reduced the financial attractiveness of undertaking new conservation projects for private owners and investors. As a result, fewer applications for LGU grants were submitted, and the pipeline of cofinanced projects shrank. At the same time, organisational factors – including delays in announcing and resolving grant competitions, complex application procedures and uncertainty about future programme continuity – created additional frictions that translated into postponements or cancellations of planned works. Finally, fluctuations are also influenced by exceptional and one-off factors, such as the 100th anniversary of Poland's independence in 2018, when a record increase in expenditures was observed, and the COVID-19 pandemic, which caused a decline in expenditures in 2020. Taken together, these factors underscore the vulnerability of heritage protection to regulatory and administrative changes, especially when local spending heavily depends on cofinancing arrangements with private actors.

The distribution of expenditures by LGU type reveals a clear and persistent concentration of funds in larger units, above all voivodeships and cities with county rights (CCR). When aggregate expenditure over 2014–2023 is considered, communes (municipalities) record the highest total spending simply because they are the most numerous group. Communes incurred the highest total expenditures – PLN 924 million in the analyzed period, representing a share of 45% of all expenditures. Counties allocated PLN 650 million for this purpose, while voivodeships spent PLN 454 million, as shown in Chart 2. However, when expenditures are examined at the level of LGU types rather than individual units, voivodeships and CCR emerge as the main drivers of heritage funding. Voivodeships, starting from marginal amounts in 2014, steadily increased their investment and current expenditures, reaching a peak of nearly 94 million PLN in 2022 before experiencing in 2023 a decline to PLN 57.5 million representing a 39% reduction compared to the previous year. CCR also maintained a high and relatively stable level of involvement, particularly in investment categories.

Counties, especially rural counties, occupy an intermediate position. They allocated substantial sums to monument protection, but their role weakened in the later years of the period analysed, with a noticeable decline after 2018. Counties peaked in expenditures in 2018 (PLN 128 million), after which their involvement began to decline sharply, particularly in 2023, when expenditures dropped by about 39%.

Rural and urban communes, in turn, operate on much smaller budgets and dedicate comparatively lower amounts to heritage, even though they are responsible for a large share of the territory and numerous smaller heritage sites. This configuration leads to a situation in which the financial effort de-

voted to monument protection is strongly concentrated in a relatively small group of large, fiscally stronger LGUs.

Differences in heritage protection expenditures between large LGUs, such as voivodeships or cities with county rights, and smaller ones, particularly rural communes, have not only a statistical dimension but also tangible economic consequences. Smaller units often face budgetary constraints that prevent them from providing adequate funding. This, in turn, leads to the deterioration of conservation conditions and may weaken their developmental and tourism potential, and as the research results by Kostakis and Sarantis (2024, pp. 1231–1234) indicate, the development and exploitation of cultural heritage resources contribute to economic growth, with a greater impact visible in lower-income regions, which can lead to reducing interregional development disparities. Actions improving the quality and standard of heritage constitute an effective instrument of regional development policy.

2018 marked a turning point for all governance levels that recorded record-high or very high expenditures on monument protection. This was linked to the centennial celebration of Poland's independence, which brought additional funds for heritage restoration. In subsequent years, especially after 2020, the impact of external factors became evident, such as the COVID-19 pandemic, budgetary constraints, and changes in financing systems and the availability of EU funds.

The unequal distribution of resources is visible not only in total expenditure, but also in the structure of spending across individual budget paragraphs (Table 1; see Section 3 for details of the statistical tests). High-value projects and grants to nonpublic entities, particularly in paragraphs such as §657 (investment transfers to entities outside the public finance sector), are dominated by CCR and voivodeships. These units are able to support large-scale investments by foundations, associations, parishes or other nonpublic owners of monuments, often cofinancing extensive renovation or modernisation works. In contrast, rural communes and rural counties allocate far smaller amounts in these categories, which reflects both their limited fiscal capacity and the difficulty of mobilising matching funds for sizeable projects in less affluent areas.

Even in categories where rural communes appear to have relatively high shares – for example, in current grants to entities outside the public finance sector (§272) – the underlying amounts remain modest in absolute terms. This means that, despite a certain degree of engagement, the scale of support offered by small LGUs to local heritage owners is limited. Many necessary conservation works either do not receive funding at all or are implemented only partially, which can lead to a gradual deterioration of heritage assets, especially in smaller towns and rural areas. By contrast, CCR and voivodeships, with greater fiscal space and easier access to external programmes, can undertake large projects that substantially improve the condition and

attractiveness of key monuments. CCR and voivodeships dominated in terms of expenditure values, achieving the highest average ranks. For example, the average rank of current expenditures in voivodeships is as high as 6,284.89, while in rural communes it is only 2,642.71.

An analysis of the expenditure structure by their nature and by the entity ultimately responsible for implementing the task showed that the share of communes is significantly higher in each §, while the lowest shares of expenditures are in voivodeships. The effect size (r) between the extreme groups ranges from moderate to strong, which highlights significant disparities in the financial priorities of these units.

The pattern is similar in current and investment expenditures within the public sector. Paragraphs such as §273 and §434, which capture current grants and purchases of services for entities within the public finance system, show relatively higher shares for rural communes and rural counties in some cases, reflecting their responsibility for maintaining historic properties they own or manage directly. However, when total amounts are considered, voivodeships and CCR still dominate. Investment expenditures within the public sector (§656 and §658) are particularly concentrated in these larger units, where major modernisation and renovation projects are typically co-ordinated. In effect, the ability to undertake extensive, capitalintensive interventions in heritage is closely tied to LGU size, administrative capacity and fiscal strength.

The analysis of the relationship between monumentrelated expenditures and total LGU budgets reinforces this conclusion (Tables 2–3; see Section 3 for details of the statistical tests). In voivodeships and CCR, the association between total expenditures and spending on monuments is strong and positive, especially in key paragraphs such as §272 and §657. As overall budgets grow, allocations to heritage tend to increase as well, indicating that in these units heritage protection is woven into broader development and investment strategies. In rural and urban communes, the relationship is weaker and more uneven across expenditure categories. Even in years of budgetary expansion, increases in heritage spending are often modest, as additional resources are absorbed by other pressing priorities, including social services, infrastructure and education.

The role of education expenditures as a potential competitor for funds is generally limited at the aggregate level (see Tables 4–5 and Section 3 for details). For most LGU types, the relationship between the share of education in total expenditures and spending on monuments is weak or statistically insignificant. In CCR, a significant negative relationship between the share of education expenditures and expenditures on monuments was most often observed, especially in the main spending categories (§ 272, § 434, § 657), although the strength of this effect varied. In counties, an increase in the

share of education expenditures is usually associated with a reduction in funds for monuments; however, this effect is clear and statistically significant only in selected categories (particularly § 656 and § 658, which are investment §). In the case of communes, and especially in city counties, their own revenues are an important source of local funding for education (Guziejewska & Majdzińska, p. 535), which in turn means fewer resources available for monument protection. In other cases, the effect is weak or insignificant. In voivodeships, the relationship is ambiguous. This suggests that in larger urban units, where education systems are extensive and costly, discretionary room for additional spending on heritage can become constrained when education absorbs an increasing proportion of the budget. In rural communes and urban–rural communes, isolated statistically significant relationships appear, but their magnitude is small and does not point to a systematic tradeoff.

Overall, the empirical evidence indicates that the system of financing monument protection in Poland is characterised by two interrelated features: a high concentration of resources in voivodeships and cities with county rights, and substantial volatility of spending over time. Smaller LGUs – particularly rural communes and rural counties – face structural disadvantages that limit their ability to maintain and develop their heritage base. Their fiscal capacity is weaker, their dependence on external programmes is stronger, and the competition between heritage protection and other statutory tasks is more acute. As a result, they are less able to plan and implement longterm, multistage conservation strategies and to react quickly to emerging needs, such as urgent repairs or opportunities to adapt monuments for new uses.

From a policy perspective, these findings have several implications. First, the observed volatility suggests that heritage protection should not rely exclusively on timelimited programmes and ad hoc initiatives. More stable and predictable funding instruments are needed, especially for routine maintenance and smallerscale projects, which are crucial for preventing irreversible damage to historic fabric. Second, the strong concentration of funds in voivodeships and CCR highlights the need to address territorial imbalances. Without targeted mechanisms that support rural and smalltown LGUs – for example, dedicated grant schemes with higher cofinancing rates for financially weaker units, or technical assistance to help them prepare and implement projects – the existing disparities in conservation capacity are likely to widen. Finally, the results underline the importance of integrating heritage considerations into broader debates on fiscal equalisation and local government finance. If heritage protection continues to be treated as a noncore, discretionary task, smaller LGUs will remain structurally disadvantaged in this field, and many monuments outside major urban centres may gradually lose their cultural and developmental value.

5. Conclusion

The aim of the article was to determine how different types of LGUs allocate funds for the protection and care of historic monuments. The results of the analysis covering the years 2014–2023, together with the conclusions drawn on its basis, indicate that the aim of the study was achieved. The authors hypothesized that the expenditure on the protection and care of cultural heritage sites differs both in quantitative and structural terms between various types of local government units.

Based on the analyses, the following conclusions were formulated:

1. Expenditure on protection and care of monuments in the analyzed period was not stable – significant fluctuations resulted from the availability of external funds (e.g. government programs), legal changes (e.g. restrictions on tax relief for monuments from 2023), organizational factors (delays in grant competitions, complicated procedures) and extraordinary circumstances (celebrations of the 100th anniversary of regaining independence, Covid-19 pandemic).
2. There was a significant relationship between the type of LGU and the entity (located in the public sector or outside it) that ultimately spends the funds, with a clear predominance of large units – voivodeships and cities with county rights. Investment support non-public entities is also strongly concentrated in urban environments. Rural communes, even if there are monuments on their territory, are not able to provide an appropriate level of support from their budgets.
3. In the analyzed period, the role of voivodeships increased while the share of counties decreased and the involvement of communes remained stable. The analysis showed significant differences in the structure and amount of expenditure on monuments between types of LGUs. Voivodeships and CCR dominate both current and capital expenditure, mainly due to larger budgets and large projects. This means that the system of financing the protection of monuments in Poland is subsidiary in nature.
4. Smaller LGUs are more dependent on external support, which makes the system sensitive to changes in central or provincial policy, and also limits their independence in implementing monument protection tasks.
5. The size of the LGU budget is a significant factor determining expenditure on monuments, especially in large units (voivodeships, cities with county rights). The relationship between education and monuments expenditure is weak or insignificant in most LGUs, with the exception of cities with county rights, where expenditure on education limits the funds available for monuments.

6. Low R^2 values in studies concerning the financing of cultural heritage are characteristic due to the specificity of public data, which often reflect the multidimensionality and incompleteness of information (Eun, 2015; Gelman, Hill, 2007). It is acceptable to acknowledge low coefficients of determination in research models if the statistical model allows for the identification of significant relationships and directions of associations (Gelman & Hill, 2007; Freese, Peterson, 2017).

The obtained results allowed for the verification of the research hypothesis and the statement that the expenditure on the protection and care of cultural heritage sites differs both in quantitative and structural terms between various types of local government units, i.e. the recognition that the hypothesis has been confirmed.

The obtained results constitute a useful tool for public authorities in assessing and improving the management of the monument protection system and as an instrument for allocating financial resources. Central authorities, when modifying the system of financing local government, should take into account in particular the role of voivodeships and CCR in financing the protection of monuments, as well as the problems of rural communes in implementing this task. In the case of heritage sites of exceptional cultural value located within their territory, public policy should aim to ensure that their protection and care are financed from central government funds. This financing should not be dependent on the political parties in power and should not restrict the autonomy of local governments.

Limitations

A limitation of the study, which may have affected the results obtained, was that it considered only the expenditure side of local government budgets. An analysis of the revenue sources allocated to the protection and preservation of monuments would make it possible to identify the origin of the funds that communes, counties, and voivodeships spend on heritage protection. In other words, to determine whether internal sources (own revenues) or external ones — such as the state budget, the EU budget, or transfers from other LGUs — predominate. Further research is planned to incorporate these variables.

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Appendix

Table 1. Classification of expenditures incurred on historic objects under Polish law

Classification of Expenditure by Paragraph	Belonging to the Public Finance Sector			
	Yes		No	
	"Own" budgetary unit	Other public finance sector unit		
Type of expenditure	Current	§ 434	§ 273	§ 272
	Investment	§ 658	§ 656	§ 657

Source: Own preparation.

Table 2. Kruskal-Wallis test for dependent variables: *value of the expenditures* and *share of the expenditures*

§Num-ber	Dependent variable: value of the expenditures			Dependent variable: share of the expenditures		
	H statistic	significance (p)	partial effect size	H statistic	significance (p)	partial effect size
272	$H(5) = 1208.29$	< 0.001	$\eta^2H = 0.18$	$H(5) = 1074.41$	< 0.001	$\eta^2H = 0.16$



§Num- ber	Dependent variable: value of the expenditures			Dependent variable: share of the expenditures		
	H statistic	significance (p)	partial effect size	H statistic	significance (p)	partial effect size
273	$H(5) = 98.37$	< 0.001	$\eta^2H = 0.36$	$H(5) = 135.75$	< 0.001	$\eta^2H = 0.51$
434	$H(5) = 119.17$	< 0.001	$\eta^2H = 0.11$	$H(5) = 241.06$	< 0.001	$\eta^2H = 0.24$
656	$H(4) = 19.18$	< 0.001	$\eta^2H = 0.18$	$H(4) = 31.24$	< 0.001	$\eta^2H = 0.37$
657	$H(5) = 220.00$	< 0.001	$\eta^2H = 0.19$	$H(5) = 248.90$	< 0.001	$\eta^2H = 0.22$
658	$H(5) = 84.26$	< 0.001	$\eta^2H = 0.15$	$H(5) = 125.66$	< 0.001	$\eta^2H = 0.26$

Source: own study based on data from the Besti@ database for the years 2014–2023.

Table 3. Results of the analysis using Dunn's method and Glass's rank biserial correlation effect size coefficient

§Number	dependent variable: value of the expenditures			dependent variable: share of the expenditures		
	LGU with the highest share (Mrank)	LGU with the lowest share (Mrank)	Effect size (r)	LGU with the highest share (Mrank)	LGU with the lowest share (Mrank)	Effect size (r)
272	V(6284.89)	RC(2642.71)	V>RC ($r = 0.35$)	RC(3451,45)	V(1203,85)	RC vs V: $r = 0.54$
273	V(186.44)	RC(79.86)	V>RC ($r = 0.57$)	RC(206,38)	CCR(52,94)	RC vs CCR: $r = 0.83$
434	CCR(741.52)	RC(457.24)	CCR>RC ($r = 0.43$)	RC(598,03)	V(88,07)	RC vs V: $r = 0.62$
656	CCR(60.31)	RD(21.25)	CCR>RD ($r = 0.73$)	URC(62,2)	V(26,53)	URCvsV: $r = 0.60$
657	CCR(925.32)	RC(437.79)	CCR>RC ($r = 0.50$)	RC(618,29)	V(27,8)	RC vs V: $r = 0.58$
658	CCR(365.18)	URC(211.73)	CCR>URC ($r = 0.49$)	RD(290,83)	V(39,25)	RD vs V: $r = 0.49$

Source: own study based on data from the Besti@ database for the years 2014–2023.

Explanation of abbreviations: see Table 4 and 5

Effect size: weak ($r < 0.3$), moderate ($0.3 \leq r < 0.5$), strong ($r \geq 0.5$).

Table 4. Results of regression analysis between expenditures in various § and total expenditures in LGUs' budgets

Number §	No of observation	adj. R^2	t	significance (p)	β (stand.)
Urban Communes					
272	496	0.11	7.99	< 0.001	0.34
657	140	0.07	3.28	0.001	0.27
658	61	0.15	3.28	0.002	0.39
Urban-Rural Communes					
272	1680	0.10	13.81	< 0.001	0.32
273	24	0.50	4.95	< 0.001	0.73
657	315	0.02	2.76	< 0.001	0.15



Number §	No of observarion	adj. R ²	t	significance (p)	β (stand.)
Rural Communes					
272	2353	0.10	16.11	<0.001	0.32
273	26	0.46	4.68	<0.001	0.69
Rural Counties					
272	850	0.32	20.15	<0.001	0.57
273	58	0.57	8.84	<0.001	0.76
658	50	0.07	2.18	0.034	0.30
Cities With County Rights					
272	336	0.65	25.19	<0.001	0.81
273	33	0.13	2.43	0.021	0.40
434	159	0.32	8.72	<0.001	0.57
657	90	0.65	12.89	<0.001	0.81
658	85	0.38	7.27	<0.001	0.62
Voivodeships					
272	122	0.65	4.78	<0.001	0.81
273	104	0.42	8.66	<0.001	0.65
656	32	0.25	3.36	0.002	0.52

Source: own study based on data from the Besti@ database for the years 2014–2023.

Table 5. Results of regression analysis between expenditures in various § and share of expenditures on education in LGUs' budgets

Number §	No of observations	R ²	adj. R ²	B (direction)	t	p	β
URC							
272	1680	0.01	0.01	-1681,18	-3,09	0,002	-0,08
657	315	0.01	0.01	-4424,99	-2,05	0,042	-0,11
RC							
272	2353	0.00	0.00	-786,76	-3,21	0,001	-0,07
273	26	0.19	0.15	1630,66	2,36	0,027	0,43
CCR							
272	336	0.19	0.19	-246 964,56	-8,89	<0,001	-0,44
434	159	0.08	0.08	-55 358,73	-3,75	<0,001	-0,29
657	90	0.05	0.04	-66 095,79	-2,13	0,036	-0,22
RD							
272	850	0.01	0.01	-2087,52	-3,42	<0,001	-0,12
656	12	0.41	0.35	-5114,54	-2,63	0,025	-0,64
658	50	0.08	0.06	-21977,31	-2,07	0,044	-0,29

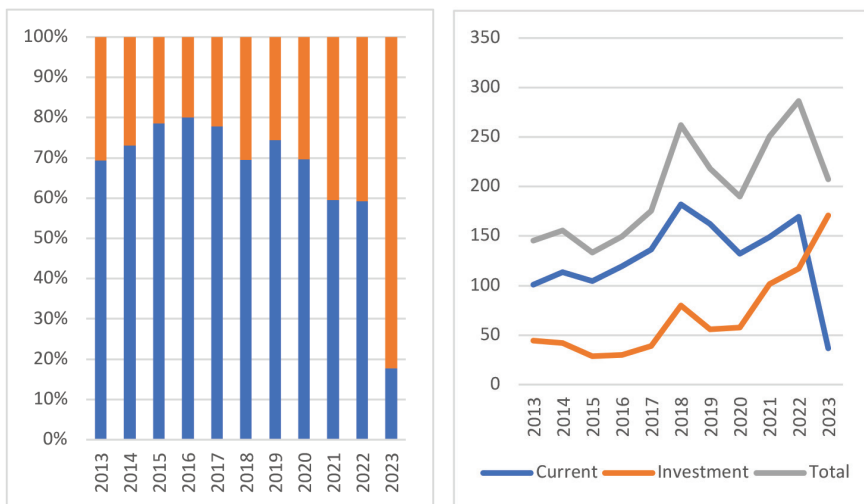
Number §	No of observations	R ²	adj. R ²	B (direction)	t	p	β
V							
272	122	0.08	0.07	476 535,88	3,17	0,002	0,28
657	20	0.21	0.16	-168 015,70	-2,16	0,045	-0,45

Source: own study based on data from the Besti@ database for the years 2014–2023.

Chart 1. Structure and value of LGUs expenditures in Poland for care of monuments in the years 2014–2023 (share of expenditures in %, value of expenditures in PLN million)

The structure of LGUs expenditure

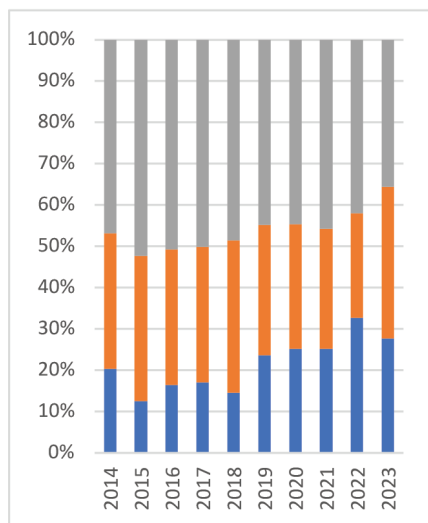
The value of LGUs expenditure in PLN million



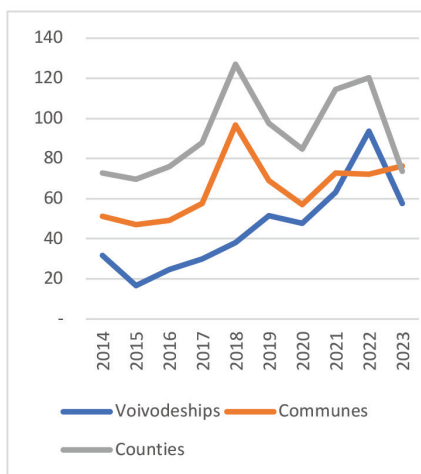
Source: own study based on data from the Besti@ database for the years 2014–2023.

Chart 2. Expenditures of various types of LGUs on the care of monuments (share of LGUs type in %, value of expenditures in PLN million)

Expenditure structure by LGU type



Expenditure by type of LGU in PLN million



Source: own study based on data from the Besti@ database for the years 2014–2023.

