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## How indicative are the financial tables? A Case Study of the Operational Programme Infrastructure and Environment (2007–2020)

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### Abstract

The article aims to assess the differences the planned allocation of national and EU funds and their actual disbursement within the Operational Programme “Infrastructure and Environment”. The study evaluates the efficiency of the planning process conducted by the Managing Authority in Poland. While evaluation reports at the national or European Commission levels typically analyze programme efficiency through its outcomes, financial governance is examined using alternative techniques. Consequently, a critical aspect of planning process is somewhat overlooked in the official review. Poland is generally regarded as a leader in EU funds absorption and exhibits one of the lowest fraud rates – significantly lower than those of many Western European Member States. However, these evaluations reflect only a technical ability to identify optimal projects and effectively manage the

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financial process. The research identified discrepancies in the level of investment priorities, with differences often amounting to less than 1.0 percentage point.

**Keywords:** EU funds, Operational Programme Infrastructure and Environment; Governance, years 2007–2013, years 2014–2020

**JEL Classification Codes:** E61, E65, H61

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## **Planowana alokacja a rzeczywiste wydatki – Studium przypadku Programu Operacyjnego Infrastruktura i Środowisko w latach 2007–2020**

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### **Streszczenie**

Celem artykułu jest ocena poziomu różnicy między planowaną alokacją środków krajowych i unijnych a rzeczywistym poziomem ich wydatkowania w ramach Programu Operacyjnego „Infrastruktura i środowisko”. Ma to na celu ocenę skuteczności procesu planowania, który został podjęty przez Instytucję Zarządzającą. Podczas gdy raporty ewaluacyjne opracowywane na poziomie krajowym lub na poziomie Komisji Europejskiej analizują skuteczność programu przez pryzmat jego wyników, zarządzanie finansami jest badane przy użyciu innych technik. W ten sposób obszar całego procesu planowania jest do pewnego stopnia ignorowany w oficjalnym procesie ewaluacyjnym. Polska jest zwykle wskazywana jako jeden z liderów pod względem absorpcji funduszy UE i ma jeden z najniższych odsetków nadużyć finansowych (znacznie poniżej wyników uzyskanych przez wiele zachodnioeuropejskich państw członkowskich UE). Wykazują one jednak raczej techniczną zdolność do identyfikowania najlepiej dopasowanych projektów i zdolność do właściwego zarządzania całym procesem finansowym. Rozbieżności zidentyfikowane na poziomie Priorytetów Inwestycyjnych były w większości przypadków znacznie poniżej 1.0 pp.

**Słowa kluczowe:** fundusze UE, Program Operacyjny Infrastruktura i Środowisko, zarządzanie, lata 2007–2013, lata 2014–2020

**Kody klasyfikacji JEL:** E61, E65, H61

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## **Introduction**

The efficiency of EU co-financed programmes is assessed through a multistage evaluation process embracing a holistic approach towards the governance of public interventions. A set of minimal requirements detailed in EU treaties was subsequently developed in sector-specific regulation adapted to a changing regulatory regime over time.

The analysis of public policies co-financed with EU funds can be conducted before the operationalisation of the process (ex-ante), during the disbursement of funds (mid-term) or after the closure of the programme (ex-post). Literature underlines that the evaluation process focuses on the outputs of programmes: their goal achievement (Philipp & Tobias, 2010; Szarfenberg, 2015; OECD, 2021; Wolniewicz-Slomka, 2022; Corti & de la Ossa, 2023) or through the lenses of the usage of available funds (Uusikylä & Virtanen, 2000; Stolbova, Monasterolo & Battiston, 2018; European Court of Auditors, 2021). Both approaches are integrated, as seen in several of the European Commission's reports (2021, 2022).

Programmes co-financed by the EU are also analysed through different governance perspective: budgeting (Downes, Moretti & Nicole, 2017); fraud prevention policies (Quirke, 2009; Pujas, 2011; Roman, Achim & McGee, 2023); administrative capabilities and cooperation (Rodríguez-Pose & Ketterer, 2019; Incaltarau, Pascariu & Surubaru, 2020).

These approaches have provided further valuable insights into successful intervention parametrisation that can be replicated in other EU Member States. However, while informative, the evaluation itself provides little data on the quality of the planning process enacted and the administrative capacity of public bodies. Furthermore, a growing number of articles and research studies analyse the outcomes of interventions using the meta-analysis approach (Marzinotto, 2012; Heapp & Allacron, 2024).

Thus, an additional layer in the evaluation process – or a different type of ex-post analysis covering the entire programming period for a specific programme – could involve comparing the planned allocation to certain investment categories or policy objectives with the actual disbursements. This approach can be criticised on several points: (1) in order to ensure that the entire allocation is used within the set time frame, the managing authority may make necessary amendments by relocating available and unused funds to those intervention that are more popular among potential beneficiaries, (2) most evaluation work relies heavily on analysing the programme's ability to deliver certain product KPIs, which in most cases take the form on easily attainable outcomes; (3) last but not least, managing authorities are scrutinized by different EU institutions that require specific outcomes and formalities as defined in regulations for the various programming periods. While these criticism may be justified towards the proposed approach, they seem to be entrenched in a specialised – or, to some extent, narrow – perspective on evaluation.

We make the case for the added value of the proposed approach, as the analysis of the life cycle of an EU co-funded programme cannot be based solely on its capacity to deliver physical KPIs, such as the length of build railways, the number of schooled children, or other widely used measures. Furthermore, even as socioeconomic variables

and the general environment change over time, EU co-funded programmes cannot be based solely on their capacity to deliver outcomes as programmed within the framework of a long- or medium-term strategic document. Due to the nature of these strategic documents, their goals remain, to a large degree, stable over extended periods. An approach based on analysing the difference between the drafted assumptions of support by intervention category (or policy objective) and the actual disbursement of funds could provide valuable insight into the programming quality during the preparatory stages of policy implementation.

This article is divided into three distinct parts. First, we provide general information concerning the evaluation process, as well as outline of the proposed analytical approach, this section also includes the theoretical assumptions made by the authors. The second part contains an analysis of the scale and scope of differences between the planned allocation and the actual disbursements made to different categories of beneficiaries. This analysis covers two programming periods: 2007–2014 and 2014–2020. The third part of the article offers further insights into the results, discusses issues encountered by the analytical team, and outlines potential directions for further research.

## The general outline of the proposed approach towards analysing the difference between the planned allocation and the actual disbursements

### An overall approach towards the evaluation process and its legal framework

Evaluating policies co-financed or financed with EU funds is enacted using three basic approaches. The first one (*Ex-ante evaluation*) is linked with the planning phase of managing EU funds on the national, regional or EU level (Pellegrin & Colnot, 2020). Authorities analyse the needed interventions (Szarfenberg, 2015) to foster the development potential (Samset & Christensen, 2017) of a region or economic sector (OECD, 2022) but also the impact of the proposed measures (Kupiec, 2014). The second path (*Mid-term evaluation*) is prepared after the third or fourth year of the implementation of the programmes. This phase is prepared by independent evaluators, mandated to determine whether the strategy adopted at launch remains relevant due to possible changes in the overall socio-economic environment. The final stage is the *Ex-post evaluation*, conducted by the EC. Its objective is to examine the utilisation of resources and their effectiveness, and potential medium- and long-term impact.

The legal framework for the evaluation process of EU policies is enshrined in the European Union treaties. As stated in article 70: “ (...) the Council may (...) adopt measures laying down the arrangements whereby Member States, in collaboration with the Commission, conduct an objective and impartial evaluation of the implementation of the Union policies referred to in this Title by Member States’ authorities (...)” (TFEU, 2016). During each programming periods, a set of regulations has been prepared (usually following a path indicated by a White Paper or a set thereof) that provides ground rules not only for the individual Funds (e.g., European Social Fund) but also for Programmes. During the programming period 2014–2020, Regulation (EU) No 1303/2013 set the legal framework for all Managing Authorities and partners involved in programming, disbursement, or evaluation.

### Why is there a need to analyse the difference between the planned allocation and actual disbursements in EU co-financed programmes?

Evaluation reports of EU co-financed programmes and policies focus on the output being provided. It can be seen in both historical as well as more recent research papers (Uusikylä & Virtanen, 2000; Marzinotto, 2012; Majone, 2015; Penszko, 2017, 2019; Boumans & Ferry, 2019; Ośrodek Ewaluacji, 2022; Mergoni & de Vitte, 2023). The reader should be aware that this approach is also enshrined in the political process of EU policies as defined through the REFIT programme (2020/C163/03), Better Regulations Guidelines (2021), and Toolbox (2023). Performance-based management of programmes has become the norm also in the case of the approach taken by EU institutions (Corti & de la Ossa, 2023; European Court of Auditors, 2021; Cipriani, 2021; European Commission, 2021). Budgetary performance is also being evaluated by both European and national institutions through governance procedures. This process is being scrutinised on different levels and themes – the procedural approach of the Court of Auditors (Giammarioli et al., 2007), the efficiency of implementing the budget (Downes & Nicole, 2016; Wantoch-Rekowski & Tati, 2023).

However, neither the performance-based nor the budgetary-based approach provides an analyses of the differences between planned allocation and actual disbursements. We should note that this sort of analytical approach is well known and widely used as a tool for evaluating the efficiency of policy-design fit, especially if this can be used to promote greater progress towards goal attainment (Early et al., 1990; Harkin et al., 2016; Przygocka, 2017; Bachtler et al., 2016; van Geet et al., 2021). Furthermore, this approach was not used in any of the major evaluations of EU-funded programmes during the 2007–2013 and 2014–2020 programming perspectives

(MFiPR, 2024). We urge the reader to note that it was also not taken into consideration during the recurring analysis of the potential of public bodies engaged in the managing the structural funds in Poland (MR, 2016; MFiPR, 2023). Thus, a general lack in the use of this approach can be identified in recent documents and analyses prepared by Polish authorities or on their behalf. However, we identify a rising trend in the use of certain elements of this approach with regard to the EU Recovery and Resilience Facility (Darvas, Welslau & Zettelmeyer, 2023; Cecchi, 2023).

Discrepancies between the first draft of the programme and the actual disbursement of funds to its beneficiaries can be used to assess not only the quality of administrative capabilities of the managing authority but also the relative ease of access to different types of public support co-financed through EU-funds. It should be noted that the latter element requires additional information concerning the level of rejection of different types of projects submitted by potential beneficiaries.

## The theoretical rationale for the analysis presented by the authors

While an analysis of planned financial allocation and its actual disbursements might be seen as a mere computational or budgeting exercise, it can also provide additional insight into the quality of the planning process of the public body. This is primarily evident in the ability of a public entity to transpose the political goals of medium and long-term development strategies into a set of KPIs, or more broadly – into the triangle of goals (general statements outlining the programme's intentions), objectives (specific results to be delivered within a preset timeframe), and outcomes (measurable statements of the result).

It imperative to consider two programming periods (2007–2013 and 2014–2020). Technically speaking, it would be possible to include the first programming period (2004–2006), during which Poland and nine other countries were considered fully-fledged Member States of the European Union. However, the scale of the programmes and the methods employed to organise and plan them were not adequate for the analytical purpose. Furthermore, by choosing the 2007–2013 and 2014–2020 periods, it is possible to identify any changes that might have arisen from increased experience in the preparation process of EU-funded programmes.

To prepare the analysis, the research team had to decide which operational programmes would be examined. A key element in the decision process was the relative similarity of political goals and objectives outlined in the EU strategic documents – both under the Lisbon Process and its direct successor Europe 2020 (COME/2010/2020) – as these two strategies set the stage for the 2007–2013 and 2014–2020 programming periods. Substantial similarities between the two strate-

gies can be observed in intervention areas related to public infrastructure (Transport, Energy, and Telecommunication), as well as in those focusing on public services delivery. While certain parallels can also be found in the areas related to innovation and entrepreneurship, these tend to be less parametrisable. Thus, a rational choice was to focus on the Operational Programme “Infrastructure and Environment” for both 2007–2013 and 2014–2020 periods, as both versions focus on the abovementioned goals and types of public intervention. It should be noted that similar actions are also being undertaken within the scope of 16 Regional Operational Programmes. However, due to their decentralised nature and the highly differentiated categories of beneficiaries, we rejected these kind of programmes. Furthermore, reports prepared by the Polish government (MR, 2016; MFiPR 2023) clearly show a large discrepancy between the administrative capacities of individual units, potentially inducing additional non parametrical elements into the research – elements that should be avoided if possible to achieve a relatively clear and unbiased result.

For more information on the documents used further within the research and identified as (1) first draft/version and (2) final version, please refer to the Table 2.

**Table 2. Organisational information concerning the programmes versions**

Programming period	First draft		Latest version	
	ID	Date	ID	Date
2007–2013	1.0	07.05.2007	5.0	18.03.2016
2014–2020	1.0	16.12.2014	25.0	15.02.2023

Source: own elaboration.

**Table 1. Aggregation of Investment Axis used in the analysis**

Programming period	Water, sewage and environmental infrastructure	Mobility infrastructure & transport services	Energy infrastructure & efficiency	Other types of public infrastructure	Technical Assistance
2007–2013	Axis 1–5	Axis 6–8	Axis 9–10	Axis 11–13	Axis 14–15
2014–2020	Axis 1 (in full) – 2 (part of)	Axis 3–6	Axis 2 (part of), 7, 11	Axis 8–9	Axis 10, 12.

Source: own elaboration.

The next stage of the analysis will be to aggregate the Investment Axis (as defined within both Operational Programmes) and Types of Intervention (as defined by COM/215/2014, COM/2021/1060) both in terms of the original allocation, the latest version of the strategic document, and lastly – the level of disbursements actually being made. This is crucial to assess the projects being rolled-out through different

schemes and approaches. The following table shows the aggregation during both programming periods.

Furthermore, one must always consider an imperative motive of the managing authority itself to reach the highest available level of disbursements of the commitments being made during the entire run of the programme. And thus, considering the inevitable transfer of allocation between different types of intervention. We should further note that this is quite normal in all EU Member States, whenever there are beneficiaries of Cohesion or Structural funds. One should also consider the fact that during later programming periods a performance reserve mechanism was introduced into EFSI funds, increasing the need of the Managing Authority to deliver pre-arranged results to have access to those blocked funds. An analysis of Polish programmes shows that the level of transfers varies greatly by both type of Managing Authority (with central government or development agencies managed programmes showing slightly higher level of reallocation of resource than in the case of self / regional governments), as well as type of funding (with higher levels among Cohesion policy programmes than in the case of Common Agricultural Policy). However, at the end the level of reprogramming could go as high as 5% of the originally allocated resources.

Thus, when aggregating the Types of Intervention and the Investment Axis into the grouping predefined by the authors, the level of reprogramming should not exceed a general rule of thumb of 1–2 percentage points. Any overlap above this threshold should be identified by a high degree of subgroup reallocation of funds, implying an issue in the programming process.

Subsequently, the analysis of allocation and disbursement will be conducted using different versions of the programmes, taking into consideration the Investment Axis, which encompasses different types of intervention for the ERDF, the ESF, and the Cohesion Fund. Considering the EU budget planning regarding disbursements and budgetary capping (commitment appropriations and payments), the discrepancies should not exceed an overall level of 2–3 pp., with a smaller allowed level of 1–2 pp. for infrastructure payments (due to specific capping).

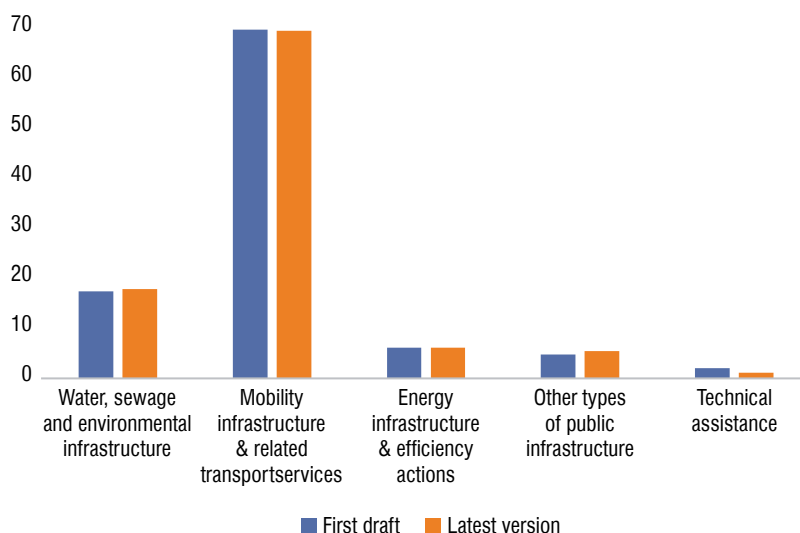
The last stage of the analysis will involve converting the prices used in the indicative tables (both the original and final versions), as well as in the beneficiary transfer data, into constant prices. Additionally, these figures must be converted into EUR, as the data provided by the Ministry contain transfers in the Polish national currency. To do so, we will use GUS deflator for individual years and NBP's official exchange rate tables.

## Analysing the allocation and disbursements in the different programming periods

### Programming period 2007–2013

The Operational Programme “Infrastructure and Environment” 2007–2013 (further abbreviated to OPIE 2007–2013) was approved by the European Commission on December 7th, 2007. The document and its crucial components underwent 25 changes advocated by the Polish Government or through the input of the Monitoring Committee of the above-mentioned Operational Programme. The implemented modifications were relevant for the allocation of national contribution on the level of Investment priorities (programming level below Investment Axis). Their impact should be seen as negligible on the entire document.

**Figure 1. Allocation of EU Funds contributions among main themes in the Operational Programme “Infrastructure and Environment” 2007–2013, in pp., and constant prices (2007)**



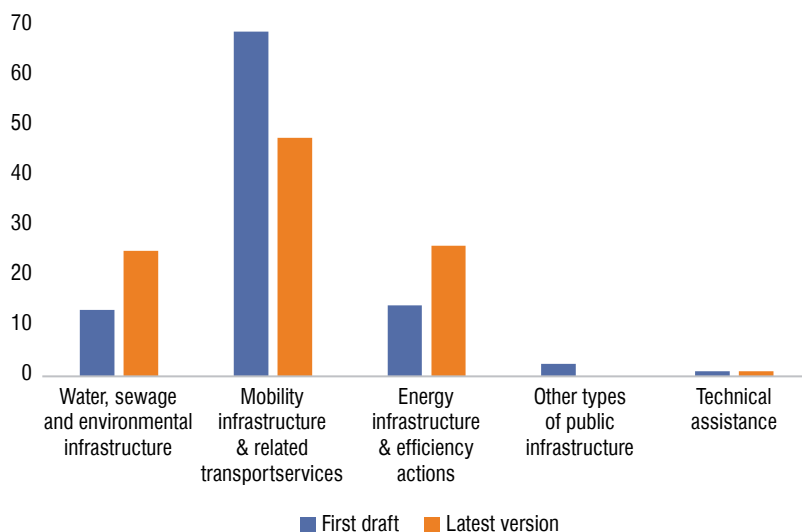
Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

The abovementioned changes were typical for other documents used to govern EU funds in Poland during the programming period 2007–2013. Furthermore, even the large number of changes made to the individual Priority Axis (15 in total, two of

which were used to finance Technical Assistance) did not make an essential change to the general allocation of EU funds (Figure 1). The difference between the versions did not exceed 0.5 pp, except for Water, sewage, and environmental infrastructure, where it increased by just over 1 pp., and for Technical Assistance, where it felt by almost 1 pp. We emphasize that a general decrease of budgets allocated to those functions was common to central government programmes.

The allocation of national budget contributions (either from the central government, local government budgets, or other public sector Polish-based entities) did change significantly (Figure 2): mobility infrastructure and related transportation services were defunded in order to increase support for either water, sewage and environmental-related infrastructure (covered under Priority Axis 1–5) or energy-related infrastructure (covered by Priority Axis 9–10). Furthermore, while the analysis will concentrate on the difference between the original allocation of funds and their actual disbursements, as this can be used to showcase the managing authority's strategic planning skills, the work will also present a breakdown of the allocation of EU and national funding. This can be used to assess if any major changes occurred on the level of strategic documents and goals during the programming period. As usual, EU funds tend to be more sticky than national contributions.

**Figure 2. Allocation of National Budget contributions among main themes in the Operational Programme “Infrastructure and Environment” 2007–2013, in pp., constant prices (2007)**

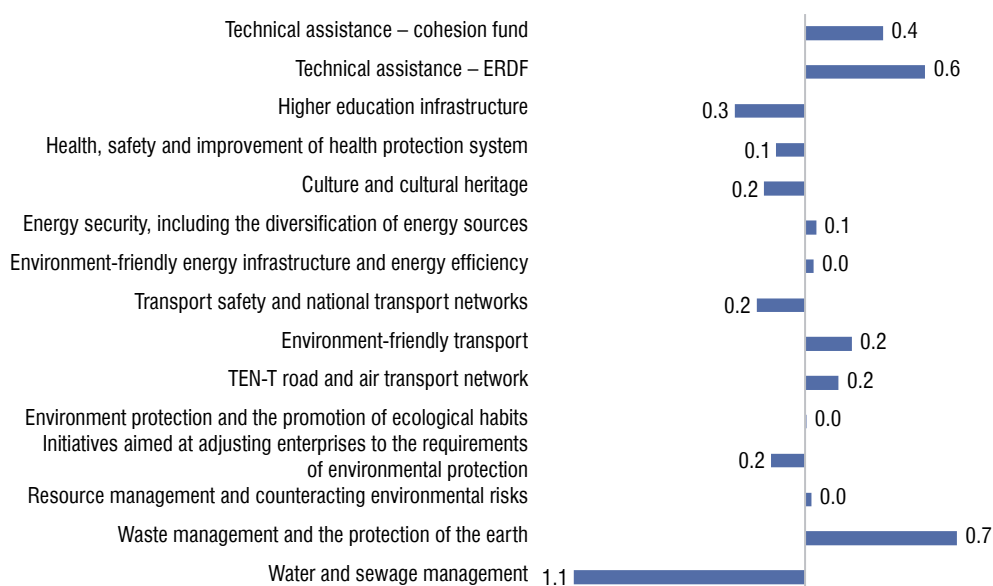


Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

The differences in the programmed allocation of EU funds between the first version of the document (approved by the European Commission in 2007) and its latest version (from 2014) appear minimal for the majority (12 out of 15) of the investment priorities (Figure 3). The most significant change between the two versions of the programme was observed in the investment priorities concerning water, sewage and waste management (Priority Axis 1 and 2).

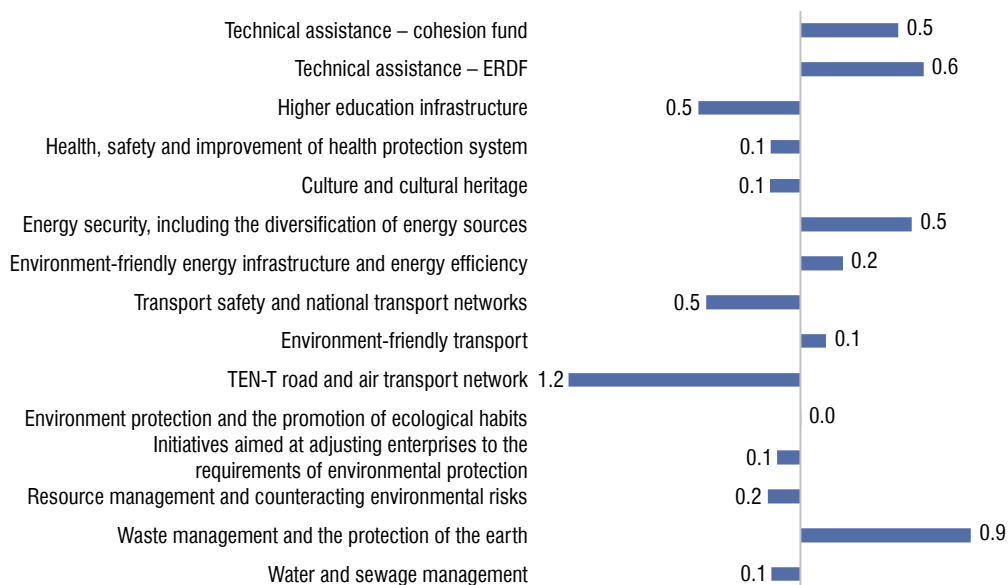
Considering disbursements of EU funds and their deviation from the original state of the Operational Programme (Figure 4), significant differences can be identified in two Priority Axis: the first being waste management and the protection of the earth (a difference of nearly 1.0 pp), and the second being the TEN-T road and air transport network (a difference slightly higher than 1.2 pp).

**Figure 3. Differences in the allocation of EU funds between the original (first) draft and the final version of the Operational Programme “Infrastructure and Environment” (2007-2013), in pp., constant prices (2007)**



Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

**Figure 4. Differences in the allocation of EU funds between the original (first) draft and the final disbursements of the Operational Programme “Infrastructure and Environment” (2007–2013), in pp., constant prices (2007)**



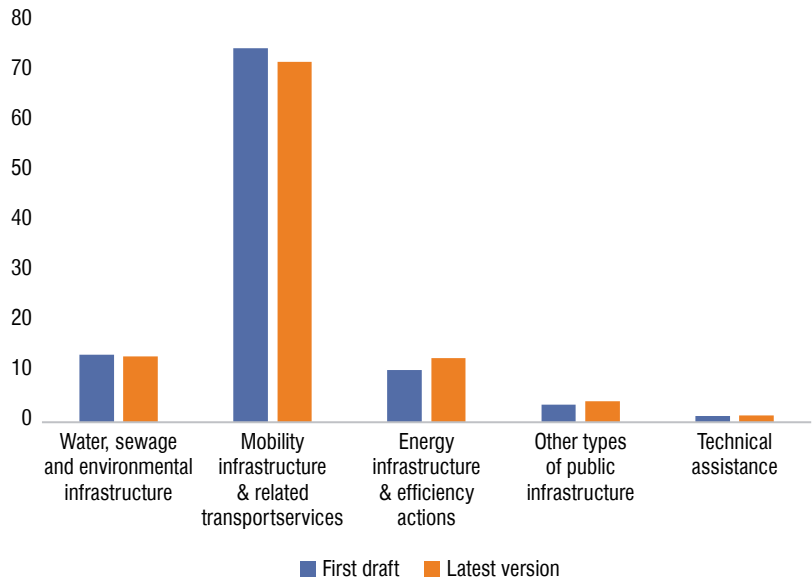
Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

## Programming period 2014–2020

The Operational Programme “Infrastructure and Environment” 2014–2020 (hereafter abbreviated as OPIE 2014–2020) was approved by the European Commission on May 24<sup>th</sup>, 2014. The document and its crucial components underwent nearly 50 changes, which is within the norm for similar national-level Operational Programmes during the 2014–2020 programming period. For example, the OP “Intelligent Growth” underwent more than 45 times modifications up to 2023, in accordance with the n+3 rule governing the disbursement of EU funds. The modifications implemented affected the allocation of national contributions at the investment priorities level (a programming level below the Investment Axis).

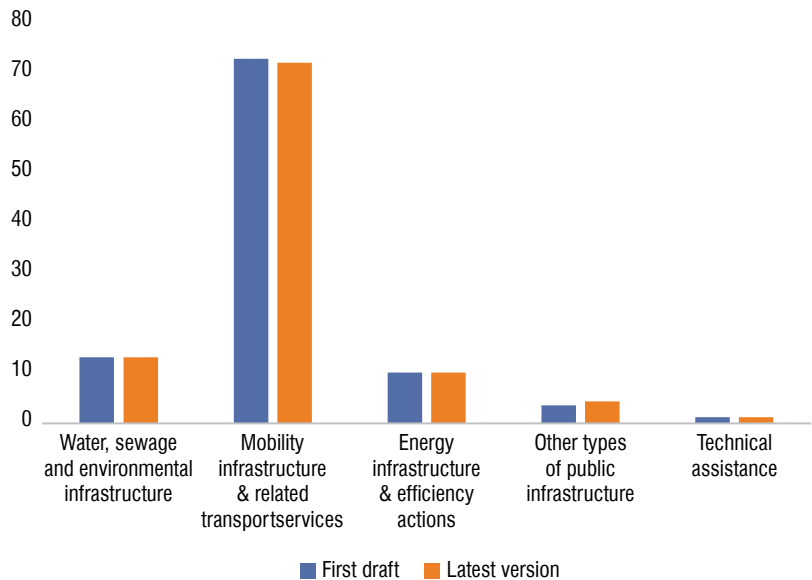
Despite the numerous changes made to the individual Priority Axis, the overall allocation of EU funds was not significantly altered (Figure 5). Compared to the previous programming period, the magnitude of discrepancies between the original allocation and the most recent version was quite similar.

**Figure 5. Allocation of EU Funds among main themes in Operational Programme “Infrastructure and Environment” (2014–2020), in pp., constant prices (2014)**



Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

**Figure 6. Allocation of National Budget contributions among main themes in Operational Programme “Infrastructure and Environment” (2014–2020), in pp., constant prices, (2014)**

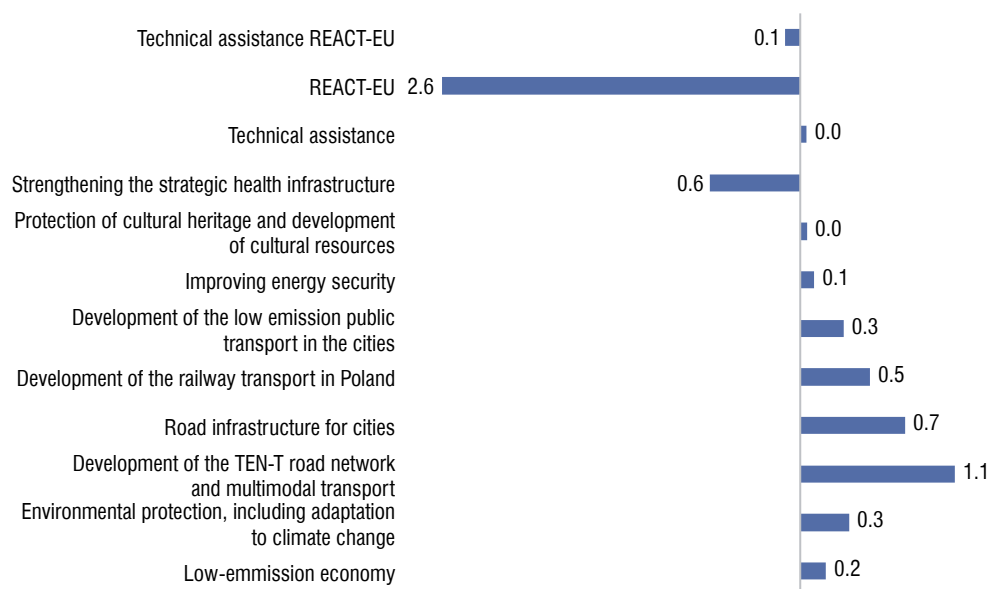


Source: own elaboration based on (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024A) data.

The allocation of National contribution (either from the central government, local government budgets, or other public sector Polish-based public sector entities) underwent a much smaller change (Figure 6) – not exceeding the 0.5 pp threshold. This is in stark contrast to the previous programming period, where the discrepancies between the original and final allocations were well above the 10 pp. mark. A working hypothesis for such overperformance is, to a certain degree, the financial condition of the Polish GG sector (which facilitated the co-financing of projects by local and self-government), as well as an overall increase in the administrative capacities of programme’s managing body. The latter hypothesis is supported by the reports of the Ministry (MR, 2016; MFiPR, 2022).

The most significant difference in the allocated EU funds between the first draft of the documents and the latest version (Figure 7) can be seen in four areas: REACT-EU, which – due to its COVID-related source – was not considered in 2014; TEN-T networks, whose allocation was reduced by more than 1.5 pp; road infrastructure in cities (+0.8 pp); and health infrastructure (+0.6 pp.).

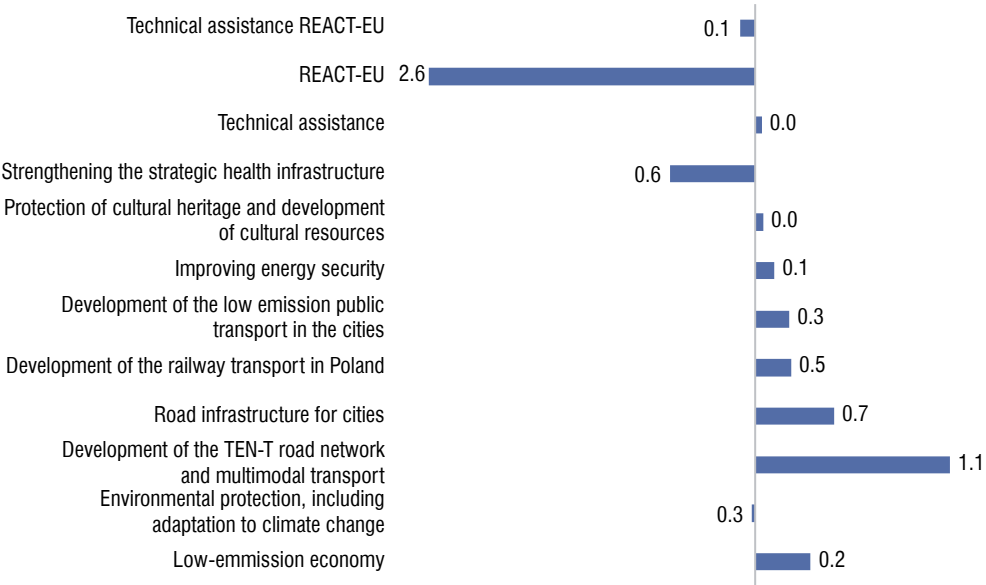
**Figure 7. Differences in allocations between the original (first) draft and the final version of the Operational Programme “Infrastructure and Environment” (2014–2020), in pp., constant prices (2014)**



Source: own elaboration based (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024B) data.

While analysing the difference between the original draft allocation and the disbursement of EU funds (Figure 8), we find the highest discrepancies in the Priority Axis 11 (REACT-EU). As noted above, this is clearly because the mechanism was implemented in 2020, while the first funding period began in 2021 (Regulation (EU) 2020/2221).

**Figure 8. Differences in allocations between the original (first) draft and final disbursements of the Operational Programme “Infrastructure and Environment” (2014-2020), in pp., constant prices (2014)**



Source: own elaboration based (Ministry of Development Funds and Regional Policy, Republic of Poland, 2024B) data.

## Discussing the obtained results and further steps

The results obtained during the computational exercise provide insight into the accuracy of the programming mechanism used by Polish national and, to a certain degree, regional authorities to manage the inflow of EU funds related to infrastructural projects. One should always take into consideration that the financial indicative tables represent a theoretical outlook on actual disbursements.

We can clearly state that during the 2007–2013 programming period, the level of difference between the draft allocation, the programme’s latest version, and the actual disbursement was, in most cases, well below 1.0 pp. However, this almost negligible difference should be solely associated with the EU contribution, as for the national

budget contribution, the difference reached a much higher value (entering the double-digit range). This striking difference can be partly explained by the financial situation of local and self-governments, whose budgets were not prepared to provide the necessary beneficiary contribution for the projects. To some extent, this explanation can be supported by the fact that an increase occurred in the allocation provided for water and sewage activities, and while utilities in Poland tend to be characterised by a relatively low level of profitability, they generate, in most cases positive cash flows from their main activities (GUS, 2024). Furthermore, another category, that experienced a relatively high level of change in the national budget allocation during the entire programming period was mobility infrastructure. This difference can be primarily explained by changes made to the budgetary mechanisms used to fund these types of works (especially in the wider context of the post-subprime crisis recovery mechanisms implemented in Poland) (Białek, Firek & Tyc, 2022; Białek & Tyc, 2022).

Looking into the difference between the allocated levels of funding at the Investment Axis level, it seldom exceeded 0.5 pp. The relatively minor discrepancies between the disbursements and the draft (original) allocation, as well as the latest allocation of the programme, can be offset by a rather stringent approach to mobility-related infrastructure (roads, railways, airports, and marine ports) in all Polish development strategies. Furthermore, infrastructure investments received higher markups compared to other investment themes, with discrepancies close to 1 pp. or even higher. The national desired outcome is broadly in line with the evolving EU mobility strategy, which now places greater emphasis on enhancing transport corridors other than East-West, in order to provide more regional development opportunities.

The analysis of the 2014–2020 programming period analysis reveals a slightly higher discrepancy between the draft allocation of EU and national contributions, and the actual final disbursements, compared to the previous period. This discrepancy (almost twice as large as in the first programming period analysed) can largely be linked to COVID-19 pandemic and its impact on economic policy. The pandemic forced a significant change to the previously observed *laissez-faire* approach to the common market and overall state aid. Public intervention, which had been viewed through the lens of anti-competition policy, was once again seen as valid instrument in Brussels and national capitals. Even taking this black swan-like event and its policy backdrop into consideration, the level of discrepancy should still be considered relatively low. We should further emphasise that discrepancies rarely reach a 2.0 pp threshold, even at the thematic objective level (excluding programming conducted specifically under the REACT-EU policy objective).

Looking at the difference between the originally planned allocation and the actual disbursements during the 2014–2020 programming period, we find that the highest

levels of discrepancies were identified in certain types of road infrastructure (both those related to municipal mobility schemes and TEN-T networks) and in health infrastructure. The latter is largely attributable once again to the COVID-19 pandemic and needs arising from its aftermath.

We identify a need for a more in-depth analysis of types of interventions made under the ERDF, the ESRF, and Cohesion Fund (and, to a certain degree, other types of EU funding). Such an analysis could be used to assess the extent to which managing bodies and authorities reallocate the funds made available to them under the Programme. Further studies could also take into consideration other investments schemes (for example, regional programmes or other programmes managed at the central level). Further research using similar methods should be considered, as it could help assess the capacity to design and implement interventions and provide insights into the quality of the programming actions during the preparatory stages of policy implementation.

## Conclusion

The article aimed to assess the discrepancy between the planned allocation of national and EU funds and their actual disbursement under the Infrastructure and Environment Operational Programme. This approach is not commonly used in research within the EU funds evaluation system, but it can serve as an additional element in examining the quality of strategic financial planning at the level of the Managing Authority.

The study covered the Polish operational programme Infrastructure and Environment from two financial perspectives: 2007–2013 and 2014–2020. For the first period, slight differences (less than 1.0 pp.) were observed between programme's initial financial plan and the actual disbursements. One possible explanation for this is the financial situation of potential beneficiaries from self and local government, which may have hindered their ability to contribute their share to the projects. In contrast, during the second period, the most rational hypothesis is that the discrepancies are significantly higher. Such discrepancies – almost twice as large as those observed in the first programming period – are related to the COVID-19 pandemic.

Analysis of the discrepancies level between the draft version of the Operational Programme and its final form in both programming periods (2007–2013 and 2014–2020) provides strong evidence that the planning process was well managed. Its outcome shows a relatively low level of overall change, at least at the level of Investments Axis. Furthermore, a certain stringency was observed in the management of EU funds

by the national authority through the analysed Operational Programme. However, we need to emphasize that higher discrepancies can be identified in the part of the programme related to the National Budget contribution. In this case, further studies should be undertaken to provide a more robust understanding of their source. The research suggests that, to a certain degree, these discrepancies can be attributed to the economic conditions of local self-governments, which are key beneficiaries of EU-funded interventions in the analysed Operational Programme.

This analysis, and others like it, could potentially allow for better preparation and planning of future operational programmes and other instruments through which EU funds are implemented. Budgetary performance, including expenditure effectiveness, is assessed by the European and national or regional institutions as part of their management procedures. However, the budgetary approach does not analyse the potential discrepancies between the planning period of a programme or budget and the timeframe in which it is effectively implemented and managed. This area has tended to be neglected in recent decades, especially as results-based programme management has become the norm for the approach adopted by the EU.

We find that further research should be concentrate on three distinctive issues: the first, an analysis of other Operational Programmes managed by both national and regional authorities in Poland; second, an international comparison within the Visegrad Group (e.g., Czechia and others), as well as with other EU Member states, especially those being targeted by the Cohesion Fund; and third, an analysis at a level lower than the thematic objectives – specifically, a closer look at the planning and disbursement of funds across investment priorities and the types of interventions made under the ERDF, the ESF, and the Cohesion Fund).

## Authors Contributions

The authors confirms being the sole contributors of this work and have approved it for publication.

## Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Ethics Statement

The authors certifies that the research published in the text was carried out in accordance with the research ethics of the affiliated university.

## Research Data Availability Statement

The original data presented in the study are found in the article. Further inquiries may be made to the authors.

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