DOCTORAL (PHD) THESIS

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EVALUATION OF THE INTERMEDIATION SYSTEM FOR REFUNDABLE SUBSIDIES

Theses of the Doctoral Dissertation

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1. BACKGROUND AND OBJECTIVES

Since 2010, we have witnessed an important era change, with the effects of globalization being replaced by disruptive social and economic changes brought about by technological development (CSÉFALVAY , 2017). There is general agreement in the literature and scientific dialogue that the two most important megatrends of the 21st century are that the world is becoming increasingly complex and changing at an ever faster rate, and that technological development is primarily behind these changes. Development policy also needs to respond to this , and instead of the previously common 'one goal - one funding source' or 'one goal - one instrument' approach, a more integrated approach and a so-called policy mix-based, cross-policy intervention logic have come to the fore (RICZ , 2016; MAZZUCATO , 2018; CAPANO – HOWLETT, 2020).

This process is well reflected in the system of financial instruments of the European Union's development policy. These repayable subsidies have supplemented non-repayable (grant -type) subsidies and have even become combinable. In the implementation of these developments, the integrated nature is reflected in the well-framed cooperation between development policy institutions and the financial institutions that allocate financial instruments.

However, it has been a long journey to get here. The Single European Act (1986), adopted as an amendment to the Treaty of Rome, already highlighted that the key to Europe's development is to reduce the differences in regional development, both socially, economically and environmentally. This document not only set the goal of reducing the differences in development between regions, but also set out the appropriate instruments (support funds, institutions). However, in cohesion policy, the use of financial instruments providing repayable support only gained an increasing role much later, as a result of the European Commission's Fifth Cohesion Report published in 2010. Although these types of support have been present in the Commission's toolbox since the mid-1990s, their use has only been very limited. The 2010 report recommended that in development areas where activities supported by cohesion policy funds result in income generation, financial instruments should be introduced, in the form of loans, equity, guarantees and combinations of these products with non-repayable resources.

Hungary was among the first Member States to use financial instruments. With the exception of Budapest (separately from Pest County from 2021), all regions are considered convergence regions (i.e. in these regions the GDP per capita does not reach 75% of the EU average), so the convergence objective must be a prominent feature of domestic development policy and the planning of the use of EU funds. Accordingly, Hungary already used diverse support options and forms in the 2007-2013 development cycle, being among the first Member States to use the financial instruments (repayable subsidies) of the European Union's cohesion policy. From the 2014-2020 period, the proportion of these development instruments will become increasingly important in Hungary, in line with the intentions of the European Commission. In terms of its resource framework, the resource allocation of financial instruments has approximately tripled for the 2014-2020 period (the Economic Development and Innovation Operational Programme increased to EUR 2.4 billion under its dedicated priority). This means that Hungary had the third largest resource allocation grouped under the framework of financial instruments among the Member States in this period (in terms of amount). (EC, 2015; EC, 2016). Since repayable grants (financial instruments) serving the implementation of the cohesion policy objectives of the European Union are present as emerging elements of development policy, the intermediary institutional system for the allocation of these resources therefore deserves special attention from both the financial sector enterprises and the implementation of development policy. The evaluation of this intermediary institutional system and the promotion of the most efficient utilization of these resources are therefore an increasingly important task, especially given that these development instruments must also be future-proof, responding to the needs of both the

final beneficiaries and the European Community in the long term, while meeting the challenges of the economic, social and technological environment.
Financial instruments, as increasingly important implementation tools of development policy, are also regularly examined and proposals for their further development are made in the European Commission's cohesion reports. The 8th cohesion report published in February 2022 and the 9th cohesion report published in March 2024 both highlight, with regard to economic development, that financing of micro , small and medium-sized enterprises within the framework of repayable grants is still at a much more rudimentary stage compared to the United States of America. The cohesion reports also draw attention to several issues, such as increasing the efficiency of regional-level economic development processes and innovation in development policy.

At the same time, innovation in development policy also requires the development of evaluation and analysis methods. The implementation of a more integrated policy approach, operating as a policy mix, should be evaluated along a more complex indicator system and from diverse perspectives. The evaluation of the institutions and institutional system ensuring the implementation of reimbursable funds requires a higher level of methodological support - this was also formulated in the evaluation report for the 2014-2020 cycle commissioned by the Prime Minister's Office (2021), citing that the evaluation and planning of the institutional system that allocates reimbursable funds often needs to be carried out by the background institutions within very tight time frames.
In addition, the institutional system for the allocation of reimbursable funds itself faces several challenges and expectations. Based on the evaluation report for the 2014-2020 period, the institutional system for the allocation of these financial instruments was less successful in facilitating access to funds for micro-enterprises , and specific banking incentives and new methods are recommended in this area (PRIME MINISTER'S OFFICE, 2021). The evaluation also includes expectations for the institutional system for the implementation of financial instruments, such as educating and informing final beneficiaries or providing technical assistance (PRIME MINISTER'S OFFICE, 2021).
The evaluation of the institutional system of reimbursable resources is also a key issue from the point of view of development policy innovation. The literature on international development finance (KISS, 2019) also draws attention to the importance and necessity of innovative financial instruments and mechanisms and the emergence of new forms of them. Furthermore, the policy documents of the evaluations increasingly highlight the complementation and combination of financial instruments with non-financial support (increasing the level of complexity) and the partnership of actors involved in development.
The results and findings of this paper aim to contribute to the implementation of this integrated policy approach, taking into account the network economic effects triggered by technological innovation and the needs and increasingly complex nature of domestic development policy and development processes.

Objective and definition of research

My research goal is to provide methodological support for the evaluation and further development of the intermediary institutional system and institutions of reimbursable European Union funds. In this context, my most important research question is: what indicators, perspectives and subjective methods capable of integrating expert opinions can be used to measure the development policy performance of the intermediary institutional system and institutions of reimbursable European Union funds?
My research objective is therefore to create an evaluation model that is capable of both evaluating the development policy performance of financial intermediary institutions at the

individual level and evaluating the institutional system that allocates repayable grants. It is also important that the model represents a future-oriented approach by combining diverse methodological elements, which is based on the Balanced Approach created by Kaplan and Norton (2000). I validate it with the perspectives of a scorecard indicator system. In addition, the evaluation model also took into account the principle of easy implementation from the beginning.
Since my research topic is the role of financial institutions that mediate repayable development funds in development policy, I need to apply both a financial and a cohesion policy perspective. I validated this partly along the diverse sources that formed the basis for the selection of the key performance indicators (KPI) of the evaluation model (semi-structured interviews, literature, enforcement of regional development principles), and partly when developing the thematics of the aggregations . The evaluation model evaluates both the institutions individually and the institutional system that manages the repayable funds itself, and the peak or final result of the model is represented by an institutional system-level effectiveness index. Within the framework of the thematic aggregations , it is possible to examine the institutions by type and by the financial product they primarily mediate. My research goal was also to integrate the regional aspect of cohesion into the model and thus contribute to reducing territorial inequalities.

The goals of my research are summarized in the following points:

- Provide methodological support:
  - Development of an indicator system and weighting methodology.
  - Creating an evaluation model that can encompass multiple fields of expertise and subjective expert opinions, and is also sensitive to regional development aspects.
- Decision support in the institutional system of development policy: the creation of an evaluation system that complies with the basic principles of regional development policy, but primarily with the principles of sustainability and convergence, which can support the development of the intermediary system of reimbursable development funds in a future-oriented manner.
- To indirectly contribute to the innovation of development policy by developing the evaluation methodology of the institutions and institutional system that allocate reimbursable funds, supporting, among other things, the preparation processes at the member state and regional level for the 2028-2034 cycle of the European Union from the side of the scientific sphere.

2. SOURCES AND METHODS

My goal was to create an evaluation system that sensitively handles the basic principles of regional development (ESDP, 1999), with special regard to the principle of partnership and institutional relations, and also validates the perspective of learning and development at the level of both the intermediary institutions and the institutional system, and is also based on the domestic experiences and practices accumulated so far in relation to reimbursable subsidies. To achieve this, and by validating the approach recommendation of the modern controlling literature that can combine mixed, quantitative and qualitative methods, and building on the modeling methodology of Thalmeiner G. (2022), I aimed for the diversity of the methods applied in this research.

The most important methodological elements of the study, linked to the study steps, were overall the following:

1. Conducting a series of expert interviews (1.) and manual analysis on the characteristics of the domestic operation of the institutional system managing refundable funds and the possible key points of a successful mediation system
2. Automated text analysis of policy documents and processing in an expert workshop (matching keywords and phrases to KPIs to determine the weighting of KPIs)
3. A series of short structured interviews on performance evaluation aspects, and then based on this
4. Data collection using an expert questionnaire survey to determine the deviation rates of KPIs from the planned value and to categorize compliance levels.

2.1 Interview Series for Establishing Performance Evaluation

In order to evaluate the institutional system for the mediation of repayable EU subsidies and to map out the criteria for a successful institutional system, a semi-structured series of expert interviews was used as the basis, in addition to the literature. The aim of this is to ensure that practical experiences can be applied in the evaluation system through the perspectives of experts with diverse professional backgrounds and relevant expertise. During the interviews, I understood a successful institutional system as a regular and planned allocation of resources and operation in accordance with the goals set in the EU and domestic strategic frameworks.
The background to conducting the interviews is the Financial Instruments and Territorial The Cohesion report, which, in addition to recording that for the 2007-2013 period, sub-regional territorial data on the use of financial instruments of the cohesion and structural funds are not available for almost all Member States (ESPON 2019 p24, p40), also highlights that due to the specificities of the implementation system, it is difficult to monitor the allocation of financial instruments in a uniform manner.
Since my research topic is the role of these instruments in development policy and the improvement of the intermediary system of these support products, data collection through interviews became inevitable and in this context it also emerged that I needed to apply a 'multi-level perspective' in terms of the experts to be involved in the research, sensitive to planning and implementation, as well as to territorial differences, along the lines of cohesion objectives. This was ultimately achieved by involving experts responsible for the planning and implementation of the instruments to be repaid and the domestic regional development policy, and by seeking interviewees who were active at both local and central levels of the intermediary institutional system (financial sector) . Another aspect in selecting interviewees was that they had a view of regional processes and, in the case of one of the two above-mentioned subject areas (repayable subsidies, regional development), also a longer-term perspective .

The first round was ultimately based on a 44-person expert outreach campaign, which ultimately enabled me to conduct 20 interviews between June 2020 and February 2021 based on their willingness to participate (the exact dates of the interviews are included in Table 1). The interviewees were given anonymity in all cases, and during the analysis I only took into account their classification according to the following categories: civil sector-1, financial sector-2, other private sector-3, state and local government sector (including European Commission experts) -4. Based on this, 6 people represented the financial sector (P), 6 people represented the other private sector category (M), including consultants and experts performing analysis and evaluation activities outside the public sector, and 8 people represented the state and local government sector (Á), including subjects acting as experts of the European Commission. In response to inquiries, no feedback was received from the civil sector (for example, the National Association of Entrepreneurs and Employers) or any willingness to participate in the research was shown.

Table 1.: Classification of interviewees by sector and date of interviews 1.

Respondent Code	Sector Category	Number of Interviewees	Interview Date
P1	Financial sector	6	17.07.2020
P2			20.07.2020
P3			17.09.2020
P4			21.01.2021
P5			08.02.2021
P6			04.02.2021
M1	Other private sector	6	16.06.2020
M2			17.07.2020
M3			17.07.2020
M4			16.06.2020
M5			17.06.2020
M6			30.06.2020
Á1	Public and municipal sector	8	25.06.2020
Á2			20.11.2020
Á3			23.07.2020
Á4			16.06.2020
Á5			09.11.2020
Á6			13.11.2020
Á7			07.12.2020
Á8			22.10.2020
Interjúalanyok (fő) száma összesen		20	

Source: Own elaboration based on own research

To study the desirable operation of the intermediary system deploying repayable funding and to summarize previous experiences, I formulated 14 open-ended questions. However, during the interviews, I consistently provided space for respondents to express their own opinions and elaborate on insightful, topic-related experiences. Thus, data collection was not restricted by the questionnaire format, and the conversations, which averaged approximately 60 minutes in length, provided a comprehensive and informative description of the research subject. The first two questions aimed to understand the interviewee's role and their engagement with repayable

funds, primarily assisting in categorizing respondents by sector and less focused on substantive issues related to repayable funding.
The ultimate goal of the interviews was to identify key performance indicators (KPIs) based on the information obtained and the literature reviewed, which would enable a forward-looking characterization of a financial intermediary system that is sensitive to both economic development and convergence objectives, as well as the deployment of repayable funding.

2.1.1 Methodological Approach to the Evaluation and Analysis of Interview Data
Following the interviews, I employed an iterative text-coding technique characterized by multiple feedback loops for processing the collected information (see Figure 1). The selection of this evaluation methodology was inspired by Hoffman et al. (2013) from the urban development segment of development policy, which I modified and adapted based on domestic qualitative research methodological literature, particularly Feischmidt (2006).
For data processing, transcripts of the interviews were prepared, supplemented by real-time notes taken during the interviews. The resulting texts were manually coded, with careful consideration of the advantages and disadvantages of manual coding (1), computer-assisted coding (2), and automated coding (3), following Molnár Cs. (2016).
During manual coding, I first assigned codes to the interview questions, then read each text segment of the interview transcripts, associating them with keywords, key phrases, or salient expressions, thus assigning codes. Subsequently, a codebook was developed to explore the themes and statements emerging from the conversations. The codebook functioned as a tool for aggregating identically coded text excerpts and organizing remarks into an analytical data profile (MOLNÁR, 2016). The textual data recorded therein (keywords, significant statements) were grouped into thematic categories based on their semantic content. In certain cases, recurring but slightly different meanings or keywords within the text were further divided into subthemes. (The terms denoting themes were referred to as themes, subthemes, or thematic codes.) The ultimate aim of the textual analysis was to lay the groundwork for selecting key performance indicators (KPIs).
As the initial step in analyzing the interview transcripts, the questions were coded, assigning one theme-indicating keyword (thematic code) to each, given their brief textual nature.
Then, I extracted quotes from the transcripts of the 5 conversations that I considered the most informative, highlighted keywords, and identified additional themes based on this. I evaluated the additional transcripts partly along these themes, but in some cases I also identified new themes, based on which I re-examined the first 5 interviews and modified their coding. I selected the 5 most informative interviews based on where, based on the answers (variety of vocabulary, listing of examples, even referring to foreign experiences), the interviewees had a high-level development policy insight in both regional policy and the application of financial instruments, in addition to the fact that their position, education, and professional experience were also related to this area.
Finally, I examined the topic codes and highlighted quotes to see if there were any other similar content, possible additional topics and subtopics in the conversations, and based on these, I added new content and statements, and based on this, I regrouped the previously coded and highlighted content. After that, I compiled the topics and the most characteristic statements and created a codebook, and then checked how coherent the resulting codebook and the revealed opinions were, and whether there were any contradictions between them.

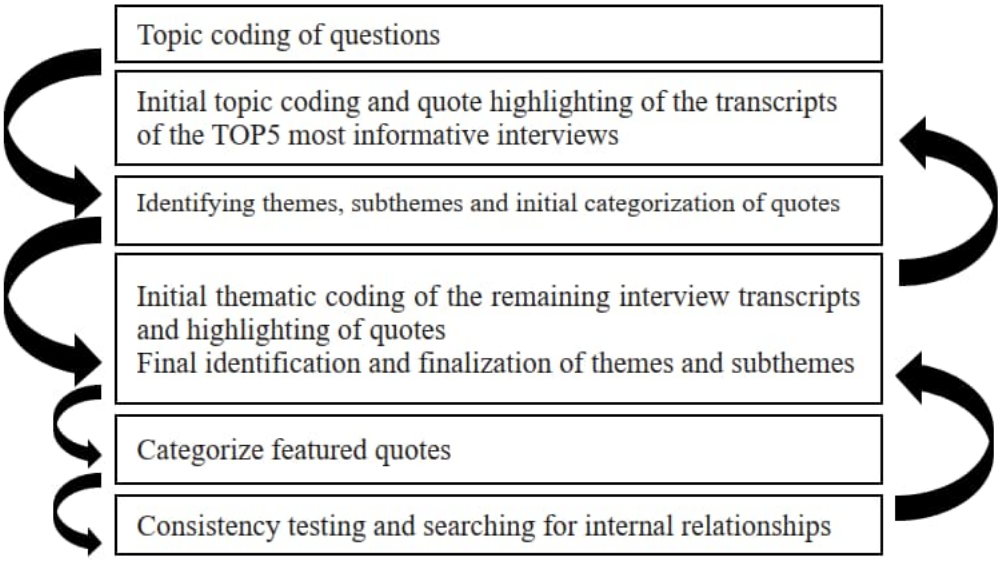

Figure 1: Iterative text encoding process
Source: Own elaboration based on own research

Finally, I first identified themes based on the keywords of the questions (31), and by analyzing the text of the interviews, highlighting key sentences (statements) of the texts, and then grouping the keywords, with which more comprehensive and fewer number of themes (finally 11) emerged.

2.2 Automated Text Analysis of Policy Documents

For the examination of strategically significant development policy documents (the National Development and Territorial Development Concept – National Development 2030, NDTDC, and the Economic Development and Innovation Operational Programme 2014-2020, EDIOP), I employed the open-source text analysis software Voyant Tools.

Voyant Tools is a freely accessible, open-source, web-based text analysis platform developed by Stéfan Sinclair, Associate Professor at McGill University's Department of Languages, Literatures, and Cultures in Montreal, Canada, and Geoffrey Rockwell, Canadian philosopher and digital humanities scholar at the University of Alberta as well as director of the Kule Institute for Advanced Study. The project, initiated in 2003 and evolved from earlier tools such as HyperPo, Taporware, and TACT, supports scholarly text processing and interpretation in digital humanities and other disciplines. It now serves a broad international user community with interfaces and documentation available in multiple languages (https://voyant-tools.org), currently enabling analyses in 37 languages, including Hungarian.

The development and textual analysis experiments of Voyant are comprehensively documented in the volume *Hermeneutica: Computer-Assisted Interpretation in the Humanities* (MIT PRESS, 2016). Additionally, practical, online versions of selected chapters are available to facilitate understanding and application of the tool's dynamic panels (http://hermeneuti.ca/).

Consequently, Voyant Tools constitutes a pivotal component of digital text analyses and international research infrastructures, underpinning numerous multidisciplinary collaborations and studies. It sees extensive use across literature, applied linguistics, and language teaching. Its functionalities—such as word frequency analysis, keyword-in-context displays, and interactive visualizations (graphs, word clouds)—support diverse reading strategies, facilitating linguistic pattern and discourse analyses, and corpus investigations. Furthermore, the tool plays a vital role in data-driven learning (DDL), enabling educators and researchers to analyze

vocabulary, sentence structure, and thematic trends for research and curriculum development (Wright, 2020).
In 2022, Voyant Tools received the prestigious Zampolli Prize from the Alliance of Digital Humanities Organizations, acknowledging its significant impact in digital research and education.
Operationally, Voyant Tools can process one or multiple documents simultaneously, performing analysis through a defined sequence of steps integrating standard text analysis techniques and interactive result visualizations. Users may upload texts in various formats (e.g., TXT, PDF, DOCX, HTML, XML) or directly input text or URLs. Upon corpus upload, the tool preprocesses the texts by cleaning unwanted elements (headers, footers, metadata), tokenizing words, and removing common stop words to focus on relevant terms. It then calculates word frequencies and identifies keywords, distinctive phrases, and various corpus-wide or document-specific statistics, such as total word count, unique lexical items, vocabulary density (Vocabulary Density Index), readability indices, average sentence length, and most frequent terms.
Voyant applies standard techniques such as frequency analysis, keyword-in-context (KWIC) concordance views, collocation and phrase detection, and, in the case of multiple documents, trend analysis across documents or time periods. It locates keyword-associated expressions and phrases by presenting keywords in their textual context, enabling users to explore co-occurrences interactively.
The tool presents analysis results via interactive visualizations, including word clouds (Cirrus) based on frequency lists, context windows displaying keywords and their collocates with graphical relationship maps (TermsBerry), and trend charts that highlight concentration points of terms across documents with trend lines and peaks. These interconnected visualizations dynamically update based on user selections, fostering deeper interpretive engagement.
For strategically grounded weight assignment, my aim was to identify relevance links between the content of development policy documents and KPIs. Accordingly, two documents were analyzed using Voyant Tools, with a focus group expert workshop facilitating the identification of connections with KPIs.
The analysis was conducted on the following two development policy documents:

I. Hungarian National Development 2030 - National Development and Territorial Development Concept (NDTDC) Resolution 1/2014 (I. 3.) of the Hungarian National Assembly: This document aims to provide a long-term developmental framework and vision up to 2030 for the country's social, economic, territorial, and environmental progress. The document incorporates the principles of sustainable development and responsible management of national resources as set out in the Fundamental Law, while also taking into account domestic and global challenges, as well as alignment with the EU 2020 Strategy and the National Reform Program. The NDTDC formed an important foundation for the development of the operational programs of the 2014–2020 European Union development cycle and, due to its long-term horizon and formulation (up to 2030), offers guidance for the 2021 2027 period as well. The concept includes references and directives regarding financial instruments; hence, their consideration during the development of the evaluation system holds strategic significance.
   The NDTDC's contents related to financial instruments include, for example:
   - The chapter 5.1, titled Financial Instruments for the Implementation of the NDTDC, records that the execution of this concept in Hungary is primarily financed by European Union funds, with only a smaller portion deriving from domestic development resources.
   - Chapter 5 also states that "a key element of the Concept's implementation is an efficient and transparently operating development policy institutional system,

necessitating the further development of the current institutional framework." Several points are listed outlining the necessary characteristics of the 2014–2020 institutional system, wherein the simplification and efficiency of financial and administrative structures are repeatedly emphasized.

- Furthermore, in section 3.2 on economic development priorities, a policy task is identified as "the restoration of small business capital allocation programs to facilitate access to capital and preferential credit conditions."
- Also in section 3.2 (page 205), territorial priorities highlight that "during state investment promotion, socioeconomically lagging areas and less developed regions should be given priority, while emphasis must also be placed on encouraging capital investments aimed at development poles and strengthening their economic spatial organizing roles."
- In subsection 3.1.4, Urban Network Development Ensuring a Polycentric Spatial Structure, among the listed policy tasks is "the application of local regulations, taxes, financial incentives, and investments for urban climate protection."

II. Economic Development and Innovation Operational Programme (EDIOP) 2014-2020: the aim of this document, financed by EU support in the 2014-2020 development cycle, is to stimulate the economy in Hungary and increase its competitiveness, especially through the development of small and medium-sized enterprises (SMEs), as well as to expand employment and stimulate research, development and innovation. The document includes the use of financial instruments as a separate priority axis , as one of the most significant tools for implementing the strategy.

The following steps were performed in Voyant Tools and subsequently in Excel for the analysis of the documents:

1. Uploading the document in PDF format.
2. Fine-tuning the stop word list by customizing settings to include conjunctions such as ‘a’, ‘az’, ‘illetve’, ‘által’, ‘is’, ‘és’, ‘meg’, ‘vagy’, ‘esetében’, etc.
3. Extracting the top 50 keywords.
4. Reviewing phrases associated with the top 50 keywords.
5. Investigating collocations of the top 50 keywords using a force-directed network graph, an integrated visualization in Voyant Tools that displays keywords and their proximate co-occurring words as a graph.
6. Assigning Key Performance Indicators (KPIs) to phrases (and indirectly to keywords) based on relevance determined through an expert focus group comprising eight participants (April 17, 2025, Infopark Building I). The expert consensus approach enables the rapid collection of extensive, nuanced information from multiple perspectives, fostering a deeper understanding of the examined issue. This method helps uncover implicit knowledge often absent from individual expert opinions (Oblath, 2006). The experts, with backgrounds in economics and social sciences, received the table from Annex 1 and an unranked list of keywords with associated phrases prior to the workshop. Participants were unaware of the keywords’ ranks. During the moderated discussion, we reviewed phrases linked to the keywords; when experts identified semantic congruence between a phrase’s meaning and one or more KPI definitions, the phrase was linked to that KPI.
7. For each analyzed document, KPI weights were determined by identifying the rank (1-50) of keywords associated with KPI-linked phrases and summing these ranks per KPI. The most significant keyword per document scored 1, while the 50th keyword scored 0.02 (1/50). A single KPI could be linked to multiple keywords within one document. For example, in the NDTDC document, KPI number 25 was associated with keywords

ranked 34, 35, 38, and 40, resulting in a KPI weight of 0.34+0.32+0.26+0.22=1.14. In EDIOP, the same KPI was linked to keywords ranked 2, 3, 5, 14, 18, 19, 22, 23, 24, 25, 26, 28, 29, 32, 35, 36, 41, 42, 44, 45, 46, and 49, with a total KPI weight of 10.28.

8. Aggregation: Subsequently, the KPI weights from the two documents were summed; in this example, KPI 25's combined weight was 1.14+10.28=11.42.
9. Normalization: Since the maximum weight per strategic document was set to 0.5, the highest combined weight KPI was assigned as 100%, and the relative percentages of KPIs with lower scores were calculated accordingly, then rescaled to the 0.5=100% scale.

The purpose of the weighting is to ensure that the strategic priorities of development policy are reflected at the level of the support policy where the financial intermediary system, responsible for disbursing the funds, is designed and evaluated.

2.2.1 Expert Focus Group

Relevance was determined with the assistance of an expert focus group composed of eight members (April 17, 2025, Infopark Building 'I'). The advantage of expert focus group consensus is that a large amount of nuanced information from multiple perspectives can be gathered in a short time, and comparing diverse professional viewpoints fosters a deeper understanding of the investigated issue. This method also helps reveal hidden or implicit knowledge that may not emerge from individual expert opinions (Oblath, 2006). The experts had backgrounds in economics and social sciences and were provided, prior to the workshop, with the table included as Annex 1, along with an unranked list of keywords and their associated phrases. Participants were not informed of the keyword rankings. During the moderated discussion, I served as the moderator and we reviewed the phrases related to the keywords. When the experts identified semantic equivalence between a phrase's meaning and one or more KPI definitions, the phrase and the KPI were linked accordingly.

2.3 A brief series of interviews aimed at identifying and filtering out extreme elements within performance evaluation criteria and the KPI list

To validate the selected and strategically assessed KPI list, an additional expert interview series was conducted in the summer of 2025. This involved shorter, primarily evaluative conversations focused on the KPI list I had developed (the exact dates of the interviews are detailed in Table 2). Interviewees were granted anonymity throughout the study, with only their sector classification recorded (financial sector, other private sector, public sector). Similar to the initial interview series, participants were selected based on their research background or occupation to ensure well-founded professional expertise in economic processes and European Union development policy. Ultimately, eight experts participated in the interviews.

Table 2: Sectoral Classification of Interviewees and Interview Dates 2.

Respondent Code	Sector	Interview Date
P1	Financial sector	02.06.2025
P2		26.06.2025
P3		11.07.2025
M1	Other private sector	16.06.2025
Á1	Public sector	12.06.2025
Á2		24.06.2025
Á3		09.07.2025
Á4		10.07.2025

Source: Own elaboration based on own research

The aim is to filter out indicators that are irrelevant from a development policy or financial institution management perspective, or that are worrisome in any way, or that are extremely inadequate KPIs . In addition, participants could indicate gaps or aspects or needs that are not covered by the indicators but are significant for the evaluation of intermediary institutions or the institutional system.
the finalization of the KPI list always needs to be adjusted to the specifics of the given development period in terms of timeliness, adapting to the relevant period of the development cycle to be examined, so that experts can form an opinion based on the most up-to-date information available to them. The surveys conducted within the framework of this research and their results therefore primarily serve as examples, helping to apply the model in real development policy assessments. The basic element of this example is that the selection of experts to be included in the survey should be done on professional grounds and that both the private sector, including the financial sector in particular, and the public sector should be represented.

2.4 Questionnaire to establish compliance categories for KPIs' plan-value deviations

In a development policy context, the assessment of financial intermediary KPIs faces several uncertainty challenges, both due to multiple external influences and the imprecise nature of organizational performance measurements. Traditional binary classification models, which rigidly categorize performance into strictly “adequate” or “inadequate”, fail to adequately capture the nuanced gradations that characterize real organizational outcomes (ZADEH , 1965). Fuzzy set theory, as originally formulated by Zadeh , provides a versatile mathematical framework for representing this uncertainty by assigning a membership degree between zero and one to each observation, thus better reflecting expert judgment and linguistic ambiguity (GÁSPÁR et al ., 2022; THALMEINER et al ., 2025).
In this evaluation model, I therefore created a short questionnaire to determine the percentage ranges and compliance categories of the KPIs' deviation levels from the planned value, where I asked the experts to determine for each KPI which value intervals they consider very underperforming , inadequate, adequate, good or excellent along the percentage of completion compared to the planned. (In this regard, it is important to note that the series of surveys related to these compliance rates must always be adapted to the specificities of the given development period. The surveys conducted within the framework of this research and the percentages of compliance categories thus established serve only as examples, helping to apply the model in real development policy evaluations.)

I sent the questionnaire to the same group of experts (8 people) whom I had previously addressed in short interviews, ensuring that potential respondents had sound professional knowledge of economic processes and the development policy of the European Union through their research background or occupation. A total of eight responses were received by 1 September 2025. Of these, 3 respondents represented the financial sector (banking sector), 1 represented the other private sector (consulting sector in the field of European Union funding), and 4 represented the public sector (managing authority, researcher at a public university).
Since I define identical compliance categories for all KPIs in the current model, I arithmetically averaged the eight expert opinions received by category (very underperforming, underperforming, adequate, good, excellent), and then applied a triangular membership function to model the transitions and fuzzy boundaries between categories.

2.4.1 Characterization of the membership function

The key element of fuzzy logic systems is the membership function, which can be used to map KPI values to linguistic categories. For this, I used the most commonly used triangular function, which is justified by the simplicity and easy interpretation of the function, as it can be described with three parameters, a lower bound, a peak and an upper bound. This facilitates expert-based assessments and provides fast calculations for running the model. The trapezoidal function can also handle a wider range, representing a plateau-like full membership, but this increases the computational complexity (GHOLAMY et al ., 2018). The Gaussian function type, although it offers a finer gradation, can only be generated through multiple iterations and requires more difficult to interpret procedures (AGARWAL et al ., 2020). However, the transparent linear course of the triangular function is particularly advantageous in development policy and decision support models (THALMEINER et al ., 2025), so I used this in my research.
The boundaries of the performance categories were determined from expert inputs. The boundary transitions for the categories were made based on the arithmetic average of the expert responses. To summarize the membership values, I used the min- max operation, using Excel's built-in MIN and MAX functions.

3. KEY FINDINGS OF THE DISSERTATION

1. A strategic analysis is also needed in the evaluation of the institutions and institutional system of the resources to be returned, where the temporal and historical factors of the development of the institutional system must also be taken into account.
the aggregation of the BSC criteria seemed to be in line with the institutional KPIs, however, during the qualitative data collection it became clear that a more complete picture of the structure of the institutional system could be formed if, based on the experiences of the previous development periods, the model also took into account some system specificities. Based on this, the Balance In addition to the thematic aggregation levels of the Scorecard , the specialization of financial intermediaries in one or two financial instruments (breakdown by financial instruments) and the separation of the most active types of institutions in the placement of certain financial instruments (breakdown by type of institution). The latter two points were specific to the 2007-2013 period and partly also to the 2014-2020 period. In order to achieve cohesion effects, the emphasis on beneficiary regions as strategic objectives also provided a new, territorial perspective in the evaluation of the system's performance (LHH breakdown).
The structure of the intermediary institutional system of refundable funds cannot be derived solely from the technical regulatory requirements of the Commission regulations. For example, the development of the 2014-2020 institutional system, which focuses on the rapid allocation of funds, was largely shaped by the late entry into operation of the institutional system of the 2007-2013 period.

2. The analytical background must develop to implement a more integrated policy mix, for which fuzzy logic-based studies represent a future-proof methodological shift
An important message of both the ESPON (2019) and the evaluation reports on financial instruments, both produced in the domestic development policy environment, is that the institutional system of these supports needs to be examined and supported with a more well-founded methodological background.
The thesis points out that both in the field of controlling and in development policy and development financing processes, multi-actor approaches are increasingly becoming the norm, leading to greater coordination, more complex and multi-dimensional negotiations and requiring analyses that can validate multiple perspectives. These processes often result in uncertain decision-making situations based on partial information, in the management of which fuzzy logic and the mathematical models based on it provide significant assistance.
The research also highlights the need to develop methodologies and research practices in the field of development policy that are capable of operating in field-specific segments (where the number of experts is low and they come from multiple fields), but which, at the same time, represent strategic importance based on the success of development policy and the amount of resources (in this case, the high and increasing proportion of reimbursable grants).

3. The greatest development policy added values of the financial intermediary system of reimbursable resources are (1) the implementation of investments serving sustainability and social goals; (2) the development of partnerships; (3) the educational, training and knowledge-gaining opportunities received by financial intermediaries.
The above statement is based on the fact that the three highest weights were given to these indicators when weighting the key performance indicators (KPIs) (25. Proportion of investments serving sustainability or social purpose, 27. Partnership commitment; 28. Education/training/knowledge acquisition opportunities received by financial intermediaries). All this responds well to the statement recorded in the literature that financing in financial

markets is far from neutral, its system actively shapes economic activities and influences which sectors and projects receive investment (O'SULLIVAN 2006, MAZZUCATO, 2013).
The second most important KPI, 27. Partnership Commitment, reflects the mission-driven development approach of Mariana Mazzucato (2021), who believes that the role of the state in economic development is no longer to correct market failures, but to shape markets, encouraging and coordinating the cooperation, joint work and creation of actors involved in development. The third most important KPI, 28, reinforces the development policy approach and expectation that financial intermediaries will result in a higher level of economic development impact through the reception of educational training opportunities and the development of the financial system.
However, the high weight of KPI 28 also draws attention to the fact that in certain cases the state is able to encourage financial innovations, ones that also bring benefits to the financial sector in the long term.

4. Machine text analysis, with expert control, can be a promising development direction in performance evaluation

When creating KPI weights, Voyant uses objective analysis of development policy documents Tools text analysis software opened a new approach and, although under expert control, it could be applied as a well-standardized method. In the future, artificial intelligence-based natural language processing (Natural Language Processing) methods, development policy documents and development strategies will become even more suitable as the basis for performance evaluation systems. The significance of this can also be highlighted in the determination of target values in relation to the methodology, since the basis for the application of the model is the ratios of the plan-actual value of KPIs. With a deeper processing and understanding of the strategic documents and the evaluation documents of previous periods, more realistic targets can most likely be created.

5. Suggestions for further development of the model concept

Overall, the next step in further developing the model could be to fill it with real performance data, as this would enable a more accurate categorization based on fuzzy logic. Following this, it could be tested, for example, how the value of the index and the aggregates would change by applying other types of membership functions, taking into account the previously indicated principle of 'simple and fast execution', which is a basic requirement in the development policy institutional system (PRIME MINISTER'S OFFICE, 2021). The condition for this is that the model is integrated into an institutional environment (for example, within the framework of a managing authority or an institution managing funds as a holding fund) that has an overview of the entire process of allocating funds and the intermediary institutions.
The further development of a performance evaluation model based on these KPIs and their aggregates using a fuzzy method also offers many innovative opportunities, especially by integrating artificial intelligence and digital technologies. When developing fuzzy limits and intervals, it could be an interesting experiment to include document analysis and content analysis of written texts, which can be processed using natural language processing (Neuro Language Processing) methods. This approach would not only rely on objective, numerical data, but would also take into account written expert opinions, regulations and other relevant textual sources, thus allowing for the definition of more precise and contextually embedded fuzzy boundary values. The use of NLP technologies would enable the rapid and structured processing of large amounts of and complex literature or transcripts of conversations and negotiations, which could open up new dimensions in the fine-tuning of the fuzzy model, as here too, the quantification and intervalization of linguistic variables and textual content depending on the meaning can take place.

Artificial intelligence and machine learning algorithms could also bring new features in the future in setting targets and refining planning processes. For example, as data collection becomes simpler and more extensive, it can be continuously analyzed and optimized for the adequacy of planned targets, taking into account, for example, market changes or internal company dynamics. In addition, the introduction of digital dashboards, real-time data visualizations and dynamic planning tools would enable the continuous updating and adaptation of strategic plans.

Also, in connection with the definition of target values, it is important to note that due to the significantly different environmental factors of the development periods (including, for example, the regulatory environment, the macroeconomic environment or the geopolitical environment), these target values must always be established in context with respect to the given environment. In the case of further development of the model, the determination of target values assigned to the indicators based on prediction is currently not possible due to the diversity and frequent changes of environmental factors, and an important feature of the model is that it does not point to cause-and-effect relationships related to the development of the indicators. Therefore, an important question for further development is how to make the model suitable for prediction, and to explore what relationships there may be between the development of the KPIs.

Although the strategic effectiveness index (SEI) of the model and the other aggregates of the model do not have specific, predefined target values, it may be worth examining whether certain SEI values, such as milestones and notable movement values (larger decreases, increases), can be determined in advance. (For example, whether it is worthwhile, over a 3-year period , to increase the SEI value by a specific percentage point and, if so, based on what.)

The weighting of KPI indicators will be determined in the future using fuzzy AHP (Analytic Hierarchy Process, i.e. a fuzzy, uncertainty-handling version of the analytical hierarchy procedure), or pairwise comparison methodology. In practical terms, this means that the importance of individual KPIs could not be determined simply, but with more advanced, subjective and uncertainty-handling mathematical methods (weighting based on fuzzy logic principles). In the framework of pairwise comparison, experts could compare the different indicators with each other, in pairs, so we can get a more accurate, fine-grained result regarding which indicator represents which priority level or rank. At the same time, as shown in the details presented in the characterization of the membership function, it is also necessary to weigh the time and analysis capacities of the model steps with the value and extent of the additional information they carry.

In addition, increasing the frequency of KPI measurement (e.g. more frequent data collection than annually) may be necessary to carefully monitor the milestones and intervention points mentioned above. However, this may significantly increase the administrative burden for all involved actors. Thus, it is essential to carefully weigh this administrative burden against the flexibility of the model and the benefits of rapid response, in order to maintain a balance between the efficiency and cost-effectiveness of the evaluation system. This consideration would also ensure that the developed performance evaluation model, which also uses fuzzy logic, remains a sustainable and effective framework in practice.

4. NEW AND INNOVATIVE FINDINGS OF THE DISSERTATION

1. I created a set of key performance indicators (33 KPIs) measuring the development policy performance of financial institutions, as well as the basic methodology required for the selection

The set of key performance indicators of financial institutions developed in the framework of this thesis, responding to the real needs of development policy, allows it to provide framework methodological support that can be applied to multiple development periods. The method of selecting indicators is able to integrate both theoretical and practical knowledge, which is ensured by the diversity of the underlying sources.

The indicator set contains 33 indicators, examining both the strategic and operational operation of intermediary institutions and the institutional system. The indicator entitled Diversity of Financial Intermediaries is an exception to this, as it can only be applied at the level of the institutional system. The indicator measures the diversity of institutions providing repayable support by type, which supports the stability of the system. The 33 KPIs form a complex, comprehensive system, they are quantifiable, relevant and time-bound, facilitating comparison and monitoring of processes. The KPIs also serve to achieve both short-term and long-term goals and to monitor short-term operational operations. The innovative element of the KPI collective is that, in addition to the traditional client- or in this case, final beneficiary-oriented and efficiency indicators, it can measure performance in a more complex way by including sustainability and social dimensions. For example, indicators reflecting sustainability and social dimensions include the proportion of investments serving sustainability and social objectives (25), the number of strategic partnerships and collaborations (27), or the proportion of ethical operating costs compared to the return on investment (ROI) (7). Another indicator that reflects a new perspective is access to information from the perspective of final beneficiaries (23), which measures the availability of information on the use of financial instruments and contributes to the dissemination of knowledge and the support of sustainable development.

The set of indicators I have developed as a general set can, however, be further developed and modified, taking into account certain conditions and principles, and its fine-tuning is essential as strategic and regulatory conditions change. At the same time, ensuring the diversity of information sources (expert interviews, scientific literature, development policy reports and regional development principles), which served as the basis for the selection of KPIs, limiting the number of KPIs and meeting other technical conditions of the indicators (such as SMART criteria), is a guarantee for the development of a next-generation evaluation system that supports sustainability and convergence.

In the research, I took the financial intermediary system of repayable European Union development funds as a basis, but the indicators of the indicator set, apart from some support policy-specific KPIs (for example, KPI 18 partner limit utilization), can also be applied to a significant extent to other financial institutions managing private funds.

2. I created a weighting method for the set of key performance indicators of the financial intermediary system that allocates repayable development funds

Using the method of establishing KPI weights, I linked the contents of strategic development documents, their intended goals, and their planned implementation with the implementing institutional system. In this way, I created a general weighting method in which the settings can be modified depending on the development situation and also allow for further detailing.

In the framework of this research, half of the weights depend on the number of types of sources underlying the indicators, while the other 50% of the weighting was given by the connection to the development policy strategy. In terms of sources, the maximum partial score (0.498) was given to those indicators whose selection was supported by both expert interviews, literature

and regional development principles. If one or two types of sources provided the basis for a KPI, its score was 0.166 or 0.332. I examined the strategic connections based on the documents of the European Union's 2014-2020 cycle, the National Development Policy and Territorial Development Concept - National Development 2030 (OFTK) and the Economic Development and Innovation Operational Programme (GINOP). In this context, an open source text analysis software (Voyant Tools) I identified the 50 most important keywords of the documents , the phrases related to them and if I could relate a phrase to a KPI, then I displayed the position number of the phrase keyword in the top50 list for the given indicator. Finally, I added the keyword rankings of the KPIs with multiple strategic relationships, then I took the one with the highest number as 100% and paired it with the value 0.5, and I created the additional values proportionally to this. As a final step, I added the values of the two weight parts for each KPI .

3. I created a controlling model that measures development policy performance, built along a hierarchy and applying multiple perspectives, in accordance with the specificities of both financial institutions and development policy.

Institutional recommendations supporting sustainability and green transition need to be evaluated at a systemic level, an approach that is also emphasized in the controlling literature, as well as the validation of complexity management. Regarding the indicators used in performance evaluation, a mixed methodological approach is increasingly needed, which is able to integrate both quantitative and qualitative data, thus providing a more complete picture of the processes under examination.

Along these lines, I created an evaluation model that is capable of measuring both institutional and institutional system-level performance, and also represents a mixed approach in its data inputs and methodological approaches.

The model built within the framework of the thesis is able to integrate numerous aspects along the BSC approach, with particular attention to the territorial approach, which can have a more serious incentive and decision-support effect towards the implementation of sustainability and cohesion.

In addition, the model, based on the previous (2007-2013) specific features of the institutional system that allocates reimbursable funds, takes into account that it is also worth aggregating institutions according to their most characteristic financial instruments, and that, due to the diversity of intermediary institutions, it is also necessary to form aggregates broken down by institution type.

From a practical point of view, the model provides a quick analysis opportunity, and the strategic performance index that is created through it provides information that is easy to interpret for several fields of expertise, creating space for the formation of development policy partnerships targeted by the principles of regional development policy. The strategic performance index and the aggregates are also built up from institutional KPIs in a traceable manner, so due to the transparency of the model, aggregation does not lead to loss of information. All this contributes greatly to the participation of financial institutions in development policy and to increasing the added value of development policy on the part of development actors.

The data collected and summarized by the model organizes numerous data that were previously inaccessible to third parties, but are not sensitive to banks or the banking system, into a framework and a unified database. Making them partially or entirely open source can form the basis for numerous further analyses, local economic development actions, and strategic planning.

4. Application of fuzzy logic in development policy

Fuzzy logic is particularly valuable when processing primary, directly collected information, such as in this case the development of the adequacy and acceptability categories of the deviation of KPIs from the plan. This method enables the exploration and evaluation of subjective, uncertain or ambiguous processes that arise during decision-making, helping to manage deviations arising from human judgment. Since both the strategic objectives and the rules for the use of resources change between the development cycles of the European Union, it is important that the evaluations take place in their context, corresponding to the given development situation, period, and the characteristics of a given region. All this can be ensured through expert interviews, but only if I do not strive to establish exact values and exclusively numerical results within appropriate methodological frameworks, but rather create predefined subsets (classification categories) linked to linguistic variables and interpretation categories along a membership function in the value judgment related to performance evaluation according to the fuzzy set theory approach.

Since development policy involves several stakeholders, coordination is of paramount importance. This has been pointed out by many experts, both theoretically and practically: at the international level, for example, by Maria Mazzucato Mission Economy , and in Hungary, for example, the evaluation report "Investigation of Regional Coordination Capacities" published by Hétfa in 2013 emphasizes this. At the same time, the organizational, process-level and methodological details of coordination are still being developed, and fuzzy logic-based models provide important support in the development of these new systems, so they are expected to play an increasingly important role in development policy.

This research clearly demonstrates that the information collected by fuzzy logic through interviews and various surveys, although it came from development policy actors from multiple fields of expertise (e.g. economics, banking, geography), reflecting aspects of both the private and public spheres, can be combined and effectively managed through appropriate methodology.

5. PRACTICAL APPLICABILITY OF THE RESULTS

The model's application can be valuable for numerous actors involved in both domestic and European Union development policies, as well as for both the private and public sectors. This includes central experts responsible for planning and implementation, who conduct analyses during decision preparation processes; and the financial intermediation institutional system, encompassing businesses at both local and central levels within the financial sector. Furthermore, the model may interest consulting firms and academic research institutes that monitor, study, and evaluate the evolution of EU development policy and the allocation of development funds. Additionally, the model's results (primarily through thematic aggregations) can provide useful input data, analytical perspectives, and region-specific findings for the foundational analyses of county and urban-level development strategies, thereby supporting municipal actors in decision-making.

The practical applicability of the model is enhanced by the flexibility it offers. For instance, the weights of key performance indicators (KPIs) can be determined based on expert opinions, and the weights of aggregated indicators can be adjusted according to whether they represent system-significant aspects in the model (currently, the model does not apply weighting at the aggregate level). Further development, modification, and integration of other methods may be particularly justified in the future given that development policy decisions often require rapid, intra-annual interventions. Currently, however, the model primarily utilizes KPIs based on annual data collection frequency. While this is beneficial practically for financial institutions as the model's use does not impose additional reporting obligations or administrative burdens, advancing the model towards a data collection and indicator selection approach that increases its temporal sensitivity and allows more frequent publication of aggregated indicators and the top-level index would be a positive development.

It is also important to emphasize that the research responds to genuine development policy needs, which appear not only in European Commission cohesion reports but are also regularly highlighted by central analyses evaluating the deployment of repayable funds. For example, one such view is that evaluations and planning of the institutional system managing repayable resources frequently need to be conducted within tight timelines, making the establishment of a well-founded, pre-developed methodological support system indispensable (Prime Minister’s Office, 2021). Moreover, regarding Hungary, the evaluation of the role of financial instruments during the 2014–2020 EU funding period recommended a more substantiated examination of the intermediary institutions and the institutional system to improve access to resources. According to the evaluation report for this period, the institutional system allocating financial instruments was less successful in facilitating micro-enterprises' access to funds, thus suggesting the creation of specific banking incentives and new methods (Prime Minister’s Office, 2021). The present evaluation model responds well to this proposal; by grouping KPIs based on the Balanced Scorecard and thematic analyses by institution types, financial instruments, and geographical areas, decision-makers gain a better understanding of the key institutional points, support product types (financial instruments), and geographic locations crucial for the flow, potential retention, disbursement, and use of these funds.

Furthermore, evaluation documents linked to the executing institutional system for financial instruments also express expectations such as training, informing, and providing technical assistance to final beneficiaries (Prime Minister’s Office, 2021), which the model enforces through KPIs grouped under the Learning and Growth perspective of the Balanced Scorecard.

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MTA IX. Gazdaság- és Jogtudományok Osztálya

Tudományos közlemények[1]	Száma		Hivatkozások[2]	
	Összesen	Részletezve	Független	Összes
I. Tudományos folyóiratcikk	9		3	5
a IX. osztály nemzetközi listás folyóirataiban		1	3	4
a IX. osztály hazai listás folyóirataiban		4	0	1
egyéb tudományos folyóiratban idegen nyelven		2	0	0
egyéb tudományos folyóiratban magyar nyelven		2	0	0
II. Könyvek	3		2	5
a) Könyv	1		2	5
a1) szakkönyv, monográfia, kézikönyv (pp. > 112)	1		2	5
idegen nyelvű		0	0	0
magyar nyelvű		1	2	5
a2) rövid könyv, monográfia (48 < pp. <= 112)	0		0	0
idegen nyelvű		0	0	0
magyar nyelvű		0	0	0
a3) műhelytanulmány és egyéb (pp. <= 48)	0		0	0
idegen nyelvű		0	0	0
magyar nyelvű		0	0	0
b) Szerkesztett könyv	2			
idegen nyelvű		0		
magyar nyelvű		2		
III. Könyvrészlet	1		0	0
idegen nyelvű		1	0	0
magyar nyelvű		0	0	0
IV. Konferenciakötetben megjelent teljes előadásszöveg	2		0	0
idegen nyelvű		1	0	0
magyar nyelvű		1	0	0
Tudományos közlemények összesen (I.-IV.)	15		5	10
idegen nyelvű hivatkozások összesen (I.-IV.)			3	5
További tudományos művek[3]	16		0	0
Felsőoktatási művek	0		0	0
tankönyv idegen nyelvű		0	0	0
tankönyv magyar nyelvű		0	0	0
tankönyv része idegen nyelven		0	0	0
tankönyv része magyar nyelven		0	0	0
Ismeretterjesztő művek	6		0	0
Könyvek		1	0	0
Folyóiratcikkek, könyvrészletek		5	0	0
Közérdekű nem besorolt művek	0		0	0

ANNEXES

ANNEX 1: KEY PERFORMANCE INDICATORS (KPIs) USED FOR THE INSTITUTIONAL ANALYSIS OF INSTITUTIONS MEDIATING REIMBURSABLE DEVELOPMENT FUNDS

Note : The abbreviations in the column Source forming the basis of the indicator: Interview (I); Interview+Specialized literature (I, S) ; Interview+Regional development principle (I, T); Interview+Specialized literature+Regional development principle (I, S, R); Specialized literature (S); Specialized literature+Regional development principle (S, R); Regional development principle (R).

	Source underlying the indicator	Name	Definition	Calculation	Unit of measure
1	I	Resilience for final beneficiaries	Surviving one (or more) crises, which can be external (e.g. global economic or energy crises) or internal (e.g. related to corporate transformation, generational change, organizational transformation) critical situations. The indicator contributes to increasing the survival rate of enterprises, which was 69% in 2021 for the 3-year survival rate and 51% for the 5-year period (Ministry of National Economy, 2024). The interviews confirmed in several cases that refundable subsidies often become of paramount importance when the external environment becomes resource-deficient and/or excessively risky for enterprises for whatever reason.	Number of crises or change management tasks resolved by the funding source and/or during the funding period divided by the number of months of the funding period. Number of crises/length of funding period in months.	pieces/month
2	I	Share of senior employees from financial intermediary institutions	The proportion of senior employees with several years of financial market experience (e.g. senior investment specialist at fund managers) on the part of financial intermediary institutions	Number of senior experts in the expert team of the intermediary institution divided by the total size of the expert team*100	%
3	I	Speed of administration	Average handling time (AHT) is the average time required to complete a given task or process, measured during in-person or online customer receptions at a financial intermediary institution. A lower AHT indicates faster processing	Average handling time: the average time required to complete a given task or process at financial intermediaries' online or in-person customer reception desks, measured annually. (A lower AHT indicates faster processing.)	Minute
4	I	Quality of post-award customer service 1. Customer satisfaction	Customer satisfaction of the final beneficiary of the financial intermediary based on a survey-based customer satisfaction score system.	A customer survey regarding certain interactions or services, in which customers are asked to rate their own satisfaction on a scale of 1 to 5. Conducted annually, as a campaign.	Scale from 1 to 5
5	I	Quality of post-acquisition customer service 2. Solution focus	First Contact Solution (First Contact Resolution - FCR): the proportion of customers whose problem is resolved on the first contact.	Number of customers contacting customer services and finding a solution the first time divided by the total number of customers contacting customer services*100. Analyzed on an annual basis.	%
6	I	Number of complaints to financial intermediary institutions	Detection of complaint cases in proportion to concluded contracts. In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	Complaint rate: number of complaints divided by number of contracts concluded*100. Examined annually. In the model, it is necessary to take the additive inverse of the ratio and multiply it by -1.	%

7	I	The costs of ethical operations	Costs of ethical operations as a percentage of return on investment (ROI) : The additional costs incurred by financial intermediaries due to compliance with socially responsible practices, such as green certifications or ethical audits. Comparing these costs to return on investment also highlights the effectiveness of investments, but it is important to note that there are non-quantifiable benefits, such as improved reputation, reduced risks or greater employee engagement, that cannot be expressed in the ROI indicator but are still important . The costs of ethical operations can be: – related to ESG integration, ESG screening, due diligence and reporting . – Green Certifications: The costs of obtaining certifications for buildings or other environmental standards (such as LEED). – Ethics Audits: The costs of independent audits to verify ethical practices in lending, investing, or customer relations. – Costs necessary to establish and practice decent work practices include special benefits and opportunities. – Community support, costs related to community development projects or charitable activities.	Total cost of ethical operations divided by total revenue * 100. Examined on an annual basis.	%
8	I	Offering additional services to the final beneficiary	The possibility for final beneficiaries to use other services from financial intermediaries that support the management and development of businesses (such as financial and tax advice, education, mentoring, incubation, etc.)	Number of learning, dissemination and development opportunities provided by financial intermediaries to final beneficiaries. Reviewed annually.	pcs/year
9	I	Returning customer rate	The rate of returning customers to each financial intermediary institution, where a return can mean a customer opening a new account, taking out a new loan, investing in a new financial product, or resuming financial activity on an account after more than a year of inactivity.	The number of returning customers in a given year divided by the total number of customers at the beginning of the period * 100	%
10	I	Return on assets (ROA) by financial intermediaries	Examining the economic sustainability of financial intermediaries, it shows how viable and equitable they are in continuing their operations from a financial perspective. (Values that are too low or too high indicate that the institution's operations are not necessarily in line with the spirit of the purpose of the development funds to be repaid.)	Net income divided by the average value of all assets. Examined on an annual basis.	HUF
11	I	Return on equity (ROE) from financial intermediaries	Examining the economic sustainability of financial intermediaries, it shows how viable and equitable they are in continuing their operations from a financial perspective. (Values that are too low or too high indicate that the institution's operations are not necessarily in line with the spirit of the purpose of the development funds to be repaid.)	Net income divided by average shareholder equity. Annualized	HUF
12	I	Regulatory risk	The placement of these support products by financial intermediaries entails costs (e.g. information technology system development, human resource development, marketing costs), the return of which may be jeopardized if the regulations related to the placement change significantly during the support period, therefore measuring this risk and keeping it as low as possible and managing it correctly is an important aspect for the stability of the intermediary institutions that place the supports. It is also important to evaluate the success of the financial intermediation of support products in this perspective. Unlike most KPIs, the indicator here is inverted, because it represents the number of changes in regulations affecting the support mediation activities of financial intermediaries in the given support period , and if this is achieved below the target value, it is actually positive, and if the deviation is above the target value, then this represents the problem.	Number of changes in regulations affecting the support intermediation activities of financial intermediaries during the support period. After that, it is necessary to take the additive inverse of the sum and multiply it by -1.	pcs

13	I	Time required for communication between intermediary institutions and the organizations and authorities that manage them	Average processing time of notifications, for example, from the managing authority or the holding fund, and from financial intermediary institutions, on average. In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	Time to first response (on average) from institutions. Based on data provided by institutions initiating communication. The first step in the measurement method is to (1) record the timestamp of the communication being sent, then (2) record the timestamp of the first response received, even if it is not a complete response, and then (3) calculate the difference. In the model, it is necessary to take the additive inverse of the ratio and multiply it by -1.	Hour, minute
14	I, S	Financial integration rate	Percentage of previously unbanked individuals or businesses who now have access to financial services through refundable subsidies.	Number of integrated individuals or businesses receiving a financial instrument not previously used by the support divided by the total number of beneficiaries supported by the institution *100	%
15	I, S	Management fees and costs to financial intermediaries from the state/EU	The amount of management fee or fund management fee paid annually by the state/holding fund to intermediary institutions. The application of this indicator is also included in assessments related to the use of financial instruments. For example: European Commission, 2015; European Commission, 2016. (p.43) In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	The amount of management fee or fund management fee paid annually by the state/holding fund to a given intermediary institution. Based on data provided by the holding fund manager. In the model, it is necessary to take the additive inverse of the ratio and multiply it by -1.	EUR/HU F
16	I, S	Management fees and costs to financial intermediaries from the state/EU in proportion to the given (operational) development program	Management fees and costs to financial intermediaries as a proportion of the amounts paid by the state/EU under the financial instruments of the given (operational) development programme, % The application of the indicator is also included in the evaluations related to the use of financial instruments. For example: European Commission, 2015; European Commission, 2016. (p.43) In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	Based on the data provided by the holding fund manager, the amount paid to the intermediary institutions divided by the amount of support allocated to the financial instruments (e.g. the financial instruments priority axis of the operational programme)*1000 In the model, it is necessary to take the additive inverse of the ratio and multiply it by -1.	‰
17	I, S	Management fees and costs to financial intermediaries in proportion to the amounts paid by the State/EU to final beneficiaries	Management fees and costs to financial intermediaries in proportion to the amounts paid by the state/EU to final beneficiaries, as a percentage of the contracted amount, % The application of the indicator is also included in the evaluations related to the use of financial instruments. For example: European Commission, 2015; European Commission, 2016. (p.43) In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	Total amount paid by the intermediary institution to the final beneficiaries (if it allocates funds under several financial instruments, then per financial instrument) divided by the amount paid to the intermediary by the state/EU (based on data provided by the holding fund manager)* 100 In the model, it is necessary to take the additive inverse of the ratio and multiply it by -1.	%
18	I, S	Activity of financial intermediary institutions 1.: partner limit utilization	The utilization rate of the limits announced or made available by each financial program by each intermediary institution, %. Since value judgments work in the opposite direction here, higher percentage performance carries a negative judgment, while underperformance carries a positive judgment, therefore their calculation is done using additive inverse. The reason for this is that over-performance, if the financial framework of the financial intermediary institution set in the agreement with the managing authority or holding fund is not enough, causes complications from the point of view of the system, over-performance is therefore not necessarily a positive thing. The indicator is based on the literature, where the term 'partner limit' is also used. It appears, for example, in the article by Nyikos, Gy . 2017 .	The total amounts contracted with final beneficiaries by the institution or groups of intermediary institutions (e.g. institutions that place specific financial instruments) providing support divided by the amount of the partner limit established for them * 100. After that, the additive inverse of the amount must be taken and multiplied by -1.	%
19	I, S	Financial Institution Activity 2: Transaction Number	Number of transactions of financial intermediary institutions per year. The indicator is based on literature, for example Nyikos, Gy . 2017 .	Based on data provided by financial intermediary institutions	pcs/year

20	I, S	Percentage of certifications obtained by employees of financial intermediaries in the areas of financial innovations and ethical operations	The proportion of certifications obtained by employees of financial intermediaries in the field of financial innovations for sustainability, such as social finance, impact investing (impact investing) or in the field of ethical lending.	Number of employees with at least one certificate or diploma divided by the total number of professional employees in the institution*100. Analyzed annually.	%
21	I, S	Number of contracts concluded by financial intermediaries and their distribution by financial product	The indicator aims to identify financial intermediaries and financial instruments that are popular among final beneficiaries.	Number of contracts concluded under a given financial instrument brokered by the institution divided by the number of contracts related to all financial instruments*100. Examined on an annual basis.	%-%-%
22	I, S	Share of investments in start-ups and early stage businesses	The literature includes both scientific treatises and (e.g. Lovas-Rába, 2013, Papp, 2012, Karsai J. 2015a, Karsai , J. 2015b) and policy documents aimed at evaluating repayable EU funds highlight that support for start-up and early-stage enterprises on the financial markets is often insufficient and in these situations, the provision of repayable support can provide significant assistance to the development of enterprises operating in directions consistent with development policy goals (e.g. supporting the transition to a lower carbon dioxide emission economy or employing disadvantaged people, etc.). In Hungary, according to the SME Strategy published by the Ministry of National Economy in 2024, Hungary leads the V4 comparison in terms of early-stage venture capital financing, but does not reach the performance of countries with developed capital markets. The indicator can also help achieve this.	Support provided to overcome financing difficulties in the start-up and early or seed development stages of businesses in the life cycle (number of contracts) compared to the number of contracts concluded with all businesses. Examined on an annual basis.	%
23	I, R	Access to information from the perspective of final beneficiaries	The number of access opportunities for final beneficiaries to information related to the application of financial instruments. The indicator is based on participation from the list of territorial development principles , and the indicator contributes to the dissemination of knowledge related to the reimbursable resources among potential final beneficiaries in the spirit of empowerment.	The number of publications on websites related to financial instruments, the number of related social media posts, the number of radio and poster campaigns, are examined annually based on data provided by the holding fund and the marketing activities of financial intermediaries.	pcs/year
24	I, R	Multi-channel access to information (number and diversity of information communication channels) from the perspective of final beneficiaries	The multi-channel nature of access to information related to the application of financial instruments from the perspective of final beneficiaries (number and diversity of information communication channels). The indicator is based on participation from the range of territorial development principles , and the indicator contributes to the dissemination of knowledge related to the reimbursable resources among potential final beneficiaries in the spirit of empowerment.	The number of channels for disclosing information related to financial instruments, for example on websites, internet platforms, video sharing sites, podcast channels, television or poster or radio campaigns, examined annually.	pcs/year
25	I, R	Proportion of investments serving sustainability or social goals	Share of investments serving sustainability or social purpose (%): the share of funds allocated to projects with any positive social or environmental impact, such as renewable energy, education, community development purposes. The indicator is related to sustainability in the set of principles of territorial development.	Percentage of new investments screened for ESG (environmental, social and governance) factors based on the institution's ESG Report. Reviewed annually.	%
26	I, R	Average customer acquisition cost/marketing cost of financial intermediary institutions	Identifying the amount of resources needed to mobilize the target group of potential final beneficiaries at the level of individual financial intermediary institutions and at the level of the entire institutional system that allocates the funds to be repaid, taking into account its territorial differences. The benchmark for marketing costs is the number of contracts concluded with final beneficiaries per institution. Since value judgments work in the opposite direction here, higher percentage performance carries a negative judgment, while underperformance carries a positive judgment, therefore their calculation is done with an additive inverse. The reason for this is that if financial intermediaries, for example, overperform in the indicator and spend more on marketing costs than the planned target value, this does not necessarily carry a positive meaning (regardless of this, it may be necessary, but overall it is not necessarily positive at this point if the model suggests that it would be worth striving for a higher customer acquisition/marketing cost). The reason why underperformance is not necessarily negative is the finding	Costs spent on marketing activities divided by the number of contracts signed. Analyzed on an annual basis. After that, it is necessary to take the additive inverse of the sum and multiply it by -1.	HUF/ Contract pcs.

			of a report on the period 2007-2013 (KMPG, 2013), which highlighted that microcredits were successful despite the fact that there were no more funds available from the technical assistance framework of operational programmes to encourage the placement of these products and to cover marketing costs, and that enterprises were still informed about these preferential financial instruments through experts managing their economic and accounting affairs (accountants, bank clerks, etc.) and quickly requested these funds, even though they did not spend much on marketing (in contrast to, for example, the precise system of the MFB, where numerous posters and media advertisements appeared about this at one time). The indicator monitors the implementation of participation and partnership from the range of territorial development principles, and also serves their implementation.		
27	I, R	Partnership commitment	Number of strategic partnerships with social, community organizations or other stakeholders and institutions to promote innovation and learning. The indicator is intended to monitor the implementation of partnerships in the context of territorial development principles.	Total number of external connections involving joint work, whether in writing (e.g. cooperation agreement or related service contract) or at the activity level, in practice (e.g. ad hoc or small-scale work of the financial intermediary's employees within the framework of a foundation). Examined on an annual basis.	pcs/year
28	I, R, S	Educational/training/knowledge acquisition opportunities hosted by financial intermediaries	Number of education/training/knowledge-building opportunities received from financial intermediaries to increase the financial awareness of the final beneficiary and to increase the financial integration capacity of institutions. The indicator also serves as a motivation for intermediary institutions to subscribe to the information channels of institutions providing professional education. For further analysis, the indicator can be compared with KPI 20. Proportion of certificates obtained by financial intermediaries' employees in the field of financial innovations and ethical operations. The indicator is intended to monitor the principles of partnership, efficiency and participation from the range of regional development principles and serves their implementation.	Number of training courses in Hungary sent to financial intermediaries via any channel, with high level accreditation (e.g. the Hungarian National Bank, Ministries responsible for economic development and regional development, as well as professional organizations or educational institutions, e.g. the Banking Association, the Hungarian Economic Society, the Budapest Institute of Banking) annually, advertising the event in an accessible way on the internet and naming the experts involved in financial intermediation as the target group (e.g. naming bank product managers, experts interested in fund management, experts working in the field of risk management, etc. in the 'Who do we recommend?' section of the events) The indicator represents the number of events per calendar year, based on data provided by intermediary institutions.	pcs/year
29	S	rate of projects implemented by financial intermediaries	The number of successfully completed and regular projects by financial intermediaries on average per year. The indicator is based on literature, for example Nyikos, Gy . 2017. However, the completed project is also referred to in the evaluation literature as a “financial instrument implemented as planned” or simply as a “completed project”. The definition of a completed project is given in the Prime Minister’s Office ’s 2021 Financial instruments evaluation of document : " *A project is considered completed if one of the following has been completed: "Actual Documented Project Completion Date", "Project Completion Date" or "Framework Cancellation Date"."*)	Based on data provided by financial intermediary institutions.	pcs/year
30	S	Data provision performance / Successful data provision	The proportion of financial intermediaries that successfully complete the data reporting required at the central level (European Commission/managing authority, holding fund) completely and according to plan.	Based on the data of the institution requesting data provision, the number of institutions providing complete and timely data divided by all financial intermediary institutions subject to the data provision obligation* 100. Examined on an annual basis.	%

31	S	Diversity of financial intermediaries	The number of types of institutions that provide repayable support, such as fund managers, commercial banks, guarantee institutions, (enterprise development) foundations, other financial enterprises . The indicator is based on the assertion that the structure of national and international financial systems is crucial in linking financial structures to development objectives in development policy. The structuring and combination of financial instruments and institutions profoundly influences the types of economic activities that are favoured and whether economic growth can occur (Asli Demirgüç -Kunt, Ross Levine , 2001; Spence , 2021). In the case of this indicator, value judgments operate in the reverse direction: a higher percentage of achievement is considered negative, whereas underperformance is viewed positively; therefore, its calculation is performed using an additive inverse.	Steps for calculating the diversity index: 1. Determining the number of types of institutions that provide refundable subsidies during the subsidy period. 2. Determining the number of institutions belonging to each institution type. (For example, institution type *i has* $_n$ number of institutions.) 3. Determining the number (N) of all financial institutions participating in the mediation. 4. Determining the relative frequency of each institution type, which shows what proportion a given institution type constitutes in relation to all institutions. 5. Formation of a diversity index (D) , which expresses whether two randomly selected institutions belong to the same institution type.	It is a dimensionless number, the lower its value, the higher the diversity, therefore, in order for a higher value to mean greater diversity, a 1-D value must be used.
32	S, R	Irregularity rate	Irregularities and violations related to the allocation of refundable funds, either on the part of the final beneficiary or the financial intermediary institution, in proportion to the number of product placements carried out. It is related to transparency among the principles of regional development, and the indicator serves to achieve this. Since value judgments work in reverse here, higher percentage performance carries a negative judgment, while underperformance carries a positive judgment, therefore their calculation is done with an additive inverse.	The number of cases that do not comply with the rules (problematic placements in this respect) divided by the total number of support products placed * 100. After that, the additive inverse of the sum must be taken and multiplied by -1.	%
33	R	Using feedback	In the case of financial intermediary institutions, the rate of use of feedback from final beneficiary clients (clients who received support products) and employees related to the resources to be repaid, which is incorporated into process improvement or decision-making. The indicator is related to partnership and transparency from the set of territorial development principles.	To obtain the percentage of implemented feedback, we divide the number of implemented feedback by the total number of feedback received as indicated in the definition *100. Examined on an annual basis	pcs/year