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**Possible instruments and methods of  
sustainable financing in Hungarian  
hospitals**

Theses of the doctoral thesis (Ph.D.)

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## **1. Work history**

There is a widespread perception that public patient care is not of the same quality as private care, because the health sector is underfunded or the sector is underpaid, and users often cannot reach care, access to public health care is delayed or after a long wait. Providers in this industry not only have to plan ahead, but also make ad hoc decisions in their day-to-day operations, often with financial consequences.

The Author would like to give a brief overview of the current situation and changes in the Hungarian health care system, most of which are not yet fully felt, and the consequences of some measures (such as the increase in doctors' salaries) can only be seen in the long term. In some cases major decisions have been taken, but detailed rules for hospital operations are lacking. In the current situation, what information do managers use in their decisions? It is now widely accepted that public and private hospitals can be run more efficiently and effectively if managers make use of appropriate information.

The author examines health financing from the perspective of sustainability. In Hungary, the goal of loss-free operation of health care institutions has long been a goal. To achieve this, two conditions must be met. On the one hand, the external condition that financing must follow the economic environment and technological and therapeutic changes. On the other hand, there is the internal condition relating to hospital management. Appropriate control and management tools must be used.

One of the most important elements of health financing is the HBCs core. The author aims to examine whether the changes in the HBCs core follow the actual changes by analysing relevant international and national literature and academic research, as well as by conducting various statistical analyses.

A further objective is to study the impact of hospital integration on the functioning of the institutions, using a variety of statistical methods from controlling databases.

The paper analyses current financing and the most significant central measure in recent years, hospital integration, with a view to sustainability.

## **2. Theme and objective**

In Hungary, also in 2023, it is expected at sectoral level that health care institutions should operate sustainably and not generate debt, one of the basic conditions for which is that health care financing - base rates, Planned Annual Framework (PAF), Homogeneous Disease Group (HDG) weight values - should follow inflation, changes in the various patient care and structural changes, and support the spread of new, modern and effective interventions, diagnostic and therapeutic procedures, as opposed to old, outdated and less effective methods. If this basic condition is met, then sustainability is a given, and the author will therefore examine the current level of funding and whether the health system can be maintained under the current conditions. The author will try to determine the minimum level of funding that would need to change in order for

hospitals to be sustainable. Related to this is the first hypothesis:

**(H1) Sustainable operation can be ensured under current funding.**

Inpatient financing is one of the most important parts of hospital financing (revenue) and depends on two factors, the HDGs weight value and the base rate. In 1993, when the HDGs system was introduced, homogeneous disease groups were defined on a cost basis. The benefits that could be provided at the same cost level were grouped together and the weight value was set according to the cost coverage of these benefits. Thus, the cost coverage of the care is the multiplication of the base rate and the weight values. Changes over the years can be monitored by adjusting these two factors. Since 1993, the HDGs have been modified several times. For example, between 2006 and 2017, the HDGs core was modified 43 times, and between 2018 and 2023, 11 times. Hence the following hypothesis:

**(H2) Hospital funding follows the changes, so their sustainability depends mainly on hospital management.**

The HDGs weight values are determined on a cost basis. As the more serious cases are more costly to treat and therefore have a higher weight value, the Case-Mix index (case mix) is higher for departments treating more serious cases and the costs of these departments are also higher. Based on this assumption, for a well-maintained HDGs

core, which is a prerequisite for sustainability, there should be a correlation between Case-Mix and costs. Therefore, the hypotheses are:

**(H3) The case-mix of departments has an impact on their costs related to patient care (material, drug, surgical costs).**

Taking the assumption further, more serious cases require higher-skilled professionals, both in terms of volume and training, who are better paid, and higher payroll, thus higher human costs.

**(H4) The case-mix of the departments is related to the human costs of the staff units.**

If the HDGs core is well maintained, which is a prerequisite for sustainability, the case mix has an impact on costs, so some relationship between case mix and departmental coverage can be identified. Hence the following hypothesis:

**(H5) The case-mix of departments is related to the 3 levels of departmental coverage.**

With sustainability in mind, it is expected that any measures taken at sector level will help hospitals to become more sustainable. One of the most significant such central measures in recent times is the hospital integration at the end of 2021, the impact of which can be assessed from 2022. These measures for hospitals will have a positive impact on the management of the institutions,

making them more sustainable. The following hypotheses have been made for this assumption:

**(H6) The integration of hospitals has had an impact on institutional costs, making healthcare more sustainable and thus improving coverage.**

The impact of integration is also examined for the first 5 hypotheses, so the data series here is also split into two periods, pre-integration and post-integration.

#### **4. Research design**

The author starts the dissertation by presenting secondary research, reviewing a wide range of relevant literature on the topic and building a summary picture based on it.

After the secondary research, one of the largest elements of health care financing, the HDGs system, which is the basis for inpatient care financing, will be examined. The HDGs system was introduced on July 1, 1993, with a base fee of 31,000 HUF per weight, based on the cost structure at the time. To examine sustainable financing, the annual average base rate changes and inflation-adjusted base rates are calculated. Two types of consumer price indices are used, the consumer price index and the price index for health care institutions. To show accurate changes, the correlation between the deleted and the new HBCS is analysed, as well as the changes in the weights, and the analysis and results of previous academic papers and publications are used. Subsequently, the payments for preventive medical benefits are analysed.

To support these hypotheses and to examine the links to sustainability, the following data are used. A detailed 20-

quarter (Q1 2018 - Q4 2022) OKFŐ controlling methodology for a county managing hospital, based on active inpatient, chronic and rehabilitation coverage calculations by specialty<sup>1</sup>

Performance and natural rates of a county hospital by active inpatient, rehabilitation and chronic specialties for 20 quarters (Q1 2018 - Q4 2022)<sup>2</sup>.

The 20 quarterly (Q1 2018 - Q4 2022) institutional coverage calculations of twenty hospitals based on the OKFŐ controlling methodology.<sup>3</sup>

The results of the statistical analysis of the correlations are summarized at the end of the dissertation, followed by an outline of further research opportunities. It makes recommendations for changes in financing in order to ensure the financial sustainability of Hungarian hospitals.

## **5. Research findings conclusions, recommendations**

The **first (H1) hypothesis** examined whether the current funding provides the opportunity for sustainable operation. The author analysed the payments to hospitals in previous years and their structure.

In the analysis, the annual consolidation is shown as a separate line, with an average of 44 billion HUF between 2017 and 2022, which unfortunately did not cover the total debt of the hospitals in the last two years. In 2023, the consolidation rate was 90 billion HUF, part of this is explained by the fact that, compared to 2022, 20.5 billion HUF less was paid for the operation of hospitals in 2023,

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<sup>1</sup> source: controlling database of the county managing hospital

<sup>2</sup> source: controlling database of the county managing hospital

<sup>3</sup> OKFŐ controlling database



and with inflation of 14.6% in 2022 and 17.6% in 2023, it is inconceivable that the institutions would operate with less resources in 2023 than in 2022. Consequently, payments would have to include the consolidation-adjusted value of payments in 2022 (which still did not cover the actual costs in 2022), which is more than 50 billion HUF<sup>4</sup>. Therefore, in fact, only 35 billion HUF more was paid **in 2023 compared to the previous year, an increase of only 3.7%**. This increase does not compensate for the economic effects of 2022 and 2023 (e.g. inflation). The author examined how the 2023 payment has evolved compared to the 2017 payments. Here the shortfall is even more striking. Excluding consolidation, actual payments have **increased by only 6.6% over 7 years**, and if consolidation is included, they have increased by 11.8%. The author calculated how much the inflation-adjusted payment would have to increase from 2017 to 2023. Two different inflation rates were used (residential and health), with the **result** in both cases showing payments in 2023 of **more than 200%**<sup>5</sup>.

**Thesis 1 (T1): The increase in payments does not even come close to the increase expected by the economic effects.**

In the **second (H2) hypothesis** analysis, two factors were examined: the base rate and the HDGs weight values. The analysis used the health and consumer price indices, analysed the ratio of GDP to payments and changes in the structure of HDGs. The % of GDP and health care

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<sup>4</sup> Consolidation in 2022 30 billion, 20.5 billion less payment in 2023

<sup>5</sup> 218% according to the consumer price index, 206% according to the health price index

payments have been in steady decline since 2005<sup>6</sup> with a low point of 4.3% in 2019. Thereafter, an upward trend is observed, improving to 5.3% in 2021, but still below the 2005 level of 5.6%. This 0,3 % difference represents a difference of 150 billion HUF<sup>7</sup>.

The HDGs weight values between 2017 and 2022 are almost unchanged<sup>8</sup>, stagnant, with the only increase in average weight being +7.8% in January 2023. The HDGs weighting base rates should have kept pace with the changes, so in 2007 they **should have been** 255 507 HUF<sup>9</sup>, in 2017 376 230 HUF<sup>10</sup> and in 2023, according to the author's calculation, **432 925 HUF** compared to the current 198 000 HUF.

**Thesis 2 (T2): Financing does not follow the changes and the deviation from the current real value is such that hospital management tools cannot eliminate debt accumulation.**

The **third (H3) hypothesis** is to further investigate one of the most important elements of sustainable financing, the HDGs core, that the weight values are indeed cost-based. If this is true, then the case-mix of the departments should have an impact on the cost of patient care. Therefore, if a department provides more severe or more costly care, it will have a higher case-mix index and thus a proportionately higher cost. The statistical result showed

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<sup>6</sup> In 2005, the payment rate was 5.6%.

<sup>7</sup> In 2006, it was 5.5%, and if we compare it to that, the difference is 0.2%, which is a difference of more than 83 billion HUF.

<sup>8</sup> Between 2017 and 2023, the HDGs core was modified 11 times.

<sup>9</sup> Fülöp, 2007 p 23

<sup>10</sup> Mattiassich, 2019

that only one of the 6 studies had a weak positive relationship with drug costs, demonstrating that HDGs weight values did not track real cost changes.

**Thesis 3 (T3): Case-mix has no effect on the cost of patient care, so HDGs weight values do not track the variable costs of patient care, i.e. drug and other costs.**

My **fourth (H4) hypothesis** also relates to the HDGs core. It is based on the assumption that if a department deals with more serious, complex cases, this means a higher caseload and more human resources<sup>11</sup>, and more highly qualified professionals, who presumably need to be paid more.

**Thesis 4 (T4) Case-mix has no effect on human resource costs, so HDGs weight values do not track the largest "fixed cost" of wage cost changes.**

In testing the **fifth (H5) hypothesis**, the author assumed that there are better funded treatments that tend to have a higher weight values (e.g., oncology care), so these affect the value of the case-mix and if these treatments are better funded, they cover the actual costs, which results in an impact on departmental coverage. For this study, the author also used the controlling data structure and examined the correlation between Departmental Coverage 3 and Case-mix.

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<sup>11</sup> In intensive care, 1 doctor is needed for every 4 beds, while in internal medicine, 2 doctors are needed for the first 15 beds and 1 doctor for every 15 beds thereafter, or in rehabilitation care, 1 doctor for the first 20 beds and 1 doctor for every 30 beds thereafter.

**Thesis 5 (T5): HDGs weight values do not track real costs, so the case-mix has no impact on the operation of the department.**

**For T3, T4 and T5, it can be seen that the weight values are not determined on a cost basis. This would require a revision of the HDGs at least every 2-3 years.**

The **sixth (H6) hypothesis** examined the effect of hospital integration. Integration was expected to lead to a reduction in central costs, in addition to efficient operations, and to a reduction in costs for materials, medicines, etc., due to higher volumes of purchases. To support these assumptions, an analysis was carried out on the available controlling data. The analysis was not only carried out on data directly related to the topic, but all the studies in this dissertation were split into two time periods (before and after integration), so that for each analysis it was examined whether integration had an impact on the correlation.

**Coverage 3 clearly deteriorated for the county managing hospitals**, but the picture was less consistent for the other 4.

In general, integration has a positive effect when interacting with certain types of hospitals and controlling variables, indicating that certain types of hospitals or financial strategies may benefit from the integration process.

**Thesis 6 (T6) The financial sustainability of certain types of hospitals has been affected by integration.**

## 6. Innovative proposals from the research

The author concluded from the research that the impacts on the functioning of institutions in terms of sustainability can be divided into two broad groups. One is the group of basic, vital conditions or impacts, which the author called the "**vital criterion of sustainability**".

**The most important part of the vital criterion is the tracking of funding changes.** In the event that consolidation is needed at the end of a year to run the institutions in a given year, the extent of this **consolidation must be built into the following year's funding**, as it is impossible to run the institutions with less resources than they needed in the previous year, given the changes and inflation.

In 2023, hospitals in Hungary will have accumulated debts of around HUF 135 billion, of which only HUF 90 billion will have been consolidated at the end of the year. This record level of debt resulted from the fact that in 2022 consolidation did not cover the then maturing debt stock and hospitals received around HUF 20 billion less in performance funding, as well as high inflation and cost increases. In the author's view, an **extra 150 billion forints or so could stop the debt from being generated again** and the health system should be run on non-vendor lending.

According to the author's calculations, under the current hybrid<sup>12</sup> financing technique, if the **basic HDGs fee were increased to 260 - 270 thousand HUF**, it would prevent the debt from being generated again. This increase would mean that the **share of health expenditure in GDP would**

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<sup>12</sup> Fixed fee payment (0-cash) and performance funding.

**have to be increased by about 0.3%**, which would result in a health expenditure ratio of 5.6% - 5.7%, which would already cover the increase in the HDGs basic fee.

In the author's view, it is not enough to create financial resources to ensure sustainability, but changes must also be made to the funding system and structure. **Hybrid funding should be eliminated and fixed fees should be incorporated into performance fees.** At the same time, a **performance incentive system needs to be developed** in relation to pay to reduce waiting lists, sick lists and under-utilised capacity.

In the course of the analysis, it became clear that the HDGs weighting values<sup>13</sup> no longer track the actual cost of benefits. Over the years, technological and cost changes have occurred such that the **weight values do not reflect the real costs, making HDGs revisions and case-level cost collection essential.**

HDGs should be revised every 2-3 years to keep changes relatively up to date.

The data did not clearly show that the integration of hospitals has led to cost savings but has reduced the scope for local management, slowing down the process. **A vital criterion for centralisation is the establishment of appropriate, modern, user-friendly IT systems,** both in the medical and economic fields.

## **7. Further research opportunities**

Another decision taken to ensure the sustainability of health institutions is the decision of the Central Public Procurement Directorate General to take over the operational tasks from the institutions under the

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<sup>13</sup> In 1993 they were based on actual, real costs.

responsibility of the CPA. In the capital from 1 July 2023 and in the counties from 1 January 2024. The aim is to save money, and possibly to achieve savings through a larger procurement. Once the final figures for 2024 are known, further studies could be carried out to see what the effects of outsourcing have been and whether they have improved the functioning of the sector and the hospitals.

It is also possible to examine integration from a different approach, using different data and indicators, and to further examine its impact in the following years, as such a change could potentially reduce the debt of hospitals in the long term and therefore make them more sustainable.

## **8. Summary**

In summary, the current health financing system will not follow the changes in 2023. The author has analysed inpatient financing, one of the largest elements of hospital financing, which is based on the HDGs system.

The HDGs system was introduced in 1993, based on the technologies, procedures and cost levels of the time, so I used the funding at that time as a benchmark. In 1993, the weighting in forint was 31 000 HUF, the real value of which has steadily deteriorated over the years. In 2023 it was 198 000 HUF, which has not changed in the last six years. To determine the real value, the consumer and health price indices were used, as well as academic papers on the subject and a study of the HDGs core.

A more serious problem is that the HDGs core has not been continuously maintained, so the weight values no longer reflect the real costs. From 2006 to 2023, the core was revised 54 times, but no real revisions to reflect changes in cost or technology were made. Some HDGs

were deleted, new HDGs were created, weight values were uniformly reduced or increased, but not based on real cost and effort. This has resulted in a situation where some benefits are better funded and others do not cover their costs. To compensate for this problem, hospitals use "HDGs selection" or, when coding patient care, try to use ICD and OENO codes that are better funded in HDGs. As a result, the statistics on benefits are corrupted because it is not the primary disease that is listed first in the documentation, but the code for the better funded disease. If HDGs weight values were based on actual costs and expenditures, there would be no need for coding "tricks". This would make the system transparent and maintainable. The excessive size of the HDGs core (767) is also a maintenance problem. Previous studies have shown that 95% of institutions only use 300 HDGs in their coding (Mattiassich, 2019), and therefore believe that a full HDG revision should address this, which would also facilitate future ongoing maintenance.

In addition to the HDGs' analysis of the core and basic rates, the ratio of health expenditure to GDP was also examined. Starting in 2003 (5.7%), the ratio showed a downward trend until 2019 (4.3%), when it reached a low point, after which it started to rise. In 2021, it rose again towards 5% (5.3%), but even here it did not reach the 2003 level. Based on GDP in 2022, an increase of 0.1% would mean an extra 66 billion HUF in resources for hospitals. In the author's opinion, with a 0.2-0.3% increase, the debt of hospitals would no longer be generated again.

After putting together the corresponding rows of payment items, it immediately became apparent that, compared to 2022, more than 20 billion HUF less was paid in 2023. If



added to the fact that there was a consolidation of 30 billion HUF<sup>14</sup> in 2022, which should have been incorporated in the following year's financing for sustainability, the 90 billion HUF<sup>15</sup> consolidation in 2023 is in fact only 35-40 billion HUF, which is only a 3.7% increase compared to the previous year's payments, which is not even close to the inflation rate in 2022-2023, but one of the basic conditions for sustainability is to follow the changes.

In the last third of the dissertation, The author examined hospital integration from the perspective of sustainability, which has a significant impact on the functioning of hospitals. An examination of the correlation between the available control data and the indicators it represents showed different results for different types of hospitals. The results showed positive and negative effects. To obtain a clear result, further studies are needed, using a different approach and relying on different data and indicators.

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<sup>14</sup> It did not cover the debt of hospitals in 2022.

<sup>15</sup> It did not cover the debt of hospitals in 2023.

## 7. Publication list

1. Mattiassich, Enikő ; Szóka, Károly A globális minimumadó következményei és megvalósíthatósága a multinacionális vállalatok számára In: Resperger, Richárd (szerk.) FENNTARTHATÓSÁGI ÁTMENET: KIHÍVÁSOK ÉS INNOVATÍV MEGOLDÁSOK - Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából: Programfüzet és előadáskivonatok Sopron, Magyarország : Soproni Egyetem Kiadó (2023) 148 p. p. 61 Absztrakt / Kivonat (Könyvrészlet) | Tudományos[34483851] [Nyilvános]
2. Mattiassich, Enikő THE ECONOMIC IMPORTANCE OF TRANSFER PRICING AND THE CHOICE OF THE APPROPRIATE PRICING METHOD In: Yigin, Akin; Ciftci, Hasan; Delen, Veysel (szerk.) 11. International Summit Scientific Research Congress: Full texts book New York, Amerikai Egyesült Államok : Liberty Academic Publishers (2023) 1,555 p. pp. 1326-1334. , 9 p. Teljes dokumentum Konferenciaközlemény (Könyvrészlet) | Tudományos [34476894] [Nyilvános]
3. Mattiassich, Enikő Koncepcionális modell a Fenntarthatósági Balanced Scorecard kialakítására In: Szegedi, Krisztina (szerk.) Integrált gondolkodás és integrált vállalati jelentés: Fenntarthatósági kockázatok a gazdasági és

energetikai válság árnyékában – BGE Magyar Tudomány Ünnepe konferencia kötet 2023 Budapest, Magyarország : Budapesti Gazdasági Egyetem (BGE) (2023) pp. 167-177. , 11 p. DOI Teljes dokumentum Konferenciaközlemény (Könyvrészlet) | Tudományos[33771040] [Nyilvános]

4. MATTIASSICH, Enikő ; SZÓKA, Károly  
IMPACT OF THE INTRODUCTION OF A GLOBAL MINIMUM TAX In: KAYA, Mustafa Göktuğ; SOYDAL, Haldun (szerk.) INTERNATIONAL CONGRESS OF FINANCE AND TAX - March 10-11, 2023 Konya, Türkiye : PROCEEDINGS BOOK Konya, Törökország : İksad Publishing House (2023) 433 p. pp. 303-310. , 8 p. SOE Publicatio repozitórium Teljes dokumentum Konferenciaközlemény (Könyvrészlet) | Tudományos[33718655] [Nyilvános]
5. MATTIASSICH, ENIKŐ ; SZÓKA, KÁROLY A transzferárazást érintő törvénymódosítások és a szabályzat elkészítésének gyakorlata E-CONOM 12: 1 pp. 3-11. , 9 p. (2023) DOI REAL SOE Publicatio repozitórium Teljes dokumentum Szakcikk (Folyóiratcikk) | Tudományos[34054122] [Nyilvános] Eniko, Mattiassich-Szokoli ; Balazs, Vajai Fintech solutions in accounting systems and proposed regulations for their framework In: 93rd International Atlantic Economic European

Conference - Virtual Meeting (2022) Paper: 17427  
Egyéb URL Absztrakt / Kivonat (Egyéb  
konferenciaközlemény) | Tudományos[32770968]  
[Nyilvános]

6. Enikő, Mattiasich-Szokoli ; Károly, Szóka  
Defining and Evaluating the Information Content  
of Sustainability Reports In: Nedelko, Zlatko  
(szerk.) 6th FEB International Scientific  
Conference : Challenges in economics and  
business in the post-COVID times Maribor,  
Szlovénia : University of Maribor (2022) 546 p.  
pp. 165-175. , 11 p.
7. DOI Konferenciaközlemény (Könyvrészlet) |  
Tudományos [32826033] [Nyilvános] Nyilvános  
idéző összesen: 1, Független: 1, Független: 0, Nem  
jelölt: 0
8. Mattiasich, Enikő Koncepcionális modell a  
Fenntarthatósági Balance Scorecard kialakítására  
(2022) Konferenciaelőadás, Beyond Financial  
Reporting – Fenntarthatóság: Integrált  
gondolkodás és integrált vállalati jelentés  
konferencia; Budapesti Gazdasági Egyetem -  
Magyar Tudomány Ünnepe, Szekció: Integrált  
vállalati jelentések jelene és jövője – a  
fenntarthatóság szolgálatában, Helyszín:  
Budapesti Gazdasági Egyetem - Online, Időpont:  
2022. november 10., Megjelenés: Magyarország,  
Nem besorolt (Egyéb) | Tudományos[33230089]  
[Nyilvános]

9. MATTIASSICH, Enikő ; Szóka, Károly A TRANSZFERÁRAZÁST ÉRINTŐ TÖRVÉNYMÓDOSÍTÁSOK ÉS A SZABÁLYZAT ELKÉSZÍTÉSÉNEK GYAKORLATA- Legislative Changes Affecting Transfer Pricing and the Practice of Preparing the Code In: Resperger, Richárd (szerk.) TÁRSADALOM – GAZDASÁG – TERMÉSZET: SZINERGIÁK A FENNTARTHATÓ FEJLŐDÉSBN (Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából) - Programfüzet és előadáskivonatok Sopron, Magyarország : Soproni Egyetemi Kiadó (2022) 155 p. p. 130 , 1 p. Absztrakt / Kivonat (Könyvrészlet) | Tudományos[33210379] [Nyilvános]
10. Mattiassich-Szokoli, Enikő ; Máté, Éva Recenzió: Pénzügyi intézményrendszer Magyarországon 2019 E-CONOM 11 : 1 pp. 17-30. , 14 p. (2022) DOI REAL SOE Publicatio repozitórium Egyéb URL Recenzió/kritika (Folyóiratcikk) | Tudományos[33111514] [Nyilvános]
11. Mattiassich-Szokoli, Enikő ; Sófi, Gyula A gyermek- és serdülőkori figyelemhiányos hiperaktivitás (ADHD) okozta nemzetgazdasági problémák és azok lehetséges kezelése IME 21 : 1 pp. 41-47. , 7 p. (2022) DOI REAL Egyéb URL Szakcikk (Folyóiratcikk) | Tudományos[32858348] [Nyilvános]

12. Mattiassich-Szokoli, Enikő ; Vajai, Balázs Fintech solutions in accounting systems and proposed regulations for their framework (2022) Konferencia-előadás, 3rd International Atlantic Economic European Conference - Online Meeting, 2022. 04.01., Nem besorolt (Egyéb) | Tudományos [32771057] [Nyilvános]
13. Mattiassich-Szokoli, Enikő A COVID HATÁSAI AZ IFRS SZERINTI BESZÁMOLÓKÉSZÍTÉSRE In: Resperger, Richárd (szerk.) Válság és kilábalás : Innovatív megoldások : Programfüzet és előadáskivonatok = Crisis and Recovery : Innovative Solutions : Schedule and Book of Abstracts Sopron, Magyarország : Soproni Egyetem Kiadó (2020) 95 p. p. 65 , 1 p. Absztrakt / Kivonat (Könyvrészlet) | Tudományos[32518323] [Nyilvános]
14. Mattiassich, Norbert ; Bubori, Zsolt; Mattiassich-Szokoli, Enikő Difficulties of introducing controlling approach and methodology in small and middle sized company environment IME 14: 8 pp. 25-29. , 5 p. (2015) Teljes dokumentum Egyéb URL Szakcikk (Folyóiratcikk) | Tudományos[2956237] [Nyilvános]