EXPLORING THE LOCKDOWN EFFECT ON THE HEALTH ECONOMY. CASE STUDY ON ROMANIA

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ABSTRACT: *Worldwide, the COVID-19 pandemic had a major impact on the economic and health systems, areas that were most affected by the emergency measures imposed. This paper focuses on the health economy in Romania, evaluating and analysing reports on public spending during the lockdown period. To study this aspect, the expenses from the lockdown intended to combat the pandemic in Romania at the level of the 42 counties, including the capital, were taken into account. The article contains theoretical aspects and a case study. Econometric calculation models were used by establishing a dependent variable represented by public expenditure reports used by institutions as a means of communication (R) and four independent variables represented by: donations and sponsorships (S), health expenditure (M), quarantine expenses (C), sanitation fees (D) and other types of expenses (T). The results of the study showed that for the reduction of the pandemic during the COVID-19 lockdown period, the public authorities allocated large sums of money for the health economy.*

KEY WORDS: *COVID-19, lockdown, health industry, economic impact, public funds.*

JEL CLASSIFICATIONS: *M40, I18.*

1. INTRODUCTION AND MOTIVATION

Economic entities typically provide information about their activities to third parties, such as: suppliers, partners, credit institutions and public institutions. This practice is a form of communication meant to improve the relations with the stakeholders, to strengthen the entity's position on the market and provide confidence in the activity carried out by the entity. Currently, due to the fact that a large number of the economic entities are facing a crisis situation, state's institutions are facing difficult

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situations in managing the health crisis caused by COVID-19 (MS, 2021). This pandemic has had a major impact on all economic entities in all areas of activity, according to the Declaration of the World Health Organisation (WHO, 2020). The changes brought by the COVID-19 pandemic globally have brought public and private economic entities to face unprecedented medical challenges and restrictions (Zetzsche, et. al., 2020).

During the pandemic crisis, the economic environment is constrained by a multitude of factors such as the imposition of social distancing, limitation of global movement, uncertainty of future sales, supply related issues, etc. On the other hand, the aspect on which the pandemic had its first impact was related to governance. The policy of organizing budgets according to previous years was no longer a priority in this context, as the COVID-19 pandemic budget had to be built without a previous reference baseline (He and Harris, 2020). As budget commitments and expenditures made in previous years cannot be completely ignored, they need to be redistributed to the extent that the strategic and operational objectives related to the COVID-19 policy are achieved. Broadly speaking, the objectives set during the crisis refer to financial transparency, to setting the strategic prioritization, to the alignment with the national requirements, to the control and monitoring and, last but not least, to the reallocation of financial resources where necessary. Financial transparency is a principle by means of which the connection between the expenditure to the factors that led to the expenditure is established. Moreover, it is possible to determine the impact that expenditure has on the national budget. A low level of financial transparency reflects the inefficiencies in the system (Burcă, et al., 2021).

The challenges posed by the global pandemic of COVID-19 has challenged the manner of governance nationally, by adopting unprecedented measures. Medical restrictions required special attention and strategies were quickly adopted to rethink the economy and the way the entire healthcare system operated. State's actions changed the rules in the community and required responsible measures to be implemented in all areas of activity, not just in the healthcare system. In these circumstances, the social distancing imposed has created difficulties in the communication process and has generated a situation of uncertainty that is difficult to manage.

The aim of this paper is to analyse the management of public funds in the health economy in terms of the expenses of these funds in the context of COVID-19. Given that the subject of the COVID-19 pandemic is a new and current one, the research was based on the expenditure reports published nationally for the lockdown period. The motivation of this paper is to find answers to questions such as: How were public funds spent during the COVID-19 lockdown in Romania? or What was the effect of the pandemic on the health economy during the COVID 19 lockdown?

2. LITERATURE REVIEW

The uncertainty created by COVID-19 around the world has affected most areas from both a healthcare and economic point of view. Change is the buzzword defining most activities that needed to adapt to the new (Atkins et. al, 2020). The impact of COVID-19 on the economic environment has been monitored since the onset

of the pandemic. This has allowed a study of organisations around the world, and from the researches carried out, the greatest impact has been the change in the legislation of companies that moved their business online (Ashraf, 2020).

Similar researches that have addressed the topic of COVID-19 have promoted a good communication and transparency as indispensable elements in evaluating an entity during a crisis (Liu et. al. 2020). Other researchers conducted in Romania that had as a case study the economic entities listed on the Bucharest Stock Exchange (BVB - Bursa de Valori București) emphasize the financial and non-financial communication in order to go well through the COVID-19 period (Hațegan, et al., 2020).

A new approach is the element defining the implementation of the important insights from the COVID-19 pandemic period (Huo and Qiu, 2020). Budgetary pressures during the lockdown period led to additional expenses, the financial effort being significant in terms of both the short-term approaches and long-term decisions (Brînduşe & Bunget, 2021).

Ozili and Arun (2020) state that the pandemic has gone beyond the borders of a traditional management. This is explained by the change in the managerial mindset to reallocate resources from areas that were not of interest, propitiating projects, a clearer understanding of what fixed and variable costs mean in the work carried out but also the creation of a clear vision regarding the current and future opportunities and risks. The economic context during the pandemic period was governed by novelty, change and speed. These are the words used most often in the vision of Who (2020), in order to describe the major changes and decisions taken in the budgetary apparatus. The goal-setting in terms of the decision-making process must have a clearly defined vision of how the activity should be carried out.

According to Sudha and Sheeja (2020) the budgetary pressures of 2020 were defined by ensuring short-term efficiency. Eliminating unnecessary costs is, according to the authors, the only chance for economic entities to survive. Obtaining a clear and optimised view of the expenses is one of the strategies that the entity must implement in order to remain active. In conclusion, in the view of Zhang, Hu, Ji (2020) during the COVID-19 period, the performance indicators must support the strategy, transparent actions leading to an effective communication process must be promoted and, last but not least, performance indicators must be set according to the adopted strategy

3. METHODOLOGY RESEARCH

In order to achieve the research objective, we used the qualitative and quantitative analysis, applying the data provided by the Public Health Directorates (DSP, 2021) of all counties in Romania. Counties represent a territorial division that consists of several administrative units in the form of cities or townships. The DSP platforms represent an efficient, secure and credible communication system that ensures the permanent access to information, which is regularly updated.

The research starts from the identification of the factors influencing the public funds in the health economy in Romania during the lockdown period. Thus, we developed at study level variables that have been analysed from an economic

perspective in the context of the COVID-19 lockdown. From all the reports published on the DSP platforms during the lockdown period, a series of expenditures was found in the 41 counties plus the capital Bucharest. E-Views and Microsoft Excel calculation software was used for all analyses and tests. This case study consisted of: one dependent variable, four independent variables. The dependent variable consists of the public expenditure reports used by the institutions as a means of communication (R). The independent variables consist of: donations and sponsorships (S), medical expenditure (M), quarantine expenditure (C), disinfection expenditure (D) and other types of expenses (T).

The expenses incurred during this period represented additional allocations or budget reallocations/redistributions, which were made from the state level through the representative institutions and which are aimed at preventing and combating the incidence of COVID-19. Given that the lockdown period was a period of crisis, we consider the public institutions' degree of communication to be an indispensable element, and the most appropriate means of communication was through the periodic reports that centralised the expenses incurred and the destination thereof. In order to establish the number of reports made at national level, we opted to centralise the data issued at county level according to the development region. In Romania, there are 8 development regions organised according to table 1.

Tabel 1. Classification and composition of development regions in Romania

Development region	**Component counties**	**Number of expense reports published during the Covid 19 lockdown**
North-East	Bacău, Botoşani, Iaşi, Neamţ, Suceava and Vaslui	24 reports
South-East	Brăila, Buzău, Constanţa, Galaţi, Vrancea and Tulcea	24 reports
South-Muntenia	Argeş, Călăraşi, Dâmboviţa, Giurgiu, Ialomiţa, Prahova and Teleorman	29 reports
South-West Oltenia	Dolj, Gorj, Mehedinţi, Olt and Vâlcea	22 reports
West	Arad, Caraş–Severin, Hunedoara and Timiş	20 reports
North-West	Bihor, Bistriţa-Năsăud, Cluj, Sălaj, Satu–Mare and Maramureş	24 reports
Centre	Alba, Braşov, Covasna, Harghita, Mureş and Sibiu	24 reports
Bucharest-Ilfov	Ilfov and Bucharest	9 reports

Source: Authors' projection based on the data provided by the DSP (2021)

The number of expenditure reports published during the Covid 19 lockdown period at the level of each development region was taken from the information provided through the DSP at county level.

Table 2. The situation of public health funds and payments made during the lockdown period by development regions in Romania

thousands of Euros

The development region	Public funds allocated		Payments made	
	Total budget allocations	of which: amounts allocated to fight the pandemic during the lockdown period	Payments made from budgetary allocations	of which: payments made to combat the pandemic during the lockdown period
North-East	861248.00	57581.00	498406.80	41270.60
South - East	926981.00	21754.80	489840.60	13420.40
South-Muntenia	786373.60	26873.60	474345.00	13989.40
South-West Oltenia	542177.60	20616.40	314709.60	9618.00
West	739807.40	31046.00	355242.40	13968.80
North-West	1150616.00	45083.40	625427.60	26020.20
Centru	765345.60	33100.40	429229.60	16096.20
Bucharest-Ilfov	2038101.20	53713.40	1048829.80	20824.00
Total	**7810650.40**	**289769.00**	**4236031.40**	**155207.60**

Source: Authors' projection based on the data provided by the DSP (2021)

Separate amounts have been allocated from the public health funds nationally in order to fight the pandemic during the lockdown period. The most significant *public funds* allocated to health were made at the level of the Bucharest-Ilfov Region, which also recorded the most significant payments made from budgetary allocations. In terms of *the amounts allocated to combat the pandemic*, the largest amounts were allocated to the North-East Region, which also recorded the highest level of payments made to combat the effects of the COVID-19 pandemic.

The legislative measures have had an impact on public entities, leading them to use the funds allocated for this purpose. In this research, the dependent variable was constituted based on this aspect. The legislative measures concerned the following areas: public procurement, health, social protection, labour, insurance and economic support and general actions to prevent, limit and control the spread of COVID-19. At national level, it has been established that these measures are adopted and reported in the territory.

The measures adopted by Romania to prevent the risk of the COVID-19 spread focused on four main categories of expenditure, plus the donations and sponsorships received from private economic entities. These categories of expenditure refer to:

1. Expenses in the medical field, which include: purchases of medicines, purchases of medical equipment/devices, purchases of medical supplies, salary entitlements specific to this period, transport of persons and goods and other expenditure;
2. Expenses on disinfection, which include: expenditure on the purchase/installation of disinfectant solution devices, expenditure on the regular disinfection of elevators, stairwells and other common areas, expenditure on the disinfection of premises in the public domain of territorial and administrative divisions and other types of expenditure on disinfection;
3. Quarantine costs, which include the costs incurred by quarantining persons in specially designated premises under contract;
4. Other types of expenditure, which include: expenditure on food allowance and accommodation allowance for the social services staff in preventive isolation at work, expenditure on the implementation of support measures for vulnerable people in isolation at home, expenditure on contracting specialists to provide counselling, expenditure on the identification of premises for the isolation of homeless people, expenditure on the conclusion of volunteering contracts and other types of expenditure;
5. In addition to all these categories of expenditure incurred from public funds, donations and sponsorships received are added. The donations and sponsorships received which the DSPs benefited from were done by private economic entities and consisted of financing the procurements of protective materials and medical equipment for hospitals. We used the scoring method to determine how many types of expenses are included in each expenditure category. If a county has published expenditure reports, it receives a score for the types of expenditure found. This method will help to calculate an average score at the level of the development region.

Table 3 shows the public funds allocated and payments made by categories of expenditure during the COVID-19 lockdown period. For each category of expenditure, the amounts (in thousands of euros) represented the budget allocations and payments made are shown.

Of the total budget allocations, the largest funds were allocated to the North-East region where Suceava County had the highest incidence of the virus compared to all other counties in Romania. At national level, in terms of the expenditure categories, the largest budget allocations were for *medical expenditure* (M).

The number of expenditure reports at the level of a development region is given by the total number of reports published by all the counties that are part of that development region. We used the scoring method to determine how many types of expenses are included in each expenditure category. If a county has published expenditure reports, it receives a score for the types of expenditure found. This method will help to calculate an average score at the level of the development region.

As regards the expenditure reports (R), both their content and the number of publications were analysed, although this does not really reflect the concern about the effectiveness of communication. Moreover, it is important how the information is structured and the correct division of expenditure according to its destination. Public expenditure was determined by the following calculation formula:

$$R = (\Sigma Xi) / ni \quad (1)$$

where:
ni = number of elements; Xi = 1 if public reports are present, 0 if public reports are not present, such that $0 \leq R \leq 1$.

Table 3. Public funds allocated and payments made by development regions and categories of expenditure during the COVID-19 lockdown period

thousands of Euros

The development region	Medical expenditure (M)		Quarantine expenditure (C)		Disinfection expenditure (D)		Other types of expenditure (T)		Total budget allocations by region	Total payments made by region	Donations and sponsorships (S)
	Budget allocations	Payments made	Budget allocations	Payments made	Budget allocations	Payments made	Budget allocations	Payments made			
	1	2	3	4	5	6	7	8	9=1+3+5+7	10=2+4+6+8	11
North-East	28973.0	17720.2	6765.4	3062.6	2357.20	1301.80	19485.40	19186.0	57581.0	41270.6	5797.0
South - East	14675.0	8854.8	2835.6	1253.2	1789.00	1385.40	2455.20	1927.0	21754.8	13420.4	2937.8
South-Muntenia	18490.4	10235.8	5210.2	1408.0	1718.60	1194.80	1454.40	1150.8	26873.6	13989.4	2622.2
South-West Oltenia	11413.4	4965.6	4652.0	1175.8	881.80	411.80	3669.20	3064.8	20616.4	9618.0	1632.6
West	26324.2	11113.4	2093.2	816.6	1066.20	729.00	1562.40	1309.8	31046.0	13968.8	2727.2
North-West	33388.4	19941.8	6797.0	3309.6	2061.20	1172.60	2836.80	1596.2	45083.4	26020.2	1305.0
Centru	23787.2	11255.2	4909.8	2177.0	2118.80	1203.80	2284.60	1460.2	33100.4	16096.2	1597.6
Bucharest -Ilfov	39377.0	13884.6	4522.2	2285.8	7544.00	3691.60	2270.20	962.0	53713.4	20824.0	2615.0
Total	196428.6	97971.4	37785.4	15488.6	19536.8	11090.80	36018.20	30656.8	289769.0	155207.6	21234.4

Source: Authors' projection based on the data provided by the DSP (2021)

In order to better assess the financial effort recorded nationally, the information has been differentiated, so it is assessed that part of the amounts allocated to fight the pandemic was from donations and sponsorships (S) from private economic entities. In order to highlight this, we proceeded to analyse the development regions that received donations and to mark them with 1 if donations and sponsorships were received and with 0 otherwise. It was proceeded in the same manner for the other variable medical expenditure (M), quarantine expenditure (C), disinfection expenditure (D) and other types of expenditure (T). All these elements were the independent variables of the research.

Based on the selected indicators, an econometric model was created on a sample consisting of the 42 counties, including Bucharest and Ilfov, the characteristics and data presented are relevant and support the testing of our objective.

We started the econometric analysis by using the model of data regression, obtained based on the variables, which is presented as follows:

$$\mathbf{R} = b_0 + \sum_{i=0}^{3} a_i * f(S, M, C, D, T) \quad (2)$$

where:

R= public reports, dependent variable with values between $\overline{0,5}$; $b_{o,,}$ a $_i$= constants ; S, M, C, D, T = independent variables with values between $\overline{0,1}$

Starting from these considerations, the following hypotheses were made:
Hypothesis 1: The expenditure reports (R) reflect the management of public funds in the Romanian health economy during the COVID-19 lockdown period,
Hypothesis 2: The donations and sponsorships (S) from private economic entities have no effect on the health economy in Romania in the context of the COVID-19 lockdown.
Hypothesis 3: Medical expenditure (M) has an effect on the health economy in Romania in the context of the COVID-19 lockdown.
Hypothesis 4: Quarantine expenditure (C) has an effect on the health economy in Romania in the context of the COVID-19 lockdown.
Hypothesis 5: Disinfection expenditure (D) has an effect on the health economy in Romania in the context of the COVID-19 lockdown.
Hypothesis 6: Other types of expenditure (T) have an effect on the health economy in Romania in the context of the COVID-19 lockdown.

4. RESEARCH RESULTS

The empirical analysis is based on the study of the data and information on the impact of COVID 19- lockdown on public funds in the health economy in Romania and on providing reports based on the impact of COVID 19 at regional and county level. For the econometric analysis we used the sample of 41 counties plus the capital Bucharest and the results are shown in table 3.

Tabel 3. Standard Deviation

Variables	Obs.	Mean	Min.	Max.	Std. Dev
R	42	2.95	2.4	3.6	0.28
S	42	0.96	0.5	1	0.13
D	42	0.91	0.75	1	0.12
M	42	0.88	0.66	1	0.10
C	42	0.87	0.5	1	0.22
T	42	0.52	0.33	0.83	0.13

Source: Authors' projection

The standard deviation shows that the variable of donations and sponsorships (D) is found on average in the public reports of 40 out of 42 counties, which results from the average index of 0.96.

Information on disinfection expenditure (D) was found in 38 counties, representing a reporting percentage of 91% of the total of 42 counties.
Medical expenses (M) and quarantine expenses (C) were included in the public reports of 37 counties, resulting in the average of between 0.87 and 0.88. Regarding the variable of other types of expenditure (T), there was a 52% reporting percentage,

which shows that out of the total number of counties in Romania, only 22 of them incurred this category of expenditure related to pandemic control. In order to demonstrate the relationship between the variables, the correlation matrix analysis was used. The results are shown in table 4.

Tabel 4. Correlation matrix

	R	*S*	*M*	*C*	*D*	*T*
R	1					
S	0,190672	1				
M	0,538203	-0,02242	1			
C	0,515079	0,045058	0,105072	1		
D	0,603222	0,179161	0,277189	0,12109	1	
T	0,660377	0,051209	-0,03732	0,179976	0,13762	1

Source: Authors' projection

The correlations between the variables analysed show that the dependent variable of public reports (R) is in a very positive correlation of intensity with the variables: medical expenditure (M), quarantine expenditure (C), disinfection expenditure (D) and other types of expenditure (T).

The values registered between the variables are above 50%, which shows that the public reports (R) consisted of medical expenditure of about 54%, about 53% in quarantine expenditure, about 60% in disinfection expenditure and most expenses territorially were recorded in the highest percentage, respectively 66%.

This high percentage can be justified by the expenditure incurred to fight the COVID-19 pandemic, which were not charged in the aforementioned categories.

Regarding the relationship between the public expenditure reports (R) and the donations and sponsorships (S), there is a positive correlation of medium intensity (0.19).

This can be explained by the fact that nationally, most public reports included medical, quarantine, disinfection and other types of expenditure.

Donations and sponsorships (S) have a positive relationship of weak intensity, with the variables: quarantine expenses (C), disinfection expenses (D) and other types of expenses (T), and a negative relationship with the variable of medical expenses (M). The medical expenditure (M) variable records positive relationships but of weak intensity (0.11) with the quarantine expenditure (C) variable, a medium intensity (0.28) in the case of disinfection expenditure (D) and a negative relationship (-0.04) regarding other types of expenditure (T).

The quarantine expenditure (C) variable registers positive relationships of low intensity (0.12) regarding the disinfection expenditure (D) and of medium intensity (0.18) with other types of expenditure (T). The disinfection expenditure variable (D) is in a weak positive relationship with other types of expenditure (T), with a value of (0.14).

We used the regression with random effects for the assessment, in order to demonstrate the influence of each independent variable, the results being shown in table 5.

Table 5. Results of regression

Regression Statistics	
Multiple R	1
R-squared	0,278260006
Adjusted R-squared	0,175816472
Standard Error	1,3477E-15
Observations	42

Source: Authors' projection

We referred to the analysis of the R-squared values because is retains the subset of variables for which the acceptable compromise is realized between the number of variables and the determination coefficient size. Performing a simple linear regression, we obtained an R-squared of 0.27, which means a significant average relationship between the variables, meaning that the change in the independent variables influences the change in the dependent variables by 27%. By the fact that it is a positive value, we can conclude that it is higher than the critical level, which means that the model is valid.

The Anova statistics for regressions test the independent variables detailed in table no. 6. It results from this that the overall regression model is not significant due to the recorded probabilities, having a value of 0, hence < p-value.

Table 6. ANOVA test

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	369,83	73,966	4,07234E+31	0
Residual	37	6,72032E-29	1,8163E-30		
Total	42	369,83			

Source: Authors' projection

By means of table 6, the aspects shown result in a strong prediction of the connection of the dependent variable for all independent variables. According to ANOVA, the F-statistic is 4.07 and the residual sum of the squares is 6.720 with a 37 degree of freedom.

By means of the regression analysis in table 7, it is demonstrated that of the five independent variables, the highest Beta values, respectively 1.5, 1.40 and 1.38, are for medical expenditure, disinfection expenditure and other types of expenditure to combat the COVID-19 pandemic.

The variables if donations and sponsorships (S) and quarantine expenditure (S) have the Beta value of S=0.41 and respectively C=0.64, which are comparably lower

than other independent variables, resulting in a lower frequency of these categories of expenditure in the public reports.

Table 7. Results of regression in depending on the content of public reports

Variable	Coefficients (Beta)	Standard Error	P-value
S	0.4051	0.3297	0.2264
M	1.500	0.3714	0.00023
C	0.6410	0.1686	0.000482
D	1.3777	0.2880	2.35
T	1.4010	0.2519	1.95

Source: Authors' projection

The results demonstrate that the medical expenditure (M) is nationally the most present and relevant variable in explaining the dependent variable R. The regression analysis according to the dependent variable showed significant values in the case of independent variables greater than 0.05.

5. DISCUSSIONS AND CONCLUSIONS

By means of this research, we analysed the lockdown effect on the health economy in Romania, through four independent variables, namely: donations and sponsorships (S), medical expenditure (M), quarantine expenditure (C), disinfection expenditure (D) and other types of expenditure (T) in order to correlate them with the dependent variable, respectively the public expenditure reports (R). Taking into account the results obtained from the analysis carried out, it is possible to validate/invalidate the hypotheses made initially.

For the hypothesis *H1: The public expenditure reports (R) reflect the management of public funds in the Romanian health economy during the COVID-19 lockdown period, it is validated.* The validation of this hypothesis results from the data obtained from Table 9 The Correlation matrix, where the dependent variable registers linear positive correlations of medium and strong intensity with all the independent variables. The strongest correlation is 0.66 recorded for the variable of other types of expenditure (T) and the weakest correlation is of 0.19 for the variable of donations and sponsorships.

For the hypothesis *H2:* The *donations and sponsorships (S) from private economic entities have no effect on the health economy in Romania in the context of the COVID-19 lockdown*, is invalidated. Even if the donations and sponsorships do not represent a financial effort of the public system, they contribute to the public reporting and are an integral part thereof. The correlation between this independent variable and the dependent variable is a positive one, with an average intensity respectively of 0.19. This shows that not all development regions have recorded donations and sponsorships or that the donations and sponsorships received from private economic entities are recorded to a small extent.

For the hypothesis *H3: Hypothesis 3: Medical expenditure (M) has an effect on the health economy in Romania in the context of COVID-19 lockdown,* it is validated. The validation of this hypothesis is based on the correlation matrix, which demonstrates that between these variables there is a positive connection of strong intensity, respectively of 0.538. This demonstrates that in Romania, medicated expenses have been reported during the lockdown period in most of the development regions.

For the hypothesis H4: Quarantine expenditure (C) has an effect on the health economy in Romania in the context of COVID-19 lockdown, it is validated. The reason why this type of expenditure is found at the level of development regions is based on the justification that during the lockdown period, the pandemic led to quarantining people in publicly funded facilities. Thus, each county allocated financial resources for quarantine expenditure (C), in this case a positive correlation between this variable and the public reports (R) was achieved, its intensity being strong, reaching 0.51, according to Table 9 The correlation matrix.

For the hypothesis H5: Disinfection expenditure (D) has an effect on the health economy in Romania in the context of COVID-19 lockdown, it is validated. The value of 0.603 obtained demonstrates the positive, strong connection of very high intensity, which leads a good part of the funds allocated to disinfection expenditure (D) being recorded in the public reports.

This type of expenditure is relevant because during the lockdown period, through a legislative framework, the disinfection of all public premises was nationally required. This action was borne by the public resources allocated to each local government.

For the hypothesis H5: *Other types of expenditure (T) have an effect on the health economy in Romania in the context of the COVID-19 lockdown*, it is validated. The validation of this hypothesis is justified by recording the highest correlation value with the dependent variable, in the public reports (R). The value of 0.660 demonstrates a direct connection of very strong intensity. It can be said that during the COVID-19 lockdown period, a lot of expenditure was made to fight the pandemic and its spread, which determined a considerable financial effort. This category of expenditure does not fall under the other categories of expenditure, but is aimed at fighting and preventing the SarsCov2 pandemic.

We assess that the management of public funds with effect on health economy during the COVID 19- lockdown period as a well-organised process. The importance of this context for Romania is given by the impact of the changes produced and the need to adapt to new rules with long-term effects.

In conclusions, by means of this research, the theoretical and practical aspects on the effect of COVID 19- lockdown on public funds in the health economy in Romania were presented. The case study demonstrates that public reports have been provided nationally, centralised at development region level. The content of the public reports on the COVID-19 included information such as: public procurement, health, social and labour protection, ensuring and supporting the economy and general actions to prevent, limit and control the spread of COVID-19.

The results of this study assess the national financial impact of the expenses incurred during the COVID-19 lockdown period on the Romanian health economy. At the same time, this paper presents the strategic way of communicating and providing information and managing public funds in a period of crisis. The process of preparing the reports consisting of a number of other expenses recorded at the level of development regions organised according to the centrally set targets.

The proposed econometric model demonstrated the relationships between public expenditure reports and the categories of expenditures incurred to fight the pandemic both from both public and private funds, such as donations and sponsorships. The importance of this study is given by the perspective of how the pandemic situation is being managed to improve the public expenditure reports and to transform them into means of communication internationally. Moreover, those interested in understanding how the public system responds to challenges and manages risks benefit from this study.

Based on the data analysed, it can be summarised that in the context of the pandemic, the entire national public system mobilised and adapted to the crisis situation created and the medical activity was made more efficient. Even though the COVID-19 pandemic had an impact on both the health and the economic systems, this crisis did not prove to be a barrier to interrupt the communication and reporting of information of national interest.

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