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THE GOVERNANCE OF EFFICIENT HEALTHCARE FINANCING SYSTEM IN OECD COUNTRIES

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Abstract: The objective of this study was to assess the relations between health spending and selected indicators of healthcare efficiency in the classification of healthcare financing systems in OECD countries. The study also provides an insight into the amount of health spending and healthcare efficiency, represented by life expectancy at birth, positive health self-assessment, and the health care index. The relationships of the selected variables were primarily examined in per their classification according to the health financing system. Aspects falling under the main objective were analysed through statistical descriptive analysis and analysis of relationships. The relationship between the level of funding in terms of GDP and the outputs of healthcare efficiency was confirmed. However, this connection was not confirmed when considering the healthcare financing system. The national health financing appeared to be the only system where the relationship existed. Simultaneously, the importance of managing an efficient healthcare financing system can be highlighted.

Key words: healthcare efficiency, health spending, health indicators, OECD

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Introduction

The assessment of efficiency of government spending on healthcare financing is one of the crucial management issues in each economy. The picture of efficiency of healthcare systems is ambiguous (Behr and Theune, 2017). Many countries face budget cuts in health spending, on the other hand, health facilities should be successful in providing healthcare with optimized health resources (Samut and Cafri, 2016). This requires the implementation of rule-based hospital management (Kodera and Yoneda, 2019). Ancarani et al. (2009) highlighted the effect of managerial and organizational elements on the efficiency of hospital wards. For these reasons, it is necessary to monitor, evaluate and manage the efficiency of healthcare financing systems. The evidence indicates that countries with improved healthcare system were more efficient overall (Ozcan and Khushalani, 2017). On this basis, the efficiency of health financing system is very important, and functioning management is necessary. This study deals with the efficiency of

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healthcare systems depending on the type of healthcare funding system in OECD countries.

Theoretical background

Efficiency and effectiveness of health systems is a topic discussed in many studies (Hadad et al., 2013; Gonncharuk, 2017; Lo Storto and Goncharuk, 2017; Stefko et al., 2018; Ahmed et al., 2019), demonstrating that understanding the current health situation and conditions is useful and necessary for health policy makers (Kocisova and Sopko, 2018). Gonzalez et al. (2010) dealt with the technical and value efficiency of the healthcare systems, and the results indicate that high-income OECD countries show the highest efficiency indices and low-income countries have the most inefficient healthcare systems. As factors that lead to health inefficiency Allin et al. (2016) identified (1) management factors, such as hospital re-admissions; (2) public health factors, such as obesity and smoking rates; and (3) environmental factors such as the population's average income. Theodorakioglou and Tsiotras (2010) emphasized the importance and the need to implement quality management systems in healthcare that can help overcome the challenges faced by healthcare facilities.

Improving the health of each group of the population should be a major effort of health policies in countries (Kubak et al., 2017). Gallardo-Albarran (2018) highlighted the importance of the relation between the health status of the population and the development of economies. Overall, health capital is an undeniably important aspect of economic growth in each country (Weil, 2007; Hartwig, 2010; Atilgan et al., 2017; Verulava and Dangadze, 2018; Kim et al., 2019). The results of several studies showed that good health has a positive impact on the economic life of countries (Bloom et al., 2004; Boachie, 2017). Population health status strongly depends primarily on the financing of healthcare and people's consumption habits (Toader et al., 2017). The effect of health spending on public health has received attention over the past decades; and many studies confirmed the effect of health spending on health outputs (Rahman et al., 2018; Bein et al., 2017; Arthur and Oaikhenan, 2017). On the other hand, Heuvel and Olaroiu (2017) emphasized the ambiguity and complexity of the relation between health spending and health outputs; the authors revealed that health spending is not the main determinant of health. The link between health spending and healthcare outputs was examined from different perspectives, for example in terms of mortality rates (Heijink et al., 2013; Budhdeo et al., 2015), child health outcomes (Novignon and Lawanson, 2017), gender diversity (Asiskovitch, 2010) or longevity (Jakovljevic et al., 2016). Life expectancy is a frequently used variable that expresses the efficiency of the healthcare system, the prosperity of economies, and the welfare of the population. Obrizan and Wehby (2018) stated that increasing health spending positively affects especially in low-life countries. Aisa et al. (2014) also agreed that health spending affects life expectancy, while public and private

health spending show different effects. Toader et al. (2017) highlighted that increasing health spending lead to increasing life expectancy. Perceived health status is also a common variable expressing the health of the population (Au and Johnston, 2014; Crossley and Kennedy, 2002). Some authors examined the relation between health spending and self-reported health status (Rivera, 2001), and a limited effect of spending was confirmed (Pierard, 2016). Regarding the relationship between health spending and healthcare quality, several studies confirmed that the relationship is small to moderate, regardless of whether the direction is positive or negative (Hussey, 2013).

As mentioned above, a positive relationship between health spending and healthcare outputs is evident. On this basis, it is very important to effectively manage the healthcare system. Buntak et al. (2019) confirmed that the implementation of a quality management system in healthcare is of great importance in addressing the differences between planned performance in the process of providing health services and achieved performance or patient satisfaction. At the same time, it can eliminate the waste of processes in healthcare facilities, map the flow of values, solve problems of rising healthcare costs.

Methodology

The main objective was to assess the relations between health spending and selected indicators of healthcare efficiency in the classification of healthcare financing systems in OECD countries. The dominant focus of this research was to determine the relations between health spending in % of Gross Domestic Product (Spend_H) and healthcare outputs in a sample of developed countries in the classification of the healthcare financing system. The health variables included perceived health status (Self_rep_H), life expectancy at birth (Life_expect), as well as the health care index (HC_index).

Three research hypotheses were formulated to achieve the stated objective:

Hypothesis 1: There is a significant relationship between Spend_H and selected healthcare outputs in countries with the national health system covering the country as a whole.

Hypothesis 2: There is a significant relationship between Spend_H and selected healthcare outputs in countries with a single health insurance fund.

Hypothesis 3: There is a significant relationship between Spend_H and selected healthcare outputs in countries with multiple insurance funds or companies.

All OECD countries were involved in the analytical procedures, with the exception of Sweden, which has a different funding system (local health systems that serve distinct geographic regions).

The first variable entered into the analysis was total health spending (Spend_H) (OECDa, 2018) expressed as a percentage of GDP from the OECD database of 2017 or the closest available year, but never earlier than 2013. Life_expect, as the second variable in analytical procedures, expressed an average life expectancy at

birth (OECDb, 2018) from the OECD databases of 2017 or the closest available year, but never earlier than 2013. Self_rep_H was the third variable that represents the percentage of the population that provided a positive response (good or very good) to the question "How is your health in general?". This variable was obtained from the OECD databases (OECDc, 2018). This variable was largely from 2016, as the only recorded 2017 response was from New Zealand, or from older answers. The indicator of healthcare quality (HC_index) was the fourth variable entering the analyses that was collected from the database of NUMBEO (2018) and the data were from the second half of 2018. The indicator determining the financing of the healthcare system (HC_System) was also used in the analyses. Three main healthcare financing systems were identified in OECD countries: (i) the national healthcare system covering the country as a whole (NHS), (ii) the single health insurance fund (single-payer model; SPM) and (iii) the multiple insurance funds or companies (MI) (OECD, 2016). This was primary collected from the Health Systems Characteristics Survey under the auspices of the Organisation for Economic Co-operation and Development in 2012 and 2016.
First of all, the basic characteristics of the descriptive analysis show the number of countries (n), the arithmetic mean ($\bar{x}$), as well as the standard deviation (σ) of health and economic indicators. The effect size was determined using η^2. The individual OECD countries sorted according to the HC_System were used in the analysis of the relationship between Life_expect, Self_rep_H, HC_index, and Spend_H. To analyse the relationship, Pearson‘s r and Spearman's ρ were used. The normality assumption was verified by Mardia's multivariate skewness and kurtosis test and Henze-Zirkler's multivariate normality test. In one case, the decision about the normality of the data was supported by an analysis performed on the basis of obliquity and punctuality. If the normality assumption was fulfilled, Pearson’s r was used; otherwise, the relation was determined using Spearman’s ρ as a nonparametric method. Analysis data were processed in RStudio (RStudio, Inc., Boston, MA, U.S.) application.

Results

Based on the above-mentioned facts, the importance of this issue from an economic and social point of view is undeniable. The following part shows the analytical procedures and processes leading to the fulfillment of the main objective of the presented study.

The presented Table 1 is divided vertically into the categories of the healthcare financing system and horizontally into selected variables. Focusing on the outputs of the descriptive analysis (frequency (n); mean ($\bar{x}$); standard deviation (σ)) in the following Table 1, the highest average value of Spend_H was found in the MI financing system (mean = 9.75 % of GDP). In the variable of Life_expect, countries using the NHS system showed the highest value (mean = 80.98 years).

The lowest value of Life_expect was in countries with SPM (mean = 80.04 years). In the case of Self_rep_H, the countries applying NHS acquired the highest proportion of the population assessing their health positively (mean = 70.70 %). The most positive outputs of HC_index were found in the MI system (mean = 73.49), but it is necessary to mention a small difference in outputs compared to other financing systems.

Table 1: Descriptive statistics of quantitative variables in the classification of the financing system

HC_System		Spend_H	Life_expect	Self_rep_H	HC_index
Total	N	35	35	35	35
	$\bar{x}$	8.76	80.59	67.29	70.68
	σ	2.36	2.58	14.11	8.17
NHS	N	14	14	14	14
	$\bar{x}$	8.78	80.98	70.70	70.05
	σ	1.35	2.74	14.93	7.24
SPM	N	9	9	9	9
	$\bar{x}$	7.40	80.04	60.70	67.93
	σ	1.97	2.51	12.40	10.86
MI	N	12	12	12	12
	$\bar{x}$	9.75	80.54	68.27	73.49
	σ	3.11	2.58	13.75	6.60

Based on these outputs, the SPM countries acquired sub-average values not only in comparison with other healthcare financing systems but also in comparison with the average outputs of OECD countries as a whole. These countries could be constrained by their characteristic economic and social aspects (for example: education, social protection, economic prosperity and development, geographical location, and others), i.e. the effects of other country-specific dimensions.
Table 2 shows the effect size of the nominal (qualitative) variable HC_System on selected health variables. The outputs in this table show the effects of HC_System on Spend_H, Life_expect, Self_rep_H, and HC_index. A small but not negligible rate of effect was found in Self_rep_H and HC_index. Spend_H showed a medium effect and in the case of Life_expect, it was a negligible rate of effect (Cohen, 1988).

Table 2: Effect size of HC_System

Dependent Variable	Spend_H	Life_expect	Self_rep_H	HC_index
Value (η^2)	0.149	0.021	0.083	0.074
Effect size	Medium	Negligible	Small	Small

National Health System Covering the Country as a Whole (NHS)

The analytical outputs demonstrate the normality (Table 3) and relationship (Table 4) of Spend_H and Life_expect, Self_rep_H, and the HC_index in the NHS system. The NHS system is established in these OECD countries: Australia, Canada, Denmark, Finland, Iceland, Ireland, Italy, Latvia, Lithuania, New Zealand, Norway, Portugal, Spain, and the United Kingdom (N = 14).

Table 3: National health system covering the country as a whole (NHS): multivariate normality

	Spend_H*Life_expect **(A)**		Spend_H*Self_rep_H **(B)**		Spend_H*HC_index **(C)**	
	Statistic	***p***	Statistic	***p***	Statistic	***p***
Henze-Zirkler	1.042	0.004	0.537	0.142	0.554	0.127
Mardia Skewness	11.836	0.018	3.678	0.451	5.854	0.210
Mardia Kurtosis	–0.133	0.894	–0.438	0.662	0.049	0.961

First, the statistical hypothesis for normality test (H_0) was tested and the variables were conformed to a multivariate normal distribution.

Based on the outputs in the previous Table 3, the assumption of normality was fulfilled and it was possible to confirm the normal statistical distribution of the continuous random variable at the variable combinations B (Spend_H*Self_rep_H) and C (Spend_H*HC_index). For these variables, the relationship was analysed using the Pearson r method. The normality assumption was not met in the case of A combination (Spend_H*Life_expect), so Spearman's ρ method was used to determine the relationship. The relationships were calculated using both methods, and a higher value was used in the parametric method if the p-value is higher than 0.05. Therefore, the statistical hypothesis of normality was not rejected. Outputs obtained using a more appropriate method are underlined (Table 4).

Table 4: Analysis of relationships in NHS

	Spend_H*Life_expect		Spend_H*Self_rep_H		Spend_H*HC_index	
	p	**cor**	***p***	**cor**	***p***	**cor**
Pearson's r	0.004	0.719	<u>0.037</u>	<u>0.560</u>	<u>0.003</u>	<u>0.729</u>
Spearman's ρ	<u>0.532</u>	-	0.122	-	0.014	0.635

Next, the null statistical hypothesis for the relationship test was verified (H_0: the true correlation is zero).

Looking at Table 4, the significant relationships between Spend_H and Self_rep_H as well as HC_index in countries that apply the NHS health financing system were confirmed. In both cases, the p-value was less than 0.05. In these cases, the

alternative statistical hypothesis to H_0 was not rejected. In the case of Spend_H and Life_expect, the *p*-value (ρ) was higher than 0.05, i.e. no significant relationship. However, this was accepted only using Spearman's test. With Pearson's *r*, the output was the opposite. Normality was rejected on the basis of two of the three outputs (that was not entirely clear); one output (Kurtosis) suggested normality. This result (H_0, non-existence of correlation) should be critically interpreted based on the above.
The relationship with Spend_H, which was evaluated as significant (Self_rep_H, HC_index), can be interpreted as positive and, according to de Vaus (2002), a substantial to very strong relationship.

Single Health Insurance Fund - Single-Payer Model (SPM)
The following analytical outputs point to the normality (Table 5) and relationship (Table 6) of Spend_H and Life_expect, Self_rep_H, and HC_index in the SPM system. The SPM system is used in these OECD countries: Estonia, France, Greece, Hungary, Korea, Luxembourg, Poland, Slovenia, and Turkey (N = 9).

Table 5: Single-payer model (SPM): multivariate normality

	Spend_H*Life_expect **(A)**		Spend_H*Self_rep_H **(B)**		Spend_H*HC_index **(C)**	
	Statistic	***p***	Statistic	***p***	Statistic	***p***
Henze-Zirkler	0.223	0.758	0.291	0.532	0.288	0.544
Mardia Skewness	1.523	0.823	7.594	0.108	3.524	0.474
Mardia Kurtosis	–0.635	0.526	0.124	0.901	–0.573	0.567

Then, the null statistical hypothesis for normality test was verified (H_0: the variables belong to a multivariate normal distribution).
Based on the results shown in Table 5, the normality assumption was met, as the significance of each variable was higher than 0.05, which suggests that the data are not significantly different from normal statistical distribution. The normal statistical distribution of a continuous random variable could be confirmed, therefore the fulfillment of the assumptions of normality and relationship was analogously tested (primary) using the Pearson *r* method. The Spearman ρ coefficient was also calculated as the verification element of the credibility of the output.

Table 6: Analysis of relationships in SPM

	Spend_H*Life_expect		Spend_H*Self_rep_H		Spend_H*HC_index	
	p	**cor**	***p***	**cor**	***p***	**cor**
Pearson's *r*	0.191	-	0.973	-	0.839	-
Spearman's ρ	0.498	-	0.966	-	0.932	-

The null statistical hypothesis for the relationship test (H_0) indicated that the true correlation is zero.
Table 6 shows that in the SPM healthcare financing system, it was not possible to confirm the existence of a relationship between variables, as the *p*-value was higher than 0.05 in each case. In all cases, it was recommended to accept the null hypothesis H_0. There was no significant relationship between Spend_H and the other selected variables (Life_expect, Self_rep_H, and HC_index), which may indicate a certain inefficiency in healthcare financing given the health implications of the SPM system.

Multiple Insurance Funds or Companies (MI)
The analytical outputs suggest the normality (Table 7) and relationship (Table 8) of Spend_H and Life_expect, Self_rep_H, and HC_index in the MI countries. The MI system is applied in these OECD countries: Austria, Belgium, Czech Republic, Germany, Chile, Israel, Japan, Mexico, the Netherlands, Slovakia, Switzerland, and the United States (N = 12).

Table 7: Multiple insurance funds or companies (MI): multivariate normality

	Spend_H*Life_expect **(A)**		Spend_H*Self_rep_H **(B)**		Spend_H*HC_index **(C)**	
	Statistic	***p***	Statistic	***p***	Statistic	***p***
Henze-Zirkler	0.702	0.036	0.407	0.307	0.645	0.055
Mardia Skewness	15.543	0.004	10.656	0.031	8.821	0.066
Mardia Kurtosis	1.098	0.272	0.917	0.359	–0.141	0.888

The next statistical hypothesis for normality test (H_0) indicated that the variables have a multivariate normal distribution.
Based on the results shown in Table 7, the assumption of normality was met because the significance of each examined variable was more than 0.05, which suggests that the data were not significantly different from a normal statistical distribution. Thus, the normality (H_0 was accepted) was fully validated in the C combination (Spend_H*HC_index). In the case of the B combination (Spend_H*Self_rep_H), definite deviations in skewness were observed, even though the normality was confirmed. Focusing on the A combination (Spend_H*Life_expect), the normality assumption was considered unfulfilled and the above-mentioned H_0 hypothesis was rejected and its alternative was accepted. Outputs obtained through a more appropriate method are underlined in Table 8.

Table 8: Analysis of relationships in MI

	Spend_H*Life_expect		Spend_H*Self_rep_H		Spend_H*HC_index	
	p	**cor**	***p***	**cor**	***p***	**cor**
Pearson's *r*	0.271	-	0.288	-	0.627	-
Spearman's *ρ*	0.106	-	0.342	-	0.391	-

Next, the null statistical hypothesis for the relationship test was verified (H_0: the true correlation is zero).
Table 8 shows that in the MI financing system, it was not possible to confirm the existence of a relationship between the individual variables, as the *p*-value was higher than 0.05 in each case. There was no significant relationship between Spend_H and the other selected variables (Life_expect, Self_rep_H, and HC_index), which may indicate a certain inefficiency in healthcare financing system, given the health implications of the MI system.

Linking Health Spending and Selected Outputs of Healthcare Efficiency in Countries without HC_System Classification

To obtain a comprehensive view of the issue, the overall relationship between selected variables in countries was evaluated (without HC_System classification). For this reason, it was necessary to determine the relationship between Spend_H and selected outputs of healthcare efficiency (Life_expect, Self_rep_H, HC_index). The forms of the healthcare financing system (HC_System) were not included in this analysis ($N = 35$).

Table 9: Overall multivariate normality – without financial system classification

	Spend_H*Life_expect **(A)**		Spend_H*Self_rep_H **(B)**		Spend_H*HC_index **(C)**	
	Statistic	***p***	Statistic	***p***	Statistic	***p***
Henze-Zirkler	1.825	1.05×10^{-4}	0.540	**0.294**	0.840	0.046
Mardia Skewness	34.418	6.11×10^{-7}	11.155	0.025	13.452	0.009
Mardia Kurtosis	5.532	3.17×10^{-8}	2.052	0.040	2.388	0.017

The null statistical hypothesis for normality test was verified (H_0: the variables belong to a multivariate normal distribution).
In all but one test, the *p*-value was lower than 0.05 (Table 9). In these cases, the statistical hypothesis confirming normality was rejected. In the case of the B combination (Spend_H*Self_rep_H), the output was controversial, since the *p*-value of the Henze-Zirkler test recommended accepting the normality condition and the Mardia test recommended rejection. In this case, it is recommended to consider both related test outputs.

Table 10: Overall analysis of relationships without financial system classification

	Spend_H*Life_expect		Spend_H*Self_rep_H		Spend_H*HC_index	
	p	**cor**	***p***	**cor**	***p***	**cor**
Pearson's *r*	0.009	0.437	0.037	0.353	0.063	0.318
Spearman's ρ	0.004	0.478	0.014	0.413	0.003	0.487

The null statistical hypothesis for the relationship test (H_0) indicated that the true correlation is zero.
Based on the results shown in Table 10, a significant correlation (at the level of 0.05) occurred in all cases. In all three cases, a significant relationship at the α level of 0.05 was found and confirmed. According to de Vaus (2002), the related rate can be interpreted as a medium to substantial relationship in all three cases.
Based on this, it can be concluded that there was the overall relationship between Spend_H and healthcare outputs (without the HC_System classification). On the other hand, in the case of the HC_System classification, the relationship was found only in the NHS system, confirming the assumption in hypothesis 1. Thus, the effects of SPM and MI funding were uncertain, in terms of effects on efficiency and consequently on the health status of the population. From this point of view, the assumptions in hypotheses 2 and 3 have not been supported in principle. Due to the small sample, the results should be understood with caution.
On the basis of the outputs of *p*-values below 0.05 in only one case, the first hypothesis was accepted (Hypothesis 1: There is a significant relationship between Spend_H and selected healthcare outputs in countries with the national health system covering the country as a whole.), and the others were disapproved.

Discussion

This research was based on the idea that good health significantly promotes economic growth (Boachie, 2017) and the health of population strongly depends on the financing of healthcare (Toader et al., 2017). Thus, it is important to focus on the management of healthcare system, as well as health spending.
The outputs showed the relationships between health spending and healthcare efficiency represented by selected health outputs (Life_expect, Self_rep_H, and HC_index) in a sample of OECD countries. Several authors (Arthur and Oaikhenan, 2017; Bein et al., 2017; Heijink et al., 2013) confirmed the effect of health spending on healthcare outputs, but the presented research provides a new perspective. It can be highlighted the fact that when identifying this relationship, the healthcare financing system must be considered (Ivanková et al., 2019).
From the outputs of the analyses, it can be concluded that within the national health system covering the country as a whole (NHS), health spending is a valid indicator of the efficiency of healthcare. Specifically, this was true for the perceived health status and health care index. For healthcare financing by the single health insurance

fund (SPM) and the multiple insurance funds or companies (MI), this justification was not substantiated. Therefore, higher health spending does not guarantee more efficient healthcare in the country. With great caution, it can be accepted that the NHS system may be considered the most efficient system in general, and SPM and MI seem to be less efficient. Therefore, it can be assumed by analogy that the efficiency of SPM and MI was not at the desired level in the investigated instances and the health spending could be inefficient. These results partially confirm the results of the study by van den Heuvel and Olaroiu (2017), who stated that health spending may not be the main determinant of health. The overall results highlight the importance of considering the analysis of the healthcare financing system. In the analysis of the relationships between selected variables, where the funding system was not considered, the relationship between health spending and healthcare outputs was confirmed. Similar results were found by Rahman et al. (2018). As stated above, the relationship, considering the funding system, was not evident in a number of cases. In this respect, the healthcare financing system should be identified when seeking to increase the efficiency of healthcare through health spending.

It can be concluded that many factors affect the efficiency of healthcare and this study shows that when examining health spending, it is necessary to take into account the healthcare financing system and the justifiability of its health spending. The management plays a crucial role in the efficient financing of the healthcare system. Each economy uses different tools to achieve health objectives, but well-functioning management can ensure that key health objectives are met by effectively managing the allocation of financial resources for health. Financial resources for healthcare need to be optimized in order to provide efficient and high-quality health services. On the other hand, in the event of a failure of the healthcare system, patients use the health services in neighbouring countries, which disadvantages domestic health services (Birader and Ozturen, 2019; Hamarnehova, 2012). Therefore, it is important to identify key risks for the effective management of healthcare systems (Virglerová, 2018). In conclusion, the issue of efficiency offers many perspectives that can inspire, leading to overall sustainability from all direction of the economy (Stefko and Steffek, 2018; Chapcakova et al., 2019; Stefko et al., 2019).

Summary

The primary objective of this study was to assess the relations between health spending and selected indicators of healthcare efficiency in the classification of healthcare financing systems in OECD countries. For this purpose, three research hypotheses were formulated. The relationship between health spending and selected outputs of healthcare efficiency was confirmed only in hypothesis 1, which focused on the national health system covering the country as a whole (NHS). The results demonstrated the differences in the relationship between

different individually-used health systems and the level of health spending with an emphasis on the efficiency of healthcare. At the same time, the importance of managing an efficient healthcare financing system can be highlighted.
The limitations of the presented article lie in its small sample, so the results should be understood with some caution. It can also be assumed that in the case of a larger sample, these findings can be confirmed of refuted by more relevant results. Further researches will be carried out to verify and deepen the outlined assumptions, i.e., to determine to what extent the funding system moderates the healthcare system at its inputs and outputs. In the future, there is a need to focus on expanding the portfolio of analysed variables for spending items (inputs) as well as for health and efficiency (outputs) and time evaluation (time series).

Abbreviations: ***GDP*** - Gross Domestic Product, ***HC_index*** – Health care Index, ***HC_System*** - Healthcare System, ***Life_expect*** - Average life expectancy at birth, ***MI*** - Multiple insurance funds or companies, ***NHS*** - National health system covering the country as a whole, ***SPM*** - Single health insurance fund (single-payer model), ***Self_rep_H*** - Perceived health status (good and very good), ***Spend_H*** - Health spending in the percentage of GDP

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ZARZĄDZANIE EFEKTYWNYM SYSTEMEM FINANSOWANIA OPIEKI ZDROWOTNEJ W PAŃSTWACH OECD

Streszczenie: Celem tego badania była ocena efektywności wydatków na opiekę zdrowotną, w zależności od rodzaju systemu finansowania opieki zdrowotnej w krajach OECD. Badanie zapewnia również wgląd w wysokość wydatków na zdrowie i efektywność opieki zdrowotnej, reprezentowanych przez oczekiwaną długość życia w chwili urodzenia, pozytywną samoocenę zdrowia i wskaźnik opieki zdrowotnej. Zależności wybranych zmiennych zbadano przede wszystkim według ich klasyfikacji zgodnie z systemem finansowania opieki zdrowotnej. Aspekty wchodzące w zakres celu głównego analizowano poprzez statystyczną analizę opisową i analizę zależności. Potwierdziliśmy związek między poziomem finansowania pod względem PKB a wynikami wydajności opieki zdrowotnej. Związek ten nie został jednak potwierdzony przy rozważaniu systemu finansowania. Wydaje się, że krajowe finansowanie opieki zdrowotnej jest jedynym systemem, w którym

istnieje związek. Jednocześnie można podkreślić znaczenie zarządzania wydajnym systemem finansowania opieki zdrowotnej.

Słowa kluczowe: efektywność opieki zdrowotnej, system finansowania opieki zdrowotnej, wydatki zdrowotne, wskaźniki zdrowotne, OECD

經合組織國家有效衛生籌資系統的治理

摘要:這項研究的目的是根據經合組織國家的衛生籌資體系類型，評估衛生保健支出的效率。該研究還提供了有關衛生支出和衛生保健效率的見解，以出生時的預期壽命，積極的健康自我評估和衛生保健指數為代表。所選變量之間的關係主要根據衛生籌資系統按其分類進行檢查。通過統計描述分析和關係分析來分析屬於主要目標的方面。我們確認了GDP資金水平與醫療效率輸出之間的關係。但是，在考慮融資系統時，尚未確定這種聯繫。國家衛生籌資似乎是存在這種關係的唯一制度。同時，可以強調管理有效的衛生保健籌資系統的重要性。

關鍵詞:衛生保健效率，衛生籌資體系，衛生支出，衛生指標，經合組織