The effect of health expenditures and good governance on health indicators of MENA countries using generalized torque method

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Abstract

In previous studies, little attention has been paid to the simultaneous effect of health expenditures and good governance on health indicators. In this regard, in this study, health expenditures and good governance on the health index of MENA countries during the period 2002 to 2019 have been investigated. The present study is descriptive-analytical-applied, and the statistical population includes the countries of Mena. The data collection method in the library and the data required for the research have been collected by referring to the World Bank database and indicators of good governance. Data were analyzed using unit root tests, Cao, and the generalized torque method using Eviews9 software. In this study, the simple weighted average of six indicators of comment and accountability, political stability and non-violence, government efficiency, quality of law and order, the rule of law, and corruption control as indicators of good governance as well as infant mortality rate and death rate and The mortality of children under five years of age was used as a health indicator.

The results showed that health costs (expenditures) had a positive and significant effect (coefficient -1.32) on reducing the mortality rate of children under five years and a positive and significant effect (coefficient -1.2) on reducing the infant mortality rate as an indicator. Health has been the health index of Mena countries. Also, the good governance index has a negative (non-significant) effect on the health situation in selected countries. The results also showed that the weakness of the institutional structure in MENA countries weakens the effect of health expenditures (with a coefficient of -0.013) on reducing the mortality rate of children under five years (and with a coefficient of -0.012) on reducing the infant mortality rate as a health indicator. Health in government leads to improved public health and a government ill health; despite increasing public health spending, it does not improve public health and leads to a waste of public resources.

Introduction

The health sector is one of the main sectors of a country's economy, which is considered an infrastructure sector in economic development, so that most countries consider it important to pay special attention to this sector [1]. Health and its provision are topics

that human beings have considered for a long time, and governments try to provide conditions for people to enjoy the maximum level of health with fair distribution.

But in the past, health was not considered a social phenomenon and was considered an individual phenomenon [2]. With the formation of governments, health as a social right and demand has become part of the duties of governments and their international obligations. Over the past three decades, health policies and the calculation of health indicators have been comprehensively and systematically formed, and the countries' health systems have tried to make public health a priority in all their policies. Accordingly, ensuring and promoting the health of society has become an interaction and a two-way phenomenon between society and governments [3].

Each person's health status is, directly and indirectly, dependent on a set of collectible variables, including behavioral factors, environmental factors, and economic factors, among which health expenditures can be mentioned. Improving health status results from government health expenditures, and the economic factors of political decisions affect the government's decision to implement health policy [4]. Life expectancy is the average life expectancy for people in a country. This variable is used as an indicator of general health status in different regions. The index is also referred to as unhealthy factors (such as war and natural disasters). [5] Good governance encompasses a very broad concept that is the product of the participation of three institutions: government, civil society, and the private sector, all of which are essential for sustainable human development. Governments create a fertile political and legal environment, the private sector generates employment and income, and civil society facilitates active groups' political and social interaction to participate in economic, social, and political activities. Good governance is not just a narrative. New concepts such as democracy, human rights, accountability, participation, and the rule of law, but also a framework in which all these goals and values come together and the goals of human development, including economic, political, social, and cultural development. People are followed [6].

Promoting health increases human capital through the accumulation of health capital and has a direct impact on growth. On the other hand, improving health by increasing the life expectancy and reducing the number of working days that the workforce acquires due to the improvement of technology increases the workforce's productivity and indirectly affects production. Also, improving health increases life expectancy. The tendency to save among the people increases investment and economic growth, and the health sector's important in improving the human development index and consequently increasing social welfare. Government investment in this sector is recognized as one of the main tasks of the government. On the other hand, due to the failure of the private sector in the production and provision of public goods and services, especially the health sector, government intervention is necessary that in this regard, a good governance model can play a constructive role in promoting health indicators [7].

Health systems in good governance seek to maintain a proper balance between delivering and financing health services with the right regulations. Conceptually, this can be considered a force for social justice and fairness in health systems [8].

In recent years, many studies have been conducted in good governance, but in the field of the impact of good governance on health indicators, very limited studies have been conducted at home and abroad.

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Hassanvand et al. Examined the simultaneous impact of good governance and government spending on economic growth in the Mena Basin countries from 2002 to 2016. The results showed that good governance and government spending positively and significantly affect economic growth [9].

Salehnia et al. In the study of health costs and good governance concerning carbon dioxide threshold on men's and women's health in selected developing countries in the period 2000 to 2016, concluded that the variables of economic growth and good governance compared to the group. High thresholds have a more positive effect. Also, the variable of health costs in the upper threshold group has a more positive effect than the low group [10].

Kafili and Qasemnejad, in examining the role of good governance in the impact of government spending on health for 109 developing countries from 2002 to 2015, showed that government spending has a positive and significant effect on health development, and this effect increases with improved governance. [11].

In an article entitled The Role of Good Governance in the Impact of Government Expenditure on the Health Sector, Daqiqi and Abdulsalami found in a case study of selected developing countries from 2002 to 2015 that government health spending has a positive and significant effect on the level of health development. Impact increases with improved governance [12]. Poor Ehtesham examined the relationship between the quality of governance and health in the countries of the Southwest Asian region during the years 1996-1995. This study showed that the quality of governance has a significant effect on the components of health sector development in the studied countries [13].

In examining the effect of good governance on public health expenditures during the years 1373-1392, it was concluded that the level of corruption is inversely related to the mortality rate of children under five years old, and corruption control indicators are directly related to life expectancy [14].

Imam Gholipour and Asemaneh, in the study of the governance index in Islam and its impact on health outputs in Iran during the years 1996-2014, concluded that along with other socio-economic and health factors, governance is an effective factor in improving health indicators And because governance in Iran is weak, poor governance has harmed life expectancy in Iran [15].

Sabbagh Kermani and Baskha examined the role of good governance in improving government spending in the health and education sectors using data from Islamic countries. In their study, they used indicators of corruption and bureaucracy as variables to indicate the state of governance in the countries under study. Their study showed that increasing education and health costs are not always effective, but in countries with better governance, this increase in costs has a greater impact on health and education indicators; in other words, improving governance indicators has increased the performance of health and education costs. [16].

Suzy and Amlani, in their study of sub-Saharan Africa, have concluded that personal and government spending in the health sector has a significant impact on the health of the countries studied, but in this area, the role of government spending in achieving the goals of the health system is very important [17].

Gaussian and Exodito have examined the relationship between government education and health spending and various social indicators and quality of life in African and Asian countries. To improve health expenditures, they recommend increasing educational expenditures in the studied countries [18].

Studies by Kaufman et al. [19; [Wolf [20]; In the studies mentioned so far, there is very little evidence of the simultaneous impact of health expenditures and good governance on health indicators at home and abroad. Therefore, there are three major differences between this research and past research. The first difference is related to the statistical population under study, which has studied the countries of MENA, and the second distinctive feature; The use of different variables to measure the health index, and the third prominent feature is the use of the dynamic model of generalized moments of panel data, which is none of the previous research to examine the impact of health expenditures and good governance and the interactive effect of these two variables on health indicators, Which is the purpose of the present study, has not been used.

Methodology

To test the effect of good governance and health expenditures on health indices in selected countries, the model used in this study is adapted from the following theoretical model introduced by Rajkumar and Swarp [22].

$$outcome = GDPP^\alpha \left(\frac{Pubexp}{GDP}\right)^\beta \qquad (1)$$

wherein;
GDPP: GDP per capita,
Pubexp: Public Health Expenditures
GDP: Gross domestic product,

Outcome: Health index (infant mortality rate and infant mortality rate under five years)
By taking the logarithm of Equation 1, we can reach Linear Equation No. 2:

$$LnOutcome = \alpha LnGDPP + \beta Ln\left(\frac{Pubexp}{GDP}\right) \qquad (2)$$

In the above equation, β, which is the coefficient of general expenditures, is written as follows:

$$\beta = \gamma(0)\beta_p \qquad (3)$$

The measure of the efficiency of public spending can be considered as a function of the status of indicators of good governance in society:

$$\gamma = \varphi_0 + \varphi_1 INS \qquad (4)$$

By placing equation (3) and equation (4) in equation (2) to achieve a predictable relationship in the health sector, the model can be rewritten by the generalized dynamics method.

$$Ln(HS) = \delta_0 + \delta_0 LnHS(-1) + \delta_1 LnGDPP + \delta_2 Ln\left(\frac{Pubexp}{GDP}\right) + \delta_3 INS +$$
$$\delta_4 INS.Ln\left(\frac{Pubexp}{GDP}\right)\beta_X + \varepsilon \qquad (5)$$

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Considering the time and cross factor, the above equation is written as follows:

$$Ln(HS_{it}) = \delta_0 + \delta_0 LnHS_{it-1} + \delta_1 LnGDPP_{it} + \delta_2 Ln\left(\frac{Pubexp_{it}}{GDP_{it}}\right) + \delta_3 INS_{it} +$$
$$\delta_4 INS_{it}.Ln\left(\frac{Pubexp_{it}}{GDP_{it}}\right)\beta_X + \varepsilon_{it} \quad (6)$$

HS is a measure of the health index, which is shown as infant mortality rate and infant mortality rate under five years.

GDPP also represents GDP per capita, and Pubexp represents public health expenditure. The Good Governance Index (INS) used in this study includes the indices introduced by Kaufman et al. These indices are: [23]

Comment and Response: This variable indicates the degree of citizen participation in the election of their rulers and freedom of expression, freedom of association, and freedom of the media.

Political stability and non-violence: This variable determines the likelihood that the government will be overthrown by illegal or violent means.

Government efficiency: The government efficiency index indicates the quality of public services, the quality of civil services and its degree of independence from political pressures, the quality of policy formulation and implementation, and the validity of government commitment to these policies.

Quality of order and regulation: This variable indicates the ability of the government to formulate policies and order that allow the expansion and development of the private sector.

Rule of Law: This indicator shows the trust of brokers in the rules of society and, in particular, the implementation of contracts, property rights, policies, courts, and the likelihood of crime and violence.

Corruption control: Corruption variable means using one's power or position to gain personal gain or the possibility that officials are demanding illegal payments.

The score of countries in these indicators is between 2.5 to 2.5, which higher value means a more favorable result for that country. These indices were normalized between zero and ten, and by collecting these indices and simply weighting them, the desired good governance index was created.

The method of data collection in this study is the library method. The study population of the countries includes Mena and the time returns studied in 2019-2009. Statistical data of good governance indices are extracted from WGI, and other research variables are extracted from the World Bank Development Index (WDI).

In this study, Model 7 is used to estimate and infer the results using the generalized torque method. The GMM method of dynamic panel data is an appropriate econometric method to solve or reduce endogenous governance indicators. Using the GMM method, dynamic panel data has advantages such as taking into account individual inequalities and more information, eliminating bias in regressions. It has a cross-section that results in more accurate, higher-efficiency, and less linear estimates due to intermittent variable interrupt in the GMM. The main advantage of dynamic GMM estimates is that all regression variables that are not correlated except for perturbations (including intermittent variables and Differential variables (can be potentially instrumental variables and solve endogenous institutional variables [24].

Results and Discussion

Before estimating the research model, it is necessary to test the significance of the

variables used in the estimates. It is necessary to use at least one of the five Levin, Lane, and Chow tests, Em test, Boys and Shim test, Generalized Dickey-Fuller test, and Fisher-Phillips Peron and Hadri for panel unit root test. These tests are called panel unit root tests. Are called, and the process of checking the mana is all the same except for the Hadri method, and by rejecting H0, the lack of mana is rejected and indicates the variable mana. Therefore, by rejecting the H0 hypothesis, the anonymity or the root of the unit is rejected, which to detect this part, the probability that it should be less than 5% is considered. In this study, Levin, Lane, and Chow test, Em test, boys and Shim test, generalized Fisher Dickey-Fuller test, and Fisher-Phillips-Prone test were used to examine the significance of the variables (Table 1).

Table 1. Mana test results of model variables

Variable	Test result	Test the first-order difference of variables		Test at the level of variables		Test
		Level Possibility	Statistics value	probability level	Statistics value	
Mortality rate of children under 5 years	Stable at level I(0)	-	-	0.0163	-2.14	LLC
		-	-	0.0000	73.16	Fisher-ADF
	Stable at level I(0)	-	-	0.0000	91.96	Fisher-pp
Infant mortality rate	Stable at level I(0)	-	-	0.0000	-4.04	LLC
	Stable at level I(0)	-	-	0.0000	82.21	Fisher-ADF
	Stable at level I(0)	-	-	0.0000	90.98	Fisher-pp
The per capita logarithm of GDP	Stable at level I(0)	-	-	0.0000	-6.99	LLC
		-	-	0.0002	62.4	Fisher-ADF
		-	-	0.0000	92.3	Fisher-pp
		0.0000	-10.4	0.0984	-1.29	LLC

Ratio of health expenditures to GDP	Stable at level I(1)	0.0000	107.6	0.3922	29.4	Fisher-ADF
		0.0000	106.6	0.2840	31.9	Fisher-pp
Good governance index	Stable at level I(0)	-	-	0.0105	-2.30	LLC
		-	-	0.0135	47.06	Fisher-ADF
		-	-	0.0152	46.56	Fisher-pp
The interactive effect of good governance and the ratio of health expenditures	Stable at level I(0)	-	-	0.0000	-6.77	LLC
		-	-	0.0403	41.4	Fisher-ADF
		-	-	0.04918	34.5	Fisher-pp

*All coefficients are 95% at the significance level

The results of Table 1 and the study of the calculated statistics and the probability of their acceptance show that all variables except the ratio of health expenditures to GDP are at the level of mana, and the variable is the ratio of health expenditures to GDP with a difference of one mana. In the next stage of the maneuver test, the panel solidarity test, the existence of long-term economic relationships is tested. The main idea in correlation analysis is that although many economic time series are anonymous (containing random trends), But in the long run, the linear combination of these variables may be mana (without random trend). Correlation analysis helps to test and estimate the long-run equilibrium relationship. If an economic theory is correct, the specific set of variables identified by that theory are related in the long run. In addition, economic theory only defines relationships statically (long-term) and does not provide information about short-term dynamics between variables [24]. If the theory is valid, it is expected that a static linear combination of these variables is meaningless and without a random trend despite the anonymity of the variables.

Table 2. Examining the existence of a correlation between the variables used in the research model

Cointegration Kao	t-Statistic	p-value
ADF child mortality rate under 5 years (ADF)	-6.14	0.0000
Infant mortality rate (ADF)	-5.17	0.0000

Otherwise, the validity of the theory in question is questioned. For this reason, the correlation has been widely used to test economic theories and estimate long-term parameters [25].

To test the aggregation of panel data, there are several tests such as the Cao test, Padron test, and Fisher test that Cao test has been used in the present study; Because it will not be possible to perform the Pateroni test due to a large number of variables and the Fisher test due to insufficient data (Table 2). There is a long-run equilibrium relationship between the dependent and independent variables, and regression will not be a false estimate.

Table 3. Results of F and Hausman tests

	Conclusion		probability		value	
	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1
F test	Panel data model	Panel data model	0.00	0.00	45/16	68/18
Hausman test	Fixed effects model	Fixed effects model	0.00	0.00	76/13	89/96

The results of homogeneity and Hausmann statistics for Equation 7 are reported in Table 3. Accordingly, the assumption of homogeneity of coefficients versus the assumption of fixed effects is not confirmed; Because the F statistic calculated in Equation 7) in both cases of the mortality rate of children under five years and infant mortality rate (according to the results of the table, the null hypothesis is rejected versus the opposite hypothesis and the models are estimated based on panel data method). Are struck.

Hausmann's statistic also shows that since the probability obtained from Hausmann's statistic in both models is less than 0.05, the assumption of zero rejects, and in other words, the model with fixed effects versus the model with random effects is confirmed. Therefore, the optimal method for estimating the models is the fixed effects model. (Table 3) Based on the results of the Sargan test, the null hypothesis that the correlations are correlated with instrumental variables is rejected, so the instrumental variables used in estimating the model have the necessary validity. In other words, the results of the

Sargan test show that in estimating each of models 1 and 2, there is no relationship between the error components and the tools used, and as a result, the validity of the results for interpretation is confirmed.

Table 4 shows the effect of the ratio of health expenditures to GDP and institutional quality index on the health index of MENA countries, based on the Generalized Torque (GMM) method of dynamic panel data. Considering that the two variables of infant mortality rate and the mortality rate of children under 5 years old were used as health indicators, the relationship between the research is estimated in two models.

To determine the degree of autocorrelation of disorder sentences, Arlando and Bond test statistics were used. The results of examining the degree of autocorrelation between differentiated disorder sentences are presented in Tables 4. Based on the results of Table 4, the null hypothesis that there is no autocorrelation in the differentiated disorder statements is not rejected. Therefore, the Orlando and Bond method is a suitable method for estimating model parameters and

eliminating fixed effects. In other words, with one-time differentiation of disorder sentences, the serial correlation between the components of the disorder sentence is eliminated, and the differentiated disorder sentences do not have first- and second-order autocorrelation.

The results of the estimation test in both research models show that GDP per capita has a significant effect on the health index in MENA countries. Statistical analysis of the research model shows that health expenditures have a negative and significant effect on the infant and child mortality rate index in Mena countries so that for a one percent increase in health expenditures, the mortality rate Infant and child mortality rates under five years are reduced by 1.32 and 1.12 percent, respectively (Table 4).

Table 4. Estimation of research model

Dependent Variable		Variable	
Model 2	Model 1		
Infant mortality rate	Mortality rate of children under 5 years		
---	-1.025 (-6.14) (0.00)	Mortality rate of children under 5 years in the previous year	
-1.142 (-5.11) (0.00)	---	Infant mortality rate in the previous year	
-9.31 (-5.51) (0.00)	-8.66 (-6.41) (0.00)	The per capita logarithm of GDP	
-1.12 (-6.15) (0.00)	-1.32 (-4.26) (0.00)	Ratio of health expenditures to GDP	
0.23 (0.39) (0.68)	0.12 (0.22) (0.85)	Good governance index	
-0.012 (-3.69) (0.00)	(-0.013) (-4.39) (0.00)	The interactive effect of good governance and the ratio of health expenditures to GDP	
8.21	11.37	*J-Statistic*	Sargan test
0.26	0.33	*Prob*	
-2.36	-1.99	*m-Statistic*	*AR(1)*	Arlando and Bond test
0.017	0.046	*Prob*	
-0.18	-0.25	*m-Statistic*	*AR(2)*
0.83	0.79	*Prob*	

*All coefficients are 95% at the significance level

The good governance index is another important factor affecting the health index, and its estimated coefficient in both research models indicates that the institutional structure has not been able to reduce the mortality rate of MENA countries. Structural weakness can even overshadow the positive effect of health expenditures on the health index, as shown in Table 4, and the interactive effect of institutional quality and health expenditures on improving under-5 mortality and mortality rates. The neonatal myrrh is weakened.

The most important test concerning the Generalized Torque Model (GMM) is the Sargan test. And the Sargan test is used to assess the instruments' accuracy and validity and prove the over-recognition credit condition. The higher the probability value of this test, the instrumental variables used in the model have good validity.

According to the estimated information in Table 4, the probability values of J statistic in both models are estimated to be 0.33 and 0.26, respectively, so the H0 hypothesis that the tools defined in the model are valid can not be rejected.

Another test is the serial correlation test in the first-order differential error sentences by the M statistic. The serial correlation with a definite order means that the residuals follow a moving average process of the same order. Four shows no second-order correlation at the 5% error level, and the estimators have consistency characteristics.

In this study, the effect of health expenditures and good governance on the health index of MENA countries was investigated using the GMM method during the period 2002 to 2019. In this study, the simple weighted average of six indicators of comment and accountability, political stability and non-violence, government efficiency, quality of law and order, rule of law and corruption control as an institutional indicator as well as infant mortality rate and mortality rate Children under 5 years old were used as a health indicator. The results showed that health expenditures had a significant effect on the health index of selected countries. Also, the results of the present study show that the good governance index has a negative (non-significant) effect on health status in selected countries. The results also showed that the weakness of the institutional structure in developing countries (MENA countries) weakened the impact of health expenditures on the health index. Therefore, it can be concluded that increasing government spending alone is not enough to improve health indicators, and variables related to the status of government institutions in society are also effective in this regard.Good governance in a country reduces corruption in society and rulers pay more attention to all aspects of society, especially health, which is one of the important criteria of a dynamic and healthy society. In addition, good governance leads to proper financial allocation to all sectors. Including the health sector and health costs increase and consequently the health situation in the country improves. This result is consistent with the results of studies by Louis [26], Konak and Kiefer [27], Alsina [28], Lapore et al. [29], Konak [30], Feng [31], Major [32], Alizadeh and Arab [33] and Sarlak [34]. Therefore, in order to achieve long-term educational and health goals, improving the governance situation can be considered as one of the needs of developing countries. Given the negative interaction effects of the governance index and health spending, it is expected that improving governance will increase the impact of government (health) spending and improve health indicators without the need to increase costs. This emphasizes that increasing health expenditures in the absence of good governance indicators does not improve the

health status as much. Thus, health in government leads to improved public health, and government ill health, despite increasing public health spending, not only does not improve public health but also leads to a waste of public resources. The most important limitation of the research was the lack of access to economic and non-economic data of Mena countries, due to which only the data of 14 Mena countries were used, which has limited the possibility of generalizing the results to other Mena and oil-rich countries.

Conclusions

In this study, the effect of health expenditures and good governance on the health index of MENA countries was investigated using the GMM method during the period 2002 to 2019. In this study, the simple weighted average of six indicators of comment and accountability, political stability and non-violence, government efficiency, quality of law and order, rule of law and corruption control as an institutional indicator as well as infant mortality rate and mortality rate Children under 5 years old were used as a health indicator. The results showed that health expenditures had a significant effect on the health index of selected countries. Also, the results of the present study show that the good governance index has a negative (non-significant) effect on health status in selected countries. The results also showed that the weakness of the institutional structure in developing countries (MENA countries) weakened the impact of health expenditures on the health index. Therefore, it can be concluded that increasing government spending alone is not enough to improve health indicators, and variables related to the status of government institutions in society are also effective in this regard.

References

[1]. Herrala, R., & Turk-Ariss, R. "Capital accumulation in a politically unstable region". International Money and Finance, 2016; 64: 1-15.

[2]. Fei-Fei Ye, Long-Hao Yang, Ying-Ming Wang, A new environmental governance cost prediction method based on indicator synthesis and different risk coefficients, Journal of Cleaner Production, 2019; 212: 548566.

[3]. Ajami E. The effect of good governance on economic growth of the country. Master's Thesis Azad Uni Tehran; 2011: 122-132.

[4]. Raeispoor E, Pajuyn J. The effect of health expenditures and economic growth and productivity in Iran regional approach. J Plan Budg, 2013; 4: 43-68.

[5]. Keefer Ph. Knack S. Boondoggles, rent-seeking, and political checks and balances: public investment under unaccountable governments. Review of Economics and Statistics, 2007; 3: 566572.

[6]. Alesina A. The political Economy of High and Low Growth. In Annualworld Bank conference on Development Economics, 1998; 2: 111-89. 7- Dadgar Y, Nadir M, analyzes the relationship between economic and labor market reforms in Iran, Journal of Economic Research, 2011; 45(3): 142120.

[7]. Phua K, International Encyclopedia of Public Health, Governance Issues in Health Financing; 2017: 330-341.

[8]. Maleki Hassanvand B, Jafari M, Fattahi Sh, Ghaffari H. Mechanism of simultaneous effect of good governance and government spending on economic growth, Quarterly Journal of Scientific Growth and Development Research, 2019; 34: 104-99.

[9]. Salehnia N, Mokhtari Torshizi H, Seyedi M. Impact of Health Costs and Good Governance Given Carbon Dioxide Threshold on Men's and Women's Health in

Selected Developing Countries, Health Research Journal, 2019; 5(1): 32-40.

[10]. Kafili V, Ghasemzade M. The Role of Good Governance in the Impact ofGovernment Expenditure on Health, Journal of Planning and Budgeting, 2019, 4(23): 137-161.

[11]. Daghighi A., Abdolsalami M, The role of good governance in the impact of government spending on the health sector: A case study of selected countries, Economic Journal, 2018, 3-4: 21-5.

[12]. Purehtesham M, the Relationship between Quality Governance and Health in Southwest Asia, Journal of Social Welfare, 2018: 18(69): 184-159.

[13]. Sayehmiri A, Effect of Good Governance on Public Health Expenditures, Journal of Research in Isfahan University of Medical Sciences, Ilam, 2018; 25(5): 17-10.

[14]. Imamgholipour S, Asheyeh Z, The Index of Governance in Islam and its Impact on Health Outcomes in Iran, Islamic Republic of Economics and Banking Quarterly, 2017; 15: 108-93.

[15]. Sabagh Kermani M, Basskah M, the role of good governance in improving the function of government expenditures: Case study of Islamic health and education sector, Journal of Economic Research, 2009; 44(1): 120-100.

[16]. Ssozi, J., & Amlani, S. The effectiveness of health expenditure on the proximate and ultimate goals of healthcare in Sub-Saharan Africa. World Development, 2018; 76: 165179.

[17]. Guisan M, Exposito P. "Health Expenditure, Education, Government Effectiveness and Quality of Life in Africa and Asia". Regional and Sectoral Economic Studies, 2017; 10(1): 115126.

[18]. Kaufmann D, Kraay A, Mastruzzi M. Governance matters III: ngovernance indicators for 1996, 1998, 2000, and 2002. World Bank Economic of good governance,

Int J Health Care Finance Econ, 2004; 13: 33–52.

[19]. Wolf S. Does aid improve public service delivery? Review of World Economics, 2007; 143(4): 650-672. 21-Rajkumar A, Swaroop V. Public spending and outcomes: Does governance matter? Journal of Development Economics, 2008; 86: 96– 111.

[20]. Kaufmann D, Aart K. The worldwide governance indicators methodology and analytical issues. The World Bank, 2010; 1-9.

[21]. Bond R. Dynamic panel data model: A guide to micro data methods and practice", The Institute for Fiscal Studies Department of Economics; 2002: 1-34.

[22]. Feng Y. Democracy, Governance and Economic performance: Theory and Evidence, Camdridge: MA", MIT press, 2003; 3(6): 55-98 25- Knack S. Democracy, Governance and Growth, Ann Arbor, The university of Michigan press, 2003; 7(9): 99-119.

[23]. Lewis M. Governance and corruption in public health care systems. Center for Global Development; 2006. [Cited 2014 Aug 14]. http://www.cgdev.org/sites/default/fil es/5967_file_WP_78.pdf

[24]. Knack, s. and keefer, p. Does social capital Have an Economic Payoof: A cross country emprical investigation, in knack, s. (E d), Democracy Governance and Growth, Ann Arbor: The university of Michigan Press; 2003; 2: 3.

[25]. Alesina A. The political Economy of High and Low Growth. In Annualworld Bank conference on Development Economics, 1998; 2: 11189.

[26]. La porto, R. ,Lopez- de- silanes, f., shleifer, A. and vishny, R, The Quality of Govermment, Journal of Law, Economics and arganisation, 1998; 15(1): 222- 279.

[27]. Knack S. Democracy, Governance and Growth, Ann Arbor, The university of Michigan press, 2003; 7: 9:99-119. 31- Feng Y. Democracy, Governance and Economic performance: Theory and Evidence, Camdridge: MA", MIT press, 2003; 3: 6: 55-98

[28]. Mauro, P., corruption and Growth, Quartely Journal of Economics, 1995; 110(3): 681-712.

[31].

[29]. Alizadeh Sani M, Fani AA. The influence of administrative corruption on human social development. Ethics in Science & Technology, 2007; 2(1): 17-24.

[30]. Sarlak, a. The impact of health indicators on the economic growth of the country's provinces. Faslname Modiraite Behdast va Darman, 2015; 6(1): 7 17.