

HEALTH CARE FINANCING IN THE REPUBLIC OF MOLDOVA UNDER THE PRESSURE OF COVID-19 PANDEMIC

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ABSTRACT

The study highlights the issue of attracting migrant workers in the financial contribution scheme to the health system in the Republic of Moldova. The right to healthcare of migrant workers is becoming a topical issue for an interconnected world in which hundreds of millions of workers are employed outside their countries of origin. The COVID-19 pandemic has revived interest in medical services for migrant workers, but academic interest is predominant from the perspective of migrant host states, not countries of origin. The research on the financing of the healthcare system through the attracting of migrant workers contributes to the completion of the health economy with theses related to the attracting of migrants in the health systems of the countries of origin and, simultaneously, aims to formulate recommendations for financing the medical system in Moldova and ensuring social justice.

Keywords: migrant workers; healthcare systems; health production function; public finances; health insurance.

JEL Classification: H12, H51, I13, I18

1. INTRODUCTION

The COVID-19 pandemic updates the relationship between public finances and economic and social rights, including the right to work and the right to health, as outlined in national legislation and the International Covenant on Economic, Social and Cultural Rights [1]. The wide spreading international labor mobility in the conditions of globalization is increasingly perceived in terms of health insurance for migrant workers in host countries and their right to healthcare. Since migrant workers have been one of the mechanisms of transmitting the new type

of coronavirus worldwide, generating the most virulent pandemic since the "Spanish flu" a century ago, and the massive return home of seasonal and circulating workers has put more pressure to national health care systems, the right to healthcare of these social categories also becomes crucial for countries of origin.

Deficient concern in the academic literature for the health of migrant workers in countries of origin has resulted in the development and implementation of public health policies that ignore the coverage of a large number of citizens in many parts of the world. The COVID-19 pandemic has for the first time seriously raised the issue of health insurance for seasonal workers and workers in Eastern Europe, who are employed (legally or illegally) in Western European economies and who came during the crisis to receive treatment (free of charge, in case of infection with the new coronavirus) in the countries of origin.

The Republic of Moldova has become one of the countries that imported COVID-19 through citizens returning home during the pandemic and it is also one of the countries that is experiencing additional pressure on the healthcare system due to the return home of some migrant workers. Thus, the health of migrant workers and the financing of the healthcare system has become a topic that has strained the public agenda in the Republic of Moldova, becoming not only a financial issue, but also an ethical, social and political one.

The efforts of public authorities, initiated by the country's president and taken over by the Commission for Exceptional Situations, which tried to force Moldovan citizens returning home to buy compulsory health insurance policy, proved to be illegal and ineffective.

Provision no. 10 of March 31, 2020 of the Commission for Exceptional Situations of the Republic of Moldova, provides: Starting with April 1, 2020, during the state of emergency, citizens of the Republic of Moldova and foreigners with a residence permit on the territory of the Republic of Moldova, who intend to cross the state border to enter the Republic of Moldova and do not have the status of insured person compulsory health care, will pay the compulsory health insurance in a fixed amount. Persons intending to cross the state border by air on the way to enter the Republic of Moldova will pay the compulsory health insurance, in a fixed amount, through the governmental Mpay system. Persons crossing the state border by land on the way to enter the Republic of Moldova, will complete and sign, mandatorily, the Statement of Own Responsibility regarding the obligation to pay within 72 hours the compulsory health insurance for 2020.

Mainly representing fortuitous and delayed reactions to a latent social problem, these approaches violate the constitutional norms [2] and are contrary to the existing legal framework in the context of compulsory health insurance, which exempts from compulsory payment for certain social categories and which Provision no. 10 of March 31, 2020 of the Commission for Exceptional Situations of the Republic of Moldova does not provide for them. Moreover, the provision

and related measures failed to cause all returning workers to purchase the compulsory health insurance policy, in the absence of effective mechanisms for monitoring and controlling the purchase of policies. Consequently, this controversial provision further antagonized society, generated a dispute on social networks between residents and the diaspora, further fueled the political conflict between power and opposition, implicitly by addressing the courts through which one of the parties in the parliamentary opposition demanded that the provision be declared unconstitutional.

Considering the reality that the healthcare system in the Republic of Moldova is inveterately underfunded and from the conviction that mandatory health care payments are important for public finances but crucial for social cohesion, the study develops a series of relevant recommendations for contouring efficiently the financing of the local healthcare system and tries to extend the research area of health economy.

The basic hypothesis - the attracting of migrant and circulating workers in the system of compulsory health insurance is *a priori* an approach of social justice and only *a posteriori* an approach of financial sustainability of the medical system in the Republic of Moldova.

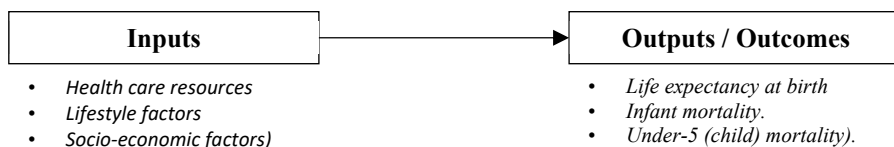
2. LITERATURE REVIEW AND METHODS APPLIED

The economic theory has developed over time a distinct branch that studies the functioning of health systems, along with the factors and behaviors that affect health - the health economics. The emphasis of the health economy is a dynamic process that begins with the Fifth World Health Assembly in 1951, at which the WHO discussed the "economic importance of preventive medicine", a process that is academically expressed in an article signed by Kenneth Arrow in 1963 (Arrow, 1963). Although Arrow, one of the greatest economists of the twentieth century and Nobel Laureate in 1972 mentioned in that article in the *American Economic Review* that the study was about the "medical industry" and not "health," the article is often credited with giving birth to the health economics as a discipline.

Health economics has acquired the methodology of neoclassical micro-economics and has been concerned with efficiency, effectiveness, value and behavior in the production and consumption of medical services. Thus, from a conceptual perspective, the health economics is its branch that investigates how limited resources are allocated with alternative uses, designed to monitor diseases and improve and maintain health. Among the peculiarities that distinguish health economics from other fields are extensive government intervention, uncertainty and instability of information, recognized by almost all schools of economic thinking, and the presence of a third agent - the doctor (Culyer, 2005; Simon *et al.*, 2015).

Relevant to the respective study, healthcare economists have focused on the efficiency of different health systems from the perspective of financing these

systems, evaluating the different types of health systems starting from the neoclassical function of production (Figure 1).



Source: developed based on Anton and Onofrei (2012)

Figure 1. Structure of a health production-function

According to this context, the causal relationship between inputs and outputs/outcomes in health systems is increasingly studied in the literature, but the conclusions are often different. On the one hand, it is the authors who find a weak or insignificant link between health expenditure and the results measured by the three indicators mentioned in Figure 1 (Filmer *et al.*, 2000; Filmer and Pritchett, 1999; Joumard, 2011). On the other hand, there are more and more empirical studies that find a positive causal relationship between the financing of health systems and the results in different states, expressed by life expectancy, infant mortality and mortality in children under 5 years (Anyanwu and Erhijakpor, 2009; Baldacci *et al.*, 2002; Berger and Messer, 2002; Bokhari *et al.*, 2007; Evans *et al.*, 2000; Gani, 2009).

Although it expands its categorical apparatus and research area, implicitly different aspects of financial analysis and the relationship with the labor market, the health economy is still methodologically limited by the decoupling of "national health systems" from broader categories such as "global health" or "regional / continental health". These theoretical limits are relevant not only for the globalization / regionalization that the world economy is going through cyclically, but they are becoming even more important in the context of global pandemics, such as the COVID-19 case. In particular, the relationship between health systems, their financing and international labor mobility, in the conditions of globalization and / or regional / continental integration projects, is insufficiently researched. The few existing studies examine the access to health services of migrant workers mainly from the perspective of host states, not of the countries of origin of these workers and are less focused on labor mobility in the process of European integration (Khonggthanachayopit and Laohasiriwong, 2017; Mcpake and Normand, 2008; Vlădescu, 2000).

In the Republic of Moldova, the health economy is still a less researched field, while most of the research is more in the field of medicine, which tries to manage the medical system under market conditions, and less in the view of economists. Thus, a series of researches are focused on the conceptualization of the health economy and on health management, and when researching the

compulsory health insurance system, it does not provide enough space for the several hundred thousand workers who emigrated from the country (Ețco, 2006; Ețco *et al.*, 2011; Goma, 2011).

By reporting the financing of the health system in the Republic of Moldova to citizens employed abroad who returned home during the COVID-19 pandemic, this study seeks not only to address a challenge in the domestic healthcare system, but also to cover an existing theoretical gap in health economy. For this, the following research stages are carried out: the factors that led to the increase of costs with global health systems are defined; the causal relationship between funding (input) and outcomes (output) in the field of health, namely life expectancy at birth, is elucidated; the different models of health systems and related funding mechanisms are highlighted; the incomes and expenses of the medical system from the Republic of Moldova are analyzed; the potential income collected from migrant workers is calculated and complementary income measures are discussed.

The study involved using the paradigm of mixed research methodology, which involves the combination of quantitative and qualitative methods. Thus, the following were used:

The quantitative analysis of documents - research of existing studies and documents, collection of relevant statistical data;

The comparative method was used for comparing different health systems in terms of funding and data on different statistical indicators;

The diachronic method was used in describing the evolution of data on insured persons and financial indicators of the compulsory health insurance system in the Republic of Moldova.

3. RESULTS AND DISCUSSIONS

Health has become one of the fundamental values of contemporary civilization, while the right to health has become part of international and national jurisprudence. The quality of healthcare services is essential for the health of citizens and, as a consequence, for increasing life expectancy worldwide, which has reached 72 years globally (World Bank, 2020). The major challenge for national health systems at the beginning of the 21st century is that limited resources, the traditional concern of the economy, are combined with the exponential increase in healthcare costs.

The specialized economic literature defines seven factors that underlie the increases of costs in the field of health care: Information (Educated consumer); Price (Intensity of skills / qualifications); Innovation (Technology); Structure (Incentives); Lifestyle (Abuse); Living standards (High quality claims); Demography (Aging population).

Increasing costs, along with ensuring economic and social rights in welfare states with "powerful governments", have led to increased health spending

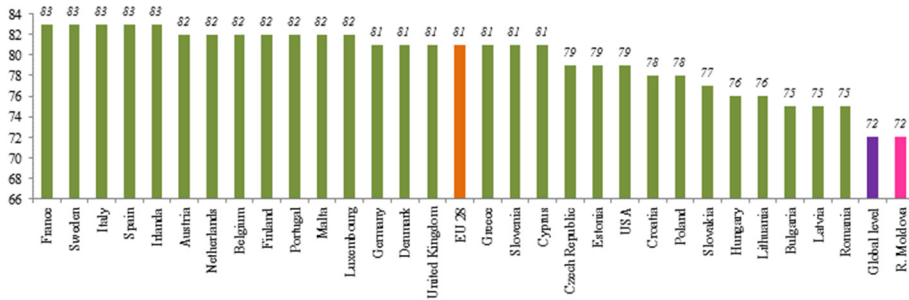
compared to GDP and in absolute values, initially in developed economies and gradually in the rest of the world. Statistical data for 2017 show that global healthcare expenditures amounted to USD 7.8 trillion (World Health Organization, 2020, p.11). At the same time, GDP-related expenditures, which accounted for 5.8% of GDP in 1970 in OECD countries, reached about 17% in the US and over 11% in France, while the average for the European Union was 9.6%. Simultaneously, there are substantial divergences in different countries of the world depending on the expenditure on health care compared to GDP, including within the European Union, although the differences are even greater in absolute values, which measure health expenditure per capita. Thus, France or Germany have more than double expenditures compared to Romania or the Republic of Moldova, where they constitute 5.2% and, respectively 4.4% of GDP (Figure 2).



Source: developed based on OECD Health Statistics (2018); Eurostat Database; WHO Global Health Expenditure Database

Figure 2. Healthcare Expenditure, 2017 (% of GDP)

The increase in health expenditures in the whole world has also meant an increase in global life expectancy, according to the data in Figure 3. Thus, the report of national and global health expenditures to outcome indicators, in terms of the structure of the production function of the world expresses the positive causal relationship between health funding and the results expressed in indicators such as infant mortality and life expectancy. Even if the positive causal relationship is much more obvious in the case of per capita health expenditures, the fact that Romania and the Republic of Moldova have the lowest expenditures compared to GDP among European countries included in the comparative analysis, and are also the countries with the lowest life expectancy- can be explained by this causality.



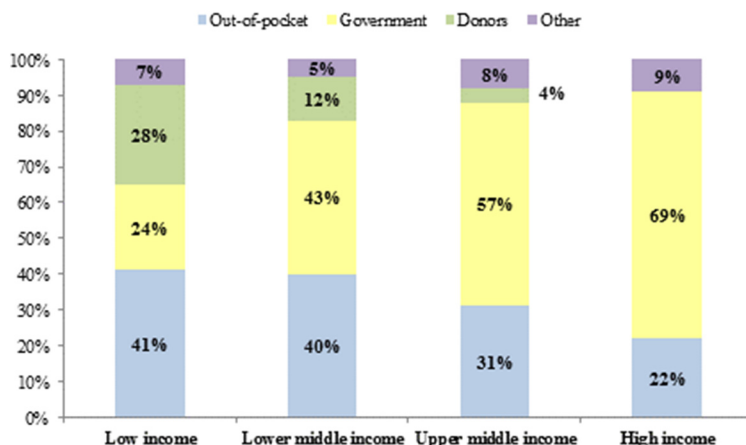
Source: developed based on World Bank (2020)

Figure 3. Life expectancy at birth, 2019

Healthcare funding around the world has also generated different models of national healthcare systems. Consequently, four basic models of national healthcare were established over time, which developed different funding mechanisms: the Beveridge model, introduced in Great Britain in 1948 and later taken over by Spain, the Scandinavian countries, New Zealand, Hong Kong; the Bismark model, introduced in Germany at the end of the XIX century and later taken over by France, Belgium, the Netherlands, Japan, Switzerland, and to some extent by Latin American countries; the national insurance model, mainly practiced in Canada, Taiwan, South Korea; the private insurance model, existing in the USA. Each of the models has different funding mechanisms.

Beyond the value of healthcare expenditures and models of healthcare systems, but in interdependent correlation with them, the sources of health funding in different countries of the world are equally relevant to the efficiency and sustainability of the system. Sources of health financing differ significantly depending on the socio-economic development of the states. In low-income countries, the main source of funding comes from the incomes of beneficiaries, with a significant share of 28% of external donations, while only 24% of the government's share. As revenues increase, the share of beneficiary payments and external donations decreases and, proportionally, the share of government increases, reaching 69% in high-income states (Figure 4).

The transition to a market economy in the Republic of Moldova was also associated with the reform of the healthcare system, from the planned national health system to the Bismark model. The complexity of the problems existing in the healthcare system of the Republic of Moldova, associated with incoherent reforms, poor technical equipment, lack of qualified medical staff and acute corruption, go beyond the research object of this study. Relevant for the present research are only the financial sustainability, which largely determines the other problems of the local healthcare system, correlated with the right to health of migrant workers.



Source: elaborated based on Xu (2019, p.9)

Figure 4. Source of health funding depending on the income of the countries

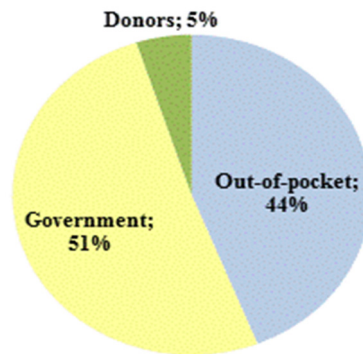
The Bismark model is one that is mainly financed by compulsory health insurance premiums. The legal framework in the Republic of Moldova establishes the operating conditions of this model and provides for its financing mechanisms. Thus, Law no. 411/1995 on health care provides that the financial means of public health institutions come from the funds of compulsory health insurance, from budgetary sources, from services provided against payment, from donations, grants and sponsorships, from other financial resources allowed by law.

Law no. 1585/1998 on compulsory health insurance, defines this insurance as an autonomous system of financial protection of the population guaranteed by the state in the field of healthcare by setting up, on the basis of solidarity, from the insurance premiums, money funds intended to cover the costs of treatment conditioned by the occurrence of insured situations (illness or disease). Compulsory insurance premiums represent a fixed amount or a percentage contribution to the salary and other rewards, which the insured person is obliged to pay to the insurer - the National Health Insurance Company. At the same time, Law no. 1585/1998 specifies that the Compulsory Health Insurance Funds are an integral part of the national public budget and are administered independently of other component budgets of the national public budget.

Law no. 1593/2002 on the size, order and terms of payment of compulsory health insurance premiums, establishes the legal framework for determining the size, order and terms of payment of compulsory health insurance premiums in the funds established and managed by the National Health Insurance Company. In this context, the Law specifies the categories of persons insured by the Government and contains two Annexes with different categories of payers: Annex 1 - Categories of payers of compulsory health insurance premiums in the form of a percentage

contribution to salary and other rewards; Annex 2 - Categories of payers of compulsory health insurance premiums, which are insured individually. Eventually, the Parliament adopts the Compulsory Health Insurance Funds Act annually.

According to WHO presented data, the sources of healthcare financing in the Republic of Moldova are represented by two major categories of payers and it is between the category of countries with below-middle and above-middle incomes. Thus, 51% represents the Government's share and 44% of the financial sources are paid out by the beneficiaries' contributions, while 5% are provided by external donations (Figure 5).



Source: developed based on Xu (2019)

Figure 5. Source of health funding in the Republic of Moldova

The number of insured persons has constantly increased in the Republic of Moldova, simultaneously with the degree of the compulsory insurance of the population. Whereas in 2014, there were 2,475,659 people insured and an insurance degree of 85% established, then in 2018 more than 2,642,969 are insured, which means an insurance degree of 88.2% (Table 1). Though about 12% of the population remains uninsured, the increase of almost 200 thousand insured persons is impressive when compared to the demographic dynamics and mass emigration of the population.

Table 1. Insured Persons, Years 2014-2018

	2014	2015	2016	2017	2018
Insured Persons, total, no.	2,475,659	2,571,960	2,575,586	2,608,426	2,642,969
Degree of Insurance, %	85.0	85.6	85.8	86.9	88.2
Persons Employed, no.	846,790	850,107	852,124	860,261	874,643
Persons Insured Individually, no.	48,925	48,307	40,113	53,684	55,451
Persons Insured by Government, no.	1,579,944	1,673,546	1,683,349	1,694,481,1	1,712,875

Source: elaborated according NHIC data

Although the size of the insurance premium as a percentage and the size of the amount were not increased between 2015-2020, the revenues and expenditures of the compulsory health insurance funds (CHIF) increased during this period. Revenues increased to MDL 7,636.3 million in 2019, while expenditures to MDL 7,489.7 million. The draft amendment to the Law on Compulsory Health Insurance Funds (CHIF) for 2020, adopted in the Parliament of the Republic of Moldova on April 23, provides for total revenues amounting to 8 billion 151 million 392 thousand lei, of which revenues from compulsory health insurance premiums in the form of a percentage contribution from salary and other rewards - 4 billion 972 million 862 thousand lei. At the same time, the expenditures in CHIF constitute 8 billion 383 million 392 thousand lei, while the deficit is to be covered from the account of the balance established on January 1, 2020 in the amount of 549 million 696 thousand 500 lei (Table 2).

Table 2. Financial indicators of the compulsory health insurance system, years 2015-2020

	2015	2016	2017	2018	2019e	2020p
CHIF Income, mil. MDL	5,062.9	5,764.2	6,256.6	6,877.4	7,636.3	8,151.4
CHIF Expenditure, mil. MDL	5,152.5	5,673.4	6,260.8,6	6,714.1	7,489.,7	8,383.4
GDP Expenditure Share, %	3.5	3.5	3.5	3.5	-	-
Size of Premium, %	9	9	9	9	9	9
Size of Fixed Amount Premium, MDL	4,056.0	4,056.0	4,056.0	4,056.0	4,056.0	4,056.0

Source: elaborated according to NHIC data

The increase in the number of insured persons in recent years and, respectively, the increases established to the CHIF budget, does not fundamentally change the healthcare system in the Republic of Moldova. The financing of the local health system remains insufficient, both as a share in GDP and in absolute values per capita. This acute underfunding of the healthcare system, which has become the main problem of the healthcare system in the Republic of Moldova, largely raises widespread corruption in healthcare, poor technical and drug endowment of public health institutions, lack of medical staff, etc. The COVID-19 pandemic has elucidated the vulnerabilities of the domestic healthcare system, in particular by the fact that the highest rate of infections among medical workers has been attested due to the shortage of appropriate equipment.

Compulsory fixed-term health insurance premiums, which are intended to attract migrant workers in the national health insurance system, have a small share in CHIF. These are just over 100 million MDL in recent years, exceeding 113 million in 2020. Since no public institution in the Republic of Moldova has accurate data on the number of emigrants from the Republic of Moldova, implicitly data on the number of seasonal and circulating workers in order to calculate the fundraising potential of migrant workers, we resorted to a simulation

using existing public data. For this, we differentiated between the number of the population with habitual residence, reported by the National Bureau of Statistics, and the number of insured persons, reported by the NHIC. After that, the difference was multiplied by the size of the fixed amount premium, initially by 100%, then by 50% of it, since the legal framework provides for this reduction for those who purchase it until March 31 (Table 3).

Table 3. The collection potential of amounts from circulating and seasonal workers

	No.	CHIF Income		Collection Potential, millions MDL		Collection potential, % compared CHIF	
		mil. MDL	%	Full Cost	Discount Cost	Full Cost	Discount Cost
Insured Persons	2,642,969	6,877.4	100	7,034.6	6,956.0	102.3	101.1
<i>Individually</i>	55,451	110.4	1.6	267.6	189.0	3.4	2.7
Population with habitual residence	2,681,734	6,877.4	100	7,034.6	6,956.0	102.3	101.1
<i>Difference/ Migrants</i>	38,765	-	-	157.2	78.6	2.3	1.1

Source: calculated according to National Bureau of Statistics and NHIC

The collection potential of income from migrant and seasonal workers, according to the simulation, is relatively modest. The maximum collection capacity varies between 78.6 and 157.2 million MDL, based on the premise that a degree of coverage with 100% health insurance premiums can be provided. At the same time, the percentage increase in CHIF revenues varies between 1-2%, which is important for every public budget, but not significant. Finally, the share of CHI premiums in the fixed amount of the total compulsory health insurance funds can increase from 1.6%, as it is now, to about 3%.

Therefore, the attracting of migrant workers (especially circulating and seasonal workers, who are not exempted from the legal framework from the procurement of health insurance premiums) in the compulsory health insurance system will not solve the financial sustainability of the health care system in the Republic of Moldova, which requires structural reforms and complex interventions.

The implementation of feasible mechanisms for collecting compulsory premiums from migrant workers is rather an approach to social justice, especially when the existing legal framework expressly provides for the principle of universality and equality. The fact that migrant workers returning to the country in the context of the pandemic, were not insured persons in the national system but received free treatment in the medical system, clearly elucidated for the first time this social injustice. In this context, requiring migrant workers to obtain compulsory health insurance premiums must be associated with a set of related measures, making it constitutional, feasible and part of a reform of the entire

healthcare system aimed at ensuring its financial sustainability. The measures are as follows:

- The reform of justice and modernization of public institutions, in order to improve governance and reduce corruption.
- Introduction of new formal co-payment mechanisms to reduce informal payments and increase the budgets of healthcare institutions.
- Streamlining the collection mechanism of policies in order to identify and attract people who are not insured.
- Streamlining the mechanism for paying the health insurance premium by circulating and seasonal workers.
- The rejection of the anti-constitutional mechanisms imposed by Provision no. 10 of March 31, 2020 of the Commission for Exceptional Situations of the Republic of Moldova.
- Establishing 14 working day deadline, in order to pay the compulsory insurance premiums.
- Correlation of mandatory payments with Law no. 105/2018 on the promotion of employment and unemployment insurance.
- Correlation of health insurance for retired persons by the Government, with the individual contribution of migrant workers to CHIF
- Initiation of negotiations with the states of the European Union and the CIS to sign Agreements for migrant workers' healthcare, following the model of the Social Security Agreements.
- Attracting the diaspora (Moldovan citizens living and working abroad on a permanent basis, at least 183 days a year) to finance the healthcare system in the Republic of Moldova.
- Attracting diaspora can only be voluntary, by establishing special purpose funds. (e.g.: A fund to finance the technical endowment / hospital equipment and drugs for district hospitals or for the elder-care, which the diaspora has in custody).
- Development of Voluntary Health Insurance.

4. CONCLUSIONS

- The health economy will become an important branch of contemporary economics, as the COVID-19 pandemic put pressure on national systems of public health and led to the one of the most serious global economic crises, after which it called for large budget deficit in most of the world's economies.
- The right to health of migrant workers becomes important for both the public finances of host and home/origin states, that is why it must be a distinct subject of the health economy in the face of increased international labor mobility in the 21st century.

- In the Republic of Moldova, the health economy is still a less researched field, while most research is focused on the management of the healthcare system in market conditions or general issues of compulsory health care, less on financing the health system from the perspective of migrant workers.
- There is a long-term causal relationship between health care funding and outcomes of life expectancy at birth.
- The different financing mechanisms that exist in the contemporary world are determined by the various health models and, in particular, by the degree of development of the states.
- The Bismark model is gradually confirmed in the Republic of Moldova, based on compulsory health insurance premiums, which is associated with a chronic underfunding of the healthcare system.
- Insufficient funding of the health system largely raises the issue of widespread corruption in healthcare, poor technical and drug equipment of public health institutions, lack of medical staff, while the COVID-19 pandemic has elucidated the vulnerabilities of the local healthcare system.
- The attracting of migrant workers in the system of compulsory payments is above all an approach of social justice and can only partially solve the financial sustainability of the healthcare system in the Republic of Moldova.
- The decisions imposed by Provision no. 10 of March 31, 2020 of the Commission for Exceptional Situations of the Republic of Moldova, that set the condition of purchasing health insurance policy by migrant workers, are unconstitutional and inefficient.
- The simulations and calculations carried out reveal the fact that the establishment of legal and efficient mechanisms for collecting mandatory fixed payments from migrant workers, could increase CHIF revenues by about 78.6-157.2 million MDL.
- The efficiency of the mechanism of payment of the health insurance premium by the circulating and seasonal workers must be associated with a series of related structural and sectorial reforms, which will ensure the proper functioning and financial sustainability of the healthcare system in the Republic of Moldova.

NOTES

- [1] International Covenant on Economic, Social and Cultural Rights. Adopted and opened for signature by the United Nations General Assembly on 16 December 1966 by Resolution 2200 A (XXI). Entered into effect on January 3, 1976. Ratified by Decision of the Parliament of the Republic of Moldova no. 217-XII of 28.07.1990.
- [2] Art. 27 (2) of the Constitution of the Republic of Moldova, which states that: "Every citizen of the Republic of Moldova is guaranteed the right to establish his domicile or habitual residence anywhere in the country, to leave, emigrate and return to the country".

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