COMPARATIVE ANALYSIS OF THE ROMANIAN AND LUXEMBOURGISH HEALTHCARE SYSTEMS

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Abstract
The state of health of the population is determined by access to health on the one hand and to the access to health services on the other. Access to health depends to a large extent on external factors to the health system: genetic factors, factors environment, economic development factors and socio-cultural factors. The access to health care is almost entirely influenced by the organization of the health system. Accessibility to healthcare services is determined by the convergence between the offer and the demand for such services, or, in other words, the availability of real-life facilities compared to the demand based on real health needs. Disparities in access to discrimination arise for at least four reasons: ethnic or racial; economic costs here, including the costs of the population (co-payments, treatment and hospitalization costs) as well as the other costs (transport costs, waiting times); inadequate geographic location of facilities; the unequal quality of services of the same type. This paper aims to examine two countries which are part of the European Union, Romania and Luxembourg, who have similar socio-economic groups and healthcare professionals with training, but are drastically different when it comes to the quality of healthcare received. The public healthcare system will be broken down into its sub-structures and compared to that of the private healthcare system, while taking an in depth look into the Romanian and Luxembourgish health systems, outlining differences and similarities and offering recommendations for the future.

Keywords
health system, comparative management, public and private ownership, quality of services

JEL Classification
I11, I18, H38, M54

Introduction

Poor information among the population on the need for medical insurance and on the conditions for access to medical services maintains some potential applicants outside the public insurance system. In such a situation there are groups from geographically isolated areas, very poor groups with a low education level which favors non-insurance behavior. First, it is an essential aid to understanding politics and government. In light of the similarities and differences that might exist between collections of facts, the comparison helps us to distinguish between significant and non-significant. (Popa, 2017) The performance of a healthcare system is largely influenced by how fundraising is taking place

to provide high quality healthcare services, and how they are distributed to health service providers.
Payment methods for health care providers are made through different mechanisms, and there is no direct link between how funds are raised and how they are distributed. Health services are funded through diverse organizations and funding systems. Depending on the model of health services, there are the following sources of funding: (1) direct non-reimbursable payment from the patient to the doctor; (2) private insurance; (3) social insurance for health; (4) coverage of the population with medical care.
The degree of coverage of the population with medical care is appreciated as different depending on the type of insurance:
- In social insurance for health, the contribution depends on the income of each citizen, and the provision of health services depends on the needs of each individual, respecting the principle of solidarity;
- Only high-income people have access to private insurance, and those with low incomes cannot benefit from health care;
- Universal governmental coverage is ensured, but human, financial and material resources are reduced because of funding problems.
Also, the coverage of the population with health services is different from one country to another, depending on the health policy of each one, on existing feasibility techniques, but nevertheless the current trend is towards universal, universal care with care medical, protecting underprivileged or at risk groups.

Health systems financing and expenditure
Type of co-contributions offers multiple ways of putting together governmental sources and individual contribution to increase the efficiency, quality and confidence of the health system. (Niagara and Manchikanti, 2012; Thomason and Kase, 2009). There are: Co-insurance - by which the patient pays a fixed percentage of the price of a received service and Co-payment - by which the patient pays a fixed amount on the medical act and doctor's remuneration.
This can be done on the basis of multiple structures: payment per service, payment based on diagnosis, the capital, the global budget, salary, payment for time worked (Wendt et al, 2009; Tudose, 2014).
The most used classification of health systems is according to the sources of funding. Thus these systems can be: (a) The national health system (Beveridge type) - funded by taxes; (b) The Health Insurance System (Bismarck type) - the financing is made by compulsory income-dependent insurance premiums; (c) Voluntary insurance system (private insurance) - the financing is private, the insurance premiums are depending on the risks of the insured. (Wendt et al, 2009; Elovainio and Evans, 2017 Westert et al, 2010).
The outcomes of the healthcare system is the most important issue when it is set up the best and affordable way of financing, the proper framework should consider the needs for health services, the quality and the sources. (Marmor, T. and Wendt, C., 2012; van de Goor et al, 2017).
The quality, efficiency and performance in healthcare system can't be affected by the austerity, the stat having the obligation to wach over the public health (Oderkirk, Ronchi and Klazinga, 2013; Wenzl, Naci, and Mossialos, 2017).

Research methodology
The present study is focused in presenting and analyzing the 3 systems of funding the healthcare (Wendt et al, 2009) and to highlight the advantages and disadvantages. Starting from the mile stones of the health systems and the expenditure management we are

presenting the comparison of the operational systems in Luxemburg and Romania as one of the first 5 countries and last 5 countries as expenditure amount per capita.
The analysis of healthcare systems and the actors' should be better done by considering the results. Measuring the success of the public policies, national reforms of healthcare system or implementation of healthcare programs will provide more effective information if the expenditure are properly used (Marmor and Wendt, 2012).
The levels we have considered were the theoretical-formal for the generally accepted systems and the operational for the case study of Romania and Luxemburg. The analytical comparison in the theoretical framework for our country (placed on the last positions among the EU countries) with reach countries system gives, in our opinion, an insight about how can be improved the performance even in shortage of financing.

Healthcare main system comparative analysis

a) National Health System

Countries which implement this system include: United Kingdom, Spain, Denmark, Finland, Sweden, Norway, Greece and Romania. It is characterized by: The sources of funding are general taxes, which come in the form of a government budget at the level of the government;- It is controlled by the government, which is also the payer; The budget is divided for different sectors, with each sector having a certain percentage, which is changed annually; The health rate is distributed by the Ministry of Health, on the basis of criteria, to county health authorities, which then distributes the existing funds to hospitals and family doctors; Doctors conclude contracts with local authorities, being paid in different forms: per act, per capita, per service, salary etc.; in this system there may also be a private sector.
Advantages: general accessibility; universal coverage; low cost of administering such a system.
Disadvantages: low efficiency in fund management; increased service offer from doctors for additional remuneration; lack of incentives for doctors.

b) Health Insurance System

It is the oldest system in Europe and operates in countries such as Germany, Austria, Belgium, France, the Netherlands and Luxembourg. This system is characterized by: Financing is done through mandatory contributions in various proportions for employer and employee; The contribution is made by paying a certain percentage according to income and is collected at the level of the insurance houses; It is the government that establishes health policies and ensures the mechanisms for pursuing the achievement of the proposed goals; The insurance houses are independent of the government, but their functioning is regulated by strict regulations and establishes service contracts with hospitals, family doctors, dentists, pharmacists, etc.
Benefits: Increasing the decentralization of the system, the money is not distributed by the Ministry of Health, the payment of various medical acts being made by different independent bodies (the insurance houses); funds for health are independent of changes in political priorities; There is competition between health care providers, by setting standards by paying bodies, which leads to increased quality of health care; Paying tertiary helps to establish and respect patients' rights as clients of health service providers; The flow of funds is visible in the system; the system provides stable sources of income for the health system; This model provides much more efficient provision of health services compared to other models, as well as increasing the funds available for health, both in absolute value and as a percentage of GDP.
Disadvantages: The contribution for health insurance paid by both the employer and the employee leads to an increase in the cost of labor for the companies, being able to get these premiums into the cost of the products; Those who are not employees (unemployed, pupils, pensioners, etc.) are covered from other funds from the state budget, which is difficult to

achieve in some cases; Difficult fixing of bonuses to be paid by self-employed workers, as these bonuses are mainly linked to earnings; Administrative costs are higher than for a system based on general taxes.

c) Voluntary insurance system – private healthcare system

This system is poorly developed in Europe and is well developed in the U.S. The voluntary insurance system is characterized by the prevalence of private insurance and the direct medical-patient payment model.

Benefits: There is competition between providers and funders of medical services, who have the interest to attract as much money as possible, and thus to as many patients as possible, which leads to the increase of the quality of medical services and to the increase of the quantitative and qualitative offer given to the patients.

Disadvantages: Poor population coverage with health services; The sanitary costs rise continuously, appearing in the phenomenon described as "adverse selection". (Wendt et al, 2009)

The three types of systems in practice are found under different combinations, modified from one country to another depending on the options of each. Recently, there has been a tendency to approach these types of health systems, and health policies aiming at combining benefits and reducing disadvantages. Thus, the national health system tries to introduce the competitive methods, which are specific to the health insurance systems. Also, in the system of social health insurance and the private system, tax changes are attempted by introducing regulations in this respect.

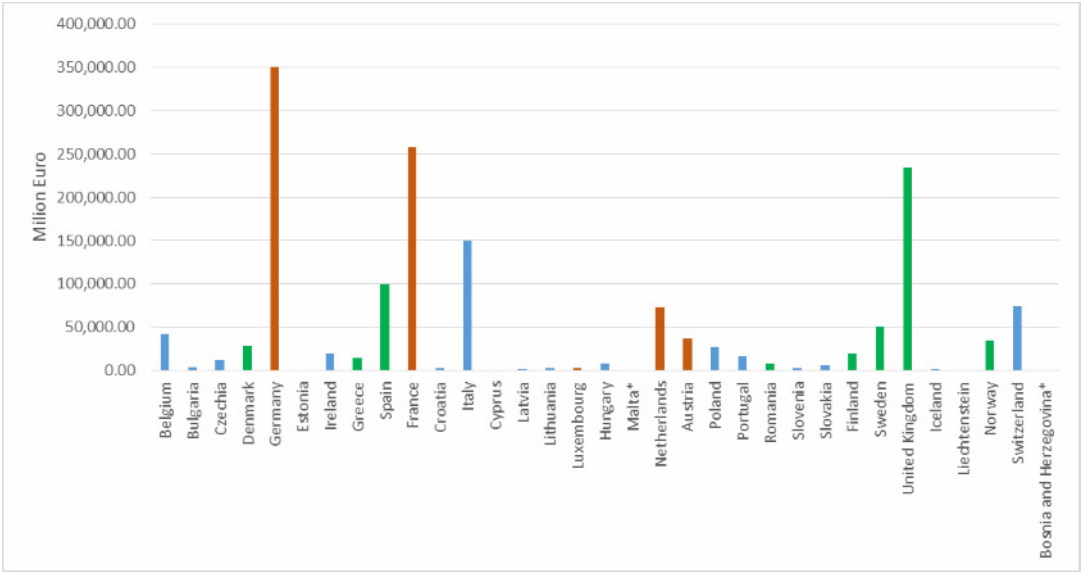

Fig no.1 Healthcare expenditure in EU Countries

Source: Eurostat, 2018. *Health in the European Union – facts and figures,* [online] Available at: *https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Health_in_the_European_Union_–_facts_and_figures* [Accessed 23 November 2018].

In figure no. 1 it can be seen that national system (in green color) and insurance system (in brown color) are applied in countries with large or small budgets as well. From the point of view of the role of the state in the financing of health care, three types of health systems can be described:

- Liberal systems characterized by private health insurance being funded through voluntary contributions paid both by employees and by employers – operates in Switzerland until the introduction of compulsory insurance.

- National systems – finance mainly from state taxes, but there is also a private sector present both in the insurance plan and in the provision of medical services – present in United Kingdom and Spain (Wendt et al, 2009).
- Intermediate systems - where pluralist funding is based, in particular, on social contributions and on voluntary contributions. Charges for patients are lower than those of liberal systems, but higher than those in national systems. Intermediate health systems are found in many European countries, such as France, Germany and Luxembourg.

The health system assessment can be done according to several parameters: the percentage of GDP spending for health, the population's satisfaction with health care, efficiency - expressed by mortality rates, infant mortality, birth hope, etc.

With respect to health spending, there are enormous discrepancies between developed and underdeveloped economically, but there are also sensitive differences even between economically developed countries.

The Romanian Healthcare System – A comprehensive breakdown

After entering the building, the patient comes in contact with the hospital staff. In private clinics there is always a reception, where he is kindly answered and is guided to the room or doctor he is looking for. If they have to wait, the patient is welcomed into the waiting room, where he finds a place to sit and wait civilized. In the case of public hospitals, there is no reception or waiting room.

When entering the building, the only way to find elemental information, such as the room you need to be in or where the you can find the doctor, is to ask left and right, patients, nurses, or doctors, and the correct answer is given by the second, fourth, seventh or tenth person questioned, often after many wounds in the hospital corridors, agitation and nerves consumed. Once they have reached the desired room, the patient has to wait in a row in a hallway, often tight, where he has to stand up with other patients of the fate and jump every time the door of the room opens to receive another patient.

Consultation schedules are treated differently in private hospitals than in public hospitals. In the case of private clinics, the patient can make appointments by phone. In public hospitals, the system is different and the notion of appointments is foreign. Starting from 7 o'clock in the morning, patients begin to sneak into the hospital corridors to find the doctor's office they want to see.

The duration of a consultation is a factor that shows the professionalism and seriousness of the doctor. In order to establish a correct diagnosis and treatment, the doctor should pay attention to the patient, ask questions and consult them in detail. Usually, in order to get a better view of the patient's affection, the doctor needs at least 15-20 minutes. This time spent with the doctor is essential for patient health and can make a difference between recommending appropriate treatment and one that will cause irreversible damage to patient health. In public hospitals, consultations take much less, sometimes just five minutes, and doctors are constantly discontinued by nurses or other patients entering the clinic.

The attitude of the medical staff towards the patient and their affection is essential for morale of the patient. The experience of a private hospital is one that does not stress, anger or humiliate the patient. Doctors and nurses are kind, attentive and receptive and the conversations take place in a relatively calm atmosphere. In public hospitals, the tense atmosphere and the high flow of patients make the workplace of the medical staff a stressful and agitated one. Physicians and nurses are constantly assaulted in the cabinets and waiting rooms, which prevents them from focusing on the task at hand. Continuous stress affects the ability of physicians to have patience and analyses the symptoms of a patient and maximize the chances of a correct diagnosis. (Fuchs & Emanuel, 2005)

The differences between the two systems are major and they affect both the patient's experience and the quality of the medical act. Apparently dull but important things, such as

the existence of a reception or the existence of a waiting room, can make a difference between a calm and patient doctor and a nervous and agitated one. In spite of the high costs the patient has to bear, all of the advantages that private clinics offer to the public make them the first to be a safer and more enjoyable alternative where the patient is treated humanely and civilized and has real chances to have the right diagnosis.
The private health care system has developed steadily over the past few years and is attracting more and more doctors and patients. Numerous clinics and private hospitals have been set up, especially in Bucharest. The high-performance equipment, the superior conditions and the kindness of the staff have attracted more and more patients to the private health system.

Table no 1. Healthcare expenditure (per capita in euros) in 2016

First 5 Countries		Last 5 Countries	
1. Monaco	4578	**24. Romania**	**410**
2. Norway	3989	25. Albania	382
3. Switzerland	3865	26. Ukraine	310
4. Luxembourg	**3750**	27. Bosnia & Herzegovina	181
5. San Marino	3250	28. Republic of Moldova	166

Source: Eurostat, 2018. *Health in the European Union – facts and figures,* [online] Available at: *https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Health_in_the_European_Union_–_facts_and_figures* [Accessed 23 November 2018].

The Luxembourgish Health Care System – SWOT Analysis

The health system in Luxembourg is one of the best in the world. However, it is not perfect and must be constantly adapted to changing needs, techniques and especially knowledge. To better guide these adaptations, you must know your strengths and weaknesses.

Strengths

Life expectancy in Luxembourg is higher than for the average European. Similarly, the state of health "perceived" by the global population is better in Luxembourg than other European member states. Tobacco and nicotine consumption is down. Immunization of children reaches very good rates. Curative care works well in terms of treatments for breast cancer and colorectal cancer.
The quality of the care appears high and the typical Luxembourgish citizen seems to maintain a positive relationship with his general practitioner inscribed by the continuity. The report also indicates that more interventions are part of a day hospitalization that the use of cheaper drugs is increasing, that there are no or few waiting lists for cares. Overall, the Luxembourgish are satisfied or very satisfied (more than 90%) vis-à-vis the health system, far more than the European average.

Weaknesses

Above all, the health disparities between the different socio-economic categories are very marked. Luxembourg has the population of around 500,000 people, with the capital, Luxembourg City housing just over 200,000 inhabitants. During the week, from 9am-5pm, Luxembourg City nearly quadruples in size, when everyone who lives in the neighboring cities and suburbs of Belgium, France and Germany, come to work. Luxembourg has a very high immigrant population, mainly compromised of Portuguese and Italians. The Luxembourgish aristocracy make up around 5% of the general population, while the rest fall under the middle to lower working class, thus making it more difficult to afford quality healthcare, which results in postponing doctor visits and ultimately leading to hospitalization or even death. Whether in terms of life expectancy, infant mortality, obesity, smoking, physical activity, social support, etc. the differences between citizens are great.

Perhaps one of the strongest if not the strongest similarity between Luxembourg and Romania.

Opportunities and Risks

The biggest opportunity is also the biggest risk for healthcare in Luxembourg, and that is allowing patients to pay for their consultations just by giving their word that they will eventually transfer the money into your account. The National Center of Security (CNS), which is equivalent to the CNAS in Romania, handles everything that pertains to both patient and doctor safety and satisfaction. Every individual who works in Luxembourg has to be registered with the CNS, including doctors. This is a very important opportunity, because unlike Romania there are no private and public hospitals, well theoretically there are, but there is no true distinction between the two. Patients can benefit from health care services from both private and public hospitals, from which they are reimbursed 90% of the total cost. Patients are also free to go see which ever doctor they want, giving that their schedule allows it, and most importantly all the consultations are billed at the same price around 48 euros for a GP consultation and around 55 euros for a specialist consultation (Healthmanagement.org, 2010). This has to be the biggest difference between the two healthcare systems, for example, not all doctors in Romania have to register with the CNAS, only doctors who work in the public health care system. If you want to go see a doctor in a private hospital in Romania and he does not have a contract with the state, then you will have to support all the costs of the consultation and follow-ups from your own pocket, and you will not be reimbursed, not even a slight percentage. System of financing hospitals account for the "money follows the patient", but in reality this applies only partially to the county health insurance houses, and if the National Health Insurance, transfers to county houses not achieved based on well-defined criteria. (Putan, 2012) Another opportunity, for Romanian doctors is that the state allows them to assert their own fees in the private system. For example, you can see a specialist in rheumatology at a private hospital and pay 20 euros and if you want to go see a Professor in rheumatology at the same private hospital you might end up paying upwards of 60 euros. This does not apply in the public healthcare system, which is a plus, but it is weighed down by all the negatives, such as a huge waiting period to see the doctor you want/need, and even if morally and ethically they have to treat you, some doctors still ask for a little ‘incentive’.

In Luxembourg the CNS allows the insured to set up their own appointment at a GP or a specialist, do a consultation, and during an ultrasound or a blood test, and they have the right to leave the doctor’s office without paying, just by promising that they will transfer the money. As stated before, the biggest opportunity for patients is in fact the biggest risk for doctors and the state. Not every patient tries to get away scot free, most of them pay on the spot, others have social welfare and the other third just try their luck. It is up to the doctor if he wants to follow up and press charges and go through a very long and drawn out legal battle, usually it depends on the amount owed, but in the end the CNS always reimburses the doctor, no matter how long it takes.

Conclusions

The analysis of these indicators and their comparison with other neighbors can be a good compass to guide health policy. We know the major impact on health of factors such as education, employment, housing, environment, income, etc. In these areas, we must also act to improve the health of the people. If socio-economic inequalities increase through austerity measures, inequalities in health will worsen. In these difficult times, social cohesion needs to be strengthened rather than unrevealed.

Financial accessibility to health care has deteriorated. The increase in patient costs has led to postponements of care. And we see that private hospital insurance is growing. The warning is clear: we must act on the cost to the patients, either by decreasing and better regulating

some prices, or by better reimbursing some expensive care. At the same time, we can act on the accountability of healthcare providers, by setting up other less inflationary financing techniques, by favoring self-monitoring based on good practice guides.
Finally, faced with a first line of care in danger, the average age of generalists continues to increase, it is to ensure its survival, continuity and development. To face this major challenge in terms of the sustainability of the system, the governance model that will be adopted by each country for the transferred competences will be decisive. If it invites collaboration and complementarity with the federal level, we can hope to meet the challenge of a first line of local and accessible care.
In the future, it is impossible to lead and coordinate a health care system without having reliable, transparent, useful and scientifically-based information, which is why the availability and accessibility of information needs to be well-tuned, thus tending towards an integrated information policy.

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