Impact of crossborder cooperation on costs of functioning of Polish hospitals

Wpływ współpracy transgranicznej na poziom kosztów funkcjonowania szpitali w Polsce

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Wstęp. Publiczne jednostki ochrony zdrowia działają na rynku regulowanym kontraktami z Narodowym Funduszem Zdrowia z elementami wolnego rynku. Przygotowanie zakładu do działań rynkowych wiąże się z prowadzeniem rachunku kosztów i budżetowaniem. Wewnątrz organizacji należy skupić się na restrukturyzacji i rozważyć zastosowanie outsourcingu. W otoczeniu szpitala należy poszukiwać partnerów do podejmowania wspólnych projektów, które mogą obniżyć koszty funkcjonowania. W rejonach przygranicznych dodatkową możliwość stanowi nawiązywanie współpracy z partnerami z pogranicza sąsiadujących krajów. Daje to podstawy do pozyskiwania funduszy Unii Europejskiej, promującej transgraniczną współpracę.

Cel pracy. Ocena wpływu współpracy transgranicznej na redukcję kosztów szpitali podejmujących współpracę transgraniczną.

Materiał i metody. Dokonano przeglądu wybranych programów współpracy transgranicznej jednostek ochrony zdrowia Województwa Podlaskiego z partnerami z regionów przygranicznych sąsiadujących krajów. Dane ekonomiczne szpitali w Polsce pozyskano z materiałów Głównego Urzędu Statystycznego. W pracy posłużono się metodą analizy oraz syntezy materiału poświęconego sytuacji szpitali w Polsce. Na podstawie danych dotyczących wysokości osiągniętych przychodów oraz poniesionych kosztów autorzy przeprowadzili test t-studenta dla prób niezależnych.

Wyniki. W analizowanej sytuacji współpracy trans granicznej mamy do czynienia z bardzo słabym efektem standaryzowanym wynoszącym 0,0177 przy wartości krytycznej t=1,9600 i mocy testu dla wymaganej liczebności próby N kształtującej się na poziomie 0,8000 co potwierdza wiarygodność hipotezy alternatywnej mówiącej o tym, iż warunkiem obniżenia poziomu kosztów funkcjonowania szpitali w Polsce jest wzmożona współpraca transgraniczna szpitali w Polsce z placówkami medycznymi sąsiadujących krajów.

Wnioski. W szpitalach należy posługiwać się wszystkimi narzędziami obniżania kosztów używanymi na wolnym rynku. W regionach przygranicznych należy w większym stopniu wykorzystać potencjał tkwiący we współpracy transgranicznej.

Słowa kluczowe: *szpital, koszty, restrukturyzacja, współpraca transgraniczna*

Introduction. Public health care entities act on the controlled market by means of contracts with the National Health Fund utilizing the elements of the free market. Preparing the establishment to undertake market activities entails maintaining costs account and budgeting. Restructuring processes and outsourcing should be contemplated. In the immediate environment partners to make common projects need to be sought for as the projects may decrease the costs of functioning. Moreover, in border areas the opportunity to establish cooperation with partners from the borderland of neighbouring countries should be taken advantage of. Thus a window of opportunity is created to apply for funds from the European Union which promotes cross-border cooperation.

Aim. To assess the impact of the cross-border cooperation on the costs reduction in hospitals that try to establish cross-border cooperation.

Material and Methods. The authors have reviewed the selected cross-border cooperation programmes of health care entities in the Podlaskie Voivodship with partners from border regions of the neighbouring countries. The economic data of the Polish hospitals has been obtained from the materials of the Central Statistical Office. The authors used a method of analysis and synthesis of the material devoted to the situation of hospitals in Poland. On the basis of the data on the earned revenues and incurred costs the authors conducted the student's t-test for independent trials.

Results. In the analyzed case we deal with a very weak standardized effect amounting to 0,0177 at the critical value t=1,9600 and the test's power for the required number N being 0,8000, what confirms the validity of an alternative thesis that the reduction of costs of functioning of hospitals in Poland is conditional upon enhanced cross-border cooperation of hospitals in Poland and in neighbouring countries.

Conclusions. All methods used by enterprises functioning on the free market should be utilized to decrease the costs of functioning of hospitals. As to border regions, their potential for cross- border cooperation should be realized to a greater degree.

Key words: *hospital, costs, restructuring, cross-border cooperation*

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Introduction

In the course of the system transition the health care system has been subject to numerous changes. Due to legislative enactments it has changed from the state ownership and state budget financing into a currently functioning model which has a varied ownership structure and is based on the principle of contracting services [1]. Medical establishments act on the quasi market where there are some elements of competitive service provision and the monopolistic disposal of public resources. Also the imposed contracting limits put brakes on the market mechanisms. In spite of these limitations modern medical establishments must work as if they have been functioning on the free market. One of the preparatory elements necessary to conduct market activities is to maintain costs account and budgeting. This approach necessitates costs reduction. However, the problem of reduction of medical costs at all levels of their generation is specific not only to Poland. Even rich countries with a perfectly well-organized health care like Holland also deal with this issue [1].

This article focuses on the internal mechanisms of cost reduction in an entity such as a hospital functioning as an independent public health care establishment. External conditions under which the hospital works are also of great importance. The starting point of all considerations on the possibility of costs reduction is the financial situation of a hypothetical hospital which may be estimated as 4 times 50. The book value of the property is 50 million zlotys. The market value is much lower. A potential buyer could buy a small property for this price. The money spent on renovation could be used for proper fixtures and equipment. The renovation costs incurred in accordance with the present legal requirements also amount to 50 million zlotys. The annual value of the contract with the National Health Fund amounts to 50 million zlotys and the hospital debt is also 50 million zlotys. The financial standing seems to be a dead end if additional resources are not employed and the costs of hospital functioning are not reduced. It is incumbent upon the owner of an independent public health care institution, i.e. a local self-government to tackle this situation.

To understand the present socio-political climate one needs to follow the changes that have been introduced to the health care system in the two recent decades in terms of organization, ownership and the manner of financing and cost calculation. The presentation of the restructuring process is aimed to show which changes must be made by the owner in order to reduce costs of hospital functioning. The presentation of the benefits of outsourcing should mobilize both owners and directors to take into account external resources in the reconstructive process of public health care establishments.

Aim

The aim of the present article is the verification of the hypothesis that cost reduction of hospitals functioning in Poland is conditioned upon the widely defined cross-border cooperation between neigbouring countries that employ the method of hospital restructuring and broadly defined outsourcing.

Material and Methods

An example of such a cooperation is a project established by the Białystok Voivodeship Hospital together with the Suwałki Voivodship Hospital and partners from Lithuania and Russia. The project was approved in Brussels by the Monitoring Committee of Poland-Lithuania-Russia Cross-border Cooperation Programme 2007-2013. As a result of this project hospitals have purchased the most modern life- and health-saving equipment and appliances. The project is worth 4 million euros and the Programme's financial backing is 3.6 million euros (about 15 million zlotys), what accounts for 90% of the project's value under the name 'Development of cooperation for health security of inhabitants of Polish, Lithuanian and Russian border areas' [2].

Another kind of cooperation is Poland-Lithuania-Russia Programme which is the only programme in Europe implemented together with neighbours from outside of the EU, within which none project has been developed yet. The project 'Development of cooperation for health security of inhabitants of Polish, Lithuanian and Russian border areas' as well as other projects will have been completed by the end of 2014 [2].

Within Poland-Belarus-Ukraine Cross-border Cooperation Programme 2007-2013 the competition projects are being prepared in the Podlaskie Voivodship. The aim is, inter alia, to obtain funds for hospital investments, roads or entrepreneurial development. But Poland- Ukraine-Belarus cross-border projects in health care sector for 2007-2015 have already been in progress. In the recent edition of the competition applications have been made by the Psychiatric Hospital in Choroszczy which wants to treat patients together with the Grodno Regional Clinical Centre. Also the Białystok Oncological Centre along with the Grodno clinical hospital are implementing a project to treat cancerous diseases by means of radiotherapy. The Białystok Voivodship Hospital and Grodno Clinical Hospital intend to use grants to equip the intensive care unit and trauma unit [2].

This article employs the method of analysis and synthesis of the material on the situation of hospitals in Poland and other countries where an opportunity for 'cooperation' or more precisely cross-border co-

operation arises. The empirical part of this work was conducted on the basis of the data of the Central Statistical Office.

Changes in health care system against general background

Social and political transformations which occured at the turn of the 1980s and 90s brought about huge economic changes. The Polish People's Republic had a command-and-quota economic system. Notions of supply and demand were alien to the authorities of the socialist state. Health services were financed from the state budget [3]. Funding for entities of the health care system was based on the performance of the previous year. Theoretically every citizen had access to every service without limitations. In practice, it was a system of permanent shortage of funds. Access to services in short supply was not defined by unambiguous principles. Instead, these principles were replaced by corruptive practices [4]. The political breakthrough enforced a new perspective on the economy. The principles of the free market have been back in favour. In spite of many drawbacks the time has come when almost all spheres of economic activity are subject to market principles. However, the health care system is a relic of a bygone era. During the 'round table' deliberations in 1989 the Subteam for Health Affairs decided that the target system should be insurance-based in terms of financing sources and supply-based in terms of health care entitlements. It was also decided that all units would have equal rights irrespective of the ownership form [5]. However, ten subsequent years had to pass before the market economy elements were introduced into the health care system. The advent of the new system was preceded by many programmes and strenous efforts of many working groups [6]. A 1999 law changed a manner of financing of health care services introducing the insurance system. The principle of payment for the service rendered was introduced. Ambitious attempts at a complete overhaul of the health care system were reduced to a couple of elements, blocking most of the market mechanisms and perverting the essence of the reform. However, the introduced changes brought many benefits. First, the society realized that medicine costs and every single provision of the medical service incurs some cost. Second, it became obvious that there was a need to attract a patient through making a contract with the Patients' Fund and a need to count the cost of functioning of medical care establishments. The essential limitation on the free market of medical services was the system of quotas and promises and the arbitrary orientation of the system towards the protection of weaker organizational units. In practice, even the weakest hospital could not fall out of the market. The principle of different valuation points as well as the principle of the price for the points awarded to the procedures in Patients' Funds remained debatable. The two principles also limited competitiveness between the entities of the health care system. The formation of the National Health Fund was an attempt to improve the existing status [7, 8]. The law establishing the National Health Fund proved to be unconstitutional [9]. However, it came into force after a few amendments. Due to the direction of adopted changes the reform practically suffered a setback.

The necessity to rationalize the management of public health care establishments motivates another stage of the health care reform where public health care establishments are to be transformed into companies where a local self-government is a majority stakeholder. Irrrespective of the future form of functioning of health care entities, one aspect remains unchanged, i.e. the necessity to rationalize health care expenses, including the ones incurred at the hospital level.

Situation of health care entities as a determinant of the scope of adjustments

As the current situation in the health care is very unstable and the future is difficult to foresee, designing a strategy of development of the establishment cannot be based on only partially rational premises. The present system may be encapsulated in a couple of statements:

1. There is no real market of medical services.
2. Elements of market mechanisms are only at the service providers' disposal. They compete with one another for the price of the service and the amount of contracted procedures.
3. There are no correlations between supply and demand. Practically speaking, the payer is a monopolist.
4. The prices of services are fixed at the payer's discretion.
5. Limits on health care entitlements allocated to particular health care entities make it impossible to influence the revenue.
6. Medical service providers are reduced to manoeuvring their own costs.

In view of the above considerations the authors have made a comparative analysis of hospitals from 2000 to 2011. The data are presented in the table below (tab. I).

The analysis of the data given above points to the fact that the process of transformations in the health care system aimed at cost cutting in hospitals functioning in Poland in the researched period, i.e. between 2000-2011 has led to a gradual reduction of the number of public hospitals and an increase in the number of non-public hospitals. 2011 saw a fall in

Table I. Characteristics of hospitals from 2000 to 2011

Itemisation	2000	2005	2010	2011
hospitals in general (on 31.12.)	716	781	795	814
public	686	611	509	501
non-public	30	170	286	313
beds (on 31.12)	190952	179493	181077	180606
in public hospitals	189378	171278	157240	152093
in non-public hospitals	1574	8215	23837	28513
for 10 thousand people	49,9	47,0	47,0	46,9
including wards:				
internal diseases	37999	36782	34337	34004
including cardiac diseases	6430	7887	7793	8166
surgical	47987	43538	40880	40278
paediatric	12344	11271	10880	10641
gynaecological and obstetric	22769	19848	18634	18487
oncological	3738	3902	4506	4860
intensive therapy	2524	2777	2977	3121
infectious	5430	4208	3384	3387
tuberculosis and pulmonary diseases	10553	9219	8459	8074
dermatological	3131	2220	1810	1736
neurological	7145	7459	7328	7246
psychiatric	4590	5183	5669	5913
including wards of addiction treatment	358	508	934	1070
neonatal	–	–	9106	9057
Movement of ill people treated in thousands:				
without inpatient movement between wards	6007	6739	7344	7469
in public hospitals	5940	6414	6406	6286
in non-public hospitals	67	325	938	1183
with inpatient movement between wards	–	6949	7912	7889
including wards:				
internal diseases	1430	1601	1617	1613
including cardiac diseases	270	419	483	512
surgical	1680	1861	1901	1933
paediatric	416	433	449	456
gynaecological and obstetric	979	1038	1137	1096
oncological	143	192	284	313
intensive therapy	103	94	92	93
infectious	134	135	131	132
tuberculosis and pulmonary diseases	197	218	229	225
dermatological	58	57	49	50
neurological	206	241	272	276
psychiatric	53	78	73	76
including wards of addiction treatment	6	19	15	18
neonatal	–	–	393	370
discharged in thousands	5734	6509	7095	7216
diseased in thousands	168	167	167	168
treated (without inpatient movement between wards) for 10 thousand people	1570	1766	1907	1939
1 bed	31,5	37,5	42,7	43,5
average inpatient stay in days	8,9	6,7	5,7	5,6
average use of a bed in days	278	259	249	245

Source: [30]

the number of public hospitals by 27% as compared with 2000. The reverse situation was recorded with regard to non-public medical establishments – in 2011 their number increased by 943% as compared with 2000. The identical situation may be noticed analysing a number of beds or a number of the treated patients.

It is a very challenging situation for any management. Every firm, including medical establishments, operates in a certain reality. The management must be familiar with the setting in which it functions. Managerial activities should be adjusted to a changing environment. Changes in the health care system create specific conditions for health care establishments and a specific approach to the management of changes is required. Stimulating the employee dissatisfaction with the workplace is not effective because it may cause a deluge of employees' grievances. The more trade unions there are in the company the more important it is to resolve conflicts properly, even if only a small percentage of employees belong to trade unions. A vision of a desirable status needs to be created. The preparation of analyses and plans, including the transition period, is inseparably linked to it. An extremely important issue is to maintain favourable effects and prevent the return of unacceptable models [10]. The role of the person managing the changes cannot be overestimated [11]. Allies need to be found within the organization and its surroundings. The social counsel and the ownership body have to be taken into account. It would be very desirable if the owner took on the active role. There are numerous examples of such an approach in self-governments at the poviat level.

Restructuring process

Every company must function in a certain environment which is composed of many elements such as the country's or region's economic situation or competitive undertakings. Legal and technological factors also have a role to play. Besides, the socio-political situation is extremely important [12]. The stability of all these elements is very rarely achieved. The environment usually changes constantly, either mildly or rapidly. The changed external conditions influence the companies' internal situation. One needs to respond adequately to the transformations. The organizational structure and functions thereof have to be altered, making it possible to maintain or restore the company's competitive advantage. Some changes occuring in companies are induced by internal factors, the example being the introduction of a new form of an activity or new services [13]. The adjustment to changes may take on the form of restructuring.

Restructuring is a process of changes that are connected with the companies being rebuilt and consists in a changed strategic approach to the activity or modifications affecting the principles of functioning, the structure and the company's organization [14]. Usually these are gradual developments, adjustments rather than abrupt changes. They consist of a few stages:

1. Elaboration of the enterprise policy and methods and techniques of its implementation.
2. Setting up special mechansims improving 'productivity'.
3. Improvement of the recruitment processes and the manner of staff training.
4. Defining the division of power, roles and position of each employed person.

It also happens that quickly ensuing changes require a quick reaction. It refers especially to crisis-affected situations. Radical changes are a response to serious changes occuring in the company's environment. They encompass three issues:

1. Reformulating the mission, strategic aims and other basic values of a company.
2. Ownership changes.
3. Changes in the decision-making system and communication channels.

Depending on the situation and the manner of conducting transformations one may distinguish four types of restructuring:

1. Creative: it is undertaken irrespective of current or foreseeable transformations in order to influence the environment to achieve a desired effect.
2. Anticipatory: it is a consequence of foreseeabe changes of the environment. In case of succesful predictions introduced adjustments make it possible to obtain a competitive advantage.
3. Adaptive: structural changes are introduced in response to the occuring environmental changes.
4. Reconstructive: it stabilizes and restores the company's lost efficiency. It is sine qua non of the company's survival.

The restructuring process usually takes place in two stages. In the first stage the objective is to save the company from collapse. The activities take on the form of reconstructive restructuring. In the second stage the company's market share is restored. The restructuring can be done on the basis of the company's own potential through streamlining the management processes, improving work and workforce organization and through improving the quality of goods and services. One of the ways is to slim the company down by getting rid of ineffective links, excluding some business activities, disposing of assets, adding external capital and downsizing the employment. A good understanding of the market may give the restructuring a developmental character as it may mean rennovating supplies, undertaking new activities, progressing technologically or seeking new output markets. Every restructuring activity should be holistic, embracing the company's whole structure:

1. Mission and goals
2. Employment structure
3. Organizational structure
4. Material resources and technology
5. Financial system.

Outsourcing

Outsourcing consists in entrusting an external entity with some business function. Usually it refers to ancillary activities but it may also concern a primary function. Its aim is to increase effectiveness and productivity of the conducted activity. Outsourcing makes it possible to concentrate on the primary business activities or reduce problems with the outsourced primary business function. It should improve the company's market position, maintain or broaden its scope of business. Outsourcing also promotes motivational attitudes and brings about the objectivization of costs. The principles on the basis of which functions are delegated to external entities should ensure the reduction of overhead costs of functioning of an entity [15]. Taking into consideration the engagement of the mother company, two types of outsourcing can be distinguished: contractual and capital. The former one occurs when partners are totally independent, in the latter one partners are related to each other by means of organizational and legal links or capital. The two types of outsourcing may be applied in health care entities. Outsourcing is applied in different health care systems, including the National Health Service (NHS), the British health care system [16]. Here are the following benefits of outsourcing [17]:

1. Access to the latest technology
2. Reduction of capital outlays
3. Reduction of number of one's own assets
4. Possibility to concentrate on the primary function
5. Reduction of operational costs
6. Easier analysis and cost planning
7. Delegation of responsibility to an external entity
8. Lack of staff problems
9. Getting rid of a problem with securing the data.

The method of outsourcing is applied in every type of an enterprise, including health care entities, irrespective of the ownership form. It may concern every type of service [18], even a sensitive one such as direct medical services [19]. However, it needs to be stressed that outsourcing is burdened with drawbacks [20], especially in the sphere of quality of services.

Possibilities of hospital restructuring

Version I: reorganization with the participation of fixed assets. The necessity to employ huge financial outlays in the initial stage of implementation brings the implementation of this version into question. Our hypothetical hospital does not have its own resources. The owner also has no investment opportunities and

has exhausted credit underwriting possibilities. If the financial situation made it possible to implement this version, considerable long-term savings might be expected. The drawback of this solution is that it necessitates employment restructuring undertaken by the hospital itself and personal conflicts seem unavoidable due to the employees' resistance.

Version II: contract-based outsourcing, i.e. taking over the highest possible amount of primary and ancillary functions by external entities. This type of outsourcing seems to be indispensable when the hospital is unable to cover the restructuring costs. The contract with the external entity needs to ensure the provision of services of adequate quality with the observance of standards prevailing in health care. This version does not require the employment of one's own resources. It brings provisional profits, reducing employment and costs of functioning of the outsourced activities. However, a part of the profits will go to the external entity. Long-term profits may be lower than in version I because the external entity may want to keep some profit margin for itself.

Version III: capital outsourcing, i.e. separating an activity and taking it over by the entity related to the hospital in terms of the organizational structure and capital. It might mean setting up a company with the external entity. This solution might make it possible to maintain control over the outsourced activity and employ external resources.

Costs of functioning of health care establishments

The abolition of budget financing of health care entities and the conversion to the insurance system sparkled interest in the costs of functioning of hospitals [21]. Hospitals and other medical establishements are not entrepreneurs in the full sense of the word. However, it was realized that without offsetting revenues against costs the health care entities will not be able to function efficiently. Therefore, the authors of this paper have compared revenues from all activities and tax deductible costs from all activities recorded in 2002-2011 in economic section 'O' Health Care and Social Assistance. On the basis of the data on the earned revenues and incurred costs the authors have conducted the student's t-test for independent trials. The data are presented in the figure below (fig. 1).

The essential element of the conducted student's t-test is the so-called "standardized effect", i.e. the effect expressed in connvenient standardized units. Conducting t-tests the standardized effect for independent sample is a difference of means divided by the standard deviation. Analizing the power of the t-test there are the following ranges for the standardized effect [31, 32]:

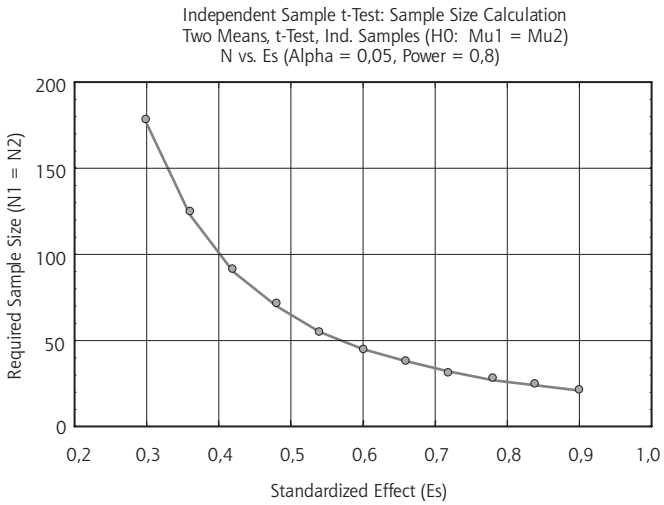

Fig. 1. Correlation between standardized effect and the amount of revenue and tax deductible costs from all activities in 2002-2011

Source: Own elaboration based on [22, 23, 24, 25, 26, 27, 28, 29, 30]

– very weak effect (Es< 0,20),
– weak effect (0,20-0,50),
– average effect (0,50-0,80),
– strong effect (Es> 0,80).

Results

In the context of testing statistical significance the author has formulated a thesis that Poland's cross-border cooperation with Lithuania, Russia or Belarus does not influence the reduction of cost level of functioning of hospitals in Poland, which is the opposite of what the author wanted to show. In the analyzed case we deal with a very weak standardized effect amounting to 0,0177 at the critical value t=1,9600 and the test's power for the required number N being 0,8000, which confirms the validity of an alternative thesis that the reduction of costs of functioning of hospitals in Poland is conditional upon an enhanced cooperation or a cross-border cooperation of hospitals in Poland with medical establishments from other countries such as Lithuania, Russia or Belarus.

In the light of the above considerations the authors aptly remark that low standardized effect indicative of a weak interest in cooperation of Polish medical establishments with hospitals from the above mentioned countries results from an excessively fast process of transformation of the Polish economy. What many generations of 'old' democracies had hard worked on [33] we had to introduce at an increased rate. In a new situation the service providers have attempted to obtain the best contracts possible ensuring the cash inflow. They have taken interest in the expenses incurred. The attempts to rationalize expenses have been made. It would not be possible without obtaining full information on the economic situation of individual health care entities. Cost accounts are maintained to

order this information. In the budget system the so-called budget accounting was maintained based on the criterion of types of expenses. In 1992 changes were introduced in recording incomes and costs in public Health Care Establishments (ZOZ) and the recording requirement was imposed on organizational units [34]. The changes are legally binding on all public Health Care Establishments (ZOZ) and non-public Health Care Establishments (ZOZ) that make use of the public resources. They make it possible to calculate costs of individual items of health care entitlements, costs of medical treatment or disease entities. Costs are classified according to many criteria. The basic ones are as follows:

a. type of expense (energy and materials wear off, foreign services, taxes, remunerations, etc.),
b. type of activity and its function (services, investment, finances),
c. place of origin (primary activity, subsidiary or ancillary activity, managerial activity),
d. relation to the subject of calculation.

Conclusions

In this article the financial situation of the hypothetical hospital has been only cursorily outlined. A decision to undertake a substantial restructuring has to be made, considering the adopted data. When it comes to a real-life hospital there should be made a ratio analysis of financial statements [35], just like in case of every enterpise functioning in the market economy. Consequently, the analysis should result in drafting a comprehensive business plan that takes into account the external and internal situation as well as alternative scenarios of future events [36]. At present independent health care establishments are in a financial predicament similar to the predicament of the presented hypothetical hospital and therefore restructuring has to rely on external financial resources. The most favourable solution seems to be the contract-based outsourcing. This solution should be implemented where there have been not established companies to run health care entities. Thus, the engagement of the local self-government in the financial upkeep of such an entity is substantially reduced. This cost-cutting mechanism may be successfully employed by the existing companies as well as by those which will be established in accordance with the current objectives of the reform of the health care system. In this case financial outsourcing also needs to be taken into consideration.

Conventional wisdom has it that ancillary functions such as laundry, housekeeping, office and legal servicing or elements of technical support can be separated and delegated to other entities. Major objections are raised to outsourcing of sections of primary functions. Despite the objections many hospitals have decided to make this form of cooperation. The cooperation concerns dialysis therapy, diagnostic laboratories, radiological diagnostics, invasive cardiology or even narrow medical specialities. The decision has been motivated by the necessity to develop services lacking in one's own resources. In this way new services have been introduced without engaging one's own resources. Therefore, the costs of functioning of the entity have been reduced. The only problem is the owner's will. For example, an independent health care establishment is obliged to obtain consent of the founding body followed by the opinion of the social council [37]. The social council acts in advisory capacity without the powers of the supervisory board. Often local politicians sit on it, which makes their opinions more socially sensitive rather than pragmatic. The owner is not bound by the council's opinion. However, the owner finds it difficult to make decisions inconsistent with the council's opinions [38].

It seems that the restructuring process of health care entities will be supported by the next governmental reform of the health care system. The reform will enable rationalization of expenses and will limit political influences in favour of cost benefit analysis and in compliance with civil rights laid down in the Constitution of the Republic of Poland. An essential solution in this case also seems to be a widely defined cooperation or cross-border cooperation between hospitals from Poland, Lithuania, Russia or Belarus. This finding is confirmed by a very weak standardized effect amounting to 0,0177 and resulting from offsetting all revenue against all deductible expenses for 2002-2011 in connection with the student's t-test for independent trials conducted by the authors of this article. The researched standardized effect confirms the research hypothesis that Polish hospitals cooperate with hospitals from Lithuania, Russia or Belarus on a small scale. The improvement of the financial standing of medical establishments should be made dependent on enhanced cross-border cooperation between the said countries.

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