

# Promoting social cohesion through investments in the health sector from the EU funds – opportunities and challenges

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**Abstract**— The main aim of EU cohesion policy is to diminish the existing disparities and to ensure economic, social and territorial cohesion. The achievement of social cohesion is becoming of particular importance for the EU and the social policy serves to attain this goal. The health of citizens can be considered as one of the conditions contributing to the increase in the economic prosperity and economic growth. However, there are health inequalities in the EU at the national and the regional level, which are determined by many different factors. Investments in the health sector could contribute to the reduction of disparities and to the achievement of social cohesion. The aim of the article is to show how important projects co-financed from the EU structural funds in the scope of health are for the elimination of inequalities existing in this regard. A particular emphasis is placed on projects implemented in Poland. Due to low public expenditure on health in Poland, the financial resources from cohesion policy will still be very important sources of financing and should contribute to the economic growth of this country. These financial instruments support not only health directly, but also indirectly. Investments in the healthcare infrastructure in Poland in 2007-2013 were punctual and, therefore, it is necessary to coordinate them at the regional and central level and to assess the usefulness of investments undertaken in 2014-2020.

The following methods were used in the article: descriptive analysis, descriptive statistics and analysis of strategic documents.

**Keywords**—social cohesion, inequalities in health, EU structural funds, strategic documents, health economics

## I. INTRODUCTION

THE cohesion policy aims at reducing inequalities in the EU not only at the national level, but also at the regional level, improving a high standard of living for its inhabitants and ensuring cohesion in the entire EU. One of the dimensions of this cohesion is social cohesion that is often associated with the society's ability to ensure long-term prosperity to the members of this society [1]. Therefore, this concept is also associated with social commitment to reduce inequalities and prevent polarisation [2] and it was examined in many studies [3, 4, 5], also with respect to the EU [6, 7]. The social cohesion is becoming a leading objective under implemented policies of the EU, especially the social policy, an important

aspect of which is health. The health of citizens can be considered as one of the conditions contributing to the increase in the economic prosperity and economic growth by affecting the labour supply and determining the quality of human resources or productivity [8].

However, there are health inequalities not only at the national, but also at the regional level, which are determined by many different factors. Therefore, it is important to take actions within particular policies focused on the reduction of excessive inequalities. Actions related to ensuring equal spatial living conditions, especially those concerning the improvement of access to health services, are taken [9]. However, not only should a modern health policy take into account the development of a modern healthcare system for people already sick, but also it should affect factors determining this health. This new approach has also been included in the EU cohesion policy [10]. The elimination of health inequalities and the provision of access to health services are supported by projects implemented from the financial resources of the European Regional Development Fund (ERDF) and the European Social Fund (ESF). Such investments are of particular importance in Central and Eastern Europe, including Poland, due to the existing distance to more developed countries and regions of the so-called "Old EU" in the scope of living conditions.

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## II. SOME CONSIDERATIONS ON RELATIONSHIP BETWEEN HEALTH, GROWTH, INVESTMENT AND SOCIAL COHESION

According to the World Health Organization, health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [11]. This approach does not associate health only with an opposite state, i.e. disease. The category of health was included in the scope of considerations related to economic growth and development. There are certain relationships between

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health and a high level of income; on the one hand, high income affects health offering residents better access to healthcare system and better living conditions, but on the other hand, health also affects the amount of income by means of various channels. The role of health in the productivity growth should be emphasised, because healthier employees are more productive. Health also has an impact on education (e.g. it improves cognitive skills and learning skills), savings (a prospect of a longer life is an incentive for saving and affects long-term investments), health of people, taking into account their number and age structure [12]. Other studies covering a very long period: 1820-2001 and 1921-2001 indicate certain relationships between health and the GDP. There is a relationship between the average life expectancy and the GDP or the GDP per capita, because the increase in the average life expectancy results in the increase in the GDP as well as GDP per capita. At the same time, it is shown that the GDP and the GDP per capita affect the average life expectancy [13].

The relationship between health and economic growth is the subject of numerous studies from the micro- and macroeconomic perspective [14, 15]. However, it is shown that health contributes to the productivity growth and may constitute a predictor of economic growth. It is also emphasised that due to low costs of some health interventions and their significant impact on health, they can constitute an important policy direction by affecting the economic growth, especially in countries with a low income level [16]. It is pointed out that countries with insufficient health and education conditions may have difficulties with achieving sustainable development and that the improvement of the average life expectancy is reflected in the economic growth. However, a low average life expectancy discourages people from organising trainings and affects the productivity in the long term. Scientific arguments provide evidence for the need to incur expenses related to health, but it must be done cautiously so as to ensure that they do not affect the total domestic spending and the competitiveness of a given country [17]. The potential of the healthcare sector to create new jobs and the need to exploit this potential should be emphasised [18]. Special attention is drawn to the importance of the health service sector and the facilitation of access to it in promoting social inclusion and overcoming poverty [19]. It should also be emphasised that health is one of the sectors with a high ability to innovate, including the R&D sector not only in Poland, but also in the EU. The healthcare sector is one of the most innovative sectors in the EU [20].

There is also another question concerning the relationship between health and social cohesion. In the context of the definition quoted in the introduction of the article, the improvement of access to health services and living conditions contributes to the improvement of the social cohesion. However, social cohesion is an important factor supporting the health of the population; these two issues are interrelated. Social cohesion is a multi-dimensional category that can be perceived through the following concepts: social equality, social inclusion, social development, social capital and social diversity. Ying-Chih, Kun-Yang and Tzu-Hsuan

show that there is a relationship between the social cohesion and health and that the following dimensions of social cohesion are strongly associated with the health of individuals: social inclusion, social capital and social diversity. In this regard, respondents from countries with a higher level of social inclusion, social capital and social diversity, indicated better health. Actions promoting specific dimensions of cohesion should therefore be taken [21].

Other studies emphasise the interrelationship between the welfare and health assessment, social reciprocity and trust as well as general health and welfare. It is also emphasised that respondents with a higher level of social satisfaction, social interaction and neighbourhood cohesiveness indicated better general health condition [22]. Therefore, it is important to take actions to improve health by incurring capital expenditures and increasing their effectiveness.

### III. HEALTHCARE IN POLAND COMPARED TO OTHER EU COUNTRIES

As shown by OECD, one of the objectives of the social policy is to ensure social cohesion, which is an ultimate goal in addition to strengthening self-sufficiency and equity as well as improving health status [23]. Social cohesion may be analysed by reference to various aspects of social life, which, according to the Council of Europe, consist of 8 aspects such as: employment and activity, income and purchasing power, housing and surroundings, diet and consumption, health, education and culture [24]. Health, which is one of these areas, can be analysed in terms of access to health, costs and reimbursement, distribution of health centres and doctors [25].

The average life expectancy is one of the measures showing and reflecting the state of healthcare and welfare. It reflects changes occurring in the scope of healthcare and medicine as well as improvement of the standard of living. The improvement of the average life expectancy is the result of many complex conditions also determined by transformations taking place in the scope of the development of a given country, the improvement of environmental conditions or in the progress of healthcare and medicine [26]. The average life expectancy was below average in new member states, e.g. in Poland, where it was 77.8 years in 2014 as compared to 80.9 years in the EU-28. Spain has the longest average life expectancy (Figure 1).

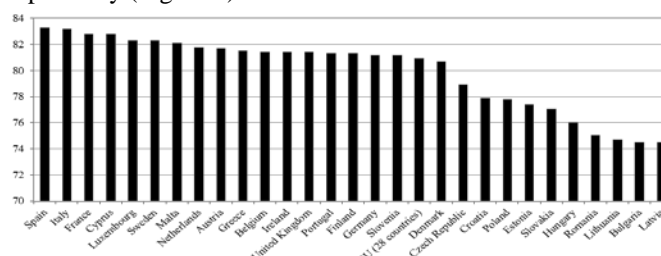


Figure 1: Average life expectancy in EU-28, 2014

Source: [27].

Access to healthcare in particular EU countries differs, taking into account the number of people employed in the healthcare sector, doctors, pharmacists etc. As far as the rate related to the number of doctors per 100,000

inhabitants is concerned, in 2013 the biggest rate was in Greece (614 per 100,000), Austria, Lithuania and Portugal whereas the lowest rate was in Poland (221 per 100,000) [28]. Poland also achieved a negative result when it comes to the number of doctors, dentists and pharmacists per 100,000 inhabitants (table 1).

Countries	Medical doctors	Dentists	Pharmacists
Belgium	295.0866	71.2253	118.7536
Bulgaria	397.6675	100.3838	:
Czech Republic	:	:	:
Denmark	362.1522	77.8314	49.5567
Germany	401.6818	81.7492	63.1877
Estonia	328.3012	89.6815	65.8575
Ireland	268.9476	:	:
Greece	:	:	:
Spain	381.0914	:	111.7545
France	309.7347	64.0566	106.0593
Croatia	303.3512	75.8025	70.0909
Italy	390.0093	:	:
Cyprus	322.1806	96.1785	21.6953
Latvia	319.1320	72.4916	:
Lithuania	427.6988	90.5437	:
Luxembourg	280.6611	86.8669	:
Hungary	320.9111	60.2744	76.0531
Malta	346.2659	46.5310	110.7768
Netherlands	:	:	:
Austria	:	:	:
Poland	224.0945	32.3921	72.1500
Portugal	:	:	77.1519
Romania	264.3555	71.2981	81.2212
Slovenia	262.9186	64.9044	57.7198
Slovakia	:	:	:
Finland	301.7114	:	:
Sweden	:	:	:
United Kingdom	277.0877	53.0350	80.0461

Table 1. Healthcare personnel (excluding nursing and caring professionals) per one hundred thousand inhabitants, 2013  
Source: [29].

Another indicator is the number of hospital beds reflecting the potential of health care. In 2011, there were 654,700 beds per 100,000 inhabitants in Poland and 534,900 in the EU, so it was relatively high [30].

The amount of expenses on health care in the selected EU countries (for which data were available) differs. In 2013, the highest expenses were incurred in Belgium, Germany, France, the Netherlands and Austria (more than EUR 3,000), whereas Poland was among the countries with one of the lowest expenditures incurred in this sector amounting to EUR 664. The group of countries with healthcare expenditures not exceeding EUR 800/person includes: Bulgaria, Croatia, Lithuania, Hungary and Romania. Expenditures incurred were also low in relation to the GDP. In case of the countries with the highest expenditures on health care/inhabitant, the ratio of expenditures incurred in this area to the GDP exceeded 10%. In Poland, these expenditures constituted 6.38% of the GDP (Table 2).

Countries	euro per inhabitant	per inhabitant in PPS	percentage of gross domestic product
Belgium	3,618.2	3,161.63	10.24
Bulgaria	453.89	1,034.47	7.87
Czech Republic	1,036.22	1,593.16	6.94
Germany	3,825.7	3,738.56	10.94
Estonia	849.02	1,175.91	5.88
Greece	1,438.78	1,710.48	8.75
France	3,521.92	3,175.53	10.93
Croatia	745.44	1,176.78	7.28
Cyprus	1,442.84	1,528.61	6.88
Lithuania	725.74	1,241.56	6.14
Hungary	748.77	1,369.47	7.37
Netherlands	4,252.04	3,730.84	10.98
Austria	3,859.82	3,521.06	10.14
Poland	664.07	1,264.42	6.38
Portugal	1,480.61	1,877.88	9.14
Romania	371.88	767.42	5.15

Table 2. Current healthcare expenditure in the selected EU countries, 2013

Source: [31].

According to the OECD survey concerning the perceived health, about 58.3% reported in Poland that they are in good health, while the average for the OECD is 69%. Also the life expectancy in Poland is still below the OECD average [32]. It indicates that despite some improvements in the health care in Poland a lot of efforts need to be done in the financial perspective 2014-2020.

It is important to improve the effectiveness of the healthcare system in Poland by improving the effectiveness of incurred expenses and increasing the number of specialists [33].

#### IV. HEALTHCARE SUPPORT FROM STRUCTURAL FUNDS UNDER THE COHESION POLICY IN THE EU AND POLAND

Investments in the healthcare sector are carried out under the cohesion policy. This support does not only mean the direct support received in the years 2007-2013 (Fig. 2).

<p><b>Direct support</b> ERDF, ESF in the scope of: infrastructure, e-health, health promotion, access to services, education, trainings etc.</p>	<p><b>Indirect support</b> ERDF, ESF – health in the work environment, inclusion employment, health and safety</p>	<p><b>Investments that are potentially profitable in terms of health</b> ERDF, ESF, Cohesion Fund – urban rehabilitation, social cohesion, R&amp;D, transport, environment</p>
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Fig. 2. Support the healthcare under the cohesion policy in the years 2007-2013.

Source: [34].

It is estimated that in the years 2007-2013, EUR 5.2 billion (from the ERDF and the ESF) was allocated to the health infrastructure under the cohesion policy (direct investments in the health infrastructure), but it does not include other investments in the healthcare sector. It amounted to 1.5% of the total allocation from the structural funds in the EU member states. However, the importance of structural funds in financing expenditures on healthcare varies in particular

countries. There are countries in which structural funds do not play an important role in financing healthcare expenditures, because they are mainly financed from national funds; these countries include: Nordic countries, Great Britain, Belgium. Structural funds in these countries support areas such as: research and development, occupational health and safety, partially supporting large projects. There are also countries in which the role of funds is significant and these funds are mainly allocated to the modernisation of the healthcare infrastructure that is underinvested. These countries include, for instance, Poland, Bulgaria, Czech Republic [35]. In Poland, in the programming period 2007-2013, the estimated amount of funds allocated to the healthcare infrastructure was 1.5% of the total allocation of structural. However, the ratio of the EU funds to total expenditures on the healthcare infrastructure was the highest in Latvia 2.5%, Hungary (2.4%), Estonia (2.2%), Lithuania (1.7%), Malta (1.2%), and Poland (0.6%) [36].

Investments in the healthcare sector financed from structural funds mostly relate to the modernisation of this type of infrastructure; other areas include e.g. health promotion, disease prevention, education of medical staff, e-health, R&D in the healthcare sector, improvement of the efficiency of public administration, safe and healthy workplace, medical tourism [37]. In Poland, in this period, the allocation of funds to the healthcare infrastructure amounted to EUR 948 million (Fig. 3).

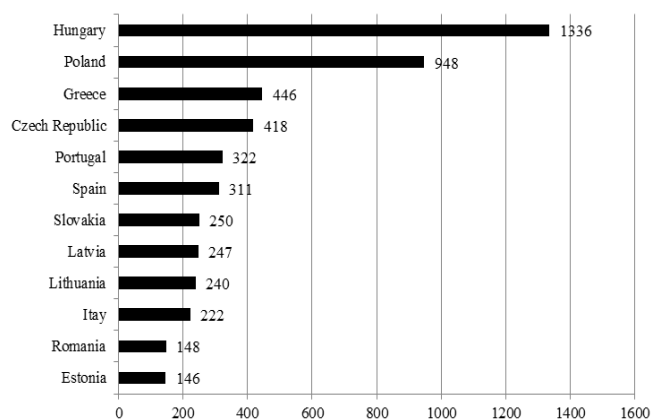


Fig. 3. Amount of structural funds allocated to the healthcare infrastructure in the years 2007-2013 in selected countries (according to the highest allocation) in millions of euros

Source: [38].

As far as the source of support is concerned, it is usually provided under operational programmes aimed at the development of the infrastructure and financed from the ERDF as well as those connected with the development of human resources and financed from the ESF. However, the new financial perspective for the years 2014-2020 provides for the allocation of more than EUR 4.94 billion for the support of healthcare investments from the ERDF (healthcare infrastructure, increasing the use of ICT, including e-health) and the allocation of EUR 4.24 billion from

the European Social Fund for the support of social investments and investments related to active ageing [39].

As far as the direction of support provided from the European Investment Funds is concerned, the following investments are mentioned:

- investments in the healthcare sector financed mainly from national funds, European funds represent only an insignificant part of investments in this area implemented in a given country;
- investments from European funds representing a significant source of financing investments, support from European funds is used for the implementation of national reforms related to the healthcare system and financial resources are allocated to various investment objectives.

However, in the current programming period 2014-2020, the infrastructure which is not an integral part of the health strategy is not supported. Therefore, in the new programming period, special attention is drawn to the fact that investments, especially those which constitute an integral part of reforms of the healthcare system, are co-financed. At the same time, typical areas of investment support in specific member states were indicated. Poland is among the countries that allocate the highest amounts to these four areas of healthcare; such expenditures increased compared to the previous period [40] (table 3).

Countries	Health infrastructure	E-health	Active and healthy ageing	Access to health and social services
Poland	1,366	349	329	910
Romania	318	30	0	457
Czech Republic	284	13	0	214
Slovakia	278	70	0	142
Hungary	253	15		215
Italy	209	49	7	400
Portugal	178	38	0	455
Spain	177	257	0	67
Lithuania	168	24	0	107
Latvia	152	7	0	133
Croatia	150	38	0	180
Estonia	141	0	0	0
Greece	129	3	0	236
Bulgaria	71	0	0	145
France	55	61	38	14
Malta	19	4	0	4
Germany	14	14	0	6
Netherlands	0	0	101	0
Slovenia	0	0	34	25
Austria	0	0	24	0
Sweden	0	7	0	0
UK	0	0	0	0
Luxembourg	0	0	0	0
Ireland	0	0	0	0
Finland	0	0	0	0
Denmark	0	0	0	0
Cyprus	0	0	0	0
Belgium	0	0	0	0

Table 3. Amount of financial support from structural funds divided into investment categories in the scope of health in EU member states (in millions of euros) in the years 2014-2020  
Source: [41].

Experiences of Poland from the period 2007-2013 in the scope of the implementation of projects related to the healthcare show certain aspects that need to be included in new programmes for the years 2014-2020. In the scope of prevention programmes, it is recommended to extend the number of diseases covered by these programmes. Special focus should be given to projects related to the solution of important health and demographic problems. Investments in the infrastructure were punctual and, therefore, it is necessary to coordinate them at the regional and central level and to assess the usefulness of investments undertaken. There were also ineffective investments. It was possible to support changes implemented in the healthcare system in the scope of the management and quality improvement, for instance, in the healthcare account settlement system thanks to the implemented projects. Educational activities were undertaken, which had a positive effect on the professional training of healthcare staff. It is worth mentioning the area connected with e-health; the Electronic Platform for Collection, Analysis and Sharing of Digital Medical Records is a key project. This system should cooperate with regional solutions. As a result of a number of obstacles, this project has not been implemented within the previous financial perspective 2014-2020; it will be implemented in the current perspective. It is the largest ICT project in Poland in this area and the number of its users is approx. 38 million people [43].

## V. CONCLUSION AND FUTURE WORK

Structural funds are important source of financing the investments in health in the EU, particularly in the EU new Members States. These financial instruments support not only the health directly, but also indirectly. Investments in the healthcare infrastructure in Poland were punctual and, therefore, it is necessary to coordinate them at the regional and central level and to assess the usefulness of investments undertaken. There were also ineffective investments. In the new financial perspective some changes need to be taken with regard to such kind of investments. Further research should deeply analyses the contribution of the EU funds to the specific areas of intervention, particularly to e-health and active and healthy ageing because these are great challenges for the EU member states, also for Poland.

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