DYNAMICS AND DISTRIBUTION OF THE CAPITAL INVESTMENTS OF BULGARIAN HOSPITALS

Doroteya T. Shtereva

Medical University – Sofia, Faculty of Public Health, Department of Health Economics, 1527 Sofia, Bulgaria

Abstract

This paper presents an analysis of the dynamics and distribution of hospital capital investments in Bulgaria in the period 2010-2013. It is particularly important to investigate the capital expenditures as they are in fact investments intended for generation of future benefits. Thus, practically, they are transformed into investments. Because of that, capital expenditures are among the main expenditure items of the hospital establishments. Those expenditures can cover various items – from roof renovation and equipment purchasing to building a new hospital facility. The analysis of capital expenditures provides an image of the stability and possibilities for development and expansion of the hospital establishments. The capital investments are intended for maintaining and/or enhancing the scope of hospital services thus aiming at improving the quality and effectiveness of the provided medical care. Consequently, it is also important that the capital investments would enable the hospitals to be profitable and competitive.

Key words: *capital investments, state medical establishments for hospital care, dynamics*

INTRODUCTION

The expenditures of the hospitals are of particular importance for their rational management and improvement of their effectiveness. The mission of every hospital is to elevate the level of patients' quality of life through providing the necessary medical services for convalescence, improvement or stabilization of their health status. For the fulfillment of this mission the health establishment spends certain funds in two directions: to provide medical services, and for its own development in order to ensure enhanced (qualitatively and quantitatively) reproduction of its activities. Unlike current expenditures, though, the capital investments are accumulated and their effect covers a long period of time. The development of the health establishment requires an increase of the capital investments. If those investments are small and insufficient, the hospital is constantly decapitalized and becomes ineffective. This was just what a large number of Bulgarian hospitals experienced to a significant degree during the last twenty five years (including private ones too). Besides that, with the contemporary quickly developing medical science and practice, it is logical that the capital investments should be quite greater to enable rendering medical services of last generation. Through capital expenditures the hospitals practically invest in their profitability and competitiveness. Unfortunately, in Bulgaria insufficient attention is paid to the competitiveness of a particular hospital, especially when (like in this analysis) private hospitals are not covered by the study. This is a fully normal sequence of the health model imposed 25 years ago due to the political regime and structure of the health network, after that because of constant reforms, and until now, due to political, demographic, financial and social factors. Even health policy makers seem to underestimate the role of a well developed competitive environment in the provision of highly effective medical care. Besides that, in times of political crises the capital expenditures are mostly affected, i.e. they are among the first expenditures to be reduced (saved). Thus, if a hospital has not spared enough funds for capital investments, that is for its own development and reproduction of its activities, it will decapitalize much quicker. The above considerations outline the particular importance of capital investments for the hospitals and underline the fact that if the hospitals aim at health and financial effectiveness, they must invest "in themselves". One of the significant ways to realize this is through allocation of adequate capital expenditures.

SURVEY AIM AND DATA

The aim of this study is to establish the dynamics and distribution of the capital investments during the last years through survey and analysis of the capital expenditures made by public (state and municipal property) medical establishments in Bulgaria.

The study analyzes the last officially published data (2010-2013).

Because of a number of changes affecting the type of registration of the hospital establishments and their ownership in conformity with the amended Health Establishment Act (HEA) (State Gazette, No. 59/31.07.2010, the dispensaries in the country were transformed into centers or specialized hospitals. That is why it was necessary to perform an individual survey for the period 2010-2013.

The expenditure data are reported according to the "Unified methods for individual reporting of the expenditures in health establishments by all types of expenditures and types of establishments" (enacted in 1993) which, since 1997 has been enacted also for all public health establishments in the country (Order of the Minister No RD-09-194). The Methods comply with the "Unified budget classifier of the Republic of Bulgaria".

The survey used data published by the National Center of Public Health and Analyses (NCPHA), National Statistic Institute (NSI), international sources and publications.

SURVEY METHODS

The following basic methods were used:

Documentary analysis enabling the investigation of the information from the acting statistical reports of NCPHA for the realized capital expenditures by the Bulgarian hospitals;

Mathematical-statistical method;

Graphical method visualizing the data, information and results.

The data were processed using Microsoft Office 2010 software.

The list of abbreviations used in the tables and graphs is given below:

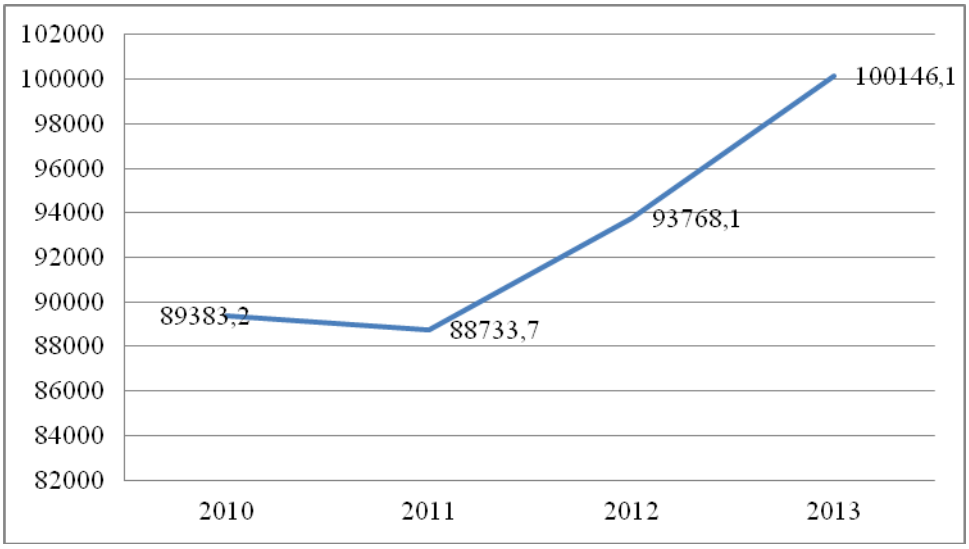
SPH	State Psychiatric Hospital
MHAT	Multiprofile Hospital for Active Treatment
NSHAT	National Specialized Hospitals for Active Treatment
SGOHAT	Specialized Gynecology and Obstetrics Hospital for Active Treatment
SHAT	Specialized Hospitals for Active Treatment
SHATPD	Specialized Hospital for Active Treatment of Pulmonary Diseases
SHATPPD	Specialized Hospital for Active Treatment of Pneumo-Phtysiatric Diseases
SHAPT	Specialized Hospital for Aftercare and Prolonged Treatment
SHAPTPD	Specialized Hospital for Aftercare and Prolonged Treatment of Pulmonary Diseases
SHCO	Specialized Hospitals and Centers of Oncology
SHR	Specialized Hospital for Rehabilitation
CDVD	Center for Dermato-Venerological Diseases
CMH	Center for Mental Health
UNMHAT	University and National Multiprofile Hospitals for Active Treatment

After: NCPHA (2014) Economical analysis of the performance of hospital care establishments in the system for public health care in the Republic of Bulgaria in 2010-2013. Prognosis for 2014.,S.

RESEARCH PART AND EMPIRICAL FINDINGS

In the period 2010-2013 the capital investments of the hospital establishments in the country amounted to 372 031 000 BGN and, as a whole, they grow continuously, with a small exception in 2011 where a slight decrease of the expenditures was observed (1 EURO = 1,96 BGN). The increase was about 10 763 thousands BGN. (Fig. 1)

Fig. 1. Dynamics of capital investments in 2010-2013 (thousands BGN)



Not all hospitals reported increased capital expenditures in 2010-2013. The increase was most evident for Specialized Hospitals for Active Treatment (almost 90-fold in 2012) and National Specialized Hospitals for Active Treatment (a little more than 2-fold). For the former, this enormous at first sight increase of capital investments was due to the start from zero in 2010 and, at the same time, funds were spent really only during the last two years of the reporting period and those capital expenditures were about 89 000 thousands BGN in 2012 and 65 000 thousands BGN in 2013 (According to NCPHA data in Bulgaria there were three SHAT in 2013) (Table 1).

Table 1. Capital expenditures of Bulgarian Hospitals in 2010-2013 (thousands BGN)

Hospital types	2010	2011	2012	2013
Total capital expenditures	**89383.2**	**88733.7**	**93768.1**	**100146.1**
University and National MHAT	40047.4	24547.9	26000.9	45545.7
Regional MHAT	13270.4	15919.3	27259	19938.1
City MHAT	1410.3	2021.2	2147.6	1229.6
Municipal MHAT	6633.2	8196	6752	3911.6
NSHAT	9857.7	15704.8	16760.6	20921.8
SHATPB	183.2	5612.9	4312.4	124.2

SHAPTPD	334.4	2245.1	1150.1	422.3
SGOHAT	336.4	372.5	1056.9	425.2
SHAT	0	0.5	89.9	65.5
SHAPT	489.4	282.2	693.9	147
SHR	740	540	818.7	1681
SPH	28.7	3661	926.7	1185.9
CMD	531.5	1091	780.6	480.8
SHATPPD	6344.4	858.8	120.8	150.4
CDVD	309.6	17	2.9	0.8
SHCO	8866.6	7663.5	4895.1	3916.2

Source: NCPHA (2014) Economical analysis of the performance of hospital care establishments in the system of public health care in the Republic of Bulgaria in 2010-2013. Prognosis for 2014, Sofia.

Here I am presenting a link to another of our studies covering the previous 9-year period (2001-2009). In this period the hospital capital investments have increased annually and have reached up to a total of 551 169 600 BGN for the whole period. From 14,8 millions BGN in 2001 they have increased to 155 millions BGN in 2009. This shows that the trend to increasing the capital expenditures is relatively preserved and evens, as an annual average for the last analyzed 4-year period, the capital investments have increased.

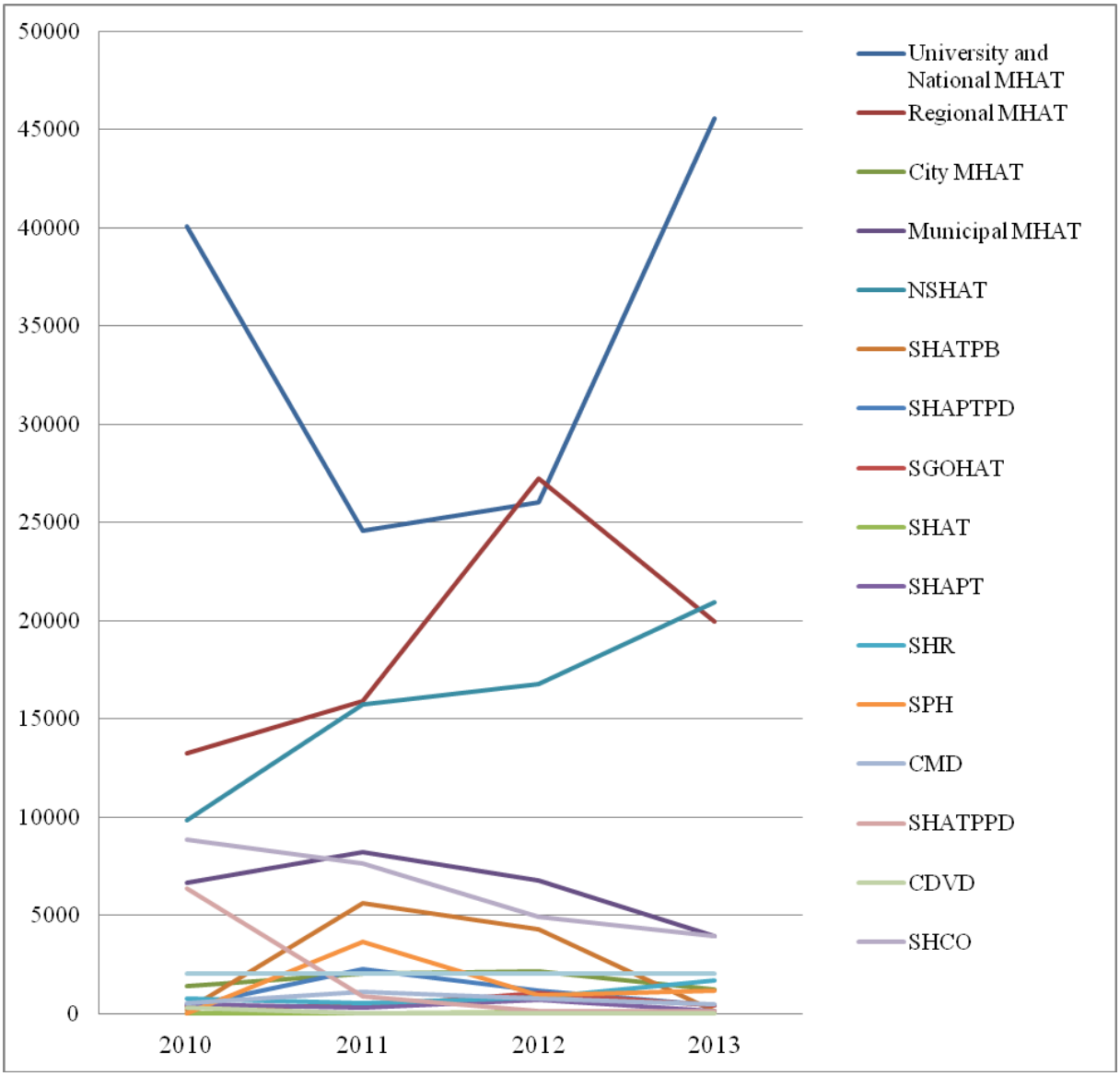
For SHATPPD, SHCO and especially for CDVD a continuous reduction of capital expenditures was observed. For the latter this reduction was more than 300-fold. For the last reported year the total expenditures of all centers in the country were only 800 BGN (according to NCPHA there were 8 centers in Bulgaria). This could conditionally mean that each of those hospital establishments had spent the “great sum” of 100 BGN for capital investments.

Uneven dynamics of the capital investments without a strict trend was observed for the other hospital groups. (Fig. 2)

For the city and municipal MHAT a more constant, without sharp ups and downs, level of capital investments was observed. This level of capital investments was crucially insufficient and much lower than the reasonable one.

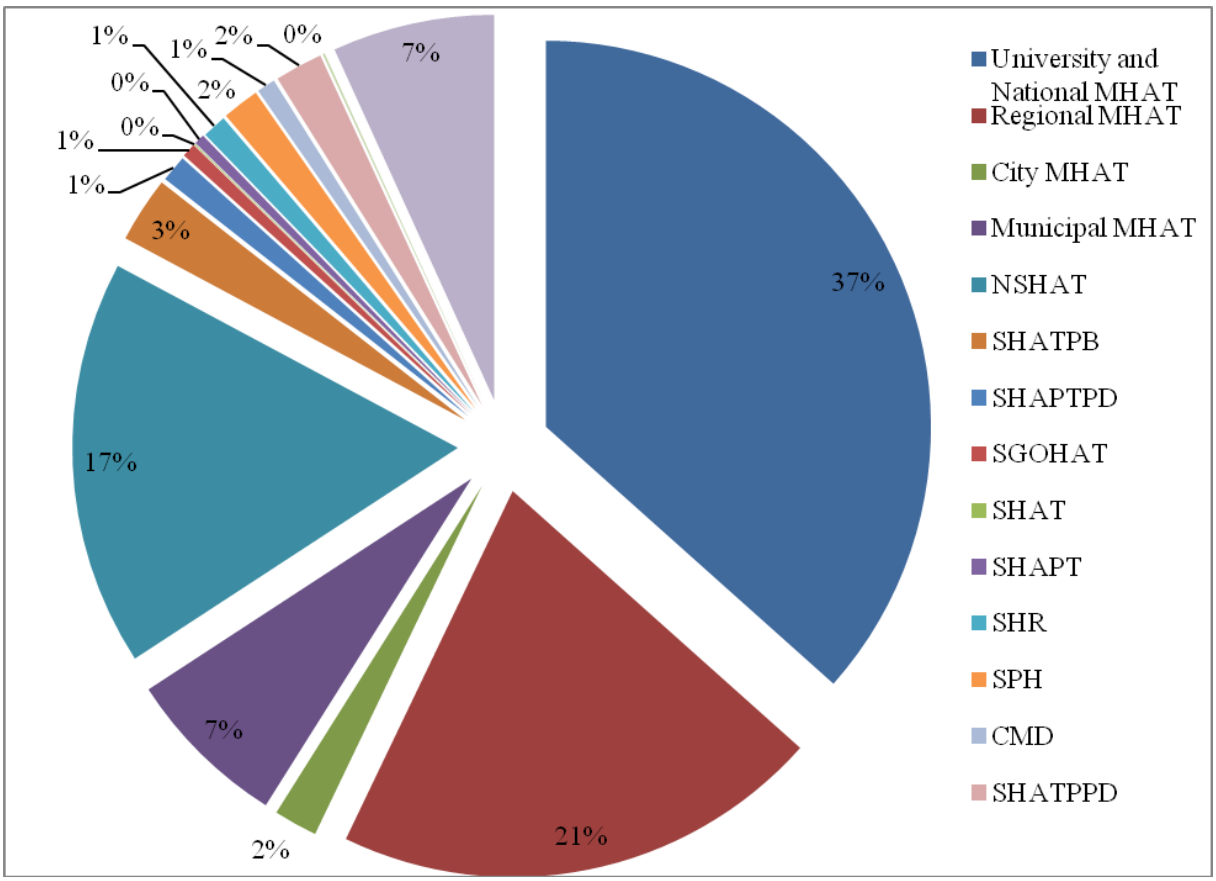
At the same time the municipal MHAT in 2013 were 70 and they have spent less than 4 millions BGN, compared to University and National MHAT which were 8 in the last reported year and have made investments for more than 45 545 000 BGN. (Table 1). In fact, the University and National MHAT together with NSHAT were the only ones that reported a significant increase of the capital investments during the last year. Although the University and National MHAT in 2011 and 2012 marked a substantial decrease compared to 2010, the levels of their capital investments were higher than those of all other hospitals. To a certain extent this trend is absolutely normal because of the high level of provided medical care but on the other hand this is an additional factor contributing to the redirecting of patients to the “high levels” and unreasonable making the needed medical interventions more expensive.

Fig. 2. Dynamics of capital investments of MHAT groups in 2010-2013



It is also observed that the greatest percentage rate of capital investments were made for University and National MHAT followed by Regional MHAT and NSHAT. The leaders have in fact spent more than one third of all capital expenditures in the country in the 4-year period. (Fig. 3)

Fig. 3. Distribution of capital expenditures in 2010-2013



As it is well known the operative unit of the hospital is the hospital bed. In the period 2010-2013 the average annual capital expenditures have increased, the average annual number of beds has decreased and the mean capital expenditures per one bed have constantly increased (Table 2)

Table 2. Capital expenditures of Bulgarian hospitals in the period 2010-2013

	Capital expenditures (thousands BGN)	% of all capital expenditures	Average number of beds in the period	Average capital investments per bed
2010	**89383.2**	**100**	**39796**	**2.2**
2011	**88733.7**	**100**	**36900**	**2.4**
2012	**93768.1**	**100**	**36149**	**2.6**
2013	**100146.1**	**100**	**36203**	**2.8**

CONCLUSIONS

The analysis of capital expenditures of the Bulgarian hospitals in 2010 – 2013 reveals constant but uneven increase (in some years and for certain hospital groups). The increase amounts to about 10 763 thousands BGN for the whole period.

More than one third of all made capital expenditures in the country in the analyzed 4-year period have been allocated to the University and National MHAT.

In the whole period 2010-2013 the average annual capital expenditures have increased, the average annual number of hospital beds has decreased and the average capital expenditures per bed have continuously increased from 2 200 BGN in 2010 to 2 800 BGN in 2013.

The low level of capital expenditures of the hospitals leads to decapitalization and deterioration of their effective performance. This has a negative effect on the quality of medical care and on results of their activities.

Besides that, it is reasonable to outline the headlong increase of expensive novelties in medicine which decreases even more the insufficient level of capital investments.

REFERENCES

1. Goranova R. Practices and attitudes of health professionals regarding global breastfeeding recommendations// Asclepios, 2013, VIII (XXVII), № 2, pp. 112-116.

2. Ministry of Finance. System of Health Accounts, Methodological notes, (2009)

3. Naseva E. Indexes for assessment of public health – empirical distributions, main trends and dependences on their economic determinants, PhD Thesis, 2013 – in Bulgarian

4. Naseva E. Introduction in biostatistics. In: Basic pharmacoepidemiology. Edited by Ilko N. Getov, Sofia, 2013, pp. 32-41, ISBN 978-954-92284-9-6

5. Naseva E. Methods of planning and conducting of pharmacoepidemiological study. In: Basic pharmacoepidemiology. Edited by Ilko N. Getov, Sofia, 2013, pp. 102-111, ISBN 978-954-92284-9-6

6. NCPHA. Economic analysis of the hospitals in the public health care system in the Republic of Bulgaria in 2010-2013. Prognosis for 2014., S. - in Bulgarian

7. NSI. Health care. Concise statistical reference book 2010, Sofia – in Bulgarian

8. Zlatanova-Velikova R., T. Zlatanova, Some Approaches for Hospital`s Management, Public Health and Health Care in Greece and Bulgaria: The Challenge of the Cross-border Collaboration in Times of Financial Crisis, Papazissis Publishers, Athens 2011, pp. 161-167

9. Zlatanova-Velikova R, T. Zlatanova. Bulgarian health care paradoxes-obligatory prophylactic examinations of persons over 18 years. General medicine 12, 2010, №2, pp. 27-

10. www.investopedia.com

11. www.nhif.bg

12. www.minfin.bg