

Challenges for Health Care Financing in Latvia – Comparison with other Baltic Countries

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Abstract. Health care is one of the most important fields for society's development and well-being. Different countries have different financing models, and analyses by the international organization OECD are realized with other modeling approaches, including regression analysis. There are going on hard political and academic discussions on the best possible solution for health care financing. The research aims to evaluate possible tendencies in health care financing in Latvia compared with other Baltic countries – Lithuania and Estonia. For data analysis, there were used data of time-series on health expenses from different sources (government, persons, and other sources of health – care financing) in Latvia and compared with tendencies of healthcare expenditure share from GDP in Baltic countries by use of trend analysis. Research results have indicated that health care expenditure increased in all Baltic countries, but the smallest share of health care expenditure during the last years from GDP was in Latvia.

Keywords: Health care expenditure; share of healthcare expenditure from GDP; Baltic countries.

1. Introduction

Health care is one of the most important fields for society's development and well-being. Different countries have different financing models, and there are going on hard political and academic discussions on the best possible solution for health care financing, as many aspects of efficient decisions in health – care expenditures are on the research agenda for many academic researchers worldwide. Academic researchers investigate several financing patterns and innovative solutions to develop reasonable scientific conclusions for the possible application of scientific findings in practical decision-making with several options. Among health – care options are fully public financing with many nice examples and solutions, but very hard for the respective state budget; mixed financing models, as often private financing contribution, can support the development of new and innovative healthcare solutions and service availability for patients. In those situations, often are discussions on healthcare availability for all: usually, there are initiated questions on equality and un-equality of different society groups. Many countries are developing health tourism to keep qualified specialists in the respective country and offer medical care services for foreign clients. All health – care expenditure models have advantages and disadvantages, which are carefully examined by academic researchers and analyzed by scientists in international scientific discussions in scientific publications and international scientific conferences. The research aims to evaluate possible tendencies in health care financing in Latvia compared with other Baltic countries – Lithuania and Estonia. Tasks of research: investigate tendencies of financing for healthcare expenses from government sources, from person private sources, and other sources in Latvia; compare tendencies of healthcare expenses in Baltic countries: Lithuania, Estonia, and Latvia. For data analysis, there were used time-series data on health expenses from different sources in Latvia and compared with tendencies of healthcare expenditure share from GDP in Baltic countries by use of trend analysis.

2. Literature Review

To a great extent, society's development depends on the health – care level, and most countries try to devote a share of GDP to health – care expenditures. Decisions on health – care expenditure depend on political decisions in respective countries, and the experience of all countries is evaluated, compared, examined, and criticized by researchers in many countries. OECD regularly makes international comparisons of life expectancy and health care expenditure (OECD, 2021, p. 34), where Latvia's results are bad. Even worse results for Latvia are on avoidable mortality (preventable and treatable) and health expenditure (OECD, 2021, p. 34). In this aspect, Latvia is in leading position – it means that serious work for policymakers and academic researchers must be done on a very serious level.

OECD is making different data analysis on healthcare expenditure by applying different models, including regression analysis (Marino et al., 2017, p.34). Very often,

there are discussions on the efficiency of public health expenditures depending on more attention to public financing or personal financing (Abraham & Tao, 2021; Kazemi Karyani et al., 2015; Li et al., 2014) where democracy, political freedom, and health expenditures are on importance. Several financing patterns are discussed in the international academic community (Ying et al., 2022). Good results of health – care financing experience are examined (Richard et al., 2014; Quaye, 2007) to develop practical recommendations for possible pattern application in other countries. Several financing patterns were examined and discussed (Pereira et al., 2019; Pascual-Saez et al., 2017; Abbade, 2018; Burinskienė, 2022; Azolibe et al., 2020), investigating influence on society development and environment. The structure of a country's inhabitants can influence the needs and supply of health – care (Cheah et al., 2021; Hajizadeh et al., 2012). Social health insurance systems and efficient contributions greatly influence health – care development aspects (Jacobs & Goddard, 2002). Many countries are developing health – tourism to contribute to the national health budget and keep qualified medical personnel in the respective country (Aydin & Karamahmet, 2017). In this field, many international academic and political discussions are realized. Professionalism of health – care personnel is of great importance (Ahadiat, 2002), and big and strict attention is paid to graduates. Several aspects of health – care fields (Sriyanto et al., 2022; Oburota & Olaniyan, 2020; Raudeliuniene & Szarucki, 2019; Alexiou & Trachanas, 2021) depend on the financing of health – care to afford many specific needs where decisions have to be taken by politicians but in many countries, policymakers are discussing several aspects with academic researchers before policy decision - making. Several aspects of involvement patients for more efficient health – care financing (Minogue et al., 2016) by reducing medical waste are with several innovative findings, which could be adopted by many other countries as is within green policy directions. Several innovative methods are applied to find the most efficient decision-making solution (Hamasha & Rumble, 2017). Social entrepreneurship aspects are developing in many countries (Davidavičienė & Raudeliūnienė, 2022), taking different directions and applications, and gaining practical experience and skills (Davidavičienė & Raudeliūnienė, 2021). The influence of social networks on the analysis agenda (Davidavičienė & Davidavičius, 2022; Raudeliūnienė et al., 2018) is with more and more stress on social marketing efficient application (Marshall et al., 2009) for health – care financing and efficient application of information technologies (Raudeliuniene et al., 2020) as well as the increasing role of female leadership (Raudeliūnienė et al., 2021) in different fields. Researchers have mainly investigated social responsibility (Sasmoko et al., 2022) and developed practical suggestions (Zeng, 2014) for even deeper academic evaluation. Results could be considered for decision-making by policy developers.

3. Research Methods

Research methods applied in the current study: analysis of scientific publications on tendencies of health – care expenditures, tendencies on the share of health care expenditures in many countries worldwide, including OECD analysis. Several healthcare financing models were examined, studied OECD modeling experience for healthcare expenses models with the application of regression analysis, searching for advantages and disadvantages of different approaches and aspects investigated for more efficient healthcare financing looking for innovative and efficient solutions. It applied analysis of statistical data on healthcare expenditure by time–series analysis by different sources of financing in Latvia and analysis on tendencies of share of healthcare expenses from GDP in Baltic countries: Lithuania, Estonia, and Latvia, for this analysis was applied trend analysis. Data for empirical analysis were obtained from the Official Statistics database of the Republic of Latvia and Eurostat.

4. Results

Tendencies of different source applications for health – care expenditures (healthcare expenditure total, household out-of-pocket expenditure, and other sources) in Latvia are included in Figure 1.

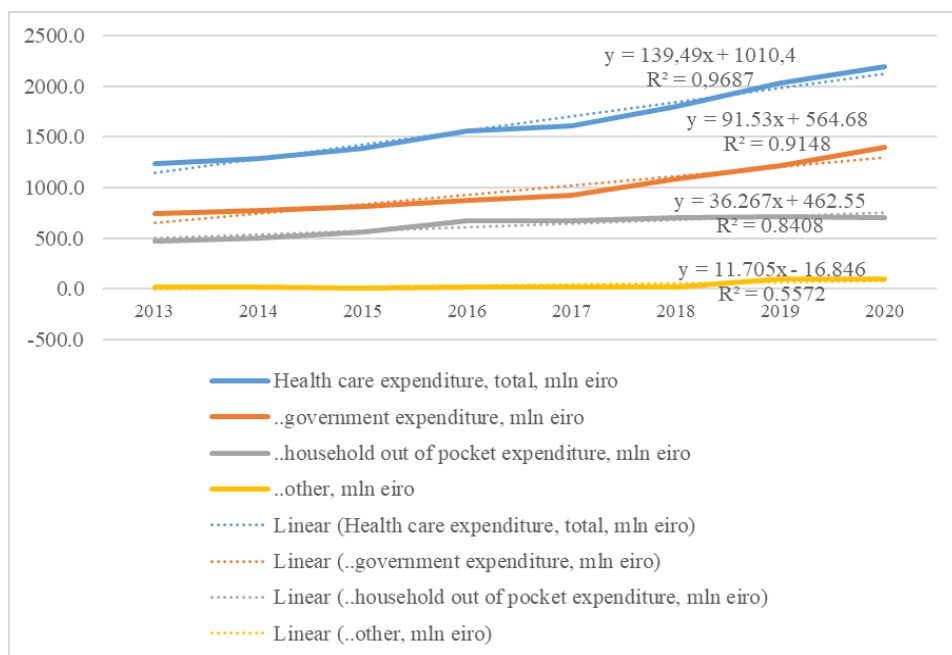


Fig. 1: Health care expenditure tendencies in Latvia in 2013-2020

Source: Authors' construction and calculations based on the Official Statistics Portal of Latvia database data (latest data available on December 1, 2022)

Data indicate that in Latvia, health care expenditure tends to increase on average by 139.49 million euros per year, with faster has grown government expenditure (on

average 91.53 million euros per year), but also has grown household out – of pocket expenditure (on average by 36.27 million euros per year). In recent years it has been increasing health – care expenditure from other sources.

Tendencies of share of health care expenditure from GDP tendencies in Baltic countries in 2013 – 2020 are included in Figure 2.

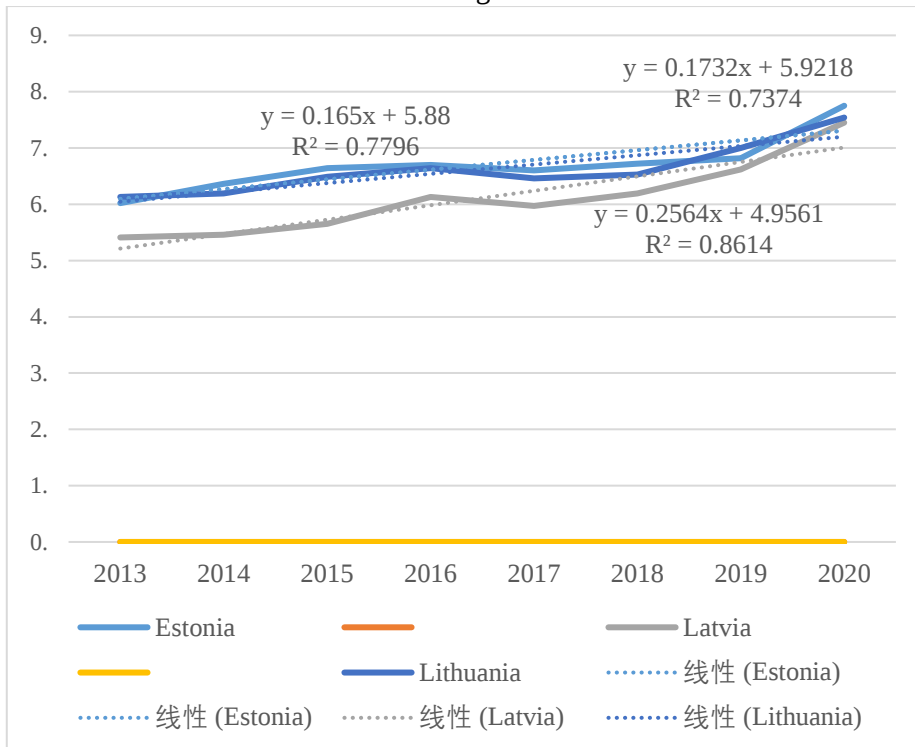


Fig. 2: Share of health care expenditure from GDP tendencies in Baltic countries in 2013-2020

Source: Authors' construction and calculations based on EUROSTAT database data (latest data available on December 1, 2022)

Data indicate that in all Baltic countries share of health care expenditure from GDP has the tendency to increase in analyzed years. In Estonia, health care expenditure from GDP was growing by an average of 0.1732 percent per year. Faster health care expenditure from GDP has grown in Latvia - an average of 0.264 percent points per year. In Lithuania, health care expenditure from GDP has increased an average of 0.164 percent points per year.

5. Discussion

The results on health – care expenditure tendencies are on the hot discussion agenda by academic researchers as deep analysis and reasonable suggestions for policy decision-making are often results of research investigations, and practical decision-making for health care financing usually is a hard political decision for finding the

best possible solution. Discussions are carried out to have the best possible model for healthcare financing: from one side, enough resources for qualified personnel financing and financing of recent scientific approaches and technologies for health care. This is very expensive, and clever decisions must be made to develop such health care. On the other hand, it is important to keep health care services affordable for different society groups. Latvia has to study more experience of other Baltic countries on health – care expenditure from GDP as Latvia has less share of health – care expenditure from GDP than other Baltic countries - Lithuania and Estonia.

6. Conclusions

In their analysis, the international organization OECD performs different international comparisons on efficiency of health care spending and different related aspects, like life expectancy where comparative analysis results inspire policymakers and academic researchers.

Academic researchers have analyzed different patterns and experience in health - care financing in many countries and suggested many innovative approaches for possible applications in other countries.

Research results have indicated that health care expenditure increased in all Baltic countries, but the smallest share of health care expenditure during the last years from GDP was in Latvia.

Data analysis results indicate that in all Baltic countries share of health care expenditure from GDP tends to increase in analyzed years. In Estonia, health care expenditure from GDP in 2013 – 2020 increased on average by 0.1732 percent per year. Faster health care expenditure from GDP has grown in Latvia - an average of 0.264 percent points per year. In Lithuania, health care expenditure from GDP has increased an average of 0.164 percent points per year.

Policymakers in Latvia and health – care specialists from Latvia could study more experience of other Baltic countries – Lithuania and Estonia, to suggest the best possible solutions to increase the share of health care expenditure from GDP as other Baltic countries - Lithuania and Estonia have managed to devote a more significant share of health care expenditure from GDP.

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References

Abbade, E.B. (2018). The relationships between obesity-increasing risk factors for public health, environmental impacts, and health expenditures worldwide. *Management of Environmental Quality*, 29(1), 131-147.

Abraham, R. & Tao, Z. (2021). Funding health in developing countries: foreign aid, FDI, or personal remittances? *International Journal of Social Economics*, 48(12), 1826-1851.

Ahadiat, N. (2002). Demand for college graduates and attributes health care organizations seek in accounting recruits. *Career Development International*, 7(3), 134-141.

Alexiou, C. & Trachanas, E. (2021). Politics, government health expenditure and infant mortality: does political party orientation matter? *International Journal of Social Economics*, 48(12), 1810-1825.

Aydin, G. & Karamahmet, B. (2017). Factors affecting health tourism and international healthcare facility choice. *International Journal of Pharmaceutical and Healthcare Marketing*, 11(1), 16-36.

Azolibe, C.B., Nwadike, C.E. & Okeke, C.M.-G. (2020). Socio-economic determinants of public expenditure in Africa: assessing the influence of population age structure. *International Journal of Social Economics*, 47(11), 1403-1418.

Burinskienė, A. (2022). The Application of Business Models in Trading Companies. *Journal of Service, Innovation and Sustainable Development*, 3(1), 14-30.

Cheah, Y.K., Goh, K.-L. & Abdul Adzis, A. (2021). Sociodemographic determinants of health care expenditure: micro level evidence of a fast-growing developing country. *International Journal of Social Economics*, 48(4), 640-656.

Davidavičienė, V. & Davidavičius, S. (2022). Impact of Activities in Social Networks on Customer Loyalty, *Journal of Logistics, Informatics and Service Science*, 9(2), 183-195.

Davidavičienė, V. & Raudeliūnienė, J. (2021). Corporate Social Entrepreneurship Practice: Lithuanian Case Analysis, *Journal of System and Management Sciences*, 21(4). 218-231.

Davidavičienė, V. & Raudeliūnienė, J. (2022). Corporate Social Entrepreneurship Practice: Lithuanian Case Study in Public and Private Organization, *Journal of System and Management Sciences*, 12(4). 349-364.

Hajizadeh, M., Connelly, L.B., Butler, J.R.G. & Khosravi, A. (2012). Unmet need and met unneed in health care utilisation in Iran. *International Journal of Social Economics*, 39(6), 400-422.

Hamasha, M.M. & Rumbe, G. (2017). Determining optimal policy for emergency department using Markov decision process. *World Journal of Engineering*, 14(5), 467-472.

Jacobs, R. & Goddard, M. (2002). Trade-offs in social health insurance systems. *International Journal of Social Economics*, 29(11), 861-875.

Kazemi Karyani, A., Homaie Rad, E., Pourreza, A. & Shaahmadi, F. (2015). Democracy, political freedom and health expenditures: evidence from Eastern Mediterranean countries. *International Journal of Human Rights in Healthcare*, 8(3), 187-194.

Li, J.-S., He, P.-P. & He, R.-B. (2014). Theoretical and empirical analysis of the supplier induced demand in health care market in China. *Grey Systems: Theory and Application*, 4(2), 207-220.

Marino A., James C., Morgan D. & Lorenzoni L. (2017). Future trends in health care expenditure: a modelling framework for cross-country forecasts, OECD. *Health Working Paper*, 95, 51.

Marshall, K.P., Skiba, M. & Paul, D.P. (2009). The need for a social marketing perspective of consumer-driven health care. *International Journal of Pharmaceutical and Healthcare Marketing*, 3(3), 236-257.

Minogue, V., Wells, B. & Brooks, A. (2016). Difficult conversations? Engaging patients in reducing waste in health care. *International Journal of Health Governance*, 21(2), 51-58.

Oburota, C.S. & Olaniyan, O. (2020). Health care financing and income inequality in Nigeria. *International Journal of Social Economics*, 47(11), 1419-1431.

OECD. (2021). Health at a Glance 2021: OECD Indicators, OECD Publishing, Paris, 273.

Pascual-Saez, M., Cantarero-Prieto, D. & Castañeda, D. (2017). Public health expenditure, GDP and the elderly population: a comparative study. *International Journal of Social Economics*, 44(10), 1390-1400.

Pereira, A.M., Pereira, R.M. & Rodrigues, P.G. (2019). Health care investments and economic performance in Portugal: an industry level analysis. *Journal of Economic Studies*, 46(6), 1174-1200.

Quaye, R.K. (2007). Is the Swedish welfare state in retreat? Current trends in Swedish health care. *International Journal of Health Care Quality Assurance*, 20(5), 392-404.

Raudeliuniene, J. & Szarucki, M. (2019). An integrated approach to assessing an organization's knowledge potential. *Engineering Economics*, 30(1), 69-80.

Raudeliuniene, J., Albats, E. & Kordab, M. (2021). Impact of information technologies and social networks on knowledge management processes in Middle Eastern audit and consulting companies. *Journal of Knowledge Management*, 25(4), 871-898.

Raudeliūnienė, J., Davidavičienė, V., Meidutė-Kavaliauskienė, I. & Radeckytė, V. (2021). Women's leadership success factors in the Baltic States. *International Journal of Learning and Change*, 13(2), 171-189.

Raudeliuniene, J., Davidavičiene, V., Tvaronavičiene, M. & Jonuška, L. (2018). Evaluation of advertising campaigns on social media networks. *Sustainability*, 10(4), 973.

Richard, P., West, K.D., Shin, P., Younis, M.Z. & Rosenbaum, S. (2014). Community health centers cost savings: Ambulatory care patients in North Carolina. *Journal of Public Budgeting, Accounting & Financial Management*, 26(2), 271-291.

Sasmoko, Lodhi, M.S., Aziz, A.R.A., Bandar, N.F.A., Embong, R., Jabor, M.K., Anis, S.N.M. & Zaman, K. (2022). Healthcare preventive measures, logistics challenges and corporate social responsibility during the COVID-19 pandemic: break the ice. *Foresight*, 24(5), 586-595.

Sriyanto, S., Lodhi, M.S., Salamun, H., Sardin, S., Pasani, C.F., Muneer, G. & Zaman, K. (2022). The role of healthcare supply chain management in the wake of COVID-19 pandemic: hot off the press. *Foresight*, 24(3/4), 429-444.

Ying, S., Leone, D., Cicchiello, A.F., Cicchiello, A.F. & Kazemikhasragh, A. (2022). Industrial dynamics and economic growth in healthcare context. Evidence from selected OECD countries. *Journal of Business & Industrial Marketing*, 37(8), 1706-1716.

Zeng, J. (2014). Semi-parametric identification of determinants of health expenditures – evidence from inpatients in China. *Management Decision*, 52(7), 1302-1318.