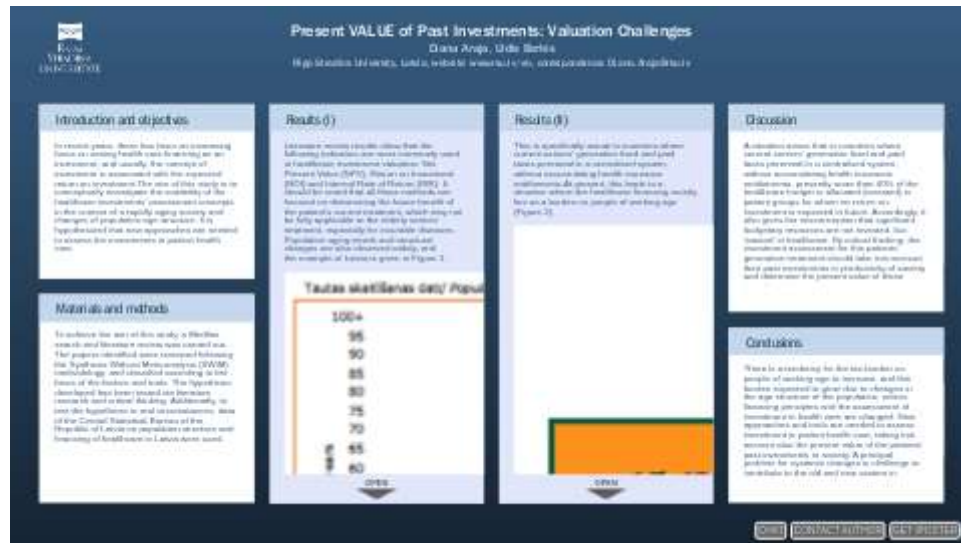


Present VALUE of Past Investments: Valuation Challenges



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INTRODUCTION AND OBJECTIVES

In recent years, there has been an increasing focus on seeing health care financing as an investment, and usually, the concept of investment is associated with the expected return on investment. The aim of this study is to conceptually investigate the suitability of the healthcare investments' assessment concepts in the context of a rapidly aging society and changes of population age structure. It is hypothesized that new approaches are needed to assess the investments in patient health care.

MATERIALS AND METHODS

To achieve the aim of this study, a Medline search and literature review was carried out. The papers identified were reviewed following the Synthesis Without Meta-analysis (SWiM) methodology, and classified according to the focus of the factors and tools. The hypothesis developed has been tested via literature research and critical thinking. Additionally, to test the hypothesis in real circumstances, data of the Central Statistical Bureau of the Republic of Latvia on population structure and financing of healthcare in Latvia were used.

RESULTS (I)

Literature review results show that the following indicators are most commonly used in healthcare investment valuation: Net Present Value (NPV), Return on Investment (ROI) and Internal Rate of Return (IRR). It should be noted that all these methods are focused on determining the future benefit of the patient's current treatment, which may not be fully applicable to the elderly seniors' treatment, especially for incurable diseases. Population aging trends and structural changes are also observed widely, and the example of Latvia is given in Figure 1..

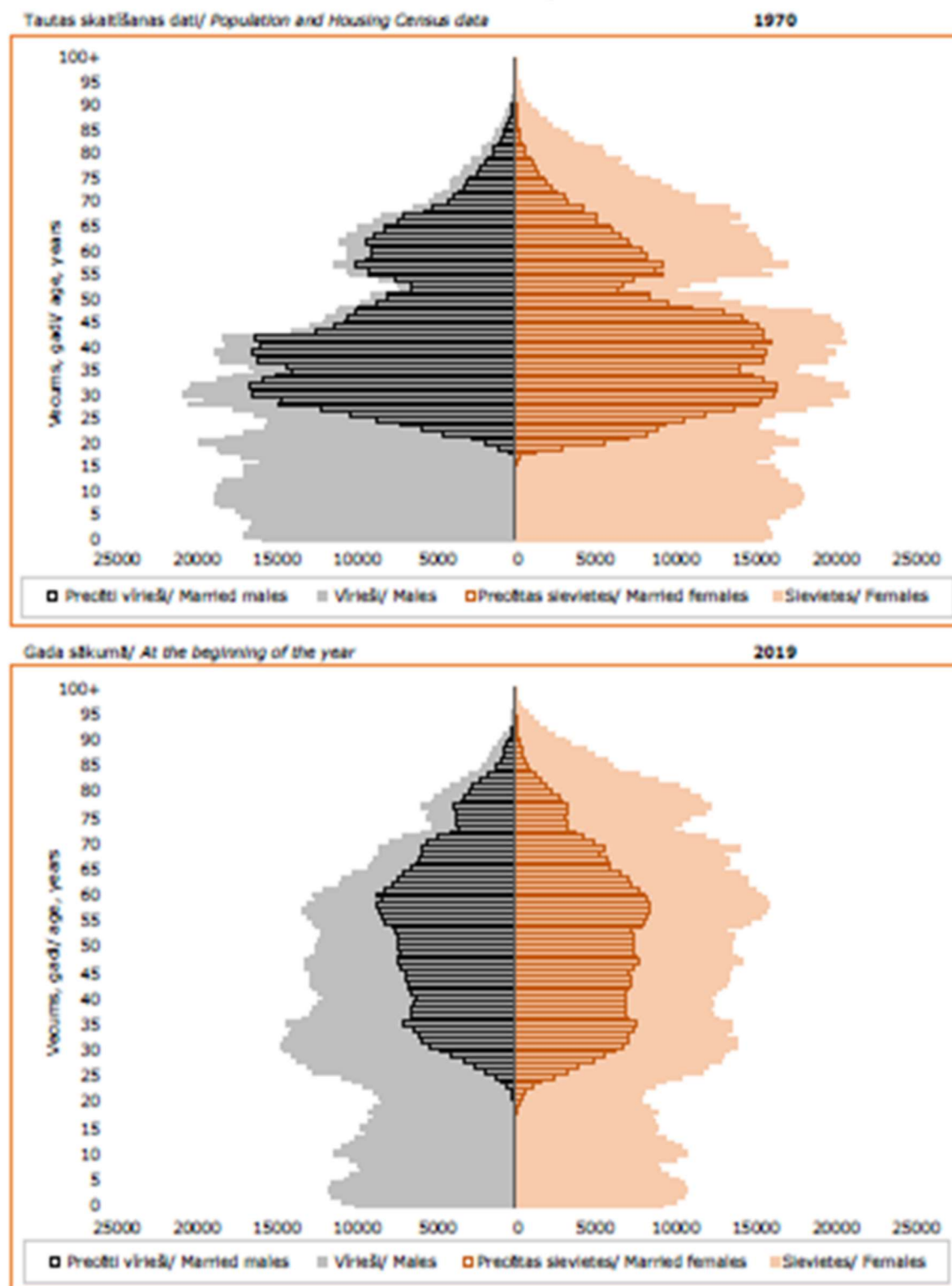


Figure 1. Age Pyramid of total and married population in Latvia, 1970 and 2019 (Central Statistical Bureau, Republic of Latvia)

Figure 1 shows the changes in the structure of the Latvian population over the last 50 years, with a significant decrease in the population up to the age of 25, which provides forecasts for a significant increase in the taxes burden on people of working age in future.

RESULTS (II)

This is specifically actual in countries where current seniors' generation lived and paid taxes perennial in a centralised system, without accumulating health insurance entitlements. At present, this leads to a situation where the healthcare financing mostly lies as a burden on people of working age (Figure 2).

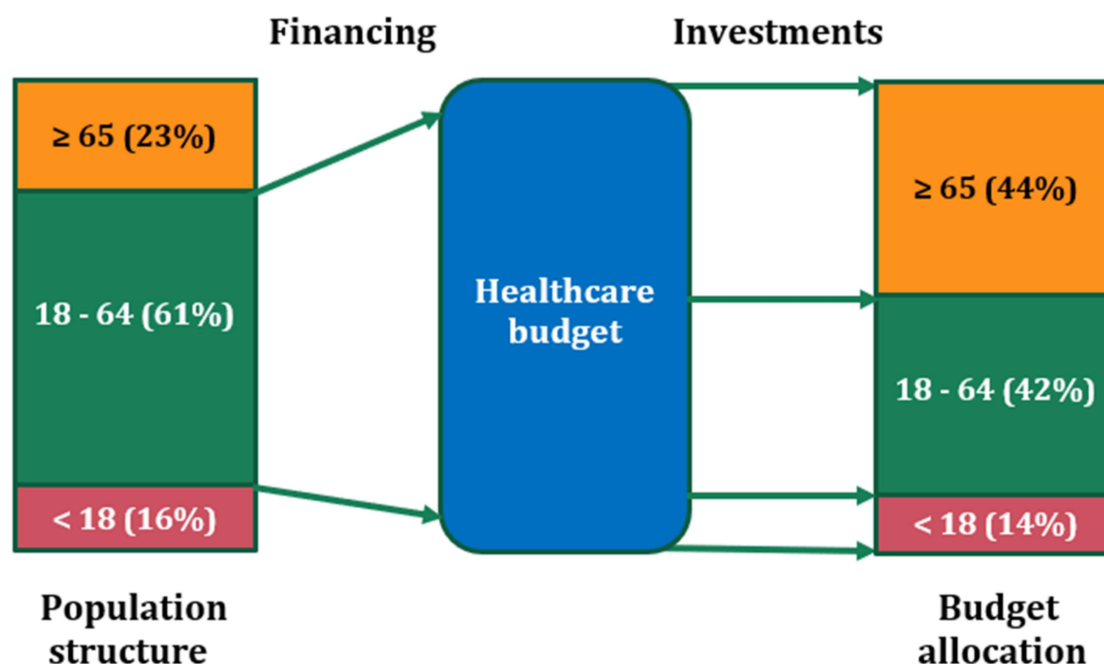


Figure 2. Sources of healthcare financing and budget allocation (investments), age groups, in Latvia

According to the literature, similar proportions for investments are typical for many European countries and the USA. The example of Latvia (Figure 2) shows that healthcare is mainly financed by taxes paid by 61% of the population. In turn, the budget is allocated (invested) in 44% of cases without the expected return on investment in the future.

An additional challenge arises from the fact that health costs are characterised by timing of effect. There are the short-term costs (vaccines and pharmaceuticals costs, medical services costs, social prevention costs, personal protection costs), medium-term costs (prevention programmes, recovery costs) and long-term costs (resistance costs (AMR), rehabilitation costs, disability expenses, research costs, mental health impairment). It should be noted that the seniors' generation is characterized by all categories of the health costs, especially long-term costs.

DISCUSSION

A situation arises that in countries where current seniors' generation lived and paid taxes perennial in a centralised system, without accumulating health insurance entitlements, presently more than 40% of the healthcare budget is allocated (invested) in patient groups for whom no return on investment is expected in future. Accordingly, it also gives the misconception that significant budgetary resources are not invested, but 'wasted' in healthcare. By critical thinking, the investment assessment for this patients' generation treatment should take into account their past investments in productivity of society and determine the present value of these investments.

CONCLUSIONS

There is a tendency for the tax burden on people of working age to increase, and this burden expected to grow due to changes in the age structure of the population; unless financing principles and the assessment of investment in health care are changed. New approaches and tools are needed to assess investment in patient health care, taking into account also the present value of the patients' past investments in society. A principal problem for systemic changes is challenge to contribute to the old and new system in parallel for productive generations.