

The role of technology in health care expenditure in the EU

By Kamil Dybczak and Bartosz Przywara

All countries of the European Union provide at least basic health care free of charge to their populations. As a result, public expenditure on health care accounts for a significant share of public spending and has been growing in real terms over the past few decades. In light of the increasing needs of an ageing society, one of the fundamental challenges facing policymakers will be to develop policies setting out the extent to which health-care shall be provided by the public sector, and, crucially, how it shall be financed in the future. Apart from explaining past trends, any attempt to project the future evolution of health care expenditure must take into account a complex network of factors affecting spending through both demand and supply channels. While demand-side factors (demographic structure, health status, national and individual income) are relatively straightforward to quantify and model, indicators of supply-side factors are less so, being mainly qualitative in nature.

Progress in medical technology is widely considered as the major driver of health care expenditure, but the multiplicity of the transmission channels makes it very difficult to project its future impact on health care expenditure. One of the accepted methods is to study the past interrelations between variables and extrapolate them into the future. An analysis of past trends in health care expenditure has therefore been undertaken, using a range of econometric tools, in order to estimate the impact of technology expressed as a residual effect after the effect of other quantifiable factors had been accounted for. Using these estimates, the impact of technology has been added to the demographic, health and income effects on the future health care expenditure projections, resulting in a considerably higher increase over the long-term.

The paper suggests, therefore, that future health care expenditure growth may be underestimated when calculated based on demographic and macroeconomic drivers only, and constitute an important challenge for the policymakers in the years and decades to come. Wider use of cost-effectiveness instruments when assessing the establishment and use of new technologies in the health care sector may be an appropriate measure to take in order to address it.