

## **Adjusting the 5C pentagon for better health policymaking: observing the leading behavioural risks factors (diet, smoking, and alcohol consumption)**

**Ioana Teodora BIȚOIU**

National University of Political Studies and Public Administration, Bucharest, Romania  
teodora.bitoiu@snsa.ro

**Cristina Elena NICOLESCU**

National University of Political Studies and Public Administration, Bucharest, Romania  
cnicolescu@snsa.ro

**Abstract.** *Smoking, alcohol consumption, and dietary risks pertain to the goods that can destabilise the market should their production trigger too many negative externalities and not enough research to counterbalance them. Moreover, all three are among the factors that, connected to ever-present risky behaviours, drive the most death and disability combined (the other two risk factors being the metabolic ones and the environmental/occupational risks). Therefore, they are to be considered as relevant to both the perceived health of the population and analysed in relation to the data on smokers, alcohol consumers, and poor diet impact.*

*However, the design of these health policies must be adapted to the pattern of national culture of Romania, increasing the degree of their acceptance by the population. This is particularly true when less-damage alternatives are present in the market. Policymakers should incentivize their use over more-damaging products. In fact, the existence of better alternatives deepens the market failure that a sub-optimal allocation of resources produces when consumers opt for more damaging products over better goods. Clearly, the objective of policymakers ought to be to differentiate based on the risk profile of the products present on the market.*

**Keywords:** health policy, cost, national culture, behavioural risk factors.

**JEL Classification:** H51, I18, Z13.

## Introduction

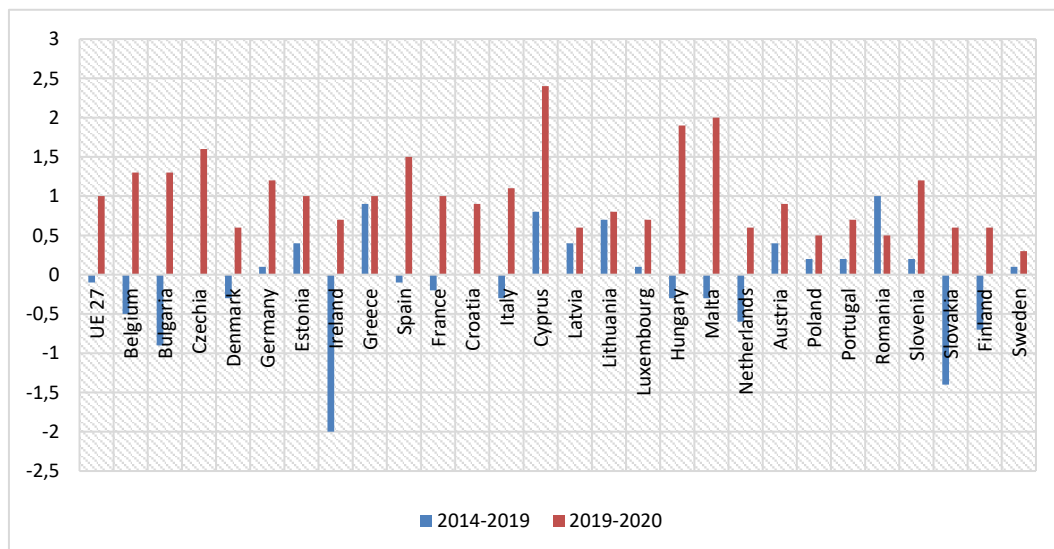
The health crisis associated with the COVID-19 pandemic was the basis of the unprecedented negative impact generated in socio-economic terms. This impact has been felt until now, and more will weigh on society in the future. The need to improve the health of the population and the recovery of national economies requires strengthening the capacity of the authorities to substantiate, formulate, and operationalize public policies suitable for solving public health problems.

From this perspective, the Cross-Country Analysis of The European Observatory COVID Response Monitor – HSRM (see <https://eurohealthobservatory.who.int/monitors/hstrm/hstrm-countries>) highlights two issues of interest: the ineffectiveness of the 3C trilemma (Cost, Coverage, Choice), and the fracture between strategic and operational planning. These deficiencies were adamantly reflected in the low resilience of the national health systems when facing the pandemic shock.

Considering the 3C trilemma an ideal and a benchmark for the success or failure of a health policy assumed the elimination of other determining factors for better policymaking. Equally, the increase in the well-being of the population after the period of economic-financial crisis (2008-2010) led to the exacerbation of the economic optimum of the Cost – Coverage – Choice model and was reflected, among other things, by the decrease in the share of general public expenditures for health in GDP.

If we refer to the last programming period 2014-2020, Eurostat statistical data shows that during the period 2014-2019, counterintuitively, most EU member states (15 out of 27) reduced the share of general public health expenditure in GDP. However, Romania is not among these states. The EU average 2014-2019 registered a negative value (Figure 1).

**Figure 1.** The overall rate of change of general government expenditure on health 2014-2019 and 2019-2020, at the level of the EU (%)



Source: Eurostat (gov\_10a\_exp).

Compared to 2019, in 2020, against the backdrop of the health crisis, all member states increased the value of these expenses (as a share of the national GDP). Romania even reached the EU average, but this was not automatically reflected in an increased resilience of the healthcare system to external shocks such as the COVID-19 pandemic. Thus, at the EU level, in the period 2020-2021, Romania, but also Bulgaria, Croatia, and Poland experienced a decrease in their resilience levels<sup>(1)</sup>.

Regarding the general government expenditure on health, broken down into categories (medical products, appliances and equipment, public health services, hospital services, outpatient services, and R&D Health), as a share of GDP, between 2014 and 2019, 11 EU Member States (Austria, Cyprus, Croatia, Estonia, Germany, Latvia, Lithuania, Luxembourg, Romania, Slovenia, and Spain) have increased the general government expenditure (as a share of GDP) both on hospital services and on outpatient services.

However, an increase in health expenditure does not automatically imply an increase in the ability to deliver health (which is the fundamental aim of the health system) or in the population's health level. Namely, in 2013 an estimation by the OECD and the European Commission upon health systems' efficiency highlighted that "up to 20% of total health care spending in Europe could be reallocated to better use, such as toward producing more health services." (EU Expert Group on Health Systems Performance Assessment – HSPA, 2019). Such a statement clearly shows the understanding that alternative policymaking is needed. Borrowing for a moment a term dear to monetary theory, "helicopter money" will not solve the problem. A better management of resources, and nudging consumers toward the consumption of better products, would go a long way in improving the resilience of the healthcare system.

This is also the case of Romania, which makes efforts to increase the budgetary allocations of the sector but continues to face an overall inefficient allocation and use of resources in the public health system. Despite extensive actions to modernize the national health system established through dedicated public policy documents (strategies, policies, plans, etc.) over time, the central pillar of this system remains the hospital sector, which is still underfunded. However, "half of the resources of the Single National Health Insurance Fund (FNUASS) are allocated to hospital care, leaving less than half for primary healthcare, specialist outpatients, medicines, other services, and medical technologies". (Romanian Government, National Health Strategy 2022-2030 "Together, for health", p. 16)

In Romania, there is an improvement in certain established indicators for assessing the health status of the population (Figures 2-6). However, life expectancy remains among the lowest in the European Union (the EU27 average being 80.1 years) although it has increased by more than three years since 2004 (from 71.4 years to 75.6 years in 2019). In addition, during the period 2007-2020, healthy life expectancy decreased by 1.5 years in Romania (Figure 4).

The low level and modest rate of increase in life expectancy reflect "unhealthy behaviours, socioeconomic imbalances, as well as deficiencies in the provision of and access to health

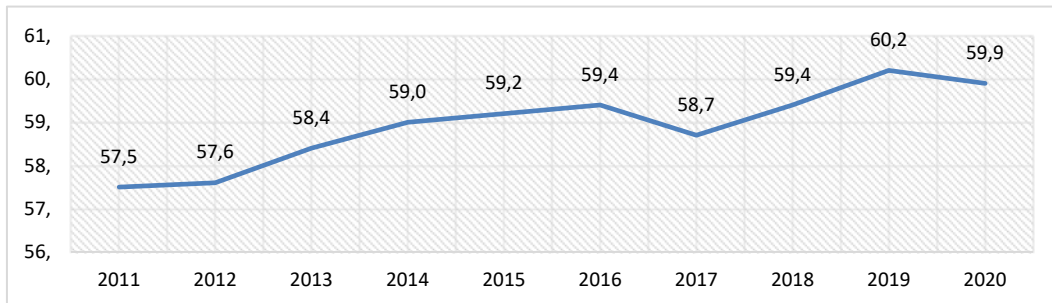
services” (Romanian Government, National Health Strategy 2022-2030 “Together, for health”, p. 11). It is the opinion of these authors that Romanian policies should aim to reduce the negative effects of unhealthy behaviours via the change of behavioural consumption patterns – a solution that would free national resources to be destined for primary healthcare.

According to the WHO statistics for Romania regarding the number of deaths in 2019 directly caused by behavioural and environmental risk factors (Our World in Data), the first three categories of risk factors are behavioural (high systolic blood pressure (28.79%), high body-mass index (12.85%), and smoking (11.90%)). These three risk factors amass 53.54% of the total deaths. These are followed by other 3 risk factors, also of behavioural origin, which produce 22.74% of total deaths (diet high in sodium (8.48%), high fasting plasma glucose (8.28%), and alcohol use (5.98%)). Practically, a limited number of non-communicable diseases, especially chronic diseases, have a negative impact on disability and mortality, especially avoidable, and are responsible for over 76% of the total number of deaths recorded in 2019 in Romania. Moreover, according to Eurostat (Figures 8 and 9), in 2019, Romania ranked 3<sup>rd</sup> in the ranking of EU Member States regarding the standardized death rate for preventable diseases/conditions (almost 296 per 100,000 inhabitants) and first place in the standardized mortality rate for treatable diseases/conditions (over 208 per 100,000 population). Like the other EU Member States, Romania has a standardized death rate for preventable diseases/conditions higher than the standard death rate for treatable diseases/conditions.

The current National Health Strategy 2022-2030 identifies as the main causes of this situation “the destruction of the networks that provided eminently preventive health services as close as possible to the citizen, the political indecision and the lack of an adequate understanding of the political decision-makers regarding the fundamental importance of prevention”, and also the lack of health education. (Romanian Government, National Health Strategy 2022-2030 “Together, for health”, p. 22)

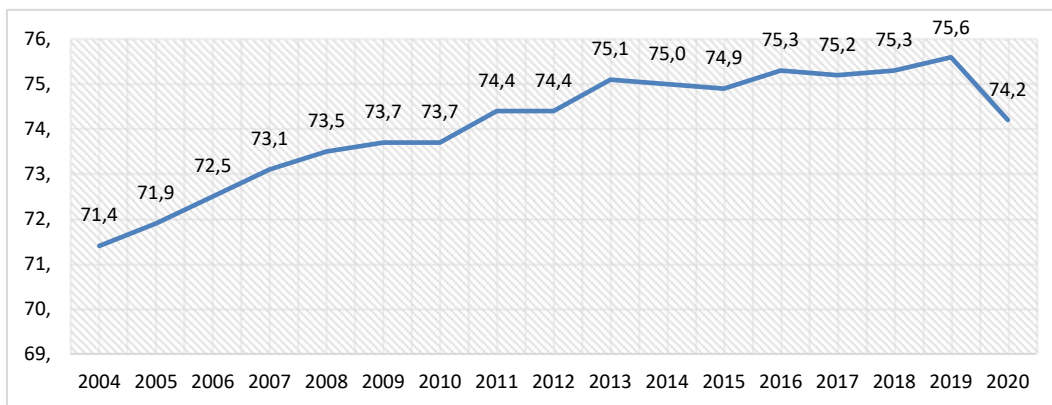
Therefore, ensuring the optimum point of the 3C trilemma is not comprehensive, despite a balance between the economic and the social plan. It is necessary to expand this model through a better adaptation to the national context by including other determining factors such as the *characteristics of the “political-administrative construction” process of public policy*. At the same time, special attention must also be paid to the *cultural context* understood as a catalytic or inhibiting factor of the authorities’ initiatives to achieve public policy objectives. The characteristics of the national culture explain to a good extent the level of awareness among the population about health issues, the trust/reluctance of the population towards the authorities, and their actions, including the degree of compliance with the rule/norm of the citizens. These societal reactions play an important role also when talking about lower-risk products, and alternatives in general. In other words, nudging consumers towards better alternatives and better lifestyles can be easier (or harder) depending on the concept explained just above.

**Figure 2.** Romania: Healthy life years in absolute value at birth (year)



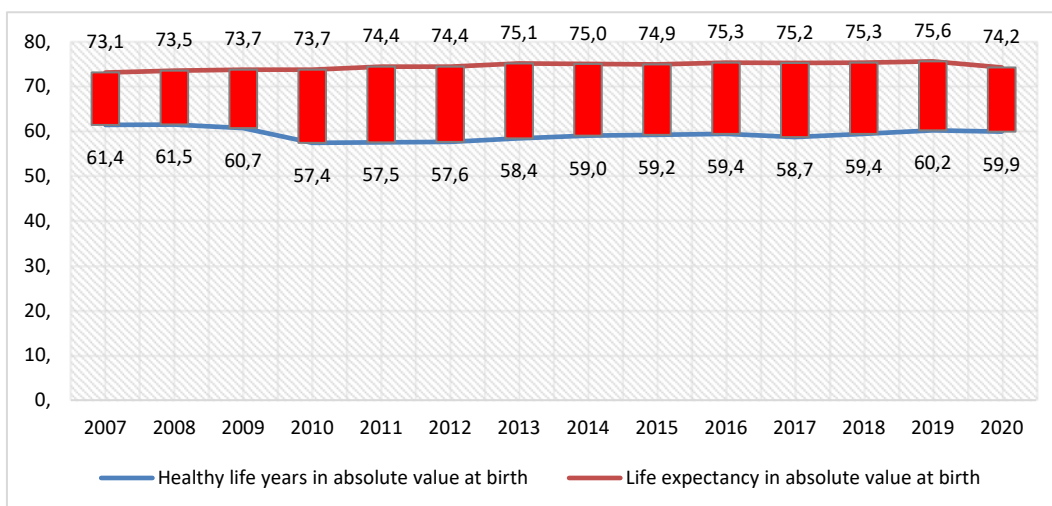
Source: Eurostat (hlth\_hlye).

**Figure 3.** Life expectancy in absolute value at birth (year)



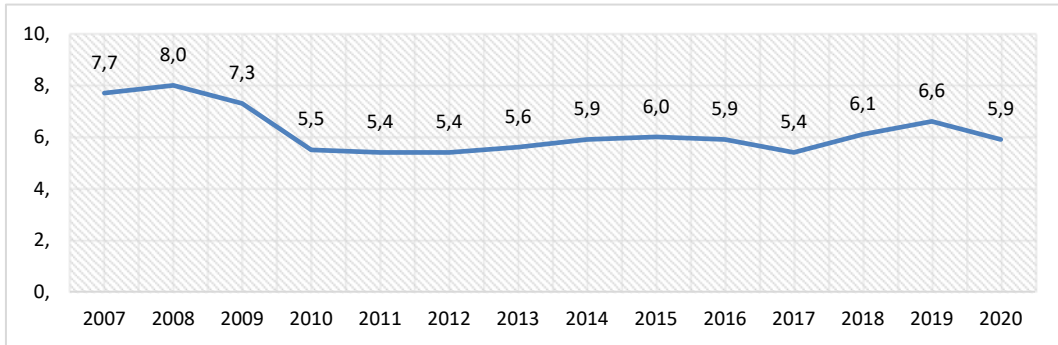
Source: Eurostat (sdg\_03\_10).

**Figure 4.** Healthy life years in absolute value at birth versus Life expectancy in absolute value at birth (year)



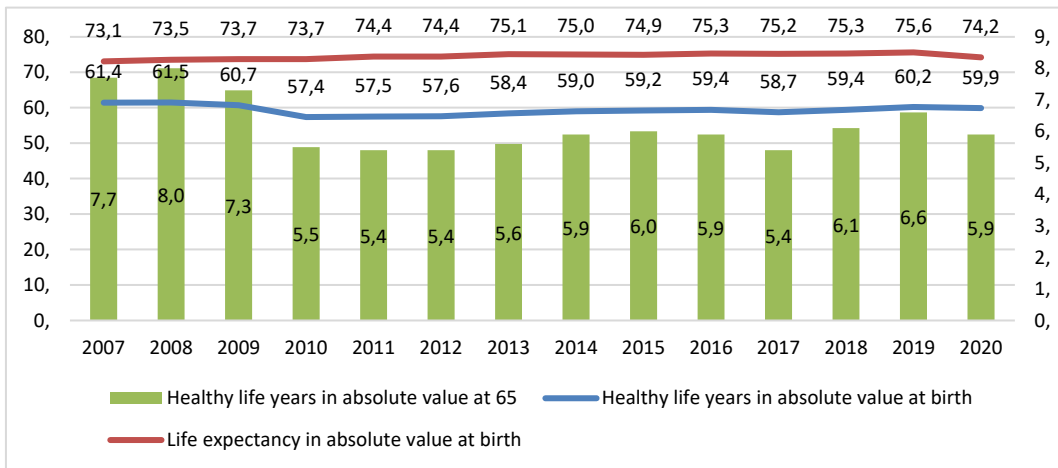
Source: Eurostat (hlth\_hlye; sdg\_03\_10).

**Figure 5.** Healthy life years in absolute value at 65 (year)



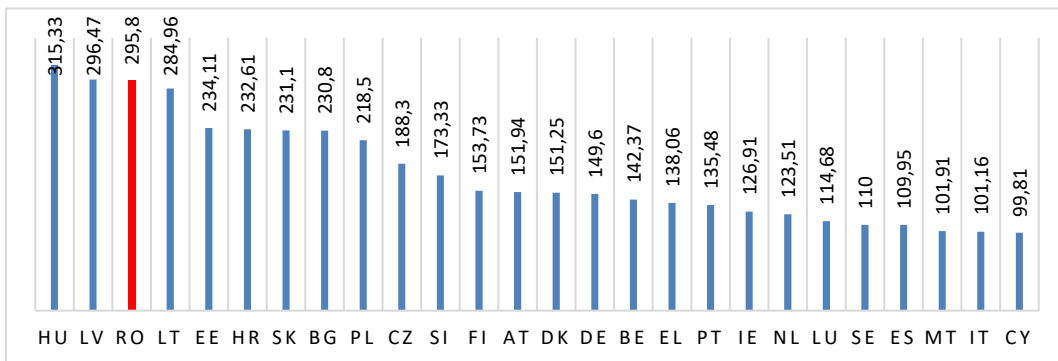
Source: Eurostat (hlth\_hlye).

**Figure 6.** Romania: Healthy life years in absolute value at birth x Life expectancy in absolute value at birth x Healthy life years in absolute value at 65 (Year)

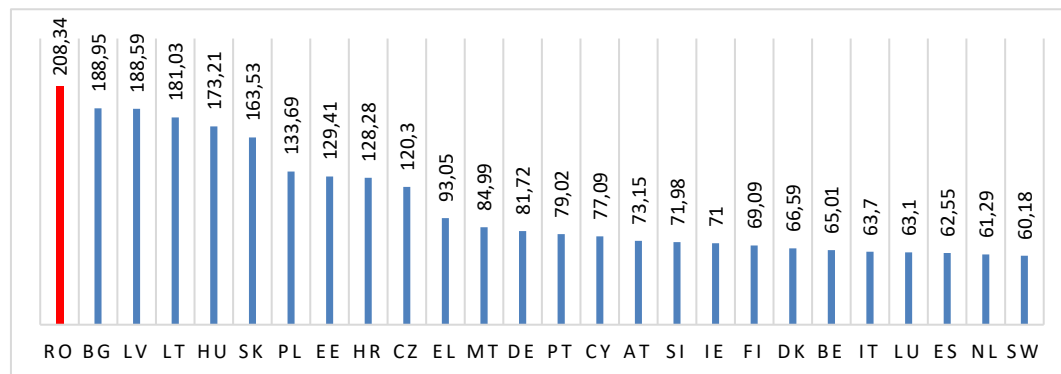


Source: Eurostat (hlth\_hlye; sdg\_03\_10).

**Figure 7.** Standardised death rates for preventable diseases/conditions, persons aged less than 75 years, 2019 (per 100 000 inhabitants)



Source: Eurostat (hlth\_cd\_apr). Data for France are not available.

**Figure 8.** Standardised death rates for treatable diseases/conditions, persons aged less than 75 years, 2019 (per 100 000 inhabitants)

Source: Eurostat (hlth\_cd\_apr). Data for France are not available.

### I. The 3C trade-off

Healthcare policymaking, too, cannot escape the 3C trilemma. The decision maker is pushed to pay attention to the objectives and constraints filtered through the 3Cs of decision-making (the trilemma Cost, Coverage, Choice), allowing it to also make different comparisons (Bițoiu and Rădulescu, 2015).

Policymakers must juggle three priorities when offering a public service: coverage, cost, and choice. They almost always have to sacrifice at least one of the three. As austerity bites, this equation is going to lead to very tricky decisions. Health is an area where the trilemma clearly applies (Buttonwood, 2011).

The cost of healthcare, especially in the case of healthcare provided to cover the effects of the consumption of non-merit goods, cannot rely upon the traditional cost factors. It must also take into account the externalities and the competition's failure which contributes to building certain costs. The actions of the public decision-maker must identify and optimally cover the social cost (Zilberman, 1999).

The marketplace needs to be designed in a way that makes consumers – both doctors and patients – more aware of the trade-off between cost and quality of the various healthcare interventions. It needs to do so without leading to a situation in which people receive ever-cheaper products without trading off any of their health (Ubel, 2009, p. 17). In order to do so, policymakers need to deal with a 3C trade-off; cover the negative externalities triggered by the consumption of the non-merit goods; mind the economic approach of subsidiarity specific to the multi-level governance as to reach a balanced solution for all stakeholders – citizens, economic agents, and the government. This last actor makes a map to cover the social costs created by negative externalities. It must be in line with both national decisions as well as European ones (see Dinu and Dumitrică, 2014). Economic development leads to changes in consumers' behaviour, with results that do not always correspond to the principles of sustainable consumption. The risk of irreversibly affecting the ecological balance requires focusing on administrative measures aimed at reducing negative

externalities. Sustainable economic development implies a set of quantitative, structural, and qualitative transformations, in the economy, in scientific research and manufacturing technology, in the functioning mechanisms and organizational structures of the economy, and last but not least, in the administrative mechanisms of the local authorities who must monitor, evaluate and regulate the entire process. Creating a map of public decision-making to deal with this market failure (externalities triggered by the non-sustainable consumption behaviour), using the tools offered by the multi-level governance and the principle of subsidiarity in order to provide a more efficient relationship between the costs and benefits of a sound policy-making. The application of the 3C model inevitably involves constant interaction with all stakeholders, an improved 5C model would imply even more though. Namely, it appears necessary to formulate decisions at an administrative level regarding negative externalities that take into account the possible contributions of all actors through the application of the principles of collaborative governance, in the context of wide-ranging national specific needs, as part of the newly defined dimensions of culture and conception. This is especially true when better alternatives are added to the market's mix. In fact, negative externalities can be lowered thanks to better decision-making of consumers – triggered by sound policy-making – in an obvious example of positive interaction between the different subjects of the 5C model.

## II. Mind the culture and conception

The culture of a nation represents a universal concept illustrating the “distinctive manner of their behaviour and the understanding of values, beliefs, regulations, and premises” (Moldoveanu, 2005, p. 166), being an element of Community empowerment<sup>(2)</sup>.

From this point of view, culture, the collective programming of thought that distinguishes the members of one society from another, is assumed to be the fourth element in our Cs pentagon model. Minding the culture when dealing with the 3C trilemma is the key to a more careful measurement of cost by better valuing both the health care and the health status of the population (assessed later through the fifth element: the conception of the system).

We argue that Hofstede's sixth dimensions described below (Hofstede, 2011) are to be considered in the health policy-making process, especially for the substantiation of the health cost assessment for non-merit goods.

1. *Power Distance*, related to the different solutions to the basic problem of human inequality (PDI).
2. *Uncertainty Avoidance*, related to the level of stress in a society in the face of an unknown future (UAI).
3. *Individualism* versus *Collectivism*, related to the integration of individuals into primary groups (IND).
4. *Masculinity* versus *Femininity*, related to the division of emotional roles between women and men (MAS).
5. *Long Term* versus *Short Term Orientation*, related to the choice of focus for people's efforts: the future or the present and past (LTO).
6. *Indulgence* versus *Restraint*, related to the gratification versus control of basic human desires related to enjoying life (IVR).



In Hofstede’s 6D model countries are positioned relative to other countries through a score defining each dimension. The dimensions are statistically distinct and do occur in all possible combinations, although some combinations are more frequent than others (Hofstede, 2011, p. 8).

The choice of the 6th dimension (IVR, is based on the result of the correlation between the values of this indicator for the EU28 member states (2014-2019) and the national averages of the weights of government budget allocations in GDP for health from the time interval chosen as a reference (see the Appendix).

Methodologically, the tested hypothesis was that the EU is an integrated macro-system within which, in a programmatic period regulated by European norms and standards, the Member States must align their national policies with the European benchmarks by contextualizing them to the national specific needs. From the programming period 2014-2020 only the interval before the start of the COVID-19 pandemic (the interval 2014-2019) was selected. For this reason, the average of the weights of budgetary allocations in GDP for health was used for the entire period 2014-2019, instead of selecting the values of this budgetary indicator for a single year.

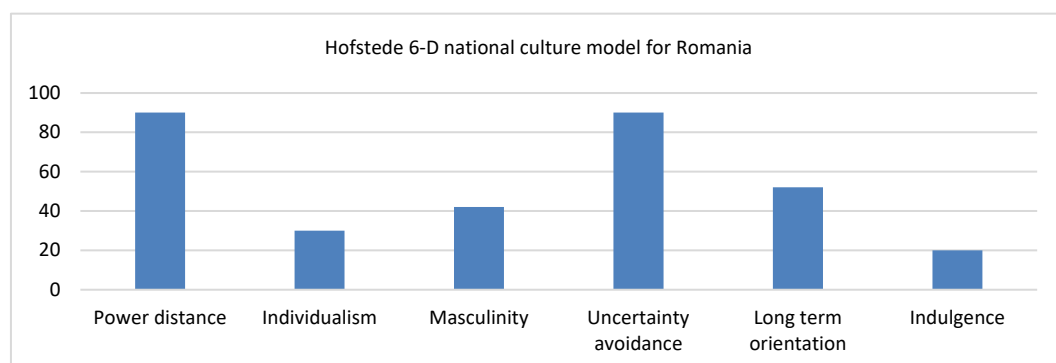
The statistical correlation between the ranking of general government expenditure on health for all 28 EU Member States (the average of this expenditure for the period 2014-2019) and the Hofstede 6-D national culture model shows an important correlation *only* between the budgetary indicator and the sixth dimension of the Hofstede model. Therefore, the strong, positive correlation ( $\rho = 0.73$ ,  $p = 1.28087E-05$ ,  $R^2 = 0.53$ ) and this result is significant (at probability value  $p < .01$ ).

In short, certain characteristics of the pattern of national culture (the dimensions of *Indulgence* versus *Restraint*) explains 53% ( $R^2 = 0.53$ ) of the levels of budget allocations.

### III. The pattern of national culture of Romania in accordance with Hofstede’s 6-D model

The figure below provides a synthesis of the scores calculated for Romania on the six dimensions of Hofstede’s 6-D national culture model.

**Figure 9.** Overview of the deep drivers of the Romanian culture relative to other world cultures



**Source:** data retrieved from <https://www.hofstede-insights.com/country-comparison/romania/>, January 9, 2023.

When examining these scores, we keep in mind the described characteristics of the national culture:

- PDI – 90 – Romania scores high on this dimension (score of 90) which means that people accept a hierarchical order in which everybody has a place and which needs no further justification. Hierarchy in an organization is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to be told what to do and the ideal boss is a benevolent autocrat.
- NB (Mc Breen et al., 2011, p. 12). The younger agents are more susceptible to following certain rules, and unlikely to provoke the higher-status agent (Mc Breen et al., 2011, p. 12). This could lead to some interesting policy conclusions. For instance, that an invitation from the higher-status agent to the lower-status agent to change the behaviour towards better alternatives (think about moving from smoking to the use of e-cigarettes and HTPs, or from eating high trans-fat-content goods to lighter food) could result in positive effects on the youth.
- UAI – 90 – Romania scores 90 on this dimension and thus has a very high preference for avoiding uncertainty. Countries exhibiting high Uncertainty Avoidance maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. In these cultures, there is an emotional need for rules (even if the rules never seem to work). Time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, innovation may be resisted, and security is an important element in individual motivation.
- IND – 30 – Romania, with a score of 30 is considered a collectivistic society. This is manifest in a close long-term commitment to the member “group”, be that a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount and overrides most other societal rules and regulations. Society fosters strong relationships where everyone takes responsibility for fellow members of their group. In collectivist societies offence leads to shame and loss of face, employer/employee relationships are perceived in moral terms (like a family link), hiring and promotion decisions take account of the employee’s in-group, and management is the management of groups.
- MAS – 42 – Romania scores 42 on this dimension and is thus considered a relatively Feminine society. In Feminine countries the focus is on “working in order to live”, managers strive for consensus, people value equality, solidarity and quality in their working lives. Conflicts are resolved by compromise and negotiation. Incentives such as free time and flexibility are favoured. The focus is on well-being; status is not shown.
- LTO – 52 – Normative societies which score low on this dimension, for example, prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Those with a culture that scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future.
- IVR – 20 – With a very low score of 20, Romanian culture is one of Restraint. Societies with a low score in this dimension tend towards cynicism and pessimism. Also, in contrast to Indulgent societies, Restrained societies do not put much emphasis on leisure time and control the gratification of their desires. People with this orientation have the perception that their actions are Restrained by social norms and feel that indulging themselves is somewhat wrong.

#### **IV. Implementing Subsidiarity – Embracing National Modern Policy Making – How to Minimize Harm in a Society with Lower State’s investment in Health Care**

As seen above the Romanian health system is facing a 3C trilemma, and according to Hofstede’s 6 D model, the Romanian citizens are looking at their policymakers to solve the trilemma and deliver a better healthcare system to patients.

Taking into consideration the principle of subsidiarity – whereby decisions should be taken at the most immediate or local level possible – the policymakers in Romania should consider adopting a policy that minimizes the harm in society resulting from the consumption of non-merit goods. In order to do so, a better classification of non-merit goods should be performed. This should take into consideration both the risk profile of the goods and the potential impact that such goods can have on the health of the consumers. For instance, if a scale from 0 to 100 defining degrees of toxicity is created (where 0 is the lowest possible value of toxicity, and 100 is the highest one) a product standing at 100 should be treated in a much harsher way than another product tested at 15.

Countries such as the UK, Australia, and New Zealand differentiate between non-merit goods based on their risk profile, presenting an example of modern policymaking. To prevent NCDs, the WHO (2016) recommends States impose a Sugar-Sweetened beverages tax and create subsidies on fruit and vegetables.

According to research led by Liu, Veugelers, Liu, and Ohinmaa (2022), fifteen studies were conducted in six countries (the US, Australia, South Africa, the UK, and Mexico). These studies revealed that the enforcement of a sugar tax improved the health-related quality of life of citizens. Savings from avoided health care costs and revenue from the sugar taxes (totaling US\$87 to US\$167,799 million) exceeded intervention costs (US\$5 to US\$2177 million). Each of the 15 studies concluded that the sugar tax constitutes a cost-effective intervention that resulted in relevant cost savings.

Romanian’s fiscal policy towards nicotine consumption shows a clear differentiation between products. Cigarettes are recognized as the most harmful form of nicotine consumption and thus taxed at the highest level, whereas Heated Tobacco Products and E-cigarettes are taxed at a significantly lower level. Given that Romania presents a large number of smokers, and that the country’s smoking incidence continues to rise, it is the opinion of these authors that policymakers should further increase the existing differential, incentivizing consumers towards better products.

#### **V. Conclusions. The scenario of the coming years: building the 5C pentagon for better health policymaking**

We aim to also include the conception element in our 5C pentagon, to improve the cost assessment, by helping the decision-maker to better value the health service that the population needs.

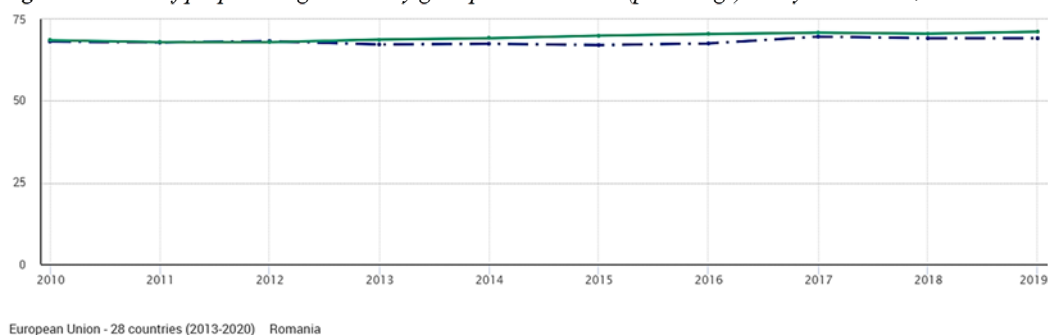
Conception must be reflected in the public health policy process (measures, interventions, and actions/inactions) just like utility mirrors prices. The process must correct the non-action approach specific to the laissez-faire state and more and more present in societies with hard-tested economies and, in particular, with a decentralised health management system.

This is also the case in Romania, a state with a national budget bent by a dangerously expanding public debt (around 50 percent of GDP), and hard tried by the deceleration of economic growth<sup>(3)</sup>. In addition, the transfer of the management of the sanitary system at the subnational level is affected by the lack of a clear division of competencies on the matter between the central and local administrative levels. This leads, on the one hand, to the dilution of the responsibility of the authorities at both administrative levels and; on the other hand, to the emphasis of the so-called “leaky bucket” economic phenomenon in the budgets of decentralized hospitals which end up taking over medical emergency cases that should fall under the competence of hospitals subordinate to the Ministry of Health (Nicolescu et al., 2016, pp. 75-81). Additionally, the major deficit of the FNUASS is generated by the fact that only a third of the insured pay health contributions to this fund (Romanian Government, National Health Strategy 2022-2030 “Together, for health”, p. 16).

For Romania, an important lesson of the COVID-19 health crisis is precisely the avoidance of premature withdrawal of budgetary support (Romanian Government, Tax and Budgetary Strategy for 2022-2024, p. 8) and the need for adequate coordination by the state of its policies, including through better regulation. A first reaction to “dismantle” public health policies, consists in expanding the tax base for social health insurance contributions by establishing the payment obligation on all incomes obtained by natural persons, regardless of their nature (Romanian Government, National Health Strategy 2022-2030 “Together, for health”, p. 30).

Balancing the FNUASS would allow a financial consolidation of the health programs it supports and the improvement of the prevention component. However, the measure must be corroborated with the adoption of coherent and formalized policies to combat the main behavioural risk factors (smoking, alcohol consumption, and poor diet) directly associated with a large segment (26.36%) of all deaths in Romania. In this sense, the existence of alternatives that produce lower costs to society represents a great opportunity to decrease costs and improve public health outcomes.

To build our argument and calibrate the conception element of our pentagon, we turn to a subjective measure of how people judge their health in general on a scale from “very good” to “very bad”. This particular Eurostat indicator is expressed as the share of the population aged 16 or over perceiving itself to be in “good” or “very good” health. People’s perceived general health has been found to be a good predictor of people’s future healthcare use and mortality, thus indicating the direction of government intervention.

**Figure 10.** Share of people with good or very good perceived health (percentage) – 16 years or over, 2010-2021


**Source:** Eurostat (SDG\_03\_20). The data stem from the EU Statistics on Income and Living Conditions (EU SILC).

The aggregates, be them for the EU 27 or EU 28 (as shown in Figure 10) are always below Romania's trend, showing a strong self-assessed good health of the population.

The current non-existence of such policies and the laxity of public decisions (including their insufficient substantiation) can be explained by the increasing percentage of the Romanian population with very good or good self-perceived health, increasing by over 13% in the year 2021 (28%) compared to 2019 (31.8%) (Eurostat (hlth\_silc\_10), accessed February 26, 2023), despite the negative impact of the COVID-19 pandemic. The situation remains, however, unchanged among people with a higher level of education.

### V.1. The scenario of poor diet – crosschecking data and measures

**Figure 11.** Body mass index (percentage) – 2014 vs. 2019

		BMI	Underweight	Normal	Obese
GEO	TIME				
European Union - 27 countries (from 2020)	2014	2.9	47.5	14.9	
European Union - 27 countries (from 2020)	2019	2.9	45.8	16.8	
European Union - 28 countries (2013-2020)	2014	2.8	47.0	15.4	
European Union - 28 countries (2013-2020)	2019	:	:	:	
Romania	2014	1.6	44.5	9.1	
Romania	2019	1.0	42.5	10.5	

**Source:** Eurostat (HLTH\_EHIS\_BM1E).

### V.2. The scenario of smoking habit – crosschecking data and measures

**Figure 12.** Daily smokers of cigarettes (percentage) – 2014 vs. 2019

		European Union - 27 countries	European Union - 28 countries	Romania
SMOKING	TIME			
Total	2014	19.8	18.4	19.8
Total	2019	18.4	:	18.7
Less than 20 cigarettes per day	2014	12.9	12.5	14.9
Less than 20 cigarettes per day	2019	12.6	:	13.3
20 or more cigarettes per day	2014	6.1	5.0	4.9
20 or more cigarettes per day	2019	5.9	:	5.4

**Source:** Eurostat (HLTH\_EHIS\_SK3E).

### V.3. The scenario of alcohol abuse – crosschecking data and measures

**Figure 13.** *Frequency of heavy episodic drinking (percentage) – 2014 vs. 2019*

GEO	TIME	FREQUENC			
		At least once a week	Every month	Less than once a month	Never or not in the last 1...
European Union - 27 ...	2014	4.9	14.7	19.7	60.8
European Union - 27 ...	2019	3.7	14.8	18.0	63.5
European Union - 28 ...	2014	5.5 (e)	14.4 (e)	20.2 (e)	59.9 (e)
European Union - 28 ...	2019	:	:	:	:
Romania	2014	10.6	24.3	15.0	50.1
Romania	2019	11.1	23.9	21.5	43.5

**Source:** Eurostat (HLTH\_EHIS\_AL3E).

In turn, this perception can also be explained through the lens of the characteristics of the national culture presented above, among which we distinguish the high level of conformity of the Romanian society to the *de facto* situations it faces, including negative ones. Acceptance by resignation of the shortcomings of the national health policy, although counterintuitive, can be reflected at the individual level by inducing the citizens to overestimate their own health status.

The context is estimated to be a much more worrying one if we refer to the unquantified effects of goods that are not fiscally highlighted, some of them counterfeited: namely, the black market of cigarettes and alcohol, but also the production of alcohol by Romanian households.

This worrying situation could be improved by modern policymaking, directed to nudge consumers towards better alternatives, alleviating those negative effects that are intrinsic to a market failure. A risk-based regulation (for instance, based on the sugar contained in specific products, or on the toxicity levels of goods such as cigarettes) could improve the resource allocation of the market, producing a concrete improvement in both health and economic terms. The presence of better alternatives in the market urges public authorities to move towards a more courageous kind of policymaking, where different products are treated differently, and where market failures are addressed properly. In doing so, the economic and financial cost of Romanian healthcare will decrease, helping public accounts, increasing efficiency, and bettering public health outcomes.

#### Notes

- (1) According to the Pandemic Resilience Index, the resilience of the health system has dropped from an average to a below average level. See <https://consumerchoicecenter.org/pandemic-resilience-index-2022/>
- (2) Community empowerment refers to the social action by means of which individuals play an active role in the decisions affecting their communities (international, national, local). Community empowerment stimulates involvement, participation, commitment and increases the community's control in the process of elaborating and executing these decisions.
- (3) See National Strategy and Forecast Commission, <https://cnp.ro/>

## References

- Bițoiu, T.I. and Rădulescu, C., 2015. The 3c Decision Cockpit for A Market-Oriented Public Administration, SEA – Practical Application of Science, Romanian Foundation for Business Intelligence, Editorial Department, Issue 8, pp. 127-134, June.
- Mc Breen, J., Di Tosto, G., Dignum, F., Hofstede, G., 2011. *Linking Norms and Cultures*, IEEE Computer Society.
- Dinu, T.I. and Dumitrică, C.D., 2014. Covering the social costs of market failure – the unsub of the value added, *Theoretical and Applied Economics*, Vol. XXI, No. 12(601), pp. 51-62.
- Hofstede, G., 2011. Dimensionalizing Cultures: The Hofstede Model in Context, Online Readings in Psychology and Culture, Unit 2. Retrieved from <<http://scholarworks.gvsu.edu/orpc/vol2/iss1/8>>
- Liu, S., Veugelers, P.J., Liu, C. et al. The Cost Effectiveness of Taxation of Sugary Foods and Beverages: A Systematic Review of Economic Evaluations, *Appl Health Econ Health Policy* 20, pp. 185-198 (2022). <https://doi.org/10.1007/s40258-021-00685-x>
- Moldoveanu, G., 2005. *Analiză și comportament organizațional*, Economic Publishing House, Bucharest.
- Niculescu, C.E., Bițoiu, I.T., Rădulescu, C.R., 2016. The challenges of the Romanian healthcare system-bigger means state of the art competencies for the more and more complex healthcare services demand. In Țăranu, A. (Ed.), Proceedings of the third Academos Conference 2016. Governing for the future: interdisciplinary perspectives for a sustainable world, Medimond, Bologna, pp. 75-81.
- Ubel, P.A., 2009. *The Price of Life and the Cost of Health Care: Why the Free Market Alone Can't Fix Health Care*, Harvard Business Review Press, Product #: 3944BC-PDF-ENG, Publication date: 20 January 2009.
- Zilberman, D., 1999. *Externalities, Market Failure, and Government Policy*, EEP 101, retrieved on January 19 2023, available at <<http://are.berkeley.edu/courses/EEP101/Detail%20Notes%20PDF/Cha03,%20Externalities.pdf>>
- Buttonwood, 2011. The return of rationing. The difficult decisions needed in an age of austerity, *The Economist*, print edition Finance and Economics, June 23, 2011.
- EU Expert Group on Health Systems Performance Assessment (HSPA), 2019. Tools and methodologies to assess the efficiency of health care services in Europe. An overview of current approaches and opportunities for improvement. Report by the Expert Group on Health System Performance Assessment, Luxembourg: Publications Office of the European Union, p. 7.
- European Observatory on Health Systems and Policies. The COVID-19 Health Systems Response Monitor (HSRM): Cross-Country Analysis. <<https://eurohealthobservatory.who.int/monitors/hcrm/hcrm-countries>>
- Our World in Data, <<https://ourworldindata.org/grapher/number-of-deaths-by-risk-factor?tab=table>>
- Romanian Government, National Health Strategy 2022-2030 “Together, for health”. Document pending advice and approval. Retrieved from <[https://www.ms.ro/wp-content/uploads/2022/11/SNS\\_2022-2030.pdf](https://www.ms.ro/wp-content/uploads/2022/11/SNS_2022-2030.pdf)>
- Romanian Government, Tax and Budgetary Strategy for 2022-2024, p. 8.
- The Consumer Choice Center. The Pandemic Resilience Index. Available at <<https://consumerchoicecenter.org/pandemic-resilience-index-2022/>>

## Appendix

**Table 1.** The correlation between public health expenditure pattern (2014-2019) and the 6-D of the Hofstede model of national culture (at the EU level)

The Member States of the European Union (2014-2019)	General government expenditure (as a share of gross domestic product) <sup>*)</sup> On health (Average 2014-2019)	The 6-D of the Hofstede model of national culture					
		Power Distance	Uncertainty Avoidance	Individualism versus Collectivism	Masculinity versus Femininity	Long Term versus Short Term Orientation	Indulgence versus Restraint
Italy Beveridge	6,90	50	76	70	75	61	30
Spain	6,10	57	51	42	86	48	44
Austria	8,17	11	55	79	70	60	63
Germany	7,23	35	67	66	65	83	40
United Kingdom	7,55	35	89	66	35	51	69
Sweden	6,90	31	71	5	29	53	78
Finland	7,25	33	63	26	59	38	57
Denmark	8,38	18	74	16	23	35	70
Croatia	6,25	73	33	40	80	58	33
Belgium	7,70	65	75	54	94	82	57
Poland	4,73	68	60	64	93	38	29
Lithuania	5,80	42	60	19	65	82	16
Bulgaria	5,15	70	30	40	85	69	16
Slovakia	7,32	100	52	100	51	77	28
Slovenia	6,62	71	27	19	88	49	48
Romania	4,37	90	30	42	90	52	20
Estonia	5,18	40	60	30	60	82	16
Hungary	4,75	46	80	88	82	58	31
Czech R.	7,50	57	58	57	74	70	29
Latvia	3,82	44	70	9	63	69	13
France	8,08	68	71	43	86	63	48
Portugal	6,32	63	27	31	99	28	33
Netherlands	7,73	38	80	14	53	67	68
Cyprus	2,82	60	35	57	100	45	50
Greece	5,10	28	70	68	35	24	65
Ireland	5,25	40	60	50	70	64	56
Luxembourg	5,07	56	59	47	96	47	66
Malta	5,40	50	76	70	75	61	30
Correlation between the general government expenditure (as a share of GDP) on Health (Average 2014-2019) and each of the 6 D Hofstede's model of national culture		rho = -0.32	rho = -0.15	rho = 0.22	rho = 0.14	rho =0.29	<b>rho = 0,73</b>
		Error; no correlation					Highly correlated (Probability value: p < .01) The coefficient of determination R <sup>2</sup> =0,53

<sup>\*)</sup> Eurostat (gov\_10a\_exp), retrieved on 22 March 2021.