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## Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics  
Düsternbrooker Weg 120  
24105 Kiel (Germany)  
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)  
<https://www.zbw.eu/econis-archiv/>

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## The Possibilities of Transition from Health Insurance Contributions to Earmarked Health Tax in the Czech Republic<sup>1</sup>

Jan MERTL\*

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### Abstract

*This article deals with three different approaches to health care consumption and financing that have evolved in health policy of developed countries. After classifying them, it focuses on public financing the necessary health care that should be universally available. Czech system of public health insurance has been established at the beginning of the 1990's as a compromise between the institutional framework and aims, which were highly relevant during early phase of economic transformation. The article analyses the possibilities of transition from this system to earmarked health tax on personal income as a dominant source of health care financing, while preserving the current level of fiscal capacity for health budgets. Simultaneously the socio-economic consequences of such a system are discussed, while keeping social and health policy context relevant.*

**Keywords:** *health insurance, personal income tax, health policy, earmarked health tax*

**JEL Classification:** I13, H20, H51

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### Introduction

Health care financing has been the challenge for public finance and public policy because of ever rising costs and gaining higher shares of public budgets. Simultaneously it has to deal with the progress of medicine, e.g. availability of new treatment methods and diagnostic techniques (medical inflation). Changes in demographic behaviour, higher incidence of civilization diseases and situation on labour market influence the resources, performance and costs of health care

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\* Jan MERTL, The University of Finance and Administration, Estonská 500, 101 00 Prague 10, Czech Republic; e-mail: jan.mertl@outlook.com

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systems. We expect a lot from national health care system and its effectiveness has multiple criteria (cost-effective and sustainable financing, equity and availability, responsiveness and quality of care), which makes it hard to achieve the optimal settings in particular time. The task is similar to general magic rectangle of economic policy – management of two or three macroeconomics variables is relatively easy, but keeping all four in good shape is a masterpiece of fiscal and monetary policy. On the income side of health system, it is crucial to set optimal financial flows that will provide adequate and stable resources for health care financing. Therefore, the topic of this research article is highly important.

On the theoretical level, the basic anchor of this article is the analysis of three different approaches to health care provision based on different position of the patient in the system – or to be more precise, different incentives for health care provision. The article argues that there is not a single type of demand for health care, but when looking close at the demand phenomenon, we can identify three subtypes of it, based on objective need evaluation and subjective decision split into two different paths (Mooney, 1992). Then, we will focus on how to finance the largest part of health care that is primarily based on objective need. We are aware that voluntary health systems extension financed from private resources can and should exist, but they are out of this article's scope. This approach is rooted in the nature of health economics and health policy, where financing methods are closely connected with the institutional, social and medical aspects of the system and its governance (Jakubowski and Saltman, 2013). In this context, we perform the theoretically informed review of public health financing policy options and possibilities.

The aim of this article is to show the reasons and possibilities of transition from public health insurance contributions to the earmarked health tax as a dominant health care financing source in the Czech Republic. Current system of Czech health insurance is a result of an experiment with return of multiple employment-based health insurance companies in the 1990's. However, the principle of employment-based health insurance currently does not comply with the reality of labour market with high mobility of employees, even among industry branches. Simultaneously in the system, the patients consume the majority of health care based on their objective needs. It means that the majority of health care consumption is universalistic and does not have individual limitation that could be tied to specific agreement with insurance company.

Current system also works with several categories of people, effectively segmenting citizens into four main social groups. They will be described later, but initially it can be said that this categorization is debatable now. This is facilitated by the fact, that when this system was introduced at the beginning of the 1990's, the employees were the main group that was supposed to carry the insurance

payments, since other forms (such as self-employed persons) only started to emerge. It also made sense to declare that the government will pay contributions for 'state insured' people, so that the health insurance companies (health budget) will receive adequate total contributions. Based on this socio-economic background, this article seeks to contribute to the ongoing public debate about Czech health system settings.

Scientific methods used to write this article include macroeconomic evaluation of health system financial flows, public policy evaluation of health resources' settings in the Czech Republic, projection of suggested changes into health system construction and synthesis of observed trends from the health and social policy point of view.

### **The State of Research Area and Theoretical Background**

General social policy (Krebs, 2015), health policy and health economics theoretical background applies for this article. Health care system has strong and highly visible social dimension in a view of illness as an undesired state of distress and suffering (Durdisová and Mertl, 2013) and knowledge of social medicine as a discipline (Holčík, 2009).

Two levels of solidarity appear in health systems and are inevitable for sustainable financing of universal health care. The first level is based on the solidarity between rich and poor (solidarity in income), second one based on the solidarity between healthy and sick people (solidarity in health). The second level is even more important for sustainability than the first one. The reason is that the risks selection in health is ethically, economically and medically highly problematic and thus is not recommended to be allowed at all, targeting community rating in health insurance. The main reasons are ethical, medical, legal and economic and have been specified in more detail earlier (Mertl, 2011).

Demand for health care is segmented and includes both realized and explicitly expressed demand, as well as implicitly hidden demand, and even the need for unwanted health care (Mooney, 1992). The demand for health care suffers from market failure (Arrow, 1963) and adverse selection when purchasing health insurance (Cutler and Zeckhauser, 1997). If we analyse the health care demanded by patients based on their budget constraints, elasticity of demand for health care is essential term. If demand for health is based on private spending, according to available evidence (Feldstein, 1971) it is rather inelastic, meaning that its reactivity to the price change is rather low and therefore it cannot be expected that the market structure grown on this demand will be flexible and perfectly competitive.

Similarly, problems could be expected in the private health insurance mechanisms (Feldstein, 1973), caused by parallel existence of direct demand based on out of pocket payments and indirect demand through health insurance, and also because of the existence of information asymmetry and adverse selection (Arrow, 1963). On the specific principles of health insurance, the works of Němec (2008) and Lieberthal (2016) provide the typology of public and private health insurance systems available. The market for private health insurance suffers from market failure, which makes very difficult or even impossible for customers to obtain adequate health insurance according to their demand for health care function throughout their life cycle. Therefore, social (public) health insurance systems have emerged (for example in Germany), which are compulsory for selected social groups and greatly reduce the described problems with demand. Some countries like Great Britain replaced the health insurance mechanisms as a whole with direct financing from government budget, providing and financing health care for every citizen as mixed public goods.

Generally, it is clear, that health care and insurance markets are incomplete and optimal solution cannot be achieved there spontaneously (Mwachofi and Al-Assaf, 2011). Together with health equity and regional and social availability requirements, it leads to universal coverage of objectively needed health care financed by single-payer or multi-payer systems. Health economics knows several methods of gathering resources for health care financing:

- general taxation,
- earmarked taxation (the hypothecation of taxes for health),
- social health insurance,
- two-tiered health insurance (income-related and nominal premiums, currently only in Netherlands),
- private health insurance (currently usually highly regulated as an example of ‘Obamacare’ in the USA shows),
- prepaid financing schemes,
- out-of-pocket payments (primarily regulatory effect on health care consumption in universal part of the system).

Various countries and health systems financing models use specific mix of those possibilities (Mossialos et al., 2002). Every of them has its own logic, and in reality, they sometimes overlap or are used in parallel. Comparative analysis shows that no ‘one size fits all’ or most effective approach exists (OECD, 2011). In addition, each of them has significant shortcomings that have to be minimized in order to gain a chance to their successful implementation. It also means that their theoretical anchors are sometimes modified when used in practice (Lieberthal, 2016).

The health expenditures are not just a consumption, but at least significant parts of them could be considered as an investment (Suhrcke et al., 2005; Figueras and McKee, 2012). As for specific earmarked health taxation resources, the work of Doetinchem (2010), the discussion of public policy at WHO (Prakongsai et al., 2008) and in Great Britain (Keable-Elliott, 2014) should be accounted. Theoretical foundations and international experience with earmarking have been summarized at WHO level recently (Cashin, Sparkes and Bloom, 2017). In addition, the current situation in the Czech health care system has been assessed (Mertl, 2015).

The volume of public health expenditure has been every year increasing in absolute terms and in the Czech Republic in the year 2015, it has reached nearly 270 billion CZK (ÚZIS, 2016). Health expenditure is however very broad concept today. We finance research, technologies, buildings and health networks, drugs and medical professionals. Thus, unlike in the past, when the main goal was to finance a patient-doctor relationship and undergoing treatment often with palliative parts, nowadays we finance a crucial sector of national economy with significant synergic and spill over effects to the whole socio-economic system. Therefore, it makes sense to discuss how the universal part of the system will be financed within public budgets.

### **Three Categories of Health Care Services and Provision**

Historically, the health care paradigm has been evolving and the health policy must respond to this development (Mooney, 1992). This will also clarify suitable schemes of financing. This approach can be broken down to classify health care and access to it as follows (Mertl, 2012):

The first category is the oldest and by default represents the largest and most widely applied part of medicine. Here we are talking about the medicine saving a life and health, the doctor is the one who performs ‘medical best practice’ care and is responsible for it. Health care in this scheme must be provided – is based on an objective indication. We see medicine as a sovereign art, which should not be wasted in any way, and if its stock is in a deficiency, then the criterion for its usage is the severity of the case and the patient’s prospects for the future. It is interesting that at this stage (historically), doctors were able to make under a broad social consensus such decisions that today – in terms of relative abundance of resources and capacities – would be seen as very problematic. In time, the scope of this type of health care grew with the best practice medical standards. Gradually, the provision of health care has become civilization and medical achievement of systematic evidence-based practices leading to healing, not just

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random human attempts to correct mechanisms of natural selection. Obligatory nature of providing this care, which always will form a crucial part of medicine, however, remained unchanged.

The second category, where the advancements of medicine made patient appear as a client, not only as a thinking biological machine, which should be repaired by using drugs, surgeries etc. The patient has its own priorities and health care demanded – he wants it. This type of medical care may not even have direct medical indication. If he wants something, he should pay for it privately, because it improves his individual benefit. The question arises: does this belong in the health care space at all? Are plastic surgery, treatment plan options or a luxurious room in the hospital compatible with medical ethics? Does a doctor not waste his skills and talent in the care of individual patient's wishes, when he should devote his effort to more severe cases? This has clear reminiscences to the previous category, where on one hand, you have many sufferers that the doctor has to choose from to provide treatment, and on the other hand, he is asked to provide paid, luxurious and possibly even not medically necessary treatment to others who are able to pay for it. Over time, the social consensus in developed countries settled on the fact that it is acceptable.

The third category can be traced at present. The development of new technologies, medicines, palliative medicine and diagnostics of civilization diseases especially leads to considering the effect of treatment versus the costs. Therefore, the first clearly defined boundaries between the indicated care and care provided "on request" are sneaking a difficult question: what the patient really must have? The answer might be: not everyone may get everything what is in medicine available today, there are treatment methods that despite a possible medical indication primarily benefit the individual patient utility and therefore their consumption is allowed to be based on his individual decision. The patient can have them. As a negative definition of the safety and efficacy of therapy can be applied the principle that if a certain type of care is not consumed (wanted) by a particular patient, he will suffer no harm compared to the state when he consumes (wants) it.

It is tough to provide actual examples of the above typology, because they highly depend on the country where they are applied and the state of development of medicine as a whole. But as a brief illustration, we can say that for example in current Czech stomatology, the type of 'must have' care are amalgam (black) fillings for the molars (or their basic replacement as stomatology advances), the type of 'can have' are ceramic (white) fillings for the molar and the type of 'wants to have' is the care of dental hygienists or cosmetic dental care. In psychiatrics, the 'must have' type of care is drugs treatment and basic psychotherapy,

the 'can have' type of care is e.g. autogenic training and the 'wants to have' type could be e.g. personal development and coaching. In orthopaedics, the 'must have' type is conventional endoprosthesis with standard rehabilitation, the 'can have' is a longer lasting model of endoprosthesis and 'wants to have' is extensive rehabilitation program after operation.

The above typology has however major impacts on the role of the government in health care. Suddenly ideologically tinged dispute between government and market (Goodman, 2005; O'Neill et al., 2007) pales in light of the concrete definitions of the operation and characteristics of health care. In addition, this is true even if we know that the boundaries through those three types of care are a little bit blurred. It is obvious that for high quality health care system it is difficult to refuse to provide the 'must have' type of care, and vice versa care of 'wants to have' type in the case of understanding it as a luxury could be seen as rather ineffective and thus being crowded out of the health care system.

The logic above can be projected into the design of funding (financing) schemes of health care system. Its final form is usually a combination of allocation of public resources on the principle of social effects obtained for them, sharing the risks on the principle of social or private insurance and private resource allocation based on the principle of individual benefits obtained for them, and finally control of the rules under which the schemes will work.

Because of socio-economic properties of health care and the two independent dimensions of solidarity in health (health status and income), we should not try to focus only on the public part of health care financing, which we see as necessary, and let the market decide about the rest. The market will just decide in such a way, that it will very problematically measure the health future of the patient and try to make an insurance plan for it. That will not work well. Moreover, it will prevent any sharing of the burden of disease; locking many of people out of the possibility of spend their private money in order to gain private health utility. We have to look deeper, and while differentiation by health status is highly discouraged, differentiation by wealth (income) seems more acceptable, especially in the connection with gaining private health utility.

If we look at our categories of demand for health care, we can thus divide them as follows:

Financing care of the 'must have' type has to be financed by public resources – ideally regardless of income or health condition. Those resources should come from taxation, it is a best way to do it and we will show later in this article the possibilities in this regard. To make sure that they will not disappear in public budgets, it can be worth to mark them as health tax rate at the time of payment and this will be discussed later. If public payment does not exist or is not high

enough to cover universally needed care, the result will be lower access to medical care in the relevant social groups, an increased incidence of catastrophic emergency medicine events and lost opportunities for positive externalities arising from the application of methods of social medicine. At the same time the results of international studies show positive effects of investments in health on economic growth (Suhrcke et al., 2005) and employment (Lindholm et al., 2001) – we can say that it is advantageous to seek a high level of standard of care is closely interconnected to proven (evidence-based) effects in public health.

Financing care of the ‘can have’ type is a good field for regulated private financing schemes, optimally differentiated according to income, but not by the (initial) state of health at the time of the contract or even worse, medical history. If other insurance techniques are not applicable, also the simpler prepaid schemes could be used which overcome the problem of health risks selection by not utilizing them at all and relying on paying in advance and then consuming predefined packages of health care. In this type of care is maintained condition of objective medical indications and recommendations, but without the existence of an objective need for particular method of treatment. Such schemes will increase the individual benefit of the individual, while simultaneously regulation of the products will prevent or reduce the incidence of market failure in terms of categorizing patients according to their individual health risk, which is undesirable as stated before.

Financing care of the ‘wants to have’ type could use direct payments, but it can also connect with schemes of previous type (‘can have’). Especially when taking into consideration that the real decision-making capabilities of most patients on the health market are limited and it is more efficient to purchase this care collectively (by third party), e.g. through health insurance or health savings account.

Based on the above classification, we will now focus on how the financing of the public (‘must have’) part of the system could be transformed in the Czech Republic, leaving methods of private financing behind the purpose and scope of this article. Given the volume of health resources in Czech health system, which is one of the lower in OECD comparison (OECD, 2016); it is highly desirable to preserve (at least) the amount of public resources flowing to the system. At the same time, it is valuable to discuss possible changes in the methods of how to do it.

## **The Evolution of Social Health Insurance**

It seems that the classic social health insurance approach with defined payments and corresponding benefits for specific social groups as it was introduced in Germany at the end of the 19<sup>th</sup> century is not suitable for the health care system

financing anymore. The universal character of health care consumption regardless of social group membership facilitates this. Simultaneously, the ceilings for the social health insurance payments have little sense because of the health consumption universality (Vostatek, 2010). The conditions were different then, we can note that it was combined with sickness insurance and it was meant primarily as a limited financial reimbursement for health care expenditure (Vostatek, 2000), whereas now health care consumption has mainly contribution in kind character.

At the same time, our goal is to preserve the solidarity-based financing of the public health care system. For this purpose, a theory of public finance gives us a standard tool – taxation. This has significant advantages for the financing of the health care system that other methods cannot achieve. Most important ones are equal financial burden according to disposable income and no risk selection when entering the system. Generally, there are two possibilities how to do it.

The first one is the general taxation, which can be achieved by increasing the general tax rate on personal income by amount required for public health financing. This is better according to the classical theory of public finance, because hypothecated taxes are usually avoided here. In addition, this results in maximum simplicity of the system, because there will be just one general tax rate on personal income.

The second one is the earmarked taxation. While it can be seen financially as similar to the current social health insurance approach, there are three significant differences, which should be noted. First, no specific ceiling known from social insurance has to exist. Second, the tax base could equal to or easily derive from the tax base for the personal income. Third, this health tax on personal income is usually unified, changed by public choice and is not calculated according to the individual benefits of the insured.

Several factors should be taken into consideration when making a decision. Some of them are purely economic (financial); others are psychological and public choice theory based (Keable-Elliott, 2014). We can also attribute some of those factors to behavioural economics. They can be summarized in the following Table 1.

It is up to the policy makers which variant they choose. Empirically, we can see that in some countries such as Great Britain, the health care system has been financed from general taxation but a discussion about the sources of National Health Service financing is going on (Keable-Elliott, 2014). In Great Britain, no public health insurance companies exist, health providers (especially hospitals) are part of public service and health system is managed through decentralized public administration. Therefore, it is purely a matter of public budgets settings

to finance the health care provision and delivery and institutional arrangement supports the general taxation approach. On the other hand, in periods of fiscal austerity the health system is often under pressure.

Table 1

**General versus Earmarked Approach to Health Tax**

General personal income tax	Earmarked health tax rate on personal income
Simple and compatible with standard taxation schemes	More complicated, separate tax rate and tax rule exists
One high total tax rate, e.g. current income plus health tax	Two lower tax rates, general income and health tax separated
Ability to be included in progressive taxation schemes	Ability to be separated from progressive taxation schemes
Hidden in general taxation, ability for the government to change health expenditure out of sight of people	Transparency to citizens, ability to be changed independently of general taxation and visibly to citizens
One tax base	One tax base, or some categories of income could be excluded

Source: Own proceedings.

In other countries, such as Germany (Busse and Blummel, 2014), a single rate of social health insurance now exists (15.5% to 2015, 14.6% since 2015), which is getting close to the condition of earmarked taxation on income from the payers' point of view. The exception reminding the previous configuration of multiple social health insurance rates remains that the social health insurance company can raise small supplemental percentage (on average 1.1% since 2015) from their insureds (especially when having economic problems). The social health insurance approach, while it has lost its original meaning because of the universality of health care provided, can keep one of its key attributes: the visibility of allocating a specified share of income into health care system. As an evolution process of German social health insurance system, there has been an ongoing debate in Germany (Pfaff and Langer, 2005), resulting in the suggestions of so-called 'Bürgerversicherung' as one of the two viable proposals for the health care financing in the future (the second being 'Kopfpauschale', which is actually a poll tax for health care). Many other countries in the world (more than 60) use the earmarked income or payroll tax approach for financing health care (Cashin, Sparkes and Bloom, 2017).

In some health systems, resources from general or earmarked income taxation are supplemented by indirect tax earmarking for health. The examples of Finland and Portugal have been cited (Doetinchem, 2010), and in some countries like Vietnam sin taxes on tobacco are used for tobacco control programmes financing (Cashin, Sparkes and Bloom, 2017). Important example is Ghana, where 2.5 percentage points of VAT (value added tax) has been earmarked for health care

in addition to share of workers' contribution to Social Security and National Insurance Trust. This results in significant share of Ghana's health budget to be financed from indirect earmarked taxation, which is rare but working well in Ghana's case (Schieber et al., 2012).

### **The Transformation of Public Health Insurance in the Czech Republic to Earmarked Health Tax**

In the Czech Republic, very similar system of health insurance as it was introduced in the 1990's is still present, but the socio-economic conditions have changed since then. Therefore, it makes sense to strive for a change, at the same time preserving the valuable aspects of the Czech health system that were repeatedly proven useful for a long time. These include solidarity, social and geographic availability and high quality of delivered care. The ethical dimension of health care financing including equity is essential for good health care system in the European environment. We can note that some of the suggestions and at first sight miraculously looking health reform proposals have silently broken those principles and assumptions. This should be avoided, because in the end it can deteriorate the health status of the population and can cause deeper inequalities in health, which will eventually lead to even higher health care costs.

Currently, the health insurance contributions are at the level of 13.5% paid from the health insurance base, which differs among social groups. They are:

- employers and employees – gross wage;
- self-employed – 50% of their profit, e.g. income minus the costs necessary to achieve it (or the fixed percent of 'presumed costs' applies);
- persons without taxable income – minimum wage;
- 'state insured persons' (children, unemployed, pensioners) – fixed amount set and changed arbitrarily based on public choice (by the government).

This typology means that different social groups pay different contributions and this differentiation serves as a factor of social policy measures for the burden placed on them. This is especially prominent in the case of self-employed persons, who appeared in the 1990's and this differentiation was one of the key factors of supporting their existence in national economy.

Let us show how the transformation to earmarked health tax can be done in the Czech Republic.

Current health insurance contributions (13.5% from the health insurance base) can be replaced by the health tax rate on personal income. Theoretically, the health tax base could be the same as the current tax base for personal income; this would provide maximum compatibility and simplicity. The new tax rate could be even slightly lower than the current 13.5% (approximately 12 – 13%)

in order to maintain the current fiscal capacity, because in the unified tax base variant, the tax base will be slightly higher than the current health insurance contribution base, since all personal incomes will be taxed. That would be however controversial move from current tax and health insurance policy, therefore selected types of the income according to § 8, 9 or 10 of the income tax law No. 586/1992 (incomes from other sources than labour) could be removed from the health tax base if desired by tax policy makers. Then the health tax base would differ from general income tax base, however. Still, it can be easily derived from the general income tax base when computing tax liability.

Of course, the position of employed and self-employed, which is highly asymmetric in current health insurance, would not change by this fiscally neutral approach. We recognize that it might be desirable to keep some advantage in income health tax payments for self-employed and the earmarked health tax concept is compatible with this approach. Further tax reform can set the health tax base for self-employed at different level than now if desired by public choice.

Specific problem is the transformation process for the employees, where currently the health insurance contributions are divided between employer and employee. If we want to do this operation maintaining fiscal neutrality, the following transformation mechanism could be potentially used.<sup>2</sup>

Currently the employee pays 4.5% health contribution and 6.5% social contribution (11% total), and the employer pays 9% health contribution and 25% social contribution (34% total). After the transformation, the employer pays just a health tax 11%, and the employee pays whole 31.5% social contribution and 'remaining' health tax 2.5%.

This fiscally neutral transformation could be done immediately. Further tax reform could abandon the remaining 2.5% at the employer side and put the health tax rate to the employee as a whole (e.g. earmarked health tax can then be 13.5% payroll tax for employees), or even spread the payment of health tax between employer and employee at new ratio (e.g. 1:1) if desired by public choice. To maintain fiscal and labour market neutrality, the total labour costs for employers should remain the same afterwards.

The tax could be collected through same channel as general taxation, with the method that the desired tax rate will be applied to the tax base. The current payment of insurance to individual health insurance companies can be abandoned and the health tax revenue shall go directly to the central fund of health insurance, from where it will be redistributed to health insurance companies according to the cost indexes. These redistribution mechanisms can stay the same as they are now.

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<sup>2</sup> Author of this article would like to thank prof. J. Vostatek from the University of Finance and Administration, Prague for the inspiration on this employees' transformation mechanism.

Additional important component can be introduced – the health tax relief. This could be important from the health policy point of view. If desired by policy makers, the positive health behaviour (e.g. participation on prevention) could entitle a taxpayer for health tax relief, which would lower the amount of health tax paid. The criteria are open for discussion, however the behavioural economics clearly shows that the motivation should be positive in general, not negative. As an example could serve the participation on prevention, proven absence of smoking or participation in disease management programs. These criteria, when applied properly, could provide positive motivation for effective healthy behaviour. In addition, if multiple health insurance companies are preserved, they can theoretically to some degree influence the amount of health tax relief that will be applicable to the particular citizen.

To make the proposal fiscally consistent, we have to deal with one more social group in the current system – the state insured persons. The abandoning of social health insurance can also abandon the concept of insurance contributions for state insured persons as well as artificially fixed contribution base for the government. However, the existing fiscal capacity should be preserved at least. This can be done in two ways.

First, the fiscal capacity could be maintained just by sending the same amount of money as now from the government budget to the central health care fund, making it a pure subsidy from the government budget. This is compatible with the general taxation approach, but has all the advantages and disadvantages already described. If we leave the fiscally neutral principle used for the simple transition analysis, the current discrete and static settings of the state insured person's contribution could be also changed, keeping the number of citizens without taxable income relevant for calculation. Such a mechanism has been recently discussed at the Ministry of Health level as a proposal (MZ ČR, 2016). It contains a relationship of the amount paid for state insured persons to the average wage or minimum wage (first variant is considered more suitable) and also possible introduction of variation coefficient of the amount paid based on difference between the actual number of state insured persons to their average for the given period. This can compensate for the changes in number of state insured persons caused by economic cycle (Zdravotnický deník, 2016). The categorization of citizens could be still largely simplified, but the mechanism for setting the amount paid to the health insurance companies directly from the government budget can be improved.

Second, the fiscal capacity could be maintained by earmarking part of the excise taxes for health care. While the relationship between consumption of goods subject to excise taxes (tobacco, alcohol, gasoline etc.) and the individual

health care status is not strictly causal, on the other hand it is evident that generally their consumption is related to and often increases health care expenses (side effects of smoking, drinking, traffic...). So the concept of negative externalities in health could be assessed here.

At the current state of excise taxes construction in Czech Republic, however, it is difficult to imagine the specific excise health tax e.g. on tobacco or alcohol. In addition, some recent studies argue against specific taxes on individual commodities, as it increases fiscal rigidity (Cooper, 2013). Also earmarking has been more effective when practices come closer to standard budget processes (Cashin, Sparkes and Bloom, 2017). Therefore, it makes sense to hypothecate the share of total excise taxes revenue for health, at the level of current fiscal capacity of the contributions for state insured persons. This equalled, in 2015, circa 61 billion CZK, whereas in the same year the revenue from excise taxes (tobacco, alcohol and mineral oils) was approximately 138 billion CZK (MF ČR, 2015). So we can estimate the share as  $61/138 =$  approximately 44% of the excise taxes revenue for health care.

This approach has one more advantage, when revenue from excise taxes changes in time, e.g. because of inflation, the earmarked revenue for health system will be changed accordingly. Therefore, it can to some extent react automatically to the macroeconomic development better than current system of 'state insured persons'. When larger adjustment is necessary or the settings of excise taxes change, public choice can do discrete policy change of the percentage of excise taxes allocated for health.

## Discussion

In the Czech Republic, described earmarked tax approach seems to be more suitable than increasing the general tax rate on personal income. The general tax approach would *ceteris paribus* result in a relatively high single tax rate on personal income, approximately between 33 – 37% of personal income.<sup>3</sup> This calculation is based on current real tax rate for employees being 20.1% (15% flat income tax \* 1.34) plus adding adequate percentage (13.5%) for current health insurance contributions. This is probably currently politically unfeasible, because such a personal income tax rate would psychologically work against the acceptance of such a reform. Of course, when utilizing progressive tax schemes or other tax policy changes, the total single income tax rate could be somewhat lower for the majority of taxpayers. However, it is a normative decision, which tax schemes will be used in the future.

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<sup>3</sup> Exact percentage depends on the fiscal situation at the time of change.

The health tax rate on personal income is transparent both to the government and to the taxpayer, with optional introduction of health tax relief based on positive behaviour in the system, which could be set at the government level or even at health insurance company level. Administratively, the system will be only slightly more complicated than the general tax approach is, and surely much more simplified than the current system, where specific health insurance contributions are collected directly by health insurance companies and separate mechanisms are used.

Moreover, the earmarked health tax rate could be changed independently of the general tax rate. This is very important from the health and social policy point of view. The people will be able to see the changes in health expenditure in the tax rate number. The public choice can transparently set the rate with relationship to the national expenditure on health and health technology assessment methods, preferences of people and the quality and accessibility of health care desired in society. In addition, in the times of economic downturn, the independent health tax rate could better preserve the fiscal revenues allocation for health care system, while generally the politicians currently have strong tendencies to manipulate the expenditures and/or revenues gaining required fiscal austerity, including the social systems settings and benefits (Mossialos, 1997). For example recently in the Czech Republic, there have been suggestions that pensions could be frozen or even lowered because of fiscal pressure and reform of social pension insurance has been discussed (Janský and Schneider, 2012). The earmarking (hypothecation) of taxes for health makes the health expenditure visible and inevitable part of public debate, which makes it more resistible to those pressures (OECD, 2015).

Therefore, even if some arguments for the earmarked health tax target more the policy making process and the structure of the tax system from the taxpayer's point of view than direct tax revenues level, they surely have their rationality.

Analysis of the hypothecation of taxes for health surely has significant implications both to the public finance and to the social policy field. It is clear that the theory of public finance has arguments against such an approach; it is mainly because this concept breaks the basic principle of taxes as a general tool not being tied to particular branch of economy. In addition, the common tax techniques, such as tax base, tax reliefs, tax rates etc. generally work better when having just one income tax structure where they are applied. This is why in this article a general taxation approach has been assessed, too.

However, we demonstrated that it is possible to construct earmarked health tax on personal income that is highly compatible with the principles of standard taxation procedures while keeping its advantages for health policy. This proximity

and compatibility of earmarked health taxation with general tax system has substantial value. The degree and character of earmarking for health has to be carefully evaluated when actual implementation is designed (Cashin, Sparkes and Bloom, 2017).

The hypothecated taxation approach can be seen primarily in direct income (or payroll) health taxes as an evolution of social health insurance. Secondly it can be the share from indirect excise taxes as a supplemental resource for health care financing. The actual usage, if it is introduced in reality, would require a further careful implementation analysis. This includes the mechanism of health tax reliefs, which, as the tool for positive motivation of health care behaviour, could be implemented according to approaches of behavioural economics.

A debatable spot of the introduced approach is also the share of excise taxes: while the proposed solution is an alternative to the general fiscal subsidy for state insured persons, further analysis should be done how the system will behave under various macroeconomic development. On the other hand, there are significant theoretical discussions on the share of direct and indirect taxes in economy and the level of tax burden on labour. Therefore, the ability to allocate a share of indirect taxes into health care is worth considering and should not be ignored just because the direct taxes on personal income could be easier to implement on the first sight.

## Conclusions

Based on our analysis, we recognize three basic types of demand for health care with strong implications on health systems configuration and financing, which we have analysed and classified this way:

- what a patient must have,
- what a patient wants to have,
- what a patient can have.

Public health expenditures are inevitable and largest part of financing of the ‘must have’ type of health care, so that its universal consumption is made possible. It is not true, that the concurrent allocation of private resources on health will at the end of the day increase the overall health utility for everybody as on other markets like computers or food one, and has never been proven so. Thus, public financing remains the best method for financing the universally available necessary treatment at the level that is overall common and agreed in society. Public financing should work the way that every fellow citizen be sure, that when things go wrong, they truly do not have to worry about their health fate and future and they receive the care they need free at the point of service.

Private health expenditures should provide voluntary (optional) opportunities to increase individual utility regardless of the health status of a patient (voluntary means that if option is not chosen, the health status must not be harmed or worsened). Currently, there is an increasing count of treatments that are suitable for this type of financing based on the development of medicine and better options of treatment. The actual financing schemes (other than direct payments, which are relatively easy to implement) are an important topic for future research.

This article has presented arguments and techniques for the transformation of Czech public health insurance to the earmarked (hypothecated) health tax. A fiscally neutral variant was shown, rooted in the abandoning of public health insurance contributions as being known now and replacing them with earmarked health tax rate on personal income, initially at the same or similar rate as the current one. This would solve the situation by using common taxation techniques for collecting public resources. Since the direct income/payroll taxation is a dominant public resource for health financing in the Czech Republic, this element is the most important.

Because of the current fiscal subsidy for state insured persons, if we want to maintain existing fiscal capacity, it can be replaced by a share of revenue from excise taxes. This would also put a clear share of indirect taxes into financing of health care. If this is not desired by public policy, we can evaluate one of the recent public policy proposal for automatic determining the amount paid for state insured persons and continue to pay it from general taxation (MZ ČR, 2016).

As for the international experience, the following approaches have been assessed: first, the process of transformation of social health insurance, primarily in the country of its origin, Germany, is important for consideration (especially the concept of *Bürgerversicherung*). Second, the arguments for and against earmarked taxes (primarily indirect) are subject to interest. At the same time, only few countries have currently implemented them in the form of specific indirect earmarked tax for health. This is one of the reasons, why the approach in this article is different and does not construct indirect earmarked tax on specific commodities. Rather it suggests allocating a predetermined share of excise taxes for health budget.

The advantages and disadvantages of proposed solutions have been discussed. To summarize the reasons that favour the earmarked solutions, the transparency, ability to change independently, relationship to negative externalities in health and certainty of allocation for health care are the main reasons to follow this way. In addition, a health tax relief on personal income could be present, facilitating positive behaviour in the health care system and life style. The health

tax rate on personal income is compatible with current health insurance contributions principle, while it is radically simpler and administratively easier, especially when single income tax base is utilized or simple algorithm for computation of health tax base is utilized. Thus, it can be also seen as an evolution of current public health insurance principle based on real characteristics of health care system as we see it now.

At the same time, we have to recognize that the concept of earmarked taxes is kind of novelty in the Czech scientific and public discourse. While the theoretical thinking was facilitated by the fact that fiscally neutral variant was considered, if this concept is introduced into reality, deeper evaluation would have to take place. This includes the law aspects of taxation procedures and the position of self-employed in universal health care financing. In addition, this concept requires some understanding and sympathy for its qualities, especially related to public policy and behavioural economics arguments. It is clear that health system has attributes that call for earmarked financing. While it is true that some other sectors of economy also yearn for this status (which increases fiscal rigidity), health system has specific characteristics that justify for it, being national economic priority that would have to be financed under all circumstances. As stated in literature (Doetinchem, 2010), especially sectors of health and education have such a status that they can generate public support for specific hypothecated tax approach.

Those aspects are without doubt a field for further research. It can be only desired that this research be done with open mind for the idea and trying to make a positive use of it. One thing, however, can be said already – the proposed system is surely more suitable for current socio-economic conditions than the current one, which has shown significant shortcomings. At the same time, the proposed system maintains important aspects and values of Czech health care system in terms of solidarity, accessibility and high quality, while bringing new possibilities such as earmarked health tax rate, health tax reliefs, more equal position of citizens as health taxpayers and allocating a share of excise taxes into the health care system.

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