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# Participation of Foreigners in Public Health Insurance in the Czech Republic[1]

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**Abstract**

Foreigners from third countries are not entitled to participate in the Czech public health insurance system unless they have either permanent residence in the Czech Republic or a Czech employer. This article aims to analyse the economic impact of the possible inclusion of such foreigners into the public health insurance system in the Czech Republic. First, we estimate the size of the group of foreigners concerned and follow with the estimation of contributions paid and the cost involved. The analysis is based on publicly available data that entail simplifications. The conducted research shows that the inclusion of foreigners from third countries into the public health system of the Czech Republic would positively impact the economic balance of the system in that the estimated contributions would surpass the estimated costs.

**Keywords**

Migration, Public Health Insurance, Self-Employed Persons, Participation in Public Health Insurance, Insurance for Foreigners, Insurance for Migrants, Foreigners, Migrants

## I. Introduction

Participation in the health insurance system, public or private, is a mandatory condition of residence in the Czech Republic, both short- and long-term. According to the Czech legislation, to participate in *public* health insurance one needs to have either a permanent residence or an employer in the Czech Republic. No voluntary participation in public health insurance is possible in the Czech Republic. Thus, a person who does not meet one or both of the two conditions must participate and pay for *private* health insurance.

As of the end of 2019, approximately 600,000 foreigners from third countries (i.e. non-EU nationals who are not citizens of Iceland, Liechtenstein, Norway or Switzerland) were

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registered in the Czech Republic, representing circa 5.6% of the total population of the Czech Republic (Ministry of the Interior of the Czech Republic, 2020). These countries conclude coordination agreements to protect foreigners' health insurance rights when migrating. Within the EU countries, the right to health insurance is covered by the EU regulation on the coordination of social security. Other countries have opted to coordinate their insurance systems by bilateral agreements. However, if there is no coordination of health insurance systems, only the national legislation applies. Thus, foreigners from third countries, i.e. countries with no coordination of health insurance systems, need to participate in private health insurance when they do not meet the criteria for participation in public one. This especially includes self-employed foreigners and their dependent relatives. Private health insurance is more expensive and covers fewer health risks (health procedures) than the public one. Lately, the question of monopolisation of private health insurance for such foreigners has also become part of the debate.

The issue of health insurance for foreigners has been a long-discussed topic in which various opinions collide on whether it would be appropriate and economically reasonable to include such foreigners in the public health insurance system.

The aim of the paper is to estimate the economic impact of the possible inclusion of self-employed foreigners from third countries and their dependent relatives in the public health insurance system of the Czech Republic. To assess the integration of the foreigners into the public health insurance system, we proceed in three steps: first, we identify the group or groups of migrants to be included in the system; second, we estimate the potential contributions from participation in the scheme; and third, we estimate the health care costs of these foreigners.

From an economic viewpoint, it would be appropriate to include these foreigners in the public health insurance system if their potential contributions to the system would be higher than the costs of health care provided. Further, the related concerns of potential misuse of the system should also be considered before the inclusion.

The estimates are based on publicly available data coming mainly from the Report on the Situation in the Area of Migration and Integration of Foreigners in the Czech Republic issued by the Ministry of the Interior of the Czech Republic (Ministry of the Interior of the Czech Republic, 2020); statistics on entrepreneurs, foreigners, and health care costs in the Czech Republic are sourced from the Czech Statistical Office (Czech Statistical Office, 2020); and tax statistics comes from the Financial Administration (Tax Administration of the CR, 2021).

The paper is based on the diploma thesis prepared at the Faculty of Finance and Accounting, Prague University of Economics and Business (Kottová, 2021).

## II. The Current State of Knowledge

It is extremely important for migrants not to lose their health insurance while migrating. Within the EU countries, the coordination of social security – including health insurance – is assured by Regulation EC 883/2004. Using the applicable legislation rules, the country of insurance is identified and migrants from the covered countries (EU countries, Norway, Lichtenstein, Iceland and Switzerland) will be health insurance covered under the same

conditions as the citizens of the state of migration. For some non-EU states, this area is regulated by bilateral treaties. Foreigners from other countries (not covered by the Regulation or another bilateral treaty), however, do not have similar assurance and can fall outside of the public health insurance system. It is thus important to distinguish between migrants from the countries with coordination of social security and migrants from the so-called third countries.

Participation of the migrants from third countries in the Czech public health insurance system differs based on their employment status, i.e. whether they are employees or self-employed, and their residency status. An exception is made for persons with asylum, who are legally considered to be persons with permanent residence in the Czech Republic (Tepperová and Zídková, 2016). All migrants with permanent residence in the Czech Republic are part of the public health insurance system. However, it takes at least five years of residency and fulfilment of other conditions to obtain permanent residency. The migrants without permanent residence in the Czech Republic participate in the Czech public health insurance system if they are employed by an employer who has its registered office in the Czech Republic. Such persons fall into the health care system and receive public health insurance (VZP ČR, 2020).

The situation is different for foreign entrepreneurs. Self-employed persons from third countries without permanent residence in the Czech Republic cannot participate in the Czech public health insurance system. Since voluntary participation in the public health insurance system is not possible, these persons must be insured using commercial health insurance, which is more expensive and offers a lower level of health care coverage than public insurance (Tepperová and Zídková, 2016). The same is true for dependent family members of both the employed and self-employed migrants from third countries.

Up until recently, it has been possible for migrants from third countries to arrange for commercial health insurance with one of the 6 commercial insurance companies. However, according to an amendment to the Act on the Residence of Foreign Nationals applicable since August 2021, the only possible insurance company for commercial health insurance of foreigners is VZP, a.s. This amendment was approved despite the strong criticism from experts who were pointing out the monopolisation of the market with commercial insurance. Member of the Parliament Ms. Adámková has stated that they had made this change for better clarity in the area of insurance for foreigners (Hovorková, 2021).

There have been long-lasting discussions on the inclusion of migrants from third countries in the public health insurance system. The debates are very heated as strong arguments both for and against inclusion are stated. On the one hand, there are opponents of the inclusion of foreigners who stress the risks and disadvantages for the system; on the other hand, there are supporters of such (conditional) inclusion (Program Migration, 2014).

According to a press article from the beginning of 2015, the Association of Health Insurance Companies, the Ministry of the Interior, the Ministry of Finance, and the Ministry of Health are against the inclusion of foreigners from third countries in the Czech public health insurance system. One of the stated reasons is that self-employed foreigners and their family members would not able, through their contribution to the system, to cover the health care costs incurred (deník.cz, 2015). Also, contributions are higher for the employed

compared to self-employed persons. Thus, self-employed foreigners would not contribute sufficiently to the system through their contributions and increase the costs of health care (Citizen's Association, 2015, Kareš, 2016). Among persons concerned are also dependent relatives of the self-employed who would become state-insured persons in the case of inclusion of foreigners in the public health insurance system. This would further increase the costs – for the state. Furthermore, children and women who are most likely to be dependent relatives compared to men belong to the category of persons who receive the most health care (Kareš, 2016). It was assumed that such an inclusion would generate annual costs in the range of CZK 2–3 bill (deník.cz, 2015).

Another important factor to consider is the risk of abuse of the system. Cases have happened that foreigners purposefully set up limited liability companies to reach up to employment contracts and get included in the public health insurance system so that they can undergo expensive operations in the Czech Republic (deník.cz, 2015). According to the statement of VZP ČR, for example, the limited liability company Jedno s.r.o. had 750 executives contributing only once and drawing out of the health care system CZK 800 mill (Program Migration, 2014). The level of health care differs among the states and motivates foreigners to travel to the Czech Republic for health care treatment. On the one hand, there may be foreigners who face a very poor level of health care in their home country, but on the other hand, there may also be foreigners for whom treatment in the Czech Republic would be cheaper than in their own country. The Czech Republic has one of the widest public health care systems, so there are certain concerns that these people might come to the Czech Republic purposefully and temporarily. If healthcare in third countries was at least equal to that in the Czech Republic, the risk would disappear (Kareš, 2016).

Hnilicová (Program migration, 2014) points out the solidarity aspect that should not be neglected. Foreigners from third countries are not such a large group of people that would significantly impact the system (Program Migration, 2014). Czech public health insurance is based on solidarity; the question arises as to how broad such solidarity should be. In general, solidarity with migrants is not strong in the Czech Republic (Citizen Association, 2015).

It is important to realize that the issue does not concern only self-employed adult foreigners from third countries, but also their dependent family members and family members of employed foreigners from third countries. As an unfortunate example has been published the case of a young girl, a daughter of an Australian couple employed by the Institute of Molecular Genetics of the Czech Academy of Sciences. At the beginning of 2014, the girl was diagnosed with an aggressive form of cancer. Commercial insurance did not cover the necessary health care expenses. These were capped at CZK 1.6 mill. The family covered the rest with their savings and money from a public fundraiser. The girl has sadly died the same year and the family was left with debts associated with the treatment and hospitalisation. The debt was finally paid only with the assistance of a public fundraiser (Hořejší, 2014a, 2014b). In his article, Hořejší (2014b) opines that it is in the interest of the Czech Republic that qualified foreigners come to the country, especially scientists and other research workers. The above example of the Australian family will probably make qualified foreigners choose countries where there are no such problems. Despite concerns

of possible abuse of the system, these are according to Hořejší (2014b) only intuitive and should be examined based on e.g. experience from other EU countries.

Other cases concern newborn children of foreign women from third countries in the Czech Republic if the mother does not have permanent residency status. Even when the mother works for a Czech employer and thus she is part of the public health insurance system, the newborn baby is not. As the care of newly born is very expensive, this could create high debts on the health care (ČT24, 2013).

If foreigners need acute treatment, hospitals must take care of them regardless of insurance. Therefore, Czech hospitals incur debts of up to tens of millions of Czech crowns. Since 2000, the Prague Motol Hospital had to enforce debts worth almost CZK 37 mill.; as of mid-2017 it still registered over 160 patients who have owed on payments for the provided health care. The most expensive is hospitalisation itself, ranging between CZK 10,000 and CZK 100,000 per month. The cost of some more complex procedures, such as operations, can also reach millions of CZK. The hospital can agree with foreigners on a repayment schedule, but more often these cases end in court. The Motol hospital recorded the most receivables from foreigners from Ukraine (ČT24, 2017). Koláčková (2010) believes that this situation conflicts with the concept of integration of foreigners in the Czech Republic, and that family members should be given access to the public health insurance system as soon as possible.

Čižinský (2015) holds that foreigners from third countries should be included in our public health insurance system. Commercial insurance companies put pressure on the government not to include foreigners in the current system as this would jeopardize their profits. By excluding costly chronic diseases from the relatively low insurance coverage, their expenditures are only about 20–30% of the collected insurance premia (Hořejší, 2014b). Kareš disagrees with this estimate, as the expenses to cover insurance benefits are circa 80% of the premia payments collected from the insured persons (Program Migration, 2014).

The issue of the inclusion of foreigners in the public health insurance system is still a current topic. Discussions should focus more on the question of how large is the group of people concerned, i.e. which foreigners under what conditions could be insured in the Czech Republic so that our system does not get burdened by increased costs and risks (Citizen Association, 2015).

Tepperová and Zídková (2016) estimated whether it would be economically advantageous for the state to include foreigners from third countries in the Czech public health insurance system on the 2013 data. According to their estimates, it is considered that this inclusion could result in a positive balance for the state, as the costs of health care would be lower than the potential contributions that these persons would contribute to the system. According to the authors' estimates, the resulting impact would be positive in the amount of CZK 75 million, calculated from the data for 2013, including contributions from the state for state-insured persons. Almost 90% of all self-employed persons would contribute to the system with minimal contributions to health insurance, which corresponds to approximately 20,000 foreigners in 2013.

## III. Data and Methodology

To estimate the economic impact of including foreigners from third countries in the Czech public health insurance system, it will be necessary to determine:

a) the group of migrants to be included in the system,
b) the amount of potential contribution to the public health insurance scheme; and
c) healthcare costs incurred by the scheme to care for these newly included policyholders.

Solely from an economic viewpoint, it would be appropriate to include foreigners in the public health insurance system if the potential contributions paid into the system were higher than the costs for their health care. This simple relationship can be illustrated by the following formula:

$$PC > TC$$

where *PC* are potential contributions to the public health insurance system and *TC* are the total costs of the system for the health care of foreigners from third countries who would be newly included in the system.

### Data sources

The identification of a group of migrants will be estimated based on the Report on the Situation in the Area of Migration and Integration of Foreigners in the Czech Republic (hereinafter also the "Migration Report") issued by the Ministry of the Interior of the Czech Republic (Ministry of the Interior of the Czech Republic, 2020b). All the calculations and estimates are as of 31 December 2019. Further, we will also use data from the Ministry of Industry and Trade, which publishes information on the number of entrepreneurs doing business in the Czech Republic according to their citizenship. This information will allow estimating how many entrepreneurs from third countries are in the Czech Republic, considering only countries without any coordination agreement with the Czech Republic (Ministry of Industry and Trade, 2020). Another source of information will be the Czech Statistical Office, from which we will source information on the number of foreigners in the Czech Republic by age and sex (Czech Statistical Office, 2020).

To calculate the potential contribution, we will use data from tax statistics from the Financial Administration (Tax Administration of the Czech Republic, 2021), specifically, it will be information on personal income tax for the tax period of 2019. Information on the partial tax base for self-employment will be used.

The total costs of health care for foreigners are taken from the data from the Czech Statistical Office, which publishes data on the average costs of medical care by age groups (Czech Statistical Office, 2021b).

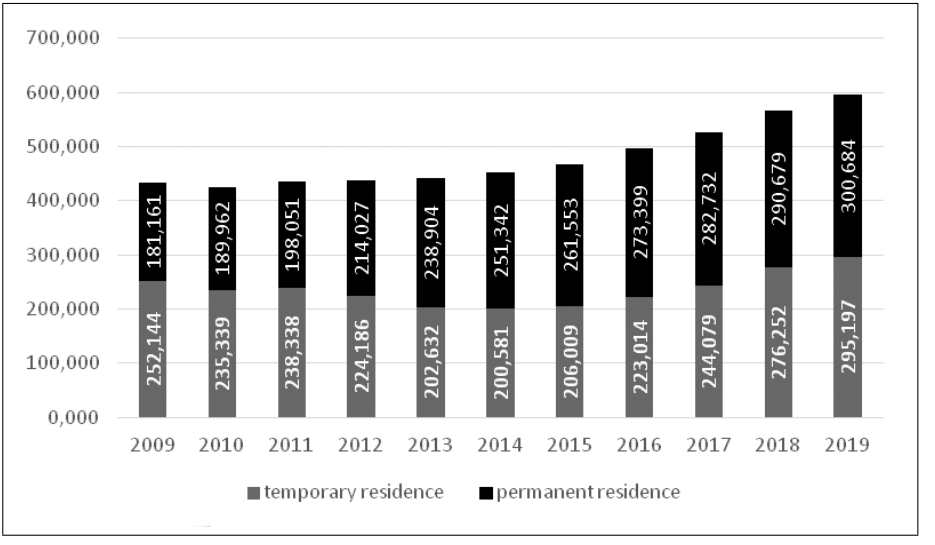
**Specification of the group of foreigners to be included**

For the analysis, it is important to distinguish between persons from the countries with coordination agreements on social security, and those from third countries. For better orientation in the text, we will continue to use the term *"foreigner"* only for citizens from the countries not covered by the EU regulation on coordination of social security. Furthermore, we will use the term *"foreigners from third countries"* for the subgroup of foreigners from the countries with whom the Czech Republic has no agreements on health insurance (neither regulation nor bilateral agreement), the term "EU citizen" for citizens of the EU, EEA and Switzerland, and the term "migrants" for both groups of these persons. All the used data are as of 31 December 2019, unless otherwise stated.

The relevant group of foreigners consists of persons from third countries with long-term visa and temporary residence in the Czech Republic along with their dependent family members, especially children and spouses. The group also includes family members of employed foreigners without permanent residence. Thus even when a foreigner gets employed by a Czech employer and becomes a part of the public health insurance system, unless s/he holds permanent residence in the Czech Republic its family members are still not part of the public health insurance system and must pay for commercial insurance. We assume that these foreigners also come from third countries that are not covered by any regulations or bilateral agreements.

The number of migrants from the EU and third countries has increased by more than 150,000 over the last five years; see Figure 1.

**Figure 1: Number of migrants with temporary and permanent residence in the Czech Republic; 2009–2019**




*Source: Ministry of the Interior of the Czech Republic (2020)*

As of 31 December 2019, there were registered 595,881 migrants in the Czech Republic who had a temporary stay longer than 90 days or with permanent residence (Ministry of the Interior of the Czech Republic, 2020). This number represents approximately 5.6% of the total population of the Czech Republic, which as of 31 December 2019 stood at 10,693,939 persons.

Of the total registered number of migrants, approximately 50.5% are persons with permanent residence in the Czech Republic. The remaining 49.5% include migrants holding a long-term visa, a long-term residence permit, a certificate of temporary residence of a citizen of the European Union, or a temporary residence permit of a dependent family member of the EU citizen. Over the last five years, the number of persons with temporary residence has been on the rise, mostly due to foreigners from third countries. This increase has been specifically significant in 2019 when their number increased by 10,681 persons. The majority of migrants are people from Ukraine (145,518 people), Slovakia (121,278 people), and Vietnam (61,952 people). Representation of nationalities within this group remains in time almost constant. In terms of gender, men represented 57.3% of the total number of migrants with a residence permit, while women accounted for the remaining 42.7%. Persons in the so-called economically active age clearly dominate here, i.e. between 19–65 years of age. Of the total number of migrants, foreigners from third countries make up 58.7%, while approximately 40% of these persons do not have permanent residence in the Czech Republic (Ministry of the Interior of the Czech Republic, 2020).

**Table 1: Number of migrants according to economic activity as of December 31, 2019**

| | | **Number of persons** | **%** |
|---|---|---|---|
| **Employees** | **Total Employees** | **621 870** | **100.00** |
| | EU citizens | 383 736 | 61.70 |
| | Foreigners from third countries | 201 007 | 32.30 |
| | Foreigners from third countries with the work permit | 37 127 | 6.00 |
| **Self-employed** | **Total Self-employed** | **93 781** | **100.00** |
| | EU citizens | 34 650 | 36.95 |
| | Foreigners | 59 131 | |
| | foreigners *with agreement* | 3 448 | 3.68 |
| | foreigners from third countries *(without agreement)* | 55 683 | 59.37 |
| **Economically active** | **Total** | **715 651** | |

*Source: Ministry of the Interior of the CR (2020), Ministry of Industry and Trade (2020), own calculations*

In total 93,781 migrants did business in the Czech Republic, of which foreigners from third countries accounted for approximately 63% and the EU citizens for the remaining 37%. The vast majority were self-employed foreigners from third countries with whom the Czech Republic has not concluded any health insurance agreement; specifically, there were 55,683 of such foreigners (Ministry of Industry and Trade, 2020).

Unfortunately, the Migration Report (Ministry of the Interior of the Czech Republic, 2020) does not contain information on the number of migrants according to their economic activity per category of permanent and temporary residence. For these purposes, we will use the share of foreigners with permanent residence and temporary residence as shown in Table 2, i.e. 40.6%. The calculation of the required values is specified in Table 2.

**Table 2: Calculation of employed and self-employed foreigners with temporary residence as of December 31, 2019**

| | | |
|---|---|---|
| Self-employed foreigners from third countries | (1) | 55 683 |
| Share of foreigners with temporary residence on the total number of foreigners | (2) | 0.4060 |
| **Estimated number of self-employed foreigners with temporary residence** | **(3) = (1)x(2)** | **22 607** |
| Employed foreigners | (4) | 238 134 |
| **Estimated number of employed foreigners with temporary residence** | **(5) = (4)x(2)** | **96 682** |

*Source: Ministry of the Interior of the CR (2020), Ministry of Industry and Trade (2020), own calculations*

Based on our estimate, at the end of 2019, there were approximately 22,607 self-employed foreigners from third countries with whom the Czech Republic has not concluded any health insurance agreement and who did not have permanent residence. Furthermore, we need to take into account the number of non-working foreigners, especially dependent family members (children, non-working spouses, students, and pensioners). The calculation of the number of these persons is derived in the following Table 3.

**Table 3: Calculation of non-working foreigners with temporary residence in the Czech Republic as of December 31, 2019**

| | | |
|---|---|---|
| Total number of foreigners with temporary residence | (6) | 141 756 |
| Self-employed foreigners with temporary residence | (3) | 22 607 |
| Employed foreigners with temporary residence | (5) | 96 682 |
| **Non-working foreigners with temporary residence** | **(7) = (6) − (3) − (5)** | **22 467** |

*Source: Ministry of the Interior of the CR (2020), Ministry of Industry and Trade (2020), own calculations*

Again, we should keep in mind that included get only non-working foreigners who come from third countries with whom the Czech Republic has no agreement. The number of persons includes non-working foreign dependent family members of self-employed foreigners and also employed foreigners who do not have permanent residence in the Czech Republic. The calculation of non-working foreigners still needs to be adjusted to get a more realistic number of the group in question. We use the share of self-employed foreigners from third countries without an agreement, which is shown in Table 4.

**Table 4: Calculation of non-working foreigners from third countries with temporary residence as of December 31, 2019**

| | | |
|---|---|---|
| Self-employed foreigners | (8) | 59 131 |
| Self-employed foreigners with temporary residence | (9) = (8) × (2) | 24 007 |
| Self-employed foreigners from a third state (without agreement) with temporary residence | (3) | 22 607 |
| Share of self-employed foreigners from countries without agreement to all foreigners with temporary residence | (10) = (3)/(9) | 0.9417 |
| Non-working foreigners | (7) | 22 467 |
| **Non-working foreigners from third countries without agreement** | (11) = (7) × (10) | 21 157 |

*Source: Ministry of the Interior of the CR (2020), Ministry of Industry and Trade (2020), own calculations*

At the end of 2019, there were an estimated 21,157 non-working foreigners from third countries without an agreement. Table 8 shows the distribution of this group by age. This information is important for the calculation of the potential contribution to the public health insurance system and the costs that the system would incur. Unfortunately, the migration report for 2019 (Ministry of the Interior of the Czech Republic, 2020) does not contain data on foreigners according to their age; therefore the data for all immigrants as of 31 December 2019 are sourced from the Czech Statistical Office. These data do not include foreigners with valid asylum (Czech Statistical Office, 2020); for more details, see Appendix A, Table 10.

Non-working migrants are further divided into people who are insured by the state and people without taxable income. For the calculation, we consider children and students up to the age of 24 state-insured, followed by pensioners over the age of 65. Persons in the range of 25–65 years of age without taxable income are not considered as state-insured and must pay their contributions themselves. A more detailed calculation of non-working foreigners is explained in the following table (Table 5).

**Table 5: Calculation of the state-insured foreigners and foreigners without taxable income**

| | | |
|---|---|---|
| Non-working foreigners from third countries without agreement | (11) | 21 157 |
| Share of persons aged 0–24 and over 65 | (12) | 0.2567 |
| Share of persons aged 25–64 | (13) | 0.7433 |
| Number of state-insured foreigners | (14) = (11) × (12) | 5 431 |
| Number of foreigners without taxable income | (15) = (11) × (13) | 15 726 |

*Source: Ministry of the Interior of the Czech Republic (2020), Ministry of industry and trade (2020), own calculations*

As of 31 December 2019, in total there were in the Czech Republic 43,764 foreigners without part of the public health insurance system. Of this number, 5,431 are estimated to be state-insured policyholders and the rest, 15,726 persons, were without taxable income and left to pay for their insurance themselves.

**Calculation of the contribution**

For the calculation of health insurance contributions, it is further important to find out the estimated assessment base. The assessment base for self-employed persons is calculated as 50% of the unadjusted partial tax base (hereinafter referred to as "PTB") granted pursuant to Section 7 of the Income Tax Act (hereinafter referred to as "ITA"). Data on personal income tax for the tax period of 2019 from the Financial Administration of the Czech Republic are used for the calculation. The document states the PTB in reference to Section 7 of ITA for independent activity. Within the calculation, we assume only income from the independent activity and therefore consider the activity of the self-employed as the main activity.

Unfortunately, our source data no longer discriminate based on the nationality of taxpayers, so we continue to assume that the distribution of income of the relevant group of self-employed foreigners is the same as for the entire population of self-employed in the Czech Republic. Based on this assumption, we estimate the income of the examined group of self-employed foreigners from the number of these foreigners and from the distribution of income, itself determined from the summary data provided by the Financial Administration.

We use PTB for all the self-employed persons who did business in the Czech Republic in 2019. Based on the data, as of 31 December 2019 there were in the Czech Republic a total of 2,051,614 self-employed persons (local and migrants) who stated in their personal income tax return incomes from independent activities pursuant to Section 7 of ITA in the total amounted of CZK 180,663,771 thousand (Tax Administration of the Czech Republic, 2021). We assume the distribution of taxpayers and their total PTB to be the same also for foreigners from third countries; we continue to use this ratio when estimating the assessment base of self-employed foreigners for health insurance contributions. For details, see Figures 2 and 3 in Appendix B.

The assessment base for the purposes of health insurance of self-employed is determined as 50% of the difference between their income and expenses reported for the purposes of income tax. Furthermore, it needs to be adjusted to the minimum assessment base, which on annual basis stands at twelve times 50% of the average monthly wage in the national economy; for 2019 this was CZK 32,699. The minimum assessment base for self-employed was CZK 16,349.5 per month and the minimum advance on contributions was CZK 2,208.

Furthermore, the data from the personal income tax return from the Financial Administration are used as follows. First, a coefficient is created from the total number of self-employed and the individual income groups, respectively. The estimated number of self-employed foreigners is in turn determined using the above coefficient and the total number of previously specified groups of foreigners from third countries without an agreement, split into individual income groups. Subsequently, an estimate of the total unadjusted PTB is made for each income margin per foreigner and the assessment base for the public health insurance contribution per foreigner, which amounts to 50% of the PTB according to Section 7 of ITA. This takes into account the minimum assessment base of 2019 which was used for persons who did not reach the average monthly health insurance

contribution of CZK 2,208. Next, the potential annual contribution is calculated as twelve times the product of the assessment base and the rate of 13.5%.
For the total number of 22,607 self-employed foreigners, we assume the total volume of contributions amounting to CZK 606,778,453. For more details on each of the PTB intervals see Appendix A, Table 11.
The calculation of the allowance for non-working family members is based on the previously estimated number of state-insured and persons without taxable income, which is a special category specified in the health insurance system. Persons without taxable income pay contributions from the minimum wage, which in 2019 amounted to CZK 13,350 and translates into the corresponding contribution of CZK 1,803 per month.
The contribution for state-insured persons is calculated as 13.5% of the decisive assessment base, which for 2019 amounted to CZK 7,540 and corresponds to the contribution of CZK 1,018 per month for one state-insured person for the year 2019.
Table 6 summarises the estimate of total contributions to be paid by self-employed foreigners, foreigners without taxable income, and state-insured foreigners from third countries if they were included in the public health insurance system. The figures are based on the data as of 31 December 2019.

**Table 6: Estimated total contribution of foreigners from third countries for 2019**

| | **Annual contribution per person (in CZK)** | **Number of foreigners** | **Total contribution (in CZK)** |
|---|---|---|---|
| Self-employed | *Appendix A, Table 11* | 22 607 | 606 778 453 |
| State-insured | 12 216 | 5 431 | 66 345 096 |
| Persons without taxable income | 21 636 | 15 726 | 340 247 736 |
| Total | | **43 764** | **1 013 371 285** |
| Total contribution without state-insured | | | **947 026 189** |

*Source: Ministry of the Interior of the Czech Republic (2020), Ministry of Industry and Trade (2020), Tax Administration of the CR (2021), own calculation*

The total contribution from the specified group of foreigners for 2019 would amount to approximately CZK 947 million. This sum represents the contribution to the health care system excluding any payments by the state for the state-insured persons.

### Calculation of the cost

In order to calculate the total costs that would be incurred by the public health insurance system of the Czech Republic in case the previously defined group of immigrants was included in the public system, the group of immigrants will be differentiated according to their age and gender. This division is important for the calculation, as the average health expenditure per person differs significantly according to these criteria. The average costs of medical care are taken from the Czech Statistical Office for 2019 (Czech Statistical Office, 2021).

**Table 7: Healthcare costs of foreigners from third countries in 2019**

| Age group | 0–14 | 15–19 | 20–59 | 60+ | Total |
|---|---|---|---|---|---|
| Foreigners from third countries | 4 502 | 1 330 | 33 542 | 4 390 | 43 764 |
| women | 2 184 | 641 | 13 906 | 1 841 | 18 572 |
| men | 2 318 | 689 | 19 636 | 2 549 | 25 192 |
| Healthcare costs of migrants (in thousands of CZK) | 97 640 | 33 998 | 690 083 | 263 009 | 1 084 730 |
| EU citizens | 52 662 | 19 197 | 407 815 | 176 965 | 656 638 |
| **Foreigners from third countries** | 44 979 | 14 801 | 282 268 | 86 045 | **428 092** |
| Healthcare costs for women foreigners from third countries (in thousands of CZK) | 21 820 | 7 133 | 117 024 | 36 084 | 182 061 |
| Healthcare costs for men foreigners from third countries (in thousands of CZK) | 23 159 | 7 668 | 165 244 | 49 961 | 246 031 |

*Source: Czech Statistical Office (2021), Czech Statistical Office (2020), own calculations*

The total potential costs of health care for foreigners for 2019 would be CZK 428 million.

## IV. Results

From an economic viewpoint, it would be appropriate to include foreigners in the public health insurance system when the potential contributions to the system were higher than the state-financed costs of their health care.

**Table 8: Financial impact of including foreigners from third countries in the public health insurance system of the Czech Republic; estimates for 2019**

| | | Total (in CZK) |
|---|---|---|
| Potential contributions | *PC* | 947 026 189 |
| Assumed healthcare costs | *TC* | 428 092 000 |
| Financial impact | *PC – TC* | 518 934 189 |

*Source: Czech Statistical Office (2021), Czech Statistical Office (2020), Tax Administration of the CR (2021), own calculations*

As of 31 December 2019, 43,764 foreigners from third countries with whom the Czech Republic has no agreement regarding health insurance resided in the Czech Republic, without permanent residence. Of these foreigners, 22,607 were estimated to be self-employed, 5,431 state-insured, and 15,726 were persons without taxable income. These people were not entitled to participate in the public health system because they did not meet the necessary conditions.

If this group of foreigners were included in the public health insurance system, in 2019 their contributions to the system would amount to approximately CZK 1,013 million. Of this amount, however, part of the money, specifically CZK 66 million, would be paid by the state for the state-insured, so the contributions to the system without state payment would amount to only CZK 947 million.

The health care costs for this specified group of foreigners were for 2019 estimated at CZK 428 million.
The calculations show that from an economic viewpoint, it would be worthwhile for the state to include these foreigners in the public health insurance system, as their theoretical contributions to the system would exceed the costs of their health care paid by the state.

### Comparison of results with previous studies

Calculations for 2019 are compared with previous estimates of potential health insurance contributions by Tepperová and Zídková (2016). In their paper, the authors compare their results with their own previous research; see Table 12 Appendix A for the comparison of estimated contribution. The summary results are compared in the following Table 9.

**Table 9: Estimated financial impact of including foreigners from third countries in the public health insurance system of the Czech Republic; comparison for 2013 and 2019 (in CZK thousand)**

| | 2013 | 2019 |
|---|---|---|
| Healthcare costs of foreigners | 1 061 520 | 428 092 |
| Potential contribution to the system including the state-insured | 1 136 447 | 1 013 371 |
| Potential contribution to the system excluding the state-insured | 1 039 922 | 947 026 |
| Resulting balance including the state-insured | 74 927 | 585 279 |
| Resulting balance excluding the state-insured | −21 598 | 518 934 |

*Source: Czech Statistical Office (2021), Czech Statistical Office (2020), Tepperová and Zídková (2016), own calculations*

Tepperová and Zídková (2016) used slightly different data for 2011 and 2012, as in the 2013 contribution they used the tax base of all self-employed persons, including those with lower employment income, as the reference point. The difference in results is probably due to the change in the number of foreigners from third countries and the amount of the partial tax base for self-employed persons in the Czech Republic.
The calculation by Tepperová and Zídková (2016) estimates that the costs of health care would be higher than their contributions to the system. In total, there is a negative balance of CZK 22 million. The resulting balance would be covered from the state budget through contributions for state-insured persons paid by the state. In such a case, the inclusion of foreigners in the public health insurance system would result in the positive balance of CZK 75 million. However, achieving a positive balance would require support and solidarity from the Czech taxpayers.
Another estimate of potential contributions was provided by Kulich (2014). He assumes that foreigners would pay significantly higher contributions at the total amount of between CZK 1.5 and 3 billion. Kulich (2014) works with a higher number of foreigners and uses a higher assessment base for the self-employed. According to his estimates, the balance of revenues and expenses represents a positive impact and ranges between CZK 130 to 1,500 million. The author concludes that the impact on the public health insurance system would be positive or neutral and, from his viewpoint, insignificant.

## V. Discussion and Conclusion

International migration is a current political issue in many countries. In order to retain rights to health care, foreigners need to be part of the health insurance schemes. In the Czech Republic, health insurance is the legal condition of residence, therefore every person residing in the Czech Republic must pay health insurance, whether public or commercial. The Public Health Insurance Act defines the conditions for participation in the public health insurance system. Persons who have permanent residence in the Czech Republic or who are employed by a Czech employer are involved. Provided the given foreigner does not meet at least one legal condition, he or she must pay for commercial insurance. To prevent foreigners from losing their rights during migration, social security coordination between individual states takes place through regulations, bilateral and association agreements.

A more complicated situation occurs with foreigners who come from third countries with whom the Czech Republic does not have any agreement on health insurance and who do not meet the conditions for participation in the public health insurance system. These are mainly (a) self-employed persons without permanent residence who come from third countries with which the Czech Republic has not concluded any agreement on health insurance, (b) their dependent family members, and (c) family members of employees from third countries. These are not part of the public health insurance system and must pay for commercial insurance themselves. This non-inclusion in the public health insurance system has in some particular cases caused existential problems to foreigners and their families, because when in the need of special, often unexpected and expensive health care, the family is not able to finance costs above the coverage provided by commercial insurance.

Therefore, there is an ongoing debate on the possible inclusion of these foreigners in the public health insurance system, with both arguments for and against inclusion.

The paper aimed to estimate whether it would be economically advantageous to include self-employed migrants from third countries and their dependent family members in the public health insurance system of the Czech Republic. All calculations were made for 2019.

As of 31 December 2019, in the Czech Republic there resided in total 43,764 foreigners from third countries with whom the Czech Republic had not concluded any agreement regarding health insurance. These were mainly self-employed persons without permanent residence and their family members, or family members of employed foreigners without permanent residence. Of the total of 22,607 foreign self-employed persons, 5,431 were registered as state-insured persons and 15,726 were registered as persons without taxable income. None of these persons was entitled to participate in the public health system because they did not meet the stipulated conditions.

The potential contribution that foreigners would make to the system in 2019 was calculation-estimated at CZK 1,013 million. Of this amount, CZK 66 million would be paid by the state for the state-insured persons and net contributions to the system without the state payment would therefore amount to CZK 947 million. Health care costs for this specified group of foreigners were recorded for 2019 in the amount of CZK 428 million.

With respect to the estimates for 2019, the inclusion of the group of foreigners in the public health insurance system would therefore lead to a positive balance of the public health insurance system of CZK 519 million.

We believe that the issue of health insurance for foreigners will continue to lead to numerous discussions on whether and under what conditions to include foreigners in the public health insurance system. Discussions should also focus on a more concrete solution, for example, whether a higher minimum allowance should be set for these persons, whether a minimum length of stay should be required, or whether allowances for the family members should be paid by foreigners themselves instead of the state.

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## Appendix A – Tables

**Table 10: Migrants according to their age groups, as of December 31, 2019**

| Age group | 0–14 | 15–19 | 20–24 | 25–34 | 35–59 | 60+ | Total |
|---|---|---|---|---|---|---|---|
| Total migrants | 59 899 | 17 694 | 33 540 | 126 323 | 286 456 | 58 424 | 582 336 |
| % | 10.29 | 3.04 | 5.76 | 21.69 | 49.19 | 10.03 | 100 |
| women (%) | 48.52 | 48.21 | 46.59 | 43.73 | 39.86 | 41.94 | |
| men (%) | 51.48 | 51.79 | 53.41 | 56.27 | 60.14 | 58.06 | |
| **Foreigners from third countries** | 4 502 | 1 330 | 2 521 | 9 493 | 21 528 | 4 390 | 43 764 |
| women | 2 184 | 641 | 1 174 | 4 152 | 8 580 | 1 841 | 18 572 |
| men | 2 318 | 689 | 1 346 | 5 342 | 12 948 | 2 549 | 25 192 |

*Source: Czech Statistical Office (2020), Ministry of the Interior of the CR (2020), own calculations*

**Table 11: Calculation of the total annual contribution on public health insurance of self-employed foreigners from third countries**

| Income interval of self-employed – Section 7 of ITA (in thousands of CZK) | Estimated number of self-employed foreigners | Estimated PTB for one person (in CZK) | Estimated assessment base for health insurance for one person (in CZK) | Monthly contribution per person (in CZK) | Annual contribution (in CZK) |
|---|---|---|---|---|---|
| 0–50 | 2 328 | –9 548 | –4 774 | 2208 | 61 689 364 |
| 51–100 | 2 006 | 40 495 | 20 247 | 2208 | 53 161 040 |
| 101–150 | 1 995 | 66 782 | 33 391 | 2208 | 52 859 633 |
| 151–200 | 2 237 | 103 214 | 51 607 | 2208 | 59 264 795 |
| 201–250 | 1 587 | 85 129 | 42 564 | 2208 | 42 060 639 |
| 251–300 | 1 334 | 83 895 | 41 947 | 2208 | 35 341 555 |
| 301–350 | 1 164 | 84 924 | 42 462 | 2208 | 30 828 706 |
| 351–400 | 1 077 | 90 104 | 45 052 | 2208 | 28 529 813 |
| 401–450 | 971 | 62 380 | 31 190 | 2208 | 25 728 752 |
| 451–500 | 905 | 60 105 | 30 052 | 2208 | 23 974 362 |
| 501–550 | 851 | 66 440 | 33 220 | 2208 | 22 551 998 |
| 551–600 | 765 | 58 488 | 29 244 | 2208 | 20 272 542 |
| 601–650 | 674 | 56 843 | 28 421 | 2208 | 17 866 346 |
| 651–700 | 583 | 59 514 | 29 757 | 2208 | 15 437 784 |

*Continued on next page*

| Income interval of self-employed – Section 7 of ITA (in thousands of CZK) | Estimated number of self-employed foreigners | Estimated PTB for one person (in CZK) | Estimated assessment base for health insurance for one person (in CZK) | Monthly contribution per person (in CZK) | Annual contribution (in CZK) |
|---|---|---|---|---|---|
| 701–750 | 504 | 64 510 | 32 255 | 2208 | 13 351 633 |
| 751–800 | 418 | 72 594 | 36 297 | 2208 | 11 082 295 |
| 801–850 | 348 | 71 210 | 35 605 | 2208 | 9 209 951 |
| 851–900 | 290 | 79 155 | 39 577 | 2208 | 7 677 622 |
| 901–950 | 237 | 88 362 | 44 181 | 2208 | 6 282 683 |
| 951–1 000 | 205 | 95 844 | 47 922 | 2208 | 5 433 046 |
| 1 001–1 100 | 321 | 107 668 | 53 834 | 2208 | 8 500 899 |
| 1 101–1 200 | 248 | 123 700 | 61 850 | 2208 | 6 560 659 |
| 1 201–1 300 | 194 | 132 419 | 66 210 | 2208 | 5 134 834 |
| 1 301–1 400 | 154 | 158 588 | 79 294 | 2208 | 4 088 696 |
| 1 401–1 500 | 126 | 177 018 | 88 509 | 2208 | 3 339 439 |
| 1 501–1 600 | 109 | 193 048 | 96 524 | 2208 | 2 885 465 |
| 1 601–1 700 | 92 | 197 098 | 98 549 | 2208 | 2 430 958 |
| 1 701–1 800 | 77 | 213 414 | 106 707 | 2208 | 2 045 413 |
| 1 801–1 900 | 67 | 212 964 | 106 482 | 2208 | 1 783 945 |
| 1 901–2 000 | 60 | 220 528 | 110 264 | 2208 | 1 600 758 |
| 2 001–2 250 | 159 | 172 933 | 86 467 | 2208 | 4 209 845 |
| 2 251–2 500 | 128 | 168 801 | 84 400 | 2208 | 3 401 744 |
| 2 501–2 750 | 88 | 211 825 | 105 912 | 2208 | 2 334 572 |
| 2 751–3 000 | 58 | 264 078 | 132 039 | 2208 | 1 540 850 |
| 3 001–3 500 | 74 | 298 188 | 149 094 | 2208 | 1 972 192 |
| 3 501–4 000 | 45 | 393 884 | 196 942 | 2 215,60 | 1 195 616 |
| 4 001–4 500 | 29 | 452 620 | 226 310 | 2 545,99 | 892 501 |
| 4 501–5 000 | 20 | 596 474 | 298 237 | 3 355,16 | 818 497 |
| over 5 000 | 78 | 1 801 667 | 900 833 | 10 134,38 | 9 437 011 |
| **Total** | **22 607** | | | | **606 778 453** |

*Source: Tax Administration of the Czech Republic (2021), own calculations*

**Table 12: Anticipated contribution to public health insurance; comparison with other studies for 2011, 2012, 2013 and 2019**

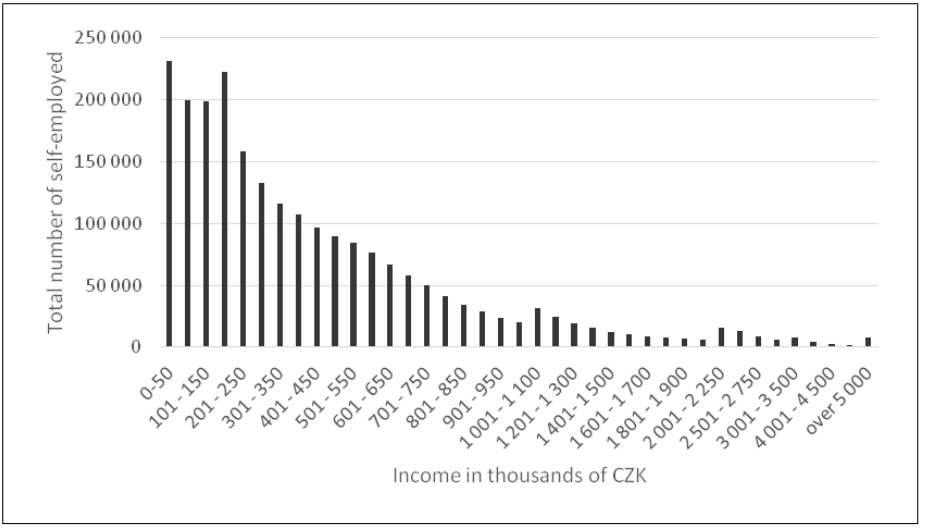
| | 2011 | | 2012 | |
|---|---|---|---|---|
| | Total contribution (in CZK) | Number of foreigners | Total contribution (in CZK) | Number of foreigners |
| Self-employed | 723 134 370 | 31 939 | 698 630 389 | 31 050 |
| State-insured | 106 635 825 | 12 291 | 141 163 067 | 16 271 |
| Persons without taxable income | 389 985 935 | 30 092 | 709 946 199 | 54 780 |
| Total | 1 219 756 130 | 74 322 | 1 549 739 655 | 102 101 |

| | 2013 | | 2019 | |
|---|---|---|---|---|
| | Total contribution (in CZK) | Number of foreigners | Total contribution (in CZK) | Number of foreigners |
| Self-employed | 554 473 373 | 22 629 | 606 778 453 | 22 607 |
| State-insured | 96 524 899 | 11 126 | 66 345 096 | 5 431 |
| Persons without taxable income | 485 449 109 | 37 457 | 340 247 736 | 15 726 |
| Total | 1 136 447 381 | 71 212 | 1 013 371 285 | 43 764 |

*Source: Czech Statistical Office (2021), Czech Statistical Office (2020), Tax Administration of the CR (2021), Tepperová and Zídková (2016), own calculations*

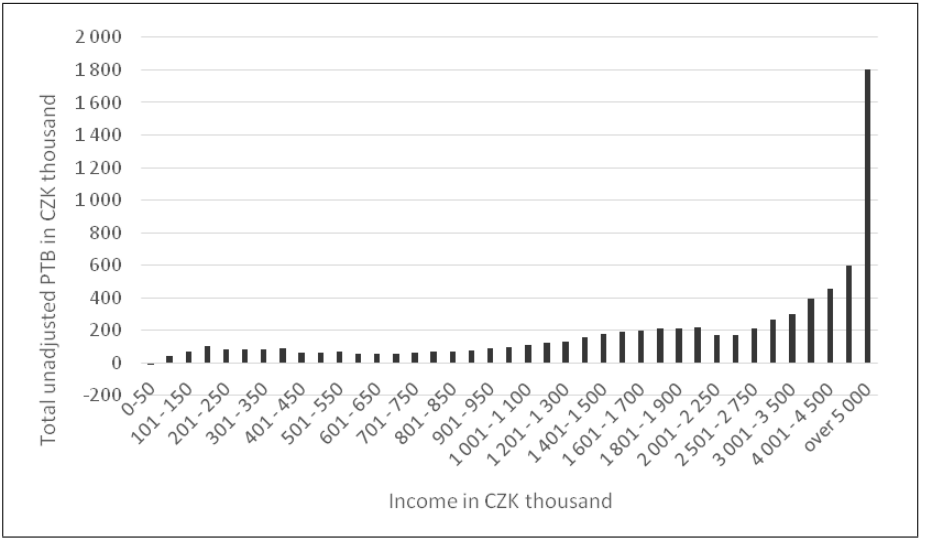
## Appendix B – Figures

**Figure 2: Total number of self-employed and their income distribution according to Section 7 of ITA in 2019**




*Source: Tax Administration of the Czech Republic (2021), own calculations*

**Figure 3: Total unadjusted PTB according to Section 7 of ITA for 2019**




*Source: Tax Administration of the Czech Republic (2021), own calculations*