

# The economic dimension of international students' volunteering – Opportunities for Central Europe\*\*

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## ABSTRACT

There is a growing body of literature that recognizes the importance of volunteering. The economic impact of volunteering has been studied in previous decades, but scientists have not examined that of international students' volunteer activities fully. Therefore, the current paper aims to identify the economic potential of ingoing Erasmus students volunteering in Visegrad 4 countries (Czech Republic, Hungary, Poland, Slovakia). The study uses a quantitative method to investigate Erasmus students' economic potential for volunteering, which is estimated by using two hypothetical situations. First, 90% of the international students shall volunteer for 4 h per month of their stay. Second, only 10% of the international students shall volunteer for 4 h per month. Replacement median wages were used to quantify the economic value of volunteering. This value is represented by an interval estimate with upper and lower bound. Results indicate the importance of international students' volunteer activity, as the potential volunteer hours and their economic value is calculated.

## KEYWORDS

volunteers, students, economic impact, V4 countries

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## INTRODUCTION

Volunteering has become an integral part of societies all over the world, including Central and Eastern Europe. There is a growing body of literature that recognizes the importance of volunteering (Handy et al., 2010; Rothwell & Charleston, 2012). Evidence suggests that voluntary activities play a crucial role in society. Therefore, the economic impact of volunteering has been studied in previous decades. However, the majority of these studies focus on local citizens' volunteering or people volunteering abroad (Dudley, 2007; Otoo & Amuquandoh, 2014; Rehberg, 2005). To date, scientists have not investigated the economic impact of international students' voluntary activities extensively in a certain area or country, they only concentrated on students' local volunteering (Cnaan et al., 2010; Cruce & Moore, 2007; Holdsworth, 2010; Holdsworth & Brewis, 2014). Due to globalization and internationalization, this phenomenon has to be studied from an international point of view as well.

Considering the notion of internationalization, it appears extensively in the field of higher education, as a continuously growing number of students decide to leave their home countries to study in a foreign country. The increasing number of international scholarship programs also fosters this tendency. Studying abroad includes not only student activities closely related to higher education institutions, but also students living in a given country (Kéri, Kazár, & Révész, 2018). Not surprisingly, the voluntary activities of international students are seldom studied in the literature, even though for some students, living in a foreign country could mean much more than just a transit country (Béla-Csovcsics & Kéri, 2017). Therefore, voluntary activities and the potential of international students should be taken into account.

Based on the arguments stated above, the current paper aims to identify the economic potential of international students' volunteering in Visegrad four countries, i.e., the Czech Republic, Hungary, Poland, Slovakia. The study provides an exciting opportunity to advance our knowledge of the potential economic impact of international students, with particular focus on ingoing Erasmus+ students. This specific group of students was chosen due to data constraints. Five academic years are studied from 2012 to 2017, as these years constitute the latest data available on Erasmus outgoing and incoming students.

In the current chapter, we are going to review the secondary literature on the economic impact of volunteering, the volunteering willingness and habits of students with specific emphasis on international students. Finally, the economic impact of international Erasmus students is investigated.

### Economic impact

Valuating the economic performance of the economy is a crucial field which attracts the attention of policy makers. However, standard economic indicators such as GDP or GNP fail to capture total economic output, let alone the wellbeing of the society (Ironmonger & Soupourmas, 2009; Mayer, 2003; Stiglitz, Sen, & Fitoussi, 2009; Wolozin, 1975). These indicators only focus on market production, although they represent different types of significant economic production outside the standard markets, such as unpaid work in the household, producing home-grown fruits, vegetables, and others. As Stiglitz et al. (2009, p. 14) wrote, "many services that households produce for themselves are not recognized in official income and production



measures, yet they constitute an important aspect of economic activity.” Another significant non-market activity is volunteer work.

According to estimates of [Salamon, Sokolowski, and Haddock \(2011, p. 219\)](#), nearly one billion people worldwide volunteer. Moreover, the economic value of volunteering worldwide is so high that it can be compared to the most robust economies of the world ([Salamon et al., 2011, p. 219](#)). Economists have been trying to quantify the value of volunteering at least for the last fifty years ([Wolozin, 1975](#)). Despite this fact, there is no consensus about the universal method for this quantification. Moreover, even the most common methods were subject to criticism based on their inaccuracy ([Bowman, 2009](#); [Brown, 1999](#)). However, at the beginning of this economic subdiscipline, it was not the aim of these quantifications to provide precise numbers ([Wolozin, 1975](#)). Three major approaches can be found regarding the volunteer activities’ quantification methods: replacement costs, opportunity costs, and societal benefits ([Orlowski & Wicker, 2015](#); [Salamon et al., 2011](#)).

The economic research of volunteering’s value is driven by the lack of data regarding the value of volunteering. As [Dingle, Sokolowski, Saxon-Harrold, Smith, and Leigh \(2001, p. 4\)](#) pointed out, “the history of volunteering is written in invisible ink.” [Salamon et al. \(2011, p. 220\)](#) added, that there is a lack of systematic comparative data on volunteering, as “it limits the visibility, and therefore the credence, of volunteer work. Also, it complicates the effective management of human time in terms of volunteering” ([Salamon et al., 2011, p. 220](#)). Therefore, quantifying the economic value of volunteering will help the research field to provide “shape and form to the contributions that citizens make to their societies through voluntary action” ([Dingle et al. 2001, p. 4](#)). [Brudney and Meijs \(2009, p. 565\)](#) also said that “volunteer labour is a renewable resource whose continuation and volume of flow can be affected positively as well as negatively by human intervention.”

One of the possible renewable resources of volunteer labour is international students taking part in international mobility programs. As they come for one semester or two, they have limited time in the country that they may spend in various ways. Therefore, it is crucial to look at students, and international students volunteer activities and the economic dimension of their presence in a host country.

## Volunteering

The research on the economic impact of volunteering is extremely complicated since the majority of articles look at the impact of volunteering on the job market possibilities and prospects of people ([Handy et al., 2010](#); [Rothwell & Charleston, 2012](#)). The definition of volunteering also varies, but in the current paper, we use the ILO definition, which states that volunteering is “Unpaid non-compulsory work; that is, time individuals give without pay to activities performed either through an organization or directly for others outside their own household” ([International Labour Organisation 2011, 13](#)).

[Handy et al. \(2010\)](#) researched the voluntary activities of students specifically in those countries where volunteering has a severe career enhancement effect and found that students motivated by resume-building volunteer fewer hours than students with other intrinsic motives. [Rothwell and Charleston \(2012\)](#) looked at volunteering as a transition between education and work in three different countries. Findings showed that the primary motivation was not being more attractive on the job market, but rather a more altruistic reason for emotional capital development.



Another substantial part of the articles investigates students' motivation and willingness to volunteer, the latter of which – according to [Cruce and Moore \(2007\)](#) – depends highly on their institution's ability to remove barriers (such as establishing contacts, eliminating language barriers) between the students and the community services. These findings are in line with [Béla-Csovcsics and Kéri \(2017\)](#) results, where students also waited for the university to provide them with volunteer opportunities. However, students' motivation to volunteer can differ. [Cnaan et al. \(2010\)](#) found that a mixture of motivation is present in students, but those who regularly volunteer have higher motivation than those who occasionally or do not volunteer at all. The motivation for CV enhancement has been on the decline and has become a secondary drive for volunteering for many higher education students, as their motivation has changed over time ([Holdsworth, 2010](#)). Higher education institutions can also encourage students to volunteer by making it a real learning experience outside school ([Garver, Divine, & Spralls, 2009](#); [Holdsworth & Quinn, 2012](#)). However, results are not always consistent in this matter, as later [Holdsworth and Brewis \(2014\)](#) conducted a case study of higher education students volunteering in the UK and looked at the impact of policy changes to boost volunteering in the country. They found that students do not wish to be influenced by their school, but only to be provided the opportunity to volunteer according to their own expectations and aspirations.

The literature also recognizes the importance of international volunteering, which has three main motivation categories: achieving something positive for others, quest for the new, and the quest for oneself ([Rehberg, 2005](#)). Further research found that the main motives behind international volunteering – in the case of Ghana – are altruism and learning, philanthropy, and socialization. However, it was also found that there are differences between individuals who had past travel volunteer experiences and those who had not. The latter group was found to be more engaged in securing ties with the local communities ([Otoo & Amuquandoh, 2014](#)). It is not very common but volunteering of immigrants was also studied before ([Dudley 2007](#)), and results show that the lack of language skills is a crucial barrier if an immigrant wants to volunteer, because in many cases they do not speak the native language of the country. However, it was also found that if an immigrant is included in volunteer activities, they are more likely to learn the local language easier, and they can integrate into the community smoothly. [Dudley \(2007\)](#) also suggests integrating volunteering in the language learning curriculum.

The previous findings could apply to incoming international students, so it is of key importance to look at international students' volunteering activities as well. However, there is little in the literature about international students' volunteer activities and willingness to volunteer. In their studies, [Béla-Csovcsics and Kéri \(2017\)](#) looked at the desire of both Hungarian and international students to volunteer in one of the V4 countries, in Hungary. Findings at the University of Szeged show that both international and Hungarian students are willing to volunteer. However, surprisingly, foreign students were more committed and determined to do so, which might stem from cultural differences between Hungarian and international students. However, the fact that international students would be more willing to volunteer in Hungary is an interesting finding, even though there were several obstacles ahead of them, such as the lack of English knowledge at volunteer organizations, lack of proper marketing activities, and institutional help from the university to connect the opportunity with the demand. As one interviewee said, they volunteer because of “the feeling that you are more than just eating and sleeping.”



Similarly, [Finn and Green \(2009\)](#) investigated the impact volunteering had on international learners and what benefits could be enlisted to their volunteer activities in terms of language, culture and employability. Their investigation method included both qualitative methods, such as weekly interviews, and a quantitative method, in the form of a questionnaire. They found that international students learn the local language more effectively when volunteering abroad. Moreover, they demonstrate a higher cultural awareness and they attribute their professional advancement to their volunteering activities.

University student volunteer activities have also been internationally studied by [Smith et al. \(2010\)](#), who found that volunteering is a popular activity among HEI students and other youngsters are the beneficiaries of these volunteer activities. Different motives were found to be behind the volunteering activities, such as career-, social-, or value-driven motives. The length of the volunteer period also varied and ranged from students volunteering occasionally, regularly or never.

As a conclusion, we can state that many of the reviewed articles look at the topic of international volunteering or international students volunteering abroad ([Rothwell & Charleston, 2012](#)). The literature and the scarce number of studies that examine the voluntary activities of international people inside a particular country highlights the importance of research in this field.

### Economic impact of international students

As the number of international students is continuously increasing, they represent a significant impact on the local economy. Even though international students' economic impact is widely studied, there is little research on the economic impact of their volunteer activities. Therefore, before looking directly at the economic impact of their voluntary activities, we should first briefly take into account international students' overall economic impact.

While the number of studies looking at the impact of international students' volunteering is relatively low, there are several papers on the economic impact of international students on the host ([Butcher, 2002](#); [Pinfold, 2018](#); [Universities UK, 2017](#)) and on their own countries ([Mantong, 2017](#)). The economic impact on international students' country of origin was studied by [Mantong \(2017\)](#), who found that if the sender country's economy is less developed than the recipient country, then there is economic growth in the home country.

Some studies solely concentrate on the relationship between education, educated students and the economic implications of these students ([Baumann & Hamin, 2011](#)), while others look at the impact that students make on the target country's economy ([Butcher, 2002](#); [Universities UK, 2017](#)). Comparing the costs and benefits of international students, we can conclude that the cost of international students is lower than the benefits, as the latter includes international students paying HEI fees, living costs, and taxes if they stay there after graduation ([Vickers & Bekhradnia, 2007](#)). Due to the economic impact of international students, many governments all around the world are taking steps to retain these students within their borders ([Phillimore & Koshy, 2010](#); [Pinfold, 2018](#)).

Regarding the V4 countries and the economic impact of international students, a study was conducted in Bratislava. [Nestorenko \(2016\)](#) looked at the case of the University of Economics in Bratislava and compared the spending of domestic and international students based on data obtained in previous academic years. It was found that international students studying at the



university spend an average of 375.3 thousand euros in total annually, which is a significant amount and – according to the author – it has a serious effect on the economy of the city. There has been similar research in Hungary – another one of the V4 countries – conducted by [Császár and Alpek \(2018\)](#), who looked into the economic impact of international students in one of the country's university cities, Pécs. Their results indicate that the money students spend on entertainment, relaxation and travel – besides their tuition fee – contributes to the local economy and small and medium-sized enterprises sector, which also results in the creation of new workplaces and to a price rise on the real estate market. An additional study was made in Hungary by [Miklós et al. \(2018\)](#), in which they investigated how foreign students spend their free time in Szeged (another university town in Hungary). The investigation also pointed out that international students have an extensive economic impact on the city, and they found that these students have a social importance as well. However, they also highlighted the lack of recreational and leisure activities in the city.

From the literature review, we can conclude that volunteering and the economic impact of international students is a widely studied phenomenon. However, previous studies have not concentrated on investigating the importance of the economic impact of students' volunteer activities. Therefore, the current paper aims to find out the economic potential of volunteering international students.

## METHODOLOGY

We have conducted a quantitative approach using the Plausibility Probes case study (see [Levy, 2008](#)) intending to estimate the economic potential of international students volunteering in V4 countries. We used the methodology of estimating the economic value of volunteering ([ILO, 2011](#); [Orlowski & Wicker, 2015](#); [Salamon et al., 2011](#)), more specifically, replacement wage using observed market proxies. As there is no available data on the willingness of international students to volunteer, we had to estimate these first. Due to the fact that it is a preliminary study and the point estimate of natural numbers is not necessary, we decided to make an interval estimate ([Dostál & Vyskočil, 2014](#)). Similarly to [Dostál and Vyskočil \(2014\)](#), we view the interval estimate as an alternative to point estimates, in which the result is a natural number. This should not be confused with a confidence interval, which is a special type of interval estimate. Therefore, we formulated two hypothetical extreme situations, represented by the upper and lower bounds.

The upper bound was represented by the hypothetical situation that 90% of international students would volunteer to spend 4 hours per month in their target country (approximately 1 h per week). We used the average number of months international Erasmus students spend in higher institutions abroad. The lower bound was represented by the hypothetical situation that only 10% of international students would volunteer for 4 hours per month. The idea behind this was that even though we do not know how many international students would be interested in such activities, we assume we can exclude extreme situations such as all or none of them volunteering.

We focused on a period of five years (from 2012 to 2017) and assumed that the four Visegrad countries (Czech Republic, Hungary, Poland, and Slovakia) share a similar historical, geographical and political background. After estimating the potential of international students



Table 1. Replacement wages and currency rates

Country	Median wage (per hour)		Average currency rate to EUR (2014)
	In local currency	In EUR	
Czech Republic	154 CZK	5.6	27.533 CZK per 1 EUR
Hungary	1,434 HUF	4.7	308.66 HUF per 1 EUR
Slovakia	5 EUR	5	1 EUR per 1 EUR
Poland	24 PLN	5.7	4.1852 PLN per 1 EUR

Source: Constructed by authors based on: *Europa.eu*.

volunteering in terms of hypothetical volunteer hours, we needed to find replacement wages to quantify the economic value of volunteering.

Even though ILO (2011) recommends using specialist wages for different types of volunteering, this method cannot be used due to lack of data on the types of volunteer activities international students might be willing to perform. Instead, we used the median generalist wage for each of the countries, the method used by some statistical offices, e.g., the Czech Statistical Office (Rybáček, Fořtová, & Skaláková, 2017). We took the national hourly median wages from ILO database, while we used the last available data (for the year 2014) for the whole period. The national median replacement wages were converted to EUR (from CZK, HUF, and PLN) using average currency rates from 2014. Table 1 shows the median hourly wages in each country.

## RESULTS

This part of the paper aims to estimate the economic potential of international students' volunteering in V4 countries. In the first part, we present the estimates on the potential of the volunteer hours international students can spend as volunteers. In the second part, we estimate the economic value of the potential volunteering of international students in V4 countries.

As described previously, we use the interval estimate to estimate the number of possible volunteer hours. However, these estimates are derived from the real data on incoming Erasmus students in V4 countries. Table 2 presents the number of incoming Erasmus students in V4 countries for five consecutive years.

Table 2. The number of ongoing Erasmus students in V4 countries

Country	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Poland	11,186	11,693	13,101	14,616	16,908
Czech Republic	5,696	6,868	8,330	9,286	10,534
Hungary	3,190	4,764	5,403	5,707	6,242
Slovakia	1,553	1,570	1,791	1,867	2,149
V4 countries	21,625	24,895	28,625	31,476	35,833
Total number of Erasmus students	182,662	272,497	291,383	303,880	325,755

Source: Constructed by authors based on ILOSTAT (2019), Czech National Bank (2019), Central Bank of Hungary (2019) and National Bank of Poland (2019).



Table 3. Ongoing Erasmus students in V4 countries – basics characteristics

	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Average time spent abroad (month)	6	5.8	5.3	5.2	5.1
Average age of participants	22	23.5	24.5	24.5	22.5
Women (%)	61	60.5	61	61	61
Men (%)	39	39.5	39	39	39
Average grant (euro)/month	272	274	281	275	316

Source: Constructed by authors based on ILOSTAT (2019), Czech National Bank (2019), Central Bank of Hungary (2019) and National Bank of Poland (2019).

Table 3 presents other basic characteristics of Erasmus students, the most important being the number of months abroad used in the estimation of the volunteer hours.

Erasmus data provides us information about how many Erasmus students are going to V4 countries, together with the average number of months Erasmus students spend in their mobility program. Using this data, we can estimate an upper and lower bound of the estimate of volunteer hours.

First, we take the upper bound, represented by the hypothetical situation when 90% of the international students would be willing to volunteer for 4 h per month. We consider this as a hypothetical upper extreme, even though some of the students might volunteer more than 4 h per month. Table 4 presents the results of this upper bound.

Due to the growing number of incoming Erasmus students in V4 countries, their potential to volunteer also increases. If 90% of the Erasmus students volunteer, for approximately 1 h per week, each V4 country will receive tens to hundreds of thousands of volunteer hours that would be spent in their societies. The upper bound of volunteer hours' potential is 657,894 volunteer hours per year for the V4 region, exclusively from Erasmus students.

While the situation mentioned above is considered to be an upper extreme, we also counted with a lower extreme hypothetical situation. The lower extreme hypothetical situation is built on the presumption that only 10% of Erasmus students volunteer for approximately 1 h per week. Table 5 describes lower bound situations.

Similar to the upper extreme, the lower bound values are also growing. Therefore, if 10% of students volunteer 4 hours per month, each V4 country will acquire from thousands to tens of

Table 4. Estimates of international students' volunteer hours – upper bound

Country	If 90 % of the students volunteer 4 hours per month				
	Volunteer hours – upper bound				
	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Poland	241,618	244,150	249,967	273,612	310,431
Czech Rep.	123,034	143,404	158,936	173,834	193,404
Hungary	68,904	99,472	103,089	106,835	114,603
Slovakia	33,545	32,782	34,172	34,950	39,456
Total	467,100	519,808	546,165	589,231	657,894

Source: Constructed by authors.



Table 5. Estimates of international students' volunteer hours – lower bound

Country	If 10 % of the students volunteer 4 hours per month				
	Volunteer hours – lower bound				
	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Poland	26,846	27,128	27,774	30,401	34,492
Czech Rep.	13,670	15,934	17,660	19,315	21,489
Hungary	7,656	11,052	11,454	11,871	12,734
Slovakia	3,727	3,642	3,797	3,883	4,384
Total	51,900	57,756	60,685	65,470	73,099

Source: Constructed by authors.

thousands of volunteer hours that would be spent in their societies. The lower bound of our estimate is 73,099 volunteer hours per year. Therefore, we can make the following interval estimates for the number of volunteer hours, such as the one in the following Table 6 for the academic year 2016–2017.

Regarding our interval estimate, the potential volunteer hours of incoming Erasmus students in V4 countries is represented by the interval from 73,099 to 657,894. These hours' estimate is a crucial data input, together with national replacement wages, to estimate the economic potential of international students' volunteering in V4 countries. After assigning values to the estimated volunteer hours by the replacement wages, we got the estimates of the economic value of volunteering.

### The economic potential of international students' volunteering

As in the case of estimating the volunteer hours, we calculated two bounds representing two extreme situations. In the first hypothetical situation, 90% of students volunteer 4 hours per month. Results are shown in Table 7.

The lower bound represents the hypothetical situation that 10% of students volunteer 4 hours per month. Reaching such numbers would probably depend on factors such as the desire of international students to volunteer, the level of volunteering infrastructure, and the willingness of community organizations to be in part of this. Results per V4 are provided in thousands of EUR. These results are shown in Table 8.

Table 6. Interval estimates of the number of volunteer hours in V4 in 2016–2017

Country	Number of volunteer hours		Share (%)
	Lower bound	Upper bound	
Poland	34,492	310,431	47
Czech Republic	21,489	193,404	29
Hungary	12,734	114,603	17
Slovakia	4,384	39,456	6
Total	73,099	657,894	100

Source: Constructed by authors.



Table 7. Estimates of the value of international students volunteering – upper bound

Country	If 90 % of the students volunteer 4 hours per month				
	Value of volunteering (EUR) – upper bound (in 2014 prices)				
	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Poland	1,377,220	1,391,654	1,424,812	1,559,586	1,769,456
Czech Rep.	688,988	803,062	890,044	973,470	1,083,064
Hungary	323,849	467,520	484,519	502,125	538,635
Slovakia	167,724	163,908	170,861	174,751	197,278
Total	2,557,781	2,826,143	2,970,237	3,209,932	3,588,433

Source: Constructed by authors.

Table 8. Estimates of the value of international students volunteering – lower bound

Country	If 10 % of the students volunteer 4 hours per month				
	Volunteer hours (EUR) – lower bound (in 2014 prices)				
	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Poland	153,024	154,628	158,312	173,287	196,606
Czech Rep.	76,554	89,229	98,894	108,163	120,340
Hungary	35,983	51,947	53,835	55,792	59,848
Slovakia	18,636	18,212	18,985	19,417	21,920
Total	284,198	314,016	330,026	356,659	398,715

Source: Constructed by authors.

Based on the lower and upper bounds of the estimate, we have constructed an interval estimate, as in case of the volunteer hours' estimates, we present the interval estimate for the academic year 2016–2017, expressed in EUR in 2014 prices. The results are shown in Table 9.

This table shows the most relevant results, while it presents our estimates about the economic potential of international students volunteering in V4 countries. Assuming a relatively little willingness of international students to volunteer, the unpreparedness of volunteering

Table 9. Interval estimates of the potential economic value of volunteering in V4 in 2016–2017

Country	The economic value of volunteering (estimate in EUR in 2014 prices)		Share (%)
	Lower bound	Upper bound	
Poland	196,606	1,769,456	49
Czech Rep.	120,340	1,083,064	30
Hungary	59,848	538,635	15
Slovakia	21,920	197,278	5
Total	398,715	3,588,433	100

Source: Constructed by authors.



infrastructure, and a relatively small willingness of the universities and community organizations to take part in organizing volunteer activities, the study still reveals exciting results. While for the countries with a relatively low number of international students coming via Erasmus programs like Hungary or Slovakia, the estimates are tens of thousands of EUR, for the other countries the estimates are much higher. In the Czech Republic, the pessimistic variant showed an estimate of 120,000 EUR, while in Poland it was almost 200,000 EUR, in case 10% of students volunteer approximately 1 hour per week (4 hours per month) during their Erasmus stay. Alternatively, it can be 5% of the students volunteering approximately 2 hours per week (8 hours per month) and other combinations.

However, the optimistic variant, presuming high willingness of the international students of volunteer, relatively good level of the volunteering infrastructure, and high level of motivation of the universities and community organizations to take part is quite impressive. In case of the optimistic variant, the economic value of the potential of international students to volunteer is hundreds of thousands of EUR per year in Hungary or Slovakia, exceeding 1,000,000 EUR per year in the Czech Republic, and 1,700,000 in the case of Poland, in case 90% of students volunteer approximately 1 hour per week (4 hours per month) during their Erasmus stay. Alternatively, it can be 45% of the students volunteering approximately 2 hours per week (8 hours per month) and other combinations.

## DISCUSSION

Within this section, we are discussing the significance of the international students' volunteering and its potential estimated in this article from the perspective of students, universities and communities. Further parts of this section also discuss the deeper economic impact of international students volunteering and the limitations of this study.

### Students (increasing their human capital)

Even though our study focused on the estimation of the value of international students' volunteering, the literature recognizes a significant impact on the volunteers themselves. Volunteering can in fact enhance students' study experience and provide additional skills and knowledge. Therefore, volunteering during students' mobility program abroad can contribute to the development of their human potential and increase their desirability on the labour market. As we discussed the immigrants volunteering above, there are some similarities between this type of volunteering and international students' volunteering.

Schugurensky, Slade, and Luo (2008) investigated immigrants volunteering in Canada and they identified several learning-related dimensions of the volunteer experience these immigrants were acquiring. While the immigrants are in a specific situation and in the need of finding a job, all respondents volunteered in order to improve their chances on the labour market, which will probably be different from international student volunteers. However, in general, both groups share several significant similarities such as high rate of people lacking local language skills or the desire to improve their human potential in order to have a better chance on the labour market. Therefore, the reason why immigrants volunteered might be relevant (Schugurensky et al. 2008, p. 8). According to Schugurensky et al. (2008), the main reason for immigrants to volunteer was to gain local experience and improve the understanding of English, which is one



of the local languages in Canada. Among other reasons were to learn about the local culture, to network or to have a “real” local workplace experience. The less significant reasons were to meet new people, have something to do or simply being involved in the local society. These reasons focused on better communication skills, cultural understanding and unique local societal and working experience could also be the reasons why the volunteering abroad might be desirable for international students.

## Universities

In her article about the social responsibility of the universities, [Perić \(2016, p. 255\)](#) mentioned a need for universities to “strengthen civic commitment and active citizenship through volunteering.” She ([Perić, 2016, p. 261](#)) also noted that universities should support their departments to build a program focused on raising “the sense of belonging to its community among students,” and also help students to “recognize social problems”, so as to “take the responsibility and apply acquired skills to solve them.” Even though she was writing about students volunteering in general, her findings could also be applied to the case of international students’ volunteering. The reason behind this is given by the meaning of such programs as described by [Perić \(2016, p. 261\)](#), where she said that such a model “has proven to be a successful educational method that encourages students to take advantage of the acquired academic knowledge to solve real social problems and needs of the community”. In other words, if universities intend to maximize the social potential of their students, both local and international, this model can be a tool for achieving such a goal.

In another article about universities’ social responsibility, [Vasilescu et al. \(2010\)](#) mentioned difficulties in defining such a concept, while they highlight its importance. They also put the university’s social responsibility in the context of the Bologna Process, while mentioning the Magna Charta Universitatum document as “the attempt of creating a European model of information transfer and knowledge exploration within the European Higher Education Area” ([Vasilescu et al., 2010, p. 4177](#)). Universities’ social responsibility is more complicated than just volunteering -- but focussing on the community is still an integral part of it. Moreover, international students’ volunteering has the potential to become an integral part of cross-border cooperation in programs such as Erasmus. Therefore, the universities can use international students’ volunteering programs as a tool to maximize their study experience, and to contribute to the information-, knowledge- and skill transfers among different countries.

The other way how universities can benefit from international students’ volunteering program is to use it as one of their PR tools. More specifically, to show the public and local communities that a university can contribute to societal wellbeing. Additionally, they can use it as a tool towards potential international students, both exchange and degree students. Universities can use it as a promotion tool where the applicants from abroad will know that at this university, they would have an opportunity to do more than just “eat, sleep or study” ([Béla-Csovcsics & Kéri, 2017](#)).

These days the whole world is dealing with the COVID-19 pandemic. The pandemic is limiting the lives of people. Still, it also creates a wave of solidarity among the people in the form of volunteering and universities are playing a role in this. However, it varies significantly in different regions and universities around the world. Since this is a relatively new phenomenon, there are not many published studies about these matters. However, there are already some



published examples of such activities, e.g. COVID-19 Medical Student Response Team at Harvard Medical School (Soled et al., 2020) or the study on the fast mass-production of medical safety shields in the context of using university fabrication facilities and volunteer labour (Kalyaev, Salimon, Korsunsky, & Denisov, 2020). However, there is very little available information. However, the question is what the participation of the universities is in dealing with COVID-19 pandemic in V4 countries, what the priorities and possibilities of the HEIs are. And also, how international students can be included in this process.

Regarding standard university students' volunteering, very few information is available, especially about the programs for international students in V4 countries. We know that universities can apply for a grant for the purpose of volunteering in the European Solidarity Corps programs. According to latest data, there are also V4 universities among them, more specifically University of the West Bohemia from the Czech Republic, the University of Pecs from Hungary and the University of Economy in Bydgoszcz from Poland (Dostál, Kéri, & Khurtsidze, 2020). Therefore, the European Solidarity Corps programs might be a potential way for universities to finance their volunteering activities. Apart from that, university students can participate in the volunteering programs outside the university structures.

## Communities

According to our estimates, the potential of international students volunteering in V4 countries is between 73,000 and 657,000 hours. For comparison, Dostál (2016) wrote that one of the biggest networks of volunteer centers in the Czech Republic is ADRA. This network is specializing in organizing regular volunteering in social and health organizations and is primarily working with youth. In 2015, more than 1,800 people volunteered for a total of 68,200 hours during 35,160 visits to about 150 receiving organizations in more than 50 cities (Dostál, 2016, p. 241). If we look at our results, we see that the potential of international students' volunteering in the Czech Republic is between 21,000 and 193,000 hours. Looking at these number in the context of the experience of the ADRA network in the Czech Republic, we might conclude that with proper management, the 68,000 volunteer hours have the potential to result in around 35,000 volunteer visits to local communities.

While ADRA volunteering is mainly focused on the communications with the clients or patients, the language barrier will probably be significant. Therefore, this example was used to illustrate the power of free time. The types of potential volunteer activities of international students are yet the subject of further research. However, we can assume that they would choose those activities in which the knowledge of the local language is not crucial, or where translation is possible. Typically, these would be activities focussing on language teaching, speaking to students or clients of social organizations with an interpreter (possibly a local student), helping with manual activities.

Regarding the other V4 countries, Soltes and Gavurova (2016) analysed the socioeconomic aspects of volunteering in Slovakia. They found out that "the significance of voluntary activities and their relevance have constantly been increasing in Slovakia." Therefore, we might conclude that there might be a demand for increased volunteering in communities. We do not know yet how much of this demand would be connected to international students' volunteering. However, the increased interest for volunteering activities in Slovakia is promising.



There is very limited information about volunteering in communities in V4 countries. However, with the ageing of the population and the current COVID-19 pandemic (both affecting all the V4 countries), we can assume that there will be more need for volunteering in the communities than there will be available resources. Also, both ageing of the population and COVID-19 pandemic has the potential to increase the feeling of loneliness in people. As we can find in the literature, loneliness can have various negative health effects which can be comparable to the impacts of high blood pressure, obesity or even smoking (DeWall & Pond, 2011; Gerst-Emerson & Jayawardhana, 2015). Volunteering, however, represents a possible counter-effect.

In general, we might conclude that international student volunteering is an opportunity to increase the non-market production in V4 countries, to the extent estimated by this article.

While volunteer activities are not directly driven by market forces, they can fill those needs that are covered neither by the government nor by the market. According to the theory of government failure described by Weisbrod (1977), discussed by Hyánek (2011), Pejcal and Dostál (2017) and others, governments focus on the need of the average voter in order to win another election. However, governments are not focussing on minority issues or problems of specific groups, if they are not crucial for the average voter. From this perspective, international students volunteering can help deal with market and government inefficiencies.

## Discussion of the deeper economic impact

As a significant contribution to the theory, the value of volunteering was presented by Mayer (2003) whose work focused on the indirect impacts of volunteering. Mayer has identified four indirect impacts of volunteering captured in the literature (on crime, health, education, and economic growth) and attempted to estimate some of them for South Australia. His study is not only reminding us that volunteering can have an indirect impact, but also shows that there are tools for capturing this impact. Based on this research, we should also keep in mind that international students' volunteering across different countries and regions can probably share the same indirect benefits, such as the positive effects on the level of crime, the health of the population, level of the education in the society, and last but not least, economic growth.

## Limits of the research

Even though we worked with the actual numbers of international students in V4 countries and the number of months they spend there, we do not yet have any reliable information about their willingness to volunteer. Because of this limitation, we calculated the interval estimate, instead of the point estimate, which is much more common in the valuation of the value of volunteering. This estimate is so broad that the likelihood that the actual willingness of international students to volunteer would be within the identified bounds is relatively high. However, the presumption of the study was that at least some international students in V4 countries will have the interest to experience this kind of activity during their studies. In order to use this potential, it is also necessary that universities, civil society organizations, and other stakeholders would be open to such initiatives.

The other limit of our study is that it focused only on Erasmus students, due to data compatibility and availability, does not cover the case of other international students. Also, it focused on the international students' volunteering only, and not on the international volunteers



via other initiatives and schemes such as the European Voluntary Service and others. It also did not cover the corporate volunteering of the big international companies operating in larger cities of V4 countries that have English as an operating language and therefore employ their staff without the knowledge of the national languages.

## CONCLUSIONS

Based on the research outcomes described above, we may conclude that international students volunteering in V4 countries have a significant economic potential. This potential is connected first to students themselves, as it can enhance their study experiences, increase their human potential and provide them with additional skills and knowledge, so they would be more desirable on the labour market. Secondly, our study is also relevant to higher education institutions. It can help them achieve their mission and goals more efficiently while enhancing their students' experiences, showing their own importance and societal interests to the public and to local communities. Universities can also use it as a competitive advantage in attracting students from abroad, offering them the possibility to do more than just study. Thirdly, it has economic potential for local communities, providing them with additional human resources to contribute to solving local problems.

More exact estimates of the economic potential of volunteering are subject of future research. We are especially interested in the volume and types of activities suitable for international student volunteers, who do not speak the local language. We would also further investigate the willingness of international students to volunteer. However, there is the presumption that many international students are not engaged in local communities and in addressing the local problems because they do not know how to participate. Without knowing the language, it might be complicated to reach the local volunteering infrastructure, even though the volunteering itself might be possible without the knowledge of local languages. While universities are not only regional centers of education, but also institutions with increasing local importance and knowledge of English, they might be natural mediators between international students willing to volunteer and local communities.

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