

Research Question: To what extent is the migration of Romanian anaestheologists towards Western countries due to wage differences, and what is the impact of this phenomenon on the Romanian economy?

# The Causes and Impact on the Romanian Economy of the Migration of Anaesthesiologists to Western-European States

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## Introduction

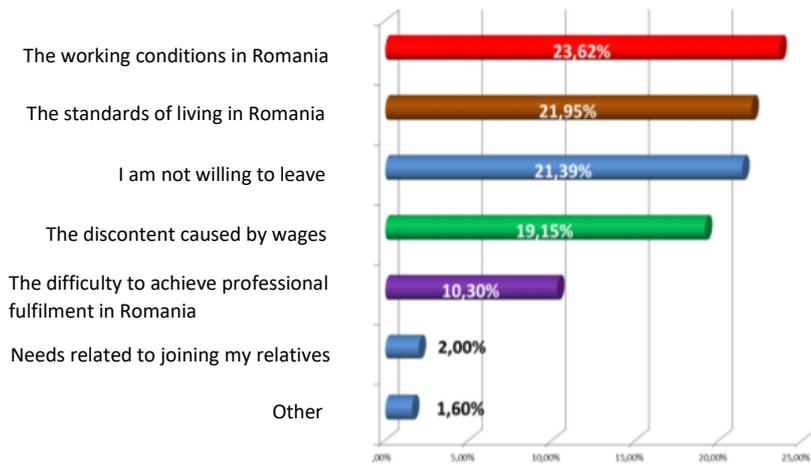
The aim of this research is to determine the extent to which the annual exodus of anaesthesiologists from Romania to Western European states impacts the economy of the source country, and to determine the importance of wage factors in this context. The research contains numerical data from various sources, one of them being the Anaesthesia and Intensive Care Department of the Fundeni Clinic and Medical Institute in Bucharest. The profession which is being analysed is anaesthesiology, for which demand has been increasing globally along the years, and most notably in Romania. This is due to a series of factors. Firstly, there has been an increase in the number and complexity of medical procedures requiring anaesthesiologists. Moreover, the presence of an anaesthesiologists has become mandatory in radiology and gastroenterology, and the workload of anaesthesiologists in intensive care units has increased recently (Mitre, et al., 2016). The research will also touch on the phenomena of brain drain (for the home country), and conversely brain gain (for the host country), and will take into consideration the short and long-term impacts on both economies and their labour markets, with an emphasis on the economy of Romania. Additionally, this research will attempt to present the reasons which encourage Romanian doctors to migrate to the West, and the measures which have been taken in order to slow down this phenomenon and their results.

## Background Information

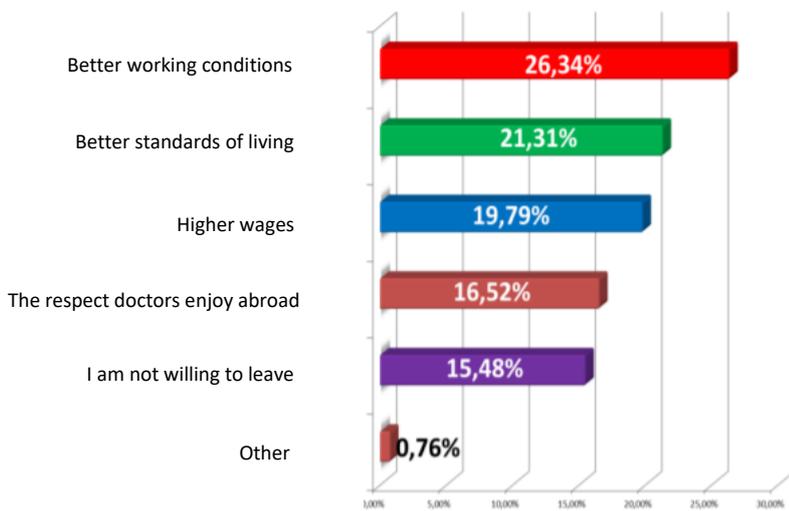
Romania is the 12<sup>th</sup> biggest country in Europe (World Population Review, 2019). Bordered by countries such as Bulgaria and Ukraine, Romania has been dealing over the years with a medical crisis stemming from the shortage of doctors caused by the continuous exodus of the latter towards western countries. This phenomenon started after the fall of the Communist regime in 1989, but gained a notable importance after the country joined the European Union on the 1<sup>st</sup> of January 2007. There are however a multitude of reasons which have led this occurrence, and have over the years accelerated it. Firstly, many doctors decide to make this move as they are seeking bigger wages, which theoretically translate into a higher standard of living. Others decide to emigrate as they are chasing professional and academic fulfilment which they can get in prestigious western medical institutions. Essentially, 43,000 doctors had left from 2007 to 2016 (Ionescu, 2019), and official government figures estimate that around six medical specialists leave for greener pastures every day (Neagu, 2019). An article in the European Journal of Anaesthesia confirms this figure, stating that 13872 medics left Romania between 2008 and 2013, which is approximately equal to 6 medics departing every day (Mitre, et al., 2016). The same source underlines that the latest available official data shows that the anaesthesia workforce of the country decreased by 40% from 2005 to 2012. This phenomenon leads to a series of benefits in the target countries as the latter increase their productive capacity with skilled individuals which are in the possession of an accredited medical diploma, recognized by the European Academy of Anaesthesiology (Mitre, et al., 2016). However, this migration also results in a negative impact on the economy of the source country. For instance, this exodus leads to a shortage of doctors and a loss of economic output.

## Data Analysis: Causes and Potential Solutions

As previously mentioned, the predominant reasons which have led Romanian doctors to relocate in the search of a better job are higher wages and the possibility to work in better conditions, in institutions enabling the latter to develop both as human beings, and professionals. Indeed, a study conducted by the University Doctor Viorel Rotila, a professor from the Dunarea de Jos University in Galati has shown that 77.57% of the medical cadres surveyed during the research had taken under consideration leaving Romania. The main reasons for such a change were the poor working conditions (23.62%), the standards of living (21.95%) and the salaries (19.15%). The same behaviour is reflected in the data gathered after asking the same pool of participants why they would be attracted to move to another country as most responded that they level of civilization and modernity appealed to them (26.34%), others stated that they were seeking higher wages (21.31%), and another important fraction said that they were attracted by the level of respect doctors get in the West (19.79%). In addition, the study concluded that the main policies which would change the doctors' minds would be the improvement of working conditions (56%) and the increase of wages (44%) (Rotila, 2018).

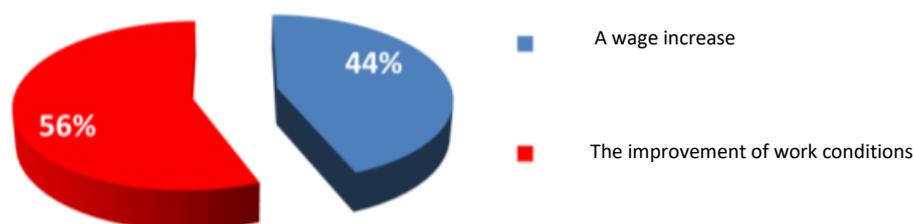


**Figure 1:** What factors would make leave Romania in the quest for a new job? (Rotila, 2018)



**Figure 2:** What factors would make you start work in another country? (Idem, 2018)

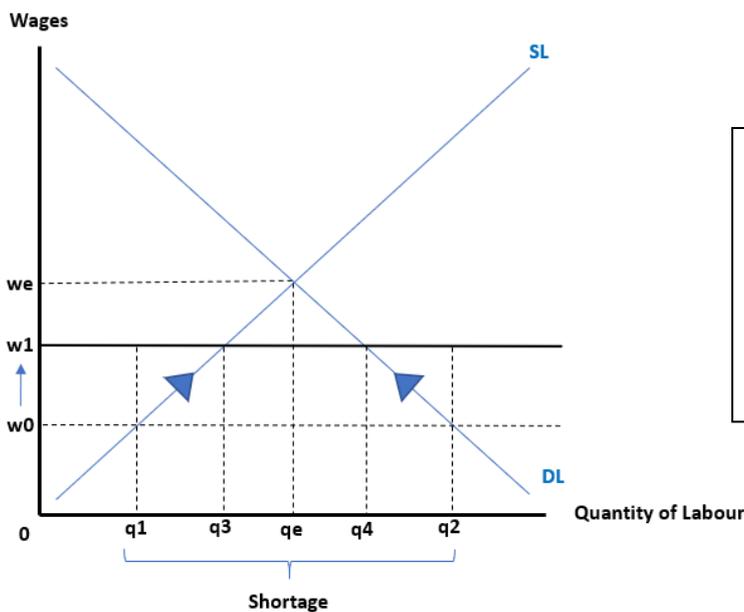
**Figure 3:** What would be the changes brought about by the government which would convince you to stay (question asked exclusively to participants having expressed their desire to emigrate). (Idem, 2018)



We can subsequently deduce from these sets of data that, contrary to popular belief which usually outlines low wages as the main reason for migration flows, the main factor leading to this wish to leave lies in the desire to activate in a country where working conditions are better than the ones in the origin country. In Romania, the working conditions in the medical fields are a result of a series of other factors. Such is the case of the physical aspect of the medical institutions in Romania. More precisely, from 1989 (the end of the Communist regime) until 2017 the State has only funded the construction of one hospital in Craiova. The government, however, spent hundreds of millions of euros in an attempt to renovate a large number of such institutions. The efficiency of these operation was very low, however, as the State focused on consolidating hospitals rather than modernizing them. Additionally, these poor working conditions are a result of the very exodus this research wants to find the impact of. In a more detailed view, the shortage of doctors caused by the continuous flows of medical professionals to Western countries has resulted in a phenomenon of burnout in

hospitals all around the country. This was explained in a recent study conducted by a series of high-profile Romanian medical personalities, one being the head of the Anaesthesia and Intensive care department at the Fundeni Medical Institute in Bucharest. The study concluded that Romanian hospitals have a medium level of burnout, which is very close to becoming high, as the average rate of Romanian hospitals currently lies at 68, the medium interval being 51<x<75 (Bubenek-Turconi, 2010). These sets of data also display low wages as one of the main factors leading to the outflow of Romanian anaesthesiologists to foreign countries. In a more detailed view, the wages Romanian anaesthesiologists receive as compared to countries such as Germany are approximately four times lower (Botnariuc, 2018), and the current level of wages in Romania might decrease as the astronomical increase which took place last year has been proved not to be sustainable, leading to outstanding levels of public debt. Essentially, Romanian anaesthesiologists are seeking better standards of living abroad. Among other factors the most notable one is arguably the academic fulfilment and public respect doctors have the chance of achieving in very developed countries such as the Western-European ones. More precisely, as medicine is a very academic and precise profession, academic fulfilment may be prioritized by doctors to the detriment of material gains.

We can subsequently note that the most obvious solutions to this problem would be implemented through government spending, and could range from an increase in wages and investment in research programs (enabling academic excellence to be rewarded which would lead to professional fulfilment) to the renovation of hospitals or the construction of new ones (which would result in an overall improvement in working conditions. However, these remain *potential* solutions for the moment as the Romanian government can't finance such ambitious projects for the moment as its dealing with an increasing budget deficit equal to approximately 2% of the state's GDP (Kiss, 2019).

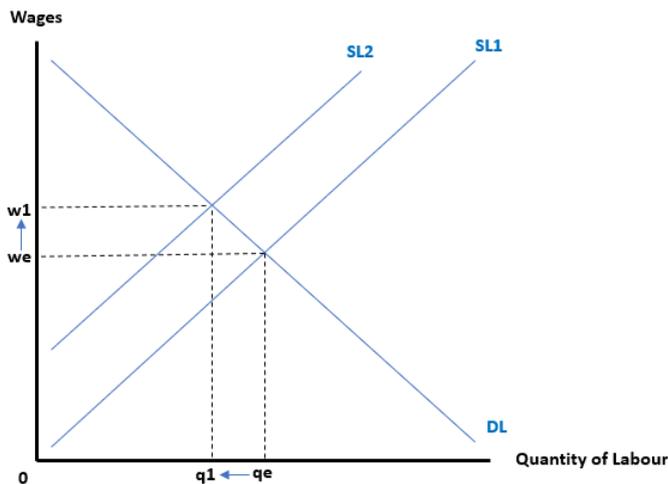


**Figure 4:** An increase in wages from  $w_0$  to  $w_1$  would convince many doctors to stay as the quantity supplied of doctors would thus increase from  $q_1$  to  $q_3$ . This policy would cause a decrease in the shortage of doctors from  $q_1q_2$  to  $q_3q_4$

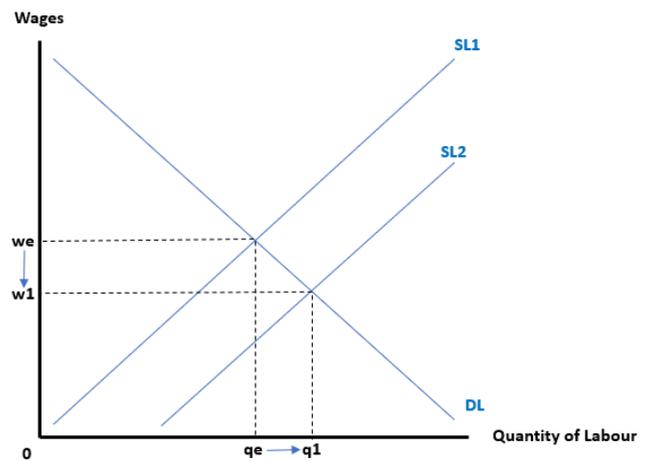
Effect of an increase in wages on the Romanian Labour Market

# Impact on the Romanian Economy

## Labour Market



**Figure 5:** Effect of migration on the Romanian Labour Market



**Figure 6:** Effect of migration on the target country's Labour Market

As Romanian doctors choose to relocate, the supply of medics decreases in the source country, which is portrayed by the shift of the Labour Supply curve from SL1 to SL2. This has the effect of increasing salaries from  $w_e$  to  $w_1$ , thus decreasing the quantity demanded of labour from  $q_e$  to  $q_1$ . Arguably, as this increase in wages will work as an incentive to stay for the remaining anaesthesiologists, but in truth, Paul Collier, an economist which has centred most of his research around migration and poor societies states that such an increase will only motivate workers to stay in their home country if it is substantial (brings wages on equal terms with Western countries). Otherwise, such an increase would merely help potential

migrants finance their departure more quickly, thus accelerating the process (Collier, 2013). Fortunately, the Romanian government has recently taken a series of measures destined to slow down the rate of migration of doctors. The latter have consisted of increasing salaries rather substantially. For instance, doctors from the Fundeni Medical Institute in Bucharest have seen their wages by almost 300%. More precisely, residents have received a 288% increase from 2022 to 7848 Romanian lei. Specialists saw their wages increase by 182%, from 4222 to 11923. Finally, the salaries of primary doctors suffered a 177% increase. The latter have had a very positive impact: some economists have estimated that migration has since slowed down by around 40% (Andreescu, 2018). These measures will however only be beneficial in the short-run, as they have been very costly. In a more detailed view, government debt has increased by 30 billion Romanian lei in response to this increase, or approximately 6 billion pounds, bringing debt to a level which is five times higher than the one ten years ago (Ziare.com, 2019). It is thus fair to say that these measures might be retracted soon in order to avoid outstanding levels of public debt, which would then lead to a decrease of wages, to a similar level to the one before the initial increase. Such measures were taken in the first place by only assessing the short-term benefits such as increase in popular support and an increase in consumption (which could boost GDP growth).

To put things into perspective, the migration of Romanian doctors greatly benefits the target country as the Supply of doctors will increase (as portrayed in Figure 6, the labour supply curve shifts from SL1 to SL2, decreasing the wage level from  $w_2$  to  $w_1$  and increasing the quantity of labour from  $q_2$  to  $q_1$ ). Firstly, the country in question suffers an increase of GDP in the process as the expansion of the supply of anaesthesiologist directly results in an increase in economic output. In addition, as the supply of workers increases, so will the productive potential of the target state.

## Loss of Output

The most notable repercussion of this migration of anaesthesiologists on the economy of the source country is arguably the loss of output, as the services provided by the latter were taken into account when calculating economic output, which is essentially a measure of the volume of goods and services produced in an economy over a given period of time. As these professionals choose to leave, the country's GDP suffers a slight decrease which as we will see will be continuously exacerbated by other factors.

## Loss of Government Funds Spent on Training

Medical training is one of the longest and most challenging university courses one can undertake. It takes six years to complete the academic formation, and between four and six other years to complete the practical training. The monetary cost of such training is subsequently high: the Romanian government has spent around 60 million euros (Spiridon, 2014) per year in the past decade on the training of doctors which have since left. There is currently no way in which the state can stop doctors from migrating, which essentially means that the government will keep on losing these astronomical sums of money until some sort of rules will be implemented making it impossible for young doctors to get free training and then leave. In addition, when visiting the Fundeni Medical Institute I learned that many hospitals attempt to take legal action against residents which decide to leave during their formation, but the latter almost never materialize, and are often very costly for the state which funds them.

## A sick and inactive population

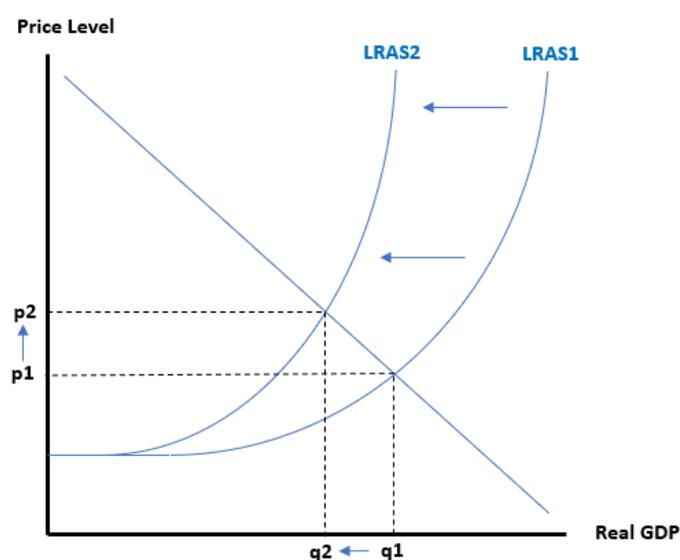
Anaesthesiologists represent an indispensable profession as they play key roles in most modern medical procedures. A shortage of such professionals thus has its consequences: the anaesthesiologist to inhabitants ration lies at around 1:10000 (Mitre, 2016), while in Germany, for instance, it is estimated at 1:3500 (Anon., 2019). This often results in extremely long waiting lists for surgeries and other medical procedures. In a more detailed view, as doctors leave, and the medical professional to inhabitant ratio decreases we can deduce the fact that economic growth will be hindered by an increase in health-related problems as there simply won't be enough doctors for everybody, and the price of consultation will also decrease as the supply of doctors decreases, making it harder for the average Romanian to afford them. This phenomenon is even more common in the countryside as most medics are concentrated in the urban areas. Moreover, as anaesthesiologist leave, they essentially leave behind an inactive economy. Indeed, the percentage of inactive individuals composing the Romanian potential workforce is 33,4%, while countries like Germany have three times less inactive individuals (Anderson, 2017) in the same age group (15-64 = age interval in which people are considered to be able to work). The inactive proportion of the population of the economy is essentially a burden for the state as it doesn't create any economic output, but the government still has to pay for their pensions. As seen in the data, the proportion of inactive individuals in the working age interval (15-64) is higher than in Western European States as many workers have left during the past decade, out of which an important percentage were doctors, and most notably anaesthesiologists.

## The Burnout Syndrome

Burnout is a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress. It occurs when you feel overwhelmed, emotionally drained, and unable to meet constant demands. As the stress continues, you begin to lose the interest and motivation that led you to take on a certain role in the first place. Burnout reduces productivity and saps your energy, leaving you feeling increasingly helpless, hopeless, cynical, and resentful. Eventually, you may feel like you have nothing more to give. (Authors: Melinda Smith, 2019). These shortages have also led to a series of anomalies, as doctors in small cities and rural areas are paid more than the ones working in prestigious medical institutions in big cities as the demand for the doctors outside of big cities has skyrocketed (wall-street.ro, 2019).

As previously and briefly stated in this study, the shortage of anaesthesiologists arising from the departure of such a great number of them to Western countries leads to more professional pressure and long working hours for the ones which remain. A study conducted by a team of Anaesthesia and Intensive care departments leaders (Bubenek-Turconi, 2010), one of them being the Fundeni Anaesthesia and Intensive care Unit has shown that Romanian hospitals are currently very close to reaching a high level of burnout. More precisely, the numerical value attributed to the Romanian hospitals when the study was conducted was 68/100, while the level of high burnout begins from 75/100. The short-run implications of this syndrome are easy to deduce: doctors work long hours, and are thus exhausted and less productive. However, this not only leads to a decrease in the quality of their services, but also stains their reputation in the public eye. Indeed, in the past few years the number of medical malpractice lawsuits has skyrocketed, and the confidence of

inhabitants has plunged as a result (Anon., 2017). This has created a climate of fear which adds to the already-existing professional pressure Romanian doctors are subject to. Moreover, in the long-run these factors create a vicious circle: this pressure and the lack of respect from patients pushes doctors to leave the country. As we have seen in Professor Rotila's study assessing the reasons why Romanian doctors choose to migrate, two of the main reasons making Romanian doctor act in this manner are the better working conditions (which imply less stress caused by the burnout syndrome) and the respect medical professionals get in Western countries, as opposed to Romania (Rotila, 2018). We can thus deduce the fact that the migration of anaesthesiologists leads to further migration because as the shortage of doctors increases, the pressure on the remaining medics increases as well, which will probably decrease their efficiency and push them to leave. This decrease in the number and efficiency of the anaesthesiologists will lead to a decrease in the productive capacity of Romania which can be portrayed by an inwards shift of the long-run aggregate supply curve from LRAS1 to LRAS2.



**Figure 7:** The effect of the migration of Romanian anaesthesiologists on the long-run aggregate supply of Romania.

## A decrease in confidence of future generations

A hidden long-run effect of the migration of anaesthesiologists could also lie in the fact that as younger generation see or hear about the poor working conditions in Romania, or by contrast, about the success stories of anaesthesiologists who have settled abroad, they could become discouraged to embark on a professional path in Romania (individuals from other professions could act in the same manner, seeking success in other fields). This would yet again justify the claims that migration is essentially a vicious circle as the more there is, the more it will accelerate in the future. Another outcome of this situation could be that the latter could be reluctant to become doctors, choosing other careers which would also lead to shortages. Additionally, another factor which validates these claims lies in the fact that as diasporas increase, so does the rate of migration (Collier, 2013). In a more detailed view, as more and more people migrate and settle in a new country, they create what is called a diaspora. This social entity will then facilitate the process of migration for others, for multiple reasons. Firstly, if a person considering to relocate already knows people in that specific country, or region, he or she will become keener to make the move as his acquaintances can help the person in question with finding a job or shelter. Moreover, just the fact that you could move to a foreign country but still be within a decent radius of people you know certainly helps people in deciding to migrate, as some might fear that they will simply fail to integrate in the new society, and that could impact their performance in the professional field.

## Conclusion

In conclusion, through this study I have determined the factors which have led to the migration of anaesthesiologists to Western countries, and the consequences it has on the economy of the source country. I was thus able to understand that the most important reasons pushing Romanian anaesthesiologists to relocate lie in the poor working conditions, low salaries and professional unfulfillment they are subject to. This means that low wages only represent one of the factors leading to this occurrence, the poor working environment being the predominant reason. In terms of impact on the economy, this research has helped me understand the fact that the repercussions this phenomenon leads to are numerous. As doctors leave, there is a loss of economic output which is accompanied by a waste of government financial funds spent on the training of medics which will never activate on Romanian ground. In addition, the shortages which arise from this type of migration often lead to stress, and eventually to the burnout effect which refers to a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress (Authors: Melinda Smith, 2019) which decrease the quality of the medical services (which subsequently leads to a decrease in peoples' confidence when it comes to doctors). The pression which sets in as a result of the shortages also works as an incentive for doctors to live as the latter is synonym to poor working conditions. Moreover, as anaesthesiologists leave the country, they leave behind an inactive population which now finds it harder to fight with health problems. Finally, as other anaesthesiologists, medics and even people working in completely different fields hear about the success stories of people which have made this big step, they might become keener to make the move themselves, which essentially increases the burden on the Romanian economy. Also, as the diasporas increase, we have seen that migration accelerates

as settling in the host society is now easier than ever. In essence, through this study one can deduce that the migration of Romanian anaesthesiologists fuels itself as the pressure arising from the shortages will push doctors to relocate, and the rapid increase of the diaspora and the success of people which act in this manner will encourage others to join them by facilitating this step many were reluctant to take in the past.

## Evaluation and Limitations

Reflecting on this investigation I understand that my research is niche, which essentially means that there hasn't been continuous coverage by respectable media outlets and institutions. The variety of sources used in order to obtain information and numerical data might mean that the latter aren't always accurate when combined, as it is hard to obtain primary government figures on such matters. Also, the numerical data regarding salaries I was able to enter in the possession of when visiting the Fundeni Medical Institute might not reflect the situation of the country as a whole, as doctors are usually paid more in big cities, and in this particular instance, in the capital. Finally, I would have also liked to focus more on finding a series of plausible solutions to this issue as during this investigation I only briefly touched on this aspect.

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