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Brain Drain Phenomenon in Romania: What Comes in Line after Corruption? A Quantitative Analysis of the Determinant Causes of Romanian Skilled Migration

Abstract

Romanians' rapidly increasing exodus over the borders, in the last years, propelled Romania to the top countries with the highest international migration rates worldwide. A rate of 7.3% per annum, recorded between 2000 and 2015, placed Romania second, after Syria (United Nations, 2016). Between 1990 – 2017, Romania registered the highest rise in the migration stock among all EU states – 287 per cent (The World Bank, 2018a). The boost of the migration phenomenon was supported by significant changes, including in the migrants' profiles, in terms of their level of education, consequently the loss of human capital represented by the highly skilled Romanians already has an impact on the key sectors of the Romanian economy. The highly skilled manpower shortage has been a constant topic on the public agenda, especially after Romania's integration in the European Union (2007), and after the burst of the most recent financial crisis (2008). The number of highly educated employees (tertiary education and upper secondary and post-secondary attainment) decreased in Romania, negatively affecting the key sectors of the economy. Furthermore, research shows that Romania has the lowest percentage of tertiary education graduates from the EU, with 26.3% for the age segment of 30 – 34 years (Eurostat, 2018a).

The paper aims to show recent data on the determinant causes of the brain drain phenomenon in Romania (push factors) and to generate a classification of the three categories of mainly possible determinants: economic, socio-political and organizational factors, based on the results of an online survey addressed to Romanian high-skilled migrants.

Keywords: brain drain; skilled migration; push factors; Romania.

Introduction

The migration flow increase rate has become more significant over the last years. At global level, in 2017, 258 million migrants were registered, higher than the 220 million in 2010 and the 173 million in 2000. 64% of the above are settled in developed countries, with high income levels (United Nations, 2017, p. 4). The increase of the migration phenomenon has

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been accompanied by significant changes in the migrants' profiles, in terms of their level of education. For example, in 2010/2011, 27% of the immigrants in G20 destination countries possessed a tertiary education diploma, compared to 23% in 2000/2001, which represents a 60% increment of their number or an increment by 12 million highly skilled university educated (tertiary educated) migrants during the ten years included in the survey (OECD, 2017, p. 10). Researchers point out that, among the G20 countries, the USA, Canada and the UK became the destination of choice for two thirds of the highly educated immigrants. The same study reveals that in 2010/2011 the main country of origin for the university diploma holders that immigrate is India (2.2 million), followed by China (1.7 million) and the Philippines (1.4 million). Romania registered the highest increase among the countries of origin of the highly educated immigrants with approximately 492 thousand people (OECD, 2017, p. 10).

The competition between the developed countries in attracting and retaining talents has become tight during the Great Depression. On top of this adds the refugee crisis and the asylum seekers increase rate which consists of aproximately 10 per cent of all international migrants (United Nations, 2017, p. 7). Boeri et al. (2012) analyze the brain drain phenomenon perceived at global level, including the economical and political factors that sharpen this compepetion, and reveal that in the context of the Great Deppression outbreak "many advanced countries are facing a public debt crisis and are forced to cut down on public spending, including some research and tertiary education programmes. This is bound to have some impact on the demand for talents in some of the traditional brain gainers, including the USA" (Boeri et al. 2012, p. 6). Meanwhile, policymakers become more interested in the skilled migration phenomenon as "it makes immigration not only economically advantageous, but also politically acceptable" (Boeri et al., 2012, p. 1).

Consequently, the USA are one of the countries of destination for most of the "brains", attracting doctorate candidates and graduates not only from the emerging countries, but also from the European Union. For example, the percentage of persons holding a doctorate diploma reached 10% out of the total migrants attracted by the Unites States from Europe in 2000 (Saint-Paul, 2004). The OECD ranking for the countries of origin of the highly educated migrants in the G20 countries, included, in 2010/11 Kazakhstan (35%), Romania (23%), Poland (20%) and United Kingdom (11%) based on the highly skilled migrants' immigration rate (defined as the percentage represented by the number of highly educated migrants from one country out of the total highly educated persons in the relevant country, including the emigrants from the country). The great majority of the migrants belong to the active population category: in 2017, 74% of the total migrants at global level were aged between 20 and 64 years, compared to 57% representing the active population of the total global population (United Nations, 2017, p. 17). Researchers show that "high-skill migration is becoming the dominant pattern of international migration and a major aspect of globalization" (Docquier & Rapoport, 2012, p. 50), that "there is an overall tendency for migration rates to be higher for highly educated individuals" (Carrington & Detragiache, 1999, p. 12).

The meaning of the term "brain drain", used during 1950 – 1960 by the British Royal Society to define the exodus of scientists and engineers from the United Kingdom to the Unites States of America and Canada (Cervantes & Guellec, 2002) widened and currently designates the migration from one country of the professionals with the highest education training. There are various definitions. For instance, some researchers use the "brain drain" term with the meaning of "the migration of more than 10 percent of the tertiary-educated population of a particular labour-exporting country" (Adams Jr, 2003, p. 1). Docquier and Rapoport

(2006) state that "the term "brain drain" designates the international transfer of resources in the form of human capital and mainly applies to the migration of relatively highly educated individuals from developing to developed countries. In the non-academic literature, the term is generally used in a narrower sense and relates more specifically to the migration of engineers, physicians, scientists and other very highly skilled professionals with university training" (Docquier & Rapoport, 2006, p. 2). Some researchers highlight the economic imbalances generated by the phenomenon, while defining it as "the migration of talented youth from developing to advanced countries was viewed in the post-war decades as a "brain drain" that exacerbated international inequality by enriching already wealthy economies at the expense of their poor counterparts" (Saxenian, 2005, p. 36). Brain drain phenomenon and its causes should be understood in a wider context, as it is not limited to developed countries and it affects developed ones alike. Although most of the studies focus on the migration from emerging countries to the developed ones, the brain drain phenomenon has not spared the developed countries, too, such as Australia, Canada, Russian Federation or countries from the European Union (Saravia & Miranda, 2004, p. 609). For example, according to Saravia and Miranda (2004), "the deficits in human resources in industrialized countries like Canada and Australia are also exacerbated by the emigration of their nationals to the centres of knowledge based industries in the United States and Europe" (p. 609).

Horváth and Anghel (2009) set the beginning of the brain drain phenomenon in the post-socialist Romania around 1993. In the 25 years that followed, the Romanian brains migration increased and extended over more professional categories. More intense periods alternated with relatively low ones in correlation to the migrants' increase in the level of awareness of the conditions in the countries of destination.

This research is intended to bring current data regarding the main determinant causes of the brain drain phenomenon in Romania, in the skilled migration issues in addition to the dedicated works and analysis patterns (see, for example, Balan & Olteanu, 2017; Goga & Ilie, 2017; Anghel, Botezat, Coşciug, Manafi, & Roman, 2016; Andrén & Roman, 2016; Boncea, 2015; Séchet & Vasilcu, 2015; Horváth & Anghel, 2009; Sandu et al., 2006).

This paper brings forward the determinant causes of the Romanian skilled migration and identifies, based on a quantitative analysis, the changes in the hierarchy of the main brain drain determinant factors, by relating them to the Romanian Emigrants Study (RES) (Roman, Goschin, Ileanu, Popa, & Roman, 2012) results. Based on the study conducted in 2010, Roman et al (2012) noted that "the reasons of the migration are related to the socio-economic environment in Romania (lack of opportunities, political instability, economic depression, corruption) as opposed to the prospects of higher living standards, better opportunities of employment, increase of earnings, political stability and the level of economic development in the host country. Individual reasons add to the above – friends and/or relatives already settled abroad, an incline towards adventure, the ambition of having a better career" (p. 154).

An image of this migration process and of the causes entailing it can stand as a useful benchmark for the decision factors which design the national brain regain programs, at government level, as well as for the private working environment level, adjusted to the current needs of highly educated individuals. For example, Romania's Ministry of Foreign Affairs through its Department for Policies on Relations with Romanians Abroad prepared in 2016 "Diaspora – Partner for Romania's development" (Ministerul Afacerilor Externe, 2016a) and a "Guide for the return of Romanians from abroad" (Ministerul Afacerilor Externe, 2016b). In the same year, Diaspora Start Up Programme was released by the Ministry of European

Funds, together with the Department for Policies on Relations with Romanians Abroad within the Ministry of Foreign Affairs – a program that sets up a funding line of up to 40,000 Euro for Romanians who wish to start a business in Romania (Ministerul Fondurilor Europene, 2016). The Romanian Business Leaders Foundation launched, in 2016, "RePatriot" – a project for the repatriation of the Diaspora through entrepreneurship. The National Bank of Romania is currently running the "Brain Regain" program for the selection of Romanian specialists from abroad and seeks to attract the university diploma holders who aquired a high level of knowledge and expertise (relevant to the activity of the National Bank) within foreign institutions and organizations (Banca Națională a României, 2018).

Causes and effects of the high-skilled migration. Gain and loss balance for the countries of origin vs. the countries of destination

Economy, political instability, high unemployment rates, demographic pressure, conflicts, poverty, inequality, life quality in the countries of origin are only a few determinant causes of the brain drain phenomenon constantly invoked and analysed by the literature in the field (see United Nations, 2016; Docquier & Rapoport, 2012; Boeri et al., 2012; Ortega & Peri, 2009; Jennissen, 2004). The economic factors, especially the lack of jobs in the countries of origin and the higher wages in the countries of destination represent the central point of most of the migrants' decisions to leave their native countries.

By referring to the determinant factors, some researchers (see for example Castles, Miller, & Ammendola, 2005; Kline, 2003; Dorigo & Tobler, 1983) distinguish between the reasons of dissatisfaction towards the country of origin (push factors, such as demographic pressure, poverty, political repression, etc.) and the features of the country of destination that make it more appealing to the emigrant (pull factors, such as labour demand, opportunities, liberties, etc.). In Europe, the net migration is explained by the enlargement process of the European Union, by the policies directed towards the young people adopted by EU (chanelled in two directions: by investing in certain domains included in the youth development programmes and by promoting the young – especially those under-privileged, and determining them to become more involved in the european project), the economic crisis that affected national economies distinctly, as well as by the political instability, the high unemployment rates or of the increasing number of refugees (Manafi et al.,2017). According to Eurostat "net migration is the difference between the number of immigrants and the number of emigrants. In the context of the annual demographic balance however, Eurostat produces net migration figures by taking the difference between total population change and natural change" (Eurostat, 2018c).

Castle, Miller and Ammendola (2005) describe several international migration trends: globalisation (increment in the number of countries of origin and of destination), acceleration, differentiation (the majority of the countries experience more than just one migration type), feminisation and politicisation. Dumont, Martin and Spielvogel (2007) consider that feminisation and talent selection are the two most obvious trends during the last period, stating that the latter brings forward the concerns related to the brain drain effects/consequences in the countries of origin. Studies show that the highly educated individuals possess a higher appetite for international mobility than the less educated ones, due to the salaries earned in the country of destination, low relocation costs and opportunities (Boeri et al., 2012). During the last decades, as the skilled migration demand increased, the education level in the

countries of origin increased accordingly (Gibson & McKenzie, 2011). "The basic idea of such "brain gain" theories is that decisions of individuals to invest in education react to the prospect of future migration, and that not all those who choose to increase their education because of the chance they may migrate actually end up migrating" (Gibson & McKenzie, 2011, p. 118).

The study on the highly skilled migration in developed countries conducted by Boeri et al. (2012) proves, with a focus on the countries of destination, that the after-tax wages and the amendments to the immigration law – after Canada, Japan and Australia opened, in the 1980's and 1990's, the path of the pro-skilled migration reforms, by the immigration laws favouring educated migrants – have strong impacts on the priority given to the selection of "brains" from the total number of immigrants. Researchers also analysed, based on the OECD data for the period 1980 – 2005, other potential factors determining highly skilled migration, such as the consistent social assistance, solid employment protection schemes and better labour market regulation, as well as the level of spend for research and development. It has been proven that welfare does not stand as a sufficient emigration reasons for the talents. However, high R&D budgets, do (Boeri et al., 2012).

The informational asymmetry on the labour market can also stand as a reason for skilled migration. For example, in an analysis of the factors determining the exodus of students studying abroad, Kwok and Leland (1982) listed the following causes: lack of employment opportunities, low salary levels in the native country and graduates' preference of living abroad. The two researchers added a new potentially determinant factor to those listed above – informational asymmetry on the labour market: "we assume that employers in the country of education can more precisely determine a graduate's potential productivity than can employers in the student's native country. Employers in the native country are assumed to offer wages that reflect the average productivity of returning workers, but which are not precisely tailored to individual productivities" (Kwok & Leland, 1982, p. 99).

Recent studies showed that the migration of highly educated persons was associated with a weak governance (Atoyan et al., 2016). Atoyan et al (2016) conclude that "there seems to be a significant negative association between the stock of tertiary-educated migrants (as a percentage of population) in 2000 and the present-day quality of governance" (p. 14), by analyzing the evolution of certain indicators of governance quality within the South-Eastern European countries – control of corruption, voice and accountability, rule of law, and government effectiveness.

The gain-loss balance generated by the high-skilled migration phenomenon includes, on one hand, negative effects such as severe lack of specialists in certain fields in the countries of origin (such as health, informational technology, civil constructions, education, and physics) or investments in the educational system capitalizes by other markets. On the other hand, researchers point to positive effects such as high remittances to countries of origin and decrease of unemployment rate (Global Knowledge Partnership on Migration and Development, 2018; United Nations, 2017; OECD, 2017). The representatives of the International Monetary Fund (IMF) highlight the fact the highly skilled migration reduced private sector activity "and raised social spending in relation to GDP, and as a consequence, emigration appears to have dampened growth in CESEE (Central, Eastern and Southeastern European) countries and slowed income convergence with advanced Europe" (Atoyan et al., 2016, p. 8). In the same study, Atoyan et al. (2016) show that receiving larger remittances is associated with significantly increased probability of a person deciding not to search for a job.

Research related to the highly educated professionals' migration registered positive brain drain effects on the development of the motivation to become educated among the persons

who remained in their countries of origin (Batista, Lacuesta, & Vicente, 2007; Beine, Doc-quier, & Rapoport, 2001, 2008). The access to new know-how resources can also represent a benefit for the countries of emigration. "Highly skilled emigration no longer appears as ex-clusively bad for developing countries. For these countries, some good may come out of this expatriation in terms of increasing access to external resources" (Meyer, 2001, p. 14). Fur-thermore, some studies show that while Western European countries pay high salaries to high-ly educated persons, the emigration perspective determine the temporary or permanent migrants from the East to invest more in the human capital (Mayr & Peri, 2009). These researchers con-clude that this investment, along with the fact that a part of the migrants return, while other potential migrants continue to live and work in Eastern countries, has a positive effect on the average education level, which compensates for a part of the negative effect generated by the brain exodus.

Brief History of Romanian Migration

In 1992, the Romanian population reached one of the highest levels in its history, with ap-proximately 23.28 million inhabitants (Institutul Național de Statistică, 2012). After 1990, the inhabitants' number has steadily decreased, thus in 2016 it decreased by 18%, at 19.63 million resident population. According to the National Statistics Institute, the progress re-flects both the decrease of birth rates – from 13.6 live new-borns per one thousand inhabi-tants in 1990 to 9.1 in 2016 – and the net population migration. The balance of the international migration in 2016 was negative, the number of migrants having exceeded by 76,000 persons the number of immigrants (National Statistics Institute, 2017). Moreover, a forecast in the de-crease of population by 2050 places Romania on rank 7 worldwide with a 16.7% reduction in the number of inhabitants (United Nations, 2017).

A rigurous evaluation and an official synopsis concerning Romanians' temporary migra-tion (either labour migrants or high skilled migrants) is not available yet, as well as a net fig-ure for the specialized manpower by sectors and professions deficit.

Approximately 3.4 million Romanians live abroad. In 2015 Romania entered the Top 20 countries that became the source of migration at international level (United Nations, 2016, p. 18). At European level, Romania occupies, for the first time, the fourth place in the number of citizens living abroad, after the United Kingdom (4.9 million), Poland (4.4 million) and Germany (4 million), and the international migration increment rate for the period 2000 – 2015, with an average of 7.3% per year, puts Romania second after Syria, with an increment of 13.1%, before Poland, with 5.1% per year and India (4.5%). The centralized statistics of the United Nations show that in 2017 Romania was registered with 371,000 international mi-grants, compared to 127,000 in 2000. If in 2000 these used to represent 0.6% of the entire population, in 2017 the percentage raised to 1.9%. Contrary to the feminisation trend identi-fied by researchers in the international migration, in Romania's case, the number of females out of the total number of migrants decreased to 46.9% in 2017, from the 52.4% in 2000 (United Nations, 2017, p. 28).

Research on the international migration phenomenon in Romania after 1990 identified distinct stages in terms of organisation and countries of destination, depending on the eco-nomical context. For example, Horváth & Anghel (2009) show that the first period (1990 – 1993) was described by the ethnic emigration and by asylum seeking, mainly, to Germany

and, secondly, to other European countries (Hungary, France and Belgium). The two researchers show that, between 1990-1994, three quarters of the 350,000 asylum seeker applications were requests for Germany. The first period was followed by a stage of relative stabilisation. EU countries impose stricter rules for access to their countries therefore Romanians chose to go to Hungary, Turkey and Israel. The Romanian migration is thus different, comprising besides the ethnic migration, the brain drain, irregular migration, marriage migration as researchers identified. After 1997, considering the massive economic restructuring, a new irregular emigration phenomenon was observed manifested, having a circular trend. According to Horváth & Anghel (2009), the countries of destination were those offering higher wages but not countries for a permanent settlement. This is the period of a migration towards new states such as Spain, Italy, Ireland and the United Kingdom. Based on data from the World Bank, Roman et al. (2012) revealed that a shift in the preference for countries of destination for the brain drain phenomenon was registered in the 2000s to include "countries where the number of Romanians working abroad increased due to the so-called "strawberry-pickers" (usually migrating to Italy and Spain): USA (10,53%), Canada (6,44%), Germany (3,75%), Hungary (3,10%), France (1,68%), Italy (0,91%), Austria (0.70%) and Spain (0,52%) as opposed to the figures recorded in the 1990s for the highly skilled workforce: USA (10,37%), Hungary (4,86%), Canada (4,56%), Germany (2,70%), France (1,58%), Australia (1,36%) and Austria (0,29%) (Roman et al., 2012, p. 151). After 2002, further to the lifting of travel restrictions for Romanians in the European Union Member States, Romania faced a new emigration wave. After 2007, along with Romania's integration in the EU, international migration amplifies and generates multiple consequences, such as the increment of remittances from the Romanians living abroad or measurable labour market effects (Horváth & Anghel, 2009). Moreover, the regional embeddedness in the EU brings a significant change in the Romanian migrant profile: "this new migration wave for labour had and has as particularity the mobility for labour of professionals in the context of the economic-financial crisis that seems to set up the foundations of the skilled and highly-skilled personnel migration for labour" (Balan & Olteanu, 2017, p. 27).

The migration phenomenon was heavily impacted by the outbreak of the financial crisis in 2008. Romanian migrant workers moved from Italy and Spain to Germany, the UK or the Scandinavian countries (Anghel et al., 2016). In 2005, according to National Statistics Institute data the majority of the Romanians living abroad (86.2%) had an average degree of education, and 12.4% – higher education level (Roman et al., 2012). Researchers show that half of the highly educated Romanian emigrants preferred countries from outside the EU (Canada or the United States of America). Canada occupies the first position among the countries preferred by this category (54% of emigrants have a higher education level), followed by Switzerland (50%) and the United Kingdom (46%). In exchange, Turkey, Italy and Spain attracted less highly educated Romanians.

The National Statistics Institute published emigration data reflecting only the countries of destination and the age groups, but not the emigrants' education level (Institutul Național de Statistică, 2018). According to the data published in 2015 by the Romanian Court of Auditors, a number of approximately 480,000 highly educated persons (about the size of a medium populated Romanian city in 2016) left Romania between 1997 and 2013 (Curtea de Conturi a României, 2015). In consequence, Romania lost a significant part of its specialized labour force, and this process is far from being over. Romania continues to be a country of emigration.

The migration of highly educated persons is already generating a deficit on the labour market in various fields (Balan & Olteanu, 2017). The Report of the Court of Auditors shows

that Romania's efforts to provide higher education to a younger population are cancelled, at great extent, by the migration of skilled youth to the EU Member States. "In other words, Romania spends significant public and private amounts for the higher education, however the benefits to such financial efforts is externalised" (Curtea de Conturi a României, 2015, p. 84).

Between 2015 and 2016, the number of highly educated employees in Romania (fourth level of education) decreased by approximately 11.5%, to 950,000 employees, while the number of general education employees increased by 8.5%, and the number of average and post-high school level raised up to 12% (Patronatul Investitorilor Autohtoni, 2017).

At the same time, research shows that Romania had, in 2017, the lowest percentage of high education graduates (tertiary education) in the European Union, with 26.3% of the population of ages 30 to 34 – see "Europe 2020 education indicators in 2017" (Eurostat, 2018a). In 2016, with 26.5%, Romania had the lowest share of people aged 30-34 with tertiary education in the EU (Eurostat, 2017). While in countries such as Lithuania, Cyprus, Ireland, Luxemburg and Sweden over half of the population aged between 30 and 34 years belong to the tertiary education segment, and 14 of the EU Member States have already reached the target established for 2020, Romania belongs, along with Italy, Croatia and Malta, to the group of countries not exceeding 30%. Therefore, by reducing the already diminished percentage of specialists on the Romanian market, the "brain drain" damages the highly qualified human capital stock, as well as its capacity of renewal. The doctors' migration, for example, is currently deemed to be one of Romania's main migration challenges (Boncea, 2015); "the number of physicians working abroad exceeded 14,000 as of 2013, representing more than 26 percent of the total number of Romanian physicians" (The World Bank, 2018b, p. 17). "Migration can mitigate the unemployment issue, however long-term net costs are more probable for the system" (Dăianu, 2013). In continuous migration conditions – especially in relation to the youth, as well as while dealing with a "limited brain regain", the European Committee draws attention on the fact that Romania risks losing additional labour force resources. In its turn, this loss may slow down productivity and income convergence and may negatively influence the potential economic growth (European Committee, 2017). Researches point out the fact that Romania is facing not only the brain drain phenomenon, but also the brain waste one – professionals choosing better life standards and bigger salaries, but accepting positions requiring lower skills (Andrén & Roman, 2016), or, in case of long-term migration, Romanian migrants accept more easily workplaces that involve a lower social-economic status than the one in their country of origin, hoping to gain access to professional opportunities (Sandu et al., 2006). On the other hand, during the years following the most recent financial crisis, as well as later on, including 2016, the ratio between the amounts of money sent to Romania from abroad by Romanian migrants (remittance) and the foreign investments between companies was above 1, and all the Romanian emigrants practically became the biggest "foreign" investors in Romania. During the first five months of 2017, this ratio descended below 1, and the remittances were exceeded, for the first time since 2008, by the foreign investments (Banca Națională a României, 2017).

Study goals and method

The scope of this research consists of creating an accurate image of the brain drain phenomenon in Romania. It adds to the existing literature and provides a quantitative assessment of the Romanians professionals' migration phenomenon based on an online survey involving

the collection of data from a sample of targeted high-skilled Romanian migrants (N = 370) through the use of a questionnaire in order to highlight the main causes of brain drain' dynamics, in the current economic, socio-political and organizational context.

The main objective is to detect the potential changes occurred during the last years in the identification of the determinant causes of the Romanian brain drain phenomenon.

As mentioned earlier, in the data interpretation, the study shall partly refer to the conclusions of the Romanian Emigrants Study (RES), which obtained data collected through an online survey of 1,514 people ran between Aug-Dec 2010 by researchers Roman et al. (2012). Over 64% of the respondents of RES study possess a university degree and 54% completed abroad further qualification and refresher training programs. At the time, the researchers identified as main professional migration reasons: the hope for a better life (reason invoked by 68.2% of the Romanian university graduates), the conditions offered in Romania (63%), higher earnings (41.2%), opportunity to leave the country, the wish to have international professional recognition, the impossibility to find a suitable work place in Romania, the opportunity to reunite with other family members established abroad and the opportunity to start up new businesses.

The present research assesses the extent to which the high-skilled migration from Romania is affected by a weaker governance, based on Atoyan et al. (2016) conclusions regarding the impact of the quality of governance on tertiary-educated migrants. The research also proposes to Romanian skilled professionals other reasons for migration like corruption and legislative instability. In relation to the impact of corruption on migration, Cooray and Schneider (2016) show that "corruption increases the emigration rate of persons with high, medium and low levels of educational attainment" (p. 295) and highlight the strong impact that weak institutions and governance have on the migration of skilled workers.

Based on the general purpose of the research, this work advances the identification and the structuring of the potential brain drain phenomenon reasons into the following categories: *economic factors* (economic instability, unsatisfying salary level in Romania, impossibility to find a work position to correspond to the professional skills in Romania, infrastructure); *socio-political factors* (political instability, legislative instability, corruption, status of the education system, status of the sanitary system, reunification with family already established abroad, social pressure, Romanian life style), and *organisational factors* (limited number of carrier opportunities, leadership at the work place in Romania, the interaction with co-workers in in Romania). This structuring relates to Afridi and Baloch's (2014) summary of the key factors responsible for brain drain in Pakistan and is adapted to Romanian reality. At the same time, part of the governance dimensions as measured by the World Bank through the Worldwide Governance Indicators (WGI) became operational. The six WGI dimensions are: Voice and Accountability, Political Stability and Absence of violence/terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (The World Bank, 2018c).

The research questions that guided this study are:

RQ1: What are, according to Romanian migrants, the reasons entailing the brain drain phenomenon in Romania?

RQ2: Which are, according to high-skilled migrants, the socio-economic indicators mostly affected by the brain drain phenomenon in Romania?

RQ3: What could limit, in the Romanian migrants' opinion, the brain drain phenomenon in Romania?

Sample

The online survey addressed to Romanian skilled migrants ran in April 2018 collected 370 responses: 227 respondents with higher education (tertiary education), 142 – secondary and 1 – middle school educated. It aimed at carrying out a research on the university educated Romanians leaving to work abroad. The conclusions of the study are fundamented on the interpretation of all collected data, irrespective of the level of education of the respondents. The delimitation of the brain drain phenomenon within this study is guided by Docquier and Rapoport's (2006) framing and considers the migration of relatively highly educated individuals from Romania to developed countries.

In terms of gender, 60% (222) were women, and the average age was of 33.6 years (M=33.6, SD=8.38). Out of the respondents who, upon their leaving Romania, belong to the secondary education category, 37 continued their education. While some attended training courses (i.e. vocational, foreign languages), 6 of them graduated faculties and doctoral schools in the countries of destination and classified in tertiary education category. In one case, the respondent begun studying in the country of destination while in middle school and reached tertiary education. In order to ensure a full picture of the socio-demographic details of the sample, a distribution of the participants in the survey according to the education and work experience was detailed in Table 1.

Table 1. Socio-demographic characteristics of the sample

Latest graduated form of education	
Doctorate	2.43%
Master	24.05%
Other high education (CFA, MBA, etc.)	0.54%
Faculty	34.32%
Post-secondary education	6.22%
High-school	24.32%
Professional school/non-graduated high-school	7.84%
Lower secondary education	0.27%
Work experience	
Higher education graduate, with no specialised (skilled) work experience	17.00%
Experience under 1 year of specialised (skilled) work experience	6.80%
Experience of 1-2 years of specialised (skilled) work experience	11.40%
Experience of 2 – 5 years of specialised (skilled) work experience	21.10%
Experience of 5 – 10 years of specialised (skilled) work experience	19.20%
Experience of 10 – 20 de years of specialised (skilled) work experience	16.80%
Experience of over 20 de years of specialised (skilled) work experience	7.80%
Current work region	
Europe	93.51%
North America	4.05%
United Arab Emirates	1.89%
Asia	0.27%
Canada	0.27%

In relation to the respondents' field of activity, 12.7% work in the service sector, 10% – in the medical sector, in the food industry – 7.8%, trade – 7.5%, IT&C industry – 6.7%. These are followed by transportation, civil constructions, automotive, agriculture, tourism, as well as education, banking system, creative industries, media, energy, airspace industry and legal system.

Method, Procedures and Measures

The questionnaire structure included some of the determinant reasons for brain drain in Romania analysed by Roman et al. (2012) and detailed earlier. At the same time, the grid questions include possible reasons leading to this phenomenon described by the researchers Atoyan et al. (2016) in the study dedicated to the economic impact of the migration on Eastern Europe. By adjusting to Romanian realities the model presented by Afridi and Baloch (2014) to point out the brain drain phenomenon in Pakistan, the questionnaire distributes the determinant factors of high skilled migration in three categories (economic, socio-political and organisational factors). A new approach presented in this study is the selection of the possible reasons and adjusting the model in order to generate a comprehensive grid with all the possible reasons for the Romanians' highly skilled migration. After a pre-testing of 8 respondents, the questionnaire was referred to highly educated emigrants working abroad, by 40 online communities on the social networks, as well as by direct approach, via e-mail. The questionnaire comprising 37 items was created using the specialized website http://www.isondaje.ro/.

To respond to RQ1 and RQ3, the respondents were provided with 16 assertions, and 13 assertions respectively, derived from the inclusion of the potential brain drain determinant factors, i.e. – for the limitation of this phenomenon – a five-point Likert scale (from 1 = not true to 5 = very true) was employed. For RQ2, a 3-step scale (from 1 = negative to 3 = positive) was employed. The collected data was processed and analysed using the SPSS software, version 17.

The study uses the classification of the respondents into the following categories: tertiary education (which includes Bachelor studies degree graduates, Master's degree graduates, postgraduate studies degree graduates, as well as doctoral and postdoctoral degree graduates), secondary education (high-school, professional and post-secondary), middle school (lower secondary), primary school (primary).

Findings and discussion

Reasons for Romanian brain drain

The respondents appreciated the main reasons for their leaving the country for work, by assessing 16 selected items, included in the following categories: economic factors, socio-political factors and organisational factors. The preliminary data analysis shows that the first three positions of the top determinant reasons are taken by the corruption, the economic instability and the unsatisfying salary level. Top 5 includes, as shown by Table 2 and Figure 1, the health system status and the limited professional opportunities.

Table 2. Determinant factors of brain drain phenomenon in Romania.

Determinant factors	Mean	Std. Deviation	N
Corruption	4.53	.962	363
Economic instability	4.37	1.237	358
Unsatisfying salary level	4.35	1.373	362
Healthcare system	4.28	1.265	364
Limited professional opportunities	4.17	1.402	364
Legislative instability	4.06	1.343	365
Political instability	3.96	1.402	364
Educational system	3.91	1.374	363
Infrastructure	3.62	1.194	363
Quality of life	3.60	1.144	360
Leadership	3.53	1.078	360
Lack of qualified jobs	3.45	1.112	366
Networking in the workplace	2.54	1.076	365
Social pressure	2.52	1.061	365
Family reunification	1.89	.948	368
Climate	1.74	.945	365

Figure 1. Determinant Causes of Romanian Skilled Migration (top push factors).
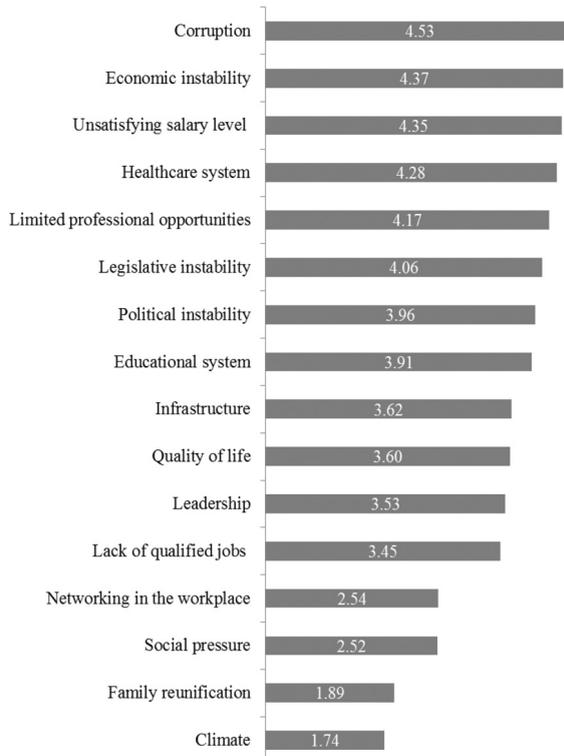
Similar to the results of Roman et al. (2012), the first position is occupied by a socio-political factor. However, if in 2010, according to a ranking of the top reasons for leaving Romania, the majority of the respondents who graduated tertiary education would appoint "hope for a better life", the results of this current survey show, from a series of exclusively push factors, "corruption" as the strongest determinant factor of the respondent's skilled migration. According to Transparency International, in relation to the perception of the corruption degree in the public system, Romania classified as the 59th country worldwide, and as the 26th at European Member States level in 2017 – it held the same position in 2016 as well -, with 48 points in terms of Corruption Perception Index (Transparency International, 2018). The only worse performing countries than Romania in the European Union are Hungary (45 points, 27th place) and Bulgaria (43 points, 28th place). At EU level, the CPI average is 66 points. Recent studies focused on the level of the anti-corruption protests during the last years in Romania (Adi & Lilleker, 2017; Rotaru, Georgescu, & Bodislav, 2017; Zaman & Meunier, 2016). The data collection period was heavily influenced by the massive anti-corruption street movements in Romania the previous months, presented in the on-line – international media and on social networks see for example (Bloomberg, 2018; DW.com, 2017; Irish Times, 2018; The Guardian, 2018; The New York Times, 2018).

The corruption ranked first among brain drain determinant factors and this finding confirms the remarks of Cooray and Schneider (2016): "corruption may particularly affect the emigration rate of qualified and highly skilled workers who are in a position to move due to being in demand in other countries" (p. 294). According to these two researchers, as corruption increases, the emigration rate of high-skilled migrants increases while "the emigration rate of medium- and low-skilled migrants advances at low levels of corruption and then starts to decline beyond a certain point" (Cooray & Schneider, 2016, p. 301).

Returning to the parallel of the study results of Roman et al. (2012) in relation to the Romanian migration, the second place in the top of identified determinant reasons in 2010 is held by "conditions offered by the country", and the higher earnings in the country of destination, as pull factor, occupies the third place among the reasons stated by 41.2% of the study's university graduates respondents. This current study shows that the second position is held by the Romanian economic instability and the unsatisfying salary level in the country of origin (Romania) is on the third place, but as push factor this time in contrast to the Roman et al. (2012) findings. This result confirms, at the same time, the conclusions of the prior studies on the main brain drain causes, which, straight from the first investigations, identified the salary in the reasons' top, but not as sufficient or as the main migration reason – see, for example, the results of several studies such as (Atoyan et al., 2016; Boeri et al., 2012; Kwok & Leland, 1982).

The complete top of the determinant factors subject to a continuous evaluation, in descending order, includes: legislative instability, political instability, educational system status, quality of the Romanian roads infrastructure, life style, the way the respondents were treated at the work place by their managers and the impossibility to find a work place to match their professional skills. At the end of the spectrum, the weakest skilled migration reasons, out of the proposed item selection, were: Romanian weather, family reintegration and the fact the most of the close friends or family/relatives would encourage it (social pressure), as a consequence of the fact that "the increase of population size or living standard increases social pressure and pressure to migration" (Chen, 2013, p. 345).

Recent researches, which compared the educational system with the healthcare system in Romania, in terms of public corruption perception, showed that healthcare takes precedence over the educational system, and the results of this survey reconfirm this perception: "(…) healthcare takes precedence in choosing the most corrupt of the two (...) we can look at the multitude of corruption acts and malpractice that occurred lately. The common practice of informal payments and doctors' negligence and incorrect treatments are generating tragedies. The analysis carried out showed that the phenomenon of corruption is highly accentuated in education, especially in higher education system" (Rotaru et al., 2017, p. 105).

The placement of the socio-political and economic factors on top of the classification confirms the general picture presented by Atoyan et al. (2016): "Control of corruption, voice and accountability, rule of law, and government effectiveness indicators are currently all notably weaker in SEE countries, which also faced larger outflows of better-educated people in earlier years than CE-5 and Baltic countries" (p. 14). The preliminary results of this research thus confirmed that the Romanian high-skilled migration is entailed, in the migrants' perception, by corruption, by the consequences of inefficient governance.

Cross-table and bi-varied correlations of the first three determinant factors, such as gender (in the situation of feminization of highly skilled migration), present income/revenues, work experience and age, were applied. A chi-square test was performed as regarding gender and the frequency of corruption in order to test whether men and women are significantly different in how they perceive and appreciate corruption as a brain drain determinant factor. It is noted that while 66.2% of the women consider the brain drain reasons represented by corruption as "definitely true", the percentage of respondent men who selected this version was of 80.1%, men being more intolerant compared to women (see Figure 2). In exchange, the "true" check-box was ticked by 22.4% in case of women and 13% in case of men. Highly skilled women migration is a rising global phenomenon and the number doubled between 2000/02 – 2010/11 (OECD, 2017) in countries such as China, India, Poland and Romania (OECD, 2017).

Figure 2. Corruption – gender correlation.
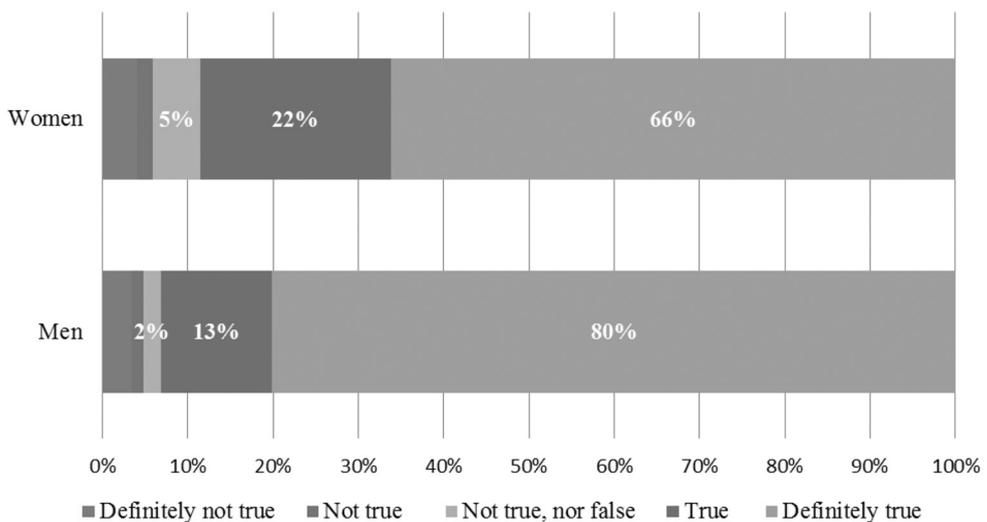
The χ^2 test did not identify significant statistical differences based on gender in the appreciation of the economic instability as determinant factor: χ^2 (4, N = 368) = 2.18, p =.70 (p value is greater than 0.05). The same conclusion also results from the appreciation of the unsatisfactory level of salary as determinant factor: χ^2 (4, N = 365) = 0.39, p =.98 (p value is greater than 0.05). The results of the research at hand, based on gender, a similar level in the appreciation of the salary earned in Romania as a brain drain determinant reason – 64.4% of the men consider that the salary level was definitely true as a determinant reason to leave Romania, while 63.7% of the women were of the same opinion. Statistical data show that Romania is the European Union Member State with the smallest differences between the men and women salaries (5.2%), while Estonia registers the biggest difference (25.3%) (Eurostat, 2018b). (The European average shows that women are 16% less paid than men).

The chi-square test shows that there are significant statistical differences (χ^2 (48, N = 348) = 66.34, p =.041) (p value is less than 0.05) between the categories of respondents, based on the present income thereof, when appreciating corruption as a brain drain determinant factor. The Pearson correlation applied between the corruption and incomes shows a weak negative significant correlation (r = -0,158, p<0,01, N = 348) – the lower the incomes, the more frequent the appreciation of corruption as a brain drain determinant factor, travelling on Likert scale towards the response variants: "Neither true, nor untrue"; "True" and "Very true" (see Annex below). The results are based on all the answers received regardless the education level of the respondents. Thus, it is noted, for example, that in the perception of 79.1% of the respondents with incomes between EUR 1.001 – 1.500, corruption is a definitely true brain drain determinant factor, and 16.4% of the same category appreciated this potential factor as true. For the next 3 salary levels (EUR 1.501 – 2.000, EUR 2.001 – 3.000, EUR 3.001 – 5.000), the "definitely true" appreciations decrease.

Another weak reversed correlation (r = -0.187, p<0.01, N = 351) is established between the assessment of the "economic instability" factor and the respondents' income. The lower the respondents' income, the stronger in their perception, the economic stability in Romania as a push factor. In relation to the income correlation – unsatisfying salary level, we note an average reversed correlation (r = -0,304, p<0,01, N = 347), the lower the respondents' incomes, the strongest, in their perception, the unsatisfying level of the Romanian salaries as a push factor.

As for corruption – qualified experience, a Pearson correlation (r=-.076, p>.01, N =365) and a Spearman's correlation (ρ =-.015, p>.01, N=365) were run to assess the relationship between the two variables. The results did not reveal any statistically significant correlations. Considering the analysed sample, the respondents with a level of 5 – 10 years of skilled/specialised work experience labelled corruption as a "definitely true" determinant brain drain factor in a percentage of 76.8%. At the other end, the highest percentage (6,9%) of the respondents who selected "definitely untrue" in relation to this determinant reason belong to the category of persons with over 20 year of specialised work experience (See Figure 3).

Figure 3. Corruption – specialized work experience correlation.
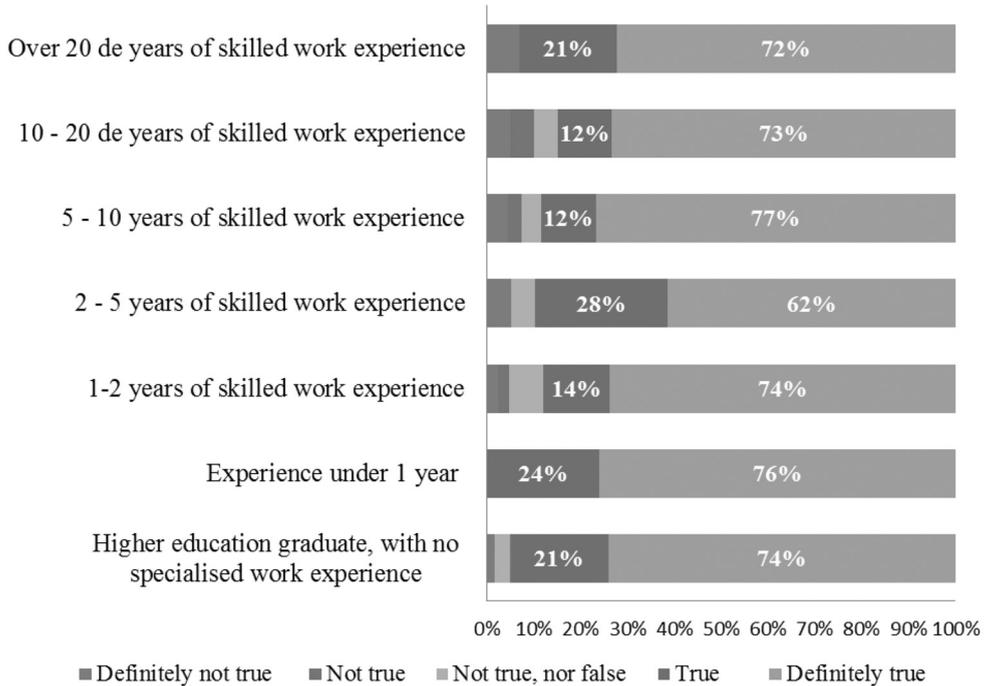
In relation to the economic instability factor, the extremes in the qualified work experience are highlighted and the highest percentages in the appreciation of the push factor as "definitely true" are as follows: 72.4% – respondents with an experience of over 20 years in specialised work– and 64% – respondents with less than 1 year of experience. However, neither the Pearson test (r=-.066, p>0.01, N = 368), nor the Spearman one (ñ =-.024, p>.01, N=368) showed any statistically significant correlation.

The assessment of the unsatisfactory level of salary based on the respondents' qualified experience shows a weak negative correlation (r=-.173, p<0.01, N = 365). The percentage of those evaluating the salary earned in the country as very true in relation to their decision to go abroad decreases as the years of experience in specialised work increases. Thus, 76.2% of the respondents with 1 – 2 years of experience in specialised (skilled) work and 74.2% of the higher education graduates, with no experience in the specialised (skilled) work consider the low salary level as a sufficiently strong brain drain reason. On the other hand, the percentage decreases to 58% in case of the segment with 5 – 10 years of skilled experience and to 50% for the segment with 10 – 20 de years of experience.

In conclusion, taking into consideration the above mentioned results, the first question reveals that the main reasons for the brain drain phenomenon continue to target Romania's socio-economic environment, with corruption and economic instability as the top 2 push factors. The same factors are highlighted by the RES (Romanian Emigrants Study) study – Roman et al. (2012) – which is a benchmark for the current research. We must specify that "hope for better living standards" and "the dissatisfaction with the country's current conditions" ranked as the first 2 positions in the 2010 study. Also, the baseline study released in 2012 notes that

"corruption" is nominated in the series of factors that impact migration, as answered in the open question. The results confirm that the high-skilled migration in Romania is affected by a weaker governance, as presented by Atoyan et al. (2016) and it also acknowledges Cooray and Schneider's (2016) observations on the impact of corruption on the migration phenomenon in general.

Concurrently, the results support that brain drain is one of the forms of "citizen exit," motivated by lack of trust and by the belief that talent will not be adequately rewarded owing to the lack of meritocracy, as World Bank researchers show (The World Bank, 2018b, p. 17).

The socio-economic indicators mostly affected by the brain drain phenomenon in Romania

To measure the perception of the high-skilled migrants in relation to the brain drain impact on Romania, the following items were defined and subjected to assessment, in this order: Romanian economy, labour potential, employees' salaries, unemployment rate, birth rate, divorce rate, school drop-out, suicide rate, remittance, the construction industry, the number of small and average sized private businesses, house prices, land prices. The preliminary data analysis shows that the first three positions in the top of the most affected indicators, in the respondent' opinion, are the remittances, cost of property and the unemployment rate. Top 5 also includes the land price and the salary level in Romania (see Table 3 and Figure 4).

Table 3. Indicators affected by brain drain phenomenon in Romania.

| Evaluated indicators	Mean	Std. Deviation	N
Remittances	2.56	0.743	323
House prices	1.99	0.853	281
Unemployment rate	1.99	0.833	327
Land price	1.97	0.862	282
Level of salary	1.97	0.833	331
Civil construction sector	1.87	0.817	282
Small and medium sized businesses	1.87	0.826	293
School drop-out rate	1.85	0.829	313
Divorce rate	1.78	0.759	294
Suicide rate	1.76	0.723	272
Workforce potential in Romania	1.68	0.892	348
Romanian economy	1.63	0.876	346
Birth rate	1.58	0.805	328

The remittances, identified by the respondents as the indicator the most affected by the brain drain, are among the effects of the migration over the countries of origin. This trend became significant in the Central, Eastern, and South-Eastern Europe (CESEE), especially in the countries were low revenues are registered (Atoyan et al., 2016, p. 14). In 2016, the top of the beneficiaries of remittance by personal transfers placed Romania on the fourth place (EUR 2.4 billion); according to Eurostat statistics, the highest remittance level was registered

by Portugal (EUR 3.3 billion), Poland (EUR 3 billion) and the United Kingdom (EUR 2.5 billion) (Eurostat, 2017a). As illustrated earlier, during the years that preceded the most recent economic recession, as well as afterwards, including 2016, the relation between the remittances from abroad and the foreign investments made by companies was above one, and the Romanian migrants stood as the greatest "foreign" investors in Romania. The ratio dropped below one, for the first time in 2008 as of the burst of the economic crisis, and the remittances, amounting to EUR 1.42 billion were exceeded by foreign investments (EUR 1.44 billion) (Banca Națională a României, 2017).

The responses indicated the house prices on the second place, confirming studies that highlighted the relation between remittances and the escalation of the non-financial asset prices. "A natural proxy for the return differential on non-financial assets would be the difference in house prices, as real estate investment is an important reason for remitting. Anecdotal evidence suggests that house prices in Romania soar in summer due to the temporary return of migrant workers, pushing up real estate demand" (Schiopu & Siegfried, 2006, p. 18).

Studies of the brain drain phenomenon in the East European countries showed that "higher remittance receipts are associated with significantly higher probability of a person deciding not to join the labour market, possibly reflecting a relaxation of the budget constraint coupled with an increase in the reservation wage" (Atoyan et al., 2016, p. 17). At the same time, the IMF representatives prove that the Baltic Countries and the SEE which faced a massive skilled workers' migration also experienced a greater pressure on salaries: "low substitutability between skilled emigrants and natives in the sending countries and higher reservation wages associated with remittances may have contributed to this outcome" (Atoyan et al., 2016, p. 20). Romania's youth unemployment rate is one of the highest in Europe: in 2017, 19.3% of the young persons aged 18 to 24 did not have a place of work or would not attend any educational or training programme; the highest percentage was registered in Italy (25.7%), Cyprus (22.7%), Greece (21.4%), Croatia (20.2%), Romania (19.3%) and Bulgaria (18.6%) (Eurostat, 2018d).

Figure 4. Main indicators influenced by the brain drain phenomenon in Romania.
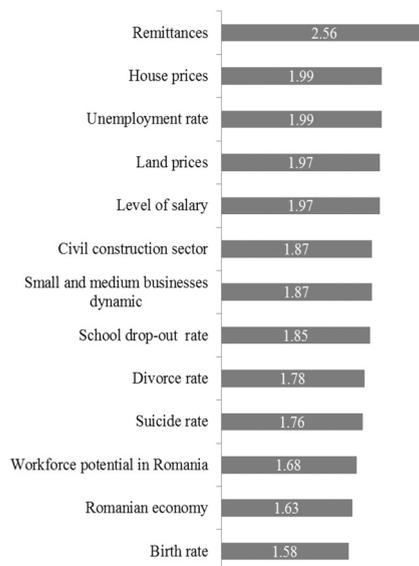
Through the lens of the participants at the study, the macroeconomic indicators are the most affected by the brain drain phenomenon, with a top 3 represented by remittances level, house prices and unemployment rate. The fact that Romania is the third largest remittance recipient in the Europe and Central Asia (ECA) region in 2017, with 4.9 US billion, after Russian Federation (8 US billion) and Ukraine (7.9 US billion) (Global Knowledge Partnership on Migration and Development, 2018, p. 27) is well-known by the laborforce established abroad. The wage level rated in the top 5 by the Romanian migrants participating in this study confirms that labor migration, especially the high-skilled labor force, puts pressure on wage increase in countries of origin – see Atoyan et al. (2016): "Countries that have experienced significant outflows of skilled workers (the Baltics and SEE countries) have also seen greater upward pressures on domestic wages" (p. 20).

Factors that could help decrease Romanian brain drain

Respondents said that an efficient reaction to the economic (and not only) effects of the migration needs, to include the reduction of corruption, the increase of salaries and the improvement of the healthcare system.

Table 4. Indicators to improve in order to reduce the brain drain phenomenon in Romania.

What to improve	Mean	Std. Deviation	N
Reducing corruption	4.55	.803	359
Increasing wages	4.52	.799	356
Improving healthcare system	4.50	.821	360
Ensuring economic stability	4.44	.772	356
Increasing chances to find an appropriate workplace	4.44	.848	357
Increasing number of career opportunities	4.43	.835	356
Improving quality of life	4.41	.920	353
Improving educational system	4.36	.920	359
Improving infrastructure	4.31	.951	350
Ensuring legislative predictability	4.23	.915	352
Improving leadership within companies	4.19	.980	355
Ensuring political stability	4.17	.926	359
Improving networking in the workplace	3.83	1.061	355

Figure 5. Top indicators to improve in order to diminish brain drain phenomenon in Romania.
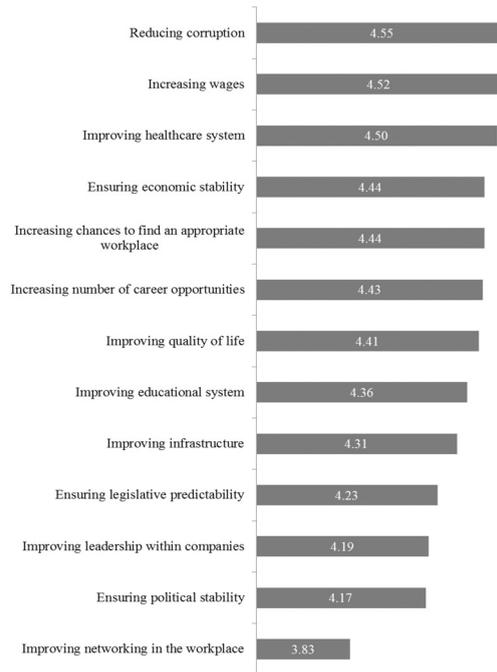
These results support the responses recorded in RQ1: practically, the top of the indicators to be improved in order to limit the brain drain double the top of the phenomenon determinant causes. Based on an evaluation of the impact of National Anti-Corruption Strategy 2012–2015 in Romania, conducted by independent experts, researchers from World Bank show that "despite success in prosecuting several high-level corruption cases, Romania's approach to anti-corruption work has not sufficiently addressed underlying problems, and now faces backlash and diminishing returns, as evidenced by demonstrations over the past year. More work is needed on prevention, where progress has been piecemeal and identified with individuals rather than institutions" (The World Bank, 2018b, p. 66). The need for a coherent and sustainable strategy on fighting corruption is also being confirmed by this research, based on the answers provided in RQ1 with corruption being the first determinant cause of the migration, and also by the results recorded at RQ3 where reducing the level of corruption could lead to a decrease of the migration phenomenon, as per the respondents' opinion.

At the same time, the results confirm researchers Cooray and Schneider's (2016) conclusions, who, by analysing the emigration data from various countries of origin in 20 OECD economies, show that the limitation of the brain drain phenomenon and the increase of the retention of highly educated people could be obtained by controlling corruption. Once more, the salary level in the country of origin proves to be one of the important indicators for the retention of the brains, but not the most important, confirming precedent studies (Atoyan et al., 2016; Boeri et al., 2012; Kwok & Leland, 1982). The responses of the present study support the idea that a part of the solutions to reduce the brain drain phenomenon analysed by Atoyan et al. (2016) are: institutional improvement, maintaining stability and creating new work places, modernisation of the educational system.

The investigation of the three research questions pointed out, as peviously observed by Roman et al. (2012), that the main reasons for migration are strongly connected to the economic and socio-political factors in Romania. Organizational factors as leadership and human interactions between work colleagues stand as the least mentioned factors reinforcing the role that governance has on reducing the brain drain phenomenon.

Limitations and avenues for future research

The present research focused on the identification of the current main causes of the Romanian brain drain. The results discussed in this paper can be considered a useful foundation for the stakeholders in charge with designing the brain regain programs at government level, as well as in the private sector, adjusted to the current needs and expectations of the highly educated individuals. Furthermore, the study reveals recent data on the brain drain phenomenon in Romania. This study, however, has a series of limitations that could be overcome by future research. Since there is not a rigorous assessment nor an official centralization of the Romanian highly skilled migrants or of the skilled labour deficit by industries and by professions, this research is limited to using a convenience sample. This can be extended to facilitate stronger and more significant correlations between variables. At the same time, the quantitative survey can be supported by a qualitative research, including–interviews with Romanian professionals who migrated and with Romanian professionals who chose not to migrate.

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Annex

Corruption – revenues correlation.

Perception	Monthly revenues at present (€)													Total
	< 500 €	501 - 1,000 €	1,001 - 1,500 €	1,501 - 2000 €	2,001 - 3,000 €	3,001- 5,000 €	5,001 - 7,000 €	7,001 - 9,000 €	9,001 - 10,000 €	10,001 - 15,000 €	15,001 - 20,000 €	20,001 - 25,000 €	25,001 - 35,000 €	
Definitely not true	.00%	.00%	.00%	2.60%	3.13%	11.54%	.00%	16.67%	.00%	.00%	.00%	.00%	66.67%	4.02%
Not true	.00%	3.85%	1.49%	.00%	2.08%	1.92%	.00%	16.67%	.00%	.00%	.00%	.00%	.00%	1.72%
Not true, nor false	.00%	3.85%	2.99%	6.49%	5.21%	1.92%	.00%	.00%	.00%	.00%	.00%	.00%	.00%	4.02%
True	50.00%	23.08%	16.42%	22.08%	20.83%	15.38%	8.33%	16.67%	.00%	.00%	.00%	.00%	.00%	18.68%
Definitely true	50.00%	69.23%	79.10%	68.83%	68.75%	69.23%	91.67%	50.00%	100.00%	100.00%	100.00%	100.00%	33.33%	71.55%
Respondents	2	26	67	77	96	52	12	6	3	2	1	1	3	348