

St. Petersburg University
Graduate School of Management
Master in Management Program

**THE ROLE OF TALENT MANAGEMENT IN TALENT
MIGRATION IN EMERGING MARKETS:
FROM BRAIN DRAIN TO BRAIN GAIN**

Master's Thesis by the 2nd year student
Concentration – Information technologies and
innovations management
Ekaterina MITSKEVICH

Research advisor:
Doctor of Economics, Associate Professor
Organizational Organizational Behavior and Personnel
Management Department
Marina O. LATUKHA

St. Petersburg
2018

ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ
ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

Я, Мицкевич Екатерина Андреевна, студентка второго курса магистратуры направления «Менеджмент», заявляю, что в моей магистерской диссертации на тему «Влияние управления талантливыми сотрудниками на миграцию талантов: от оттока кадров к их привлечению», представленной в службу обеспечения программ магистратуры для последующей передачи в государственную аттестационную комиссию для публичной защиты, не содержится элементов плагиата.

Все прямые заимствования из печатных и электронных источников, а также из защищенных ранее выпускных квалификационных работ, кандидатских и докторских диссертаций имеют соответствующие ссылки.

Мне известно содержание п. 9.7.1 Правил обучения по основным образовательным программам высшего и среднего профессионального образования в СПбГУ о том, что «ВКР выполняется индивидуально каждым студентом под руководством назначенного ему научного руководителя», и п. 51 Устава федерального государственного бюджетного образовательного учреждения высшего образования «Санкт-Петербургский государственный университет» о том, что «студент подлежит отчислению из Санкт-Петербургского университета за представление курсовой или выпускной квалификационной работы, выполненной другим лицом (лицами)».

 (Подпись студента)

23.05.2018

STATEMENT ABOUT THE INDEPENDENT CHARACTER OF
THE MASTER THESIS

I, Ekaterina Mitskevich, second year master student, program “Management”, state that my master thesis on the topic “The role of talent management in talent migration in emerging markets: from brain drain to brain gain”, which is presented to the Master Office to be submitted to the Official Defense Committee for the public defense, does not contain any elements of plagiarism.

All direct borrowings from printed and electronic sources, as well as from master theses, PhD and doctorate theses which were defended earlier, have appropriate references.

I am aware that according to paragraph 9.7.1. of Guidelines for instruction in major curriculum programs of higher and secondary professional education at St.Petersburg University «A master thesis must be completed by each of the degree candidates individually under the supervision of his or her advisor», and according to paragraph 51 of Charter of the Federal State Institution of Higher Education Saint-Petersburg State University «a student can be expelled from St.Petersburg University for submitting of the course or graduation qualification work developed by other person (persons)».

 (Student's signature)

23.05.2018

АННОТАЦИЯ

Автор	Мицкевич Екатерина Андреевна
Название ВКР	Влияние управления талантливыми сотрудниками на миграцию талантов: от оттока кадров к их привлечению
Образовательная программа	Менеджмент
Направление подготовки	38.04.02 «Менеджмент»
Год	2018
Научный руководитель	Латуха Марина Олеговна
Описание цели, задач и основных результатов	<p>Утечка мозгов в настоящее время является одной из наиболее актуальных проблем развивающихся рынков. Несмотря на то, что результаты её влияние как на страны происхождения и назначения, так и на глобальную экономику в целом до сих пор обсуждаются научным сообществом, существуют явные доказательства того, что отток талантов из страны препятствует её экономическому развитию и ухудшает конкурентоспособность местных компаний. В то время как исследователи в основном изучают государственные политики по смягчению негативных последствий утечки мозгов, действиям на уровне организации, в частности, в области управления талантами, уделяется недостаточно внимания. Целью данной магистерской диссертации является определение ключевых факторов, влияющих на миграцию талантливых выпускников университетов из России, и определение роли практик управления талантливыми сотрудниками в решении этой проблемы. В результате работы определены пять групп факторов, влияющих на миграционные решения талантливых выпускников, а именно индивидуальные, бизнес и внешнеэкономические выталкивающие факторы, международный опыт и привязанность к семье. Практики привлечения, развития и удержания талантливых сотрудников были определены как эффективный организационный инструмент управления миграционными потоками на уровне страны.</p>
Ключевые слова	Управление талантливыми сотрудниками, международная миграция, утечка мозгов

ANNOTATION

Master Student's Name	Mitskevich Ekaterina
Master Thesis Title	The role of talent management in talent migration in emerging markets: from brain drain to brain gain
Educational Program	Master in Management
Main field of study	38.04.02 Management
Year	2018
Academic Advisor's Name	Latukha Marina
Description of the goal, tasks and main results	Brain drain is one of the urgent issues that challenge emerging markets nowadays. While there is no agreement on its holistic impact on countries of origin, destination countries and the global economy, there is clear evidence that brain drain directly deteriorates workforce landscape of home countries and impedes their economic development. Whereas researchers are mostly focused on governmental efforts to mitigate brain drain consequences, little attention is paid to organizational level actions and, specifically, talent management. However, this concept is widely recognized, used and studied as an instrument of attraction, development and retention of employees on the company-level. This master thesis is aimed at defining factors of migration of talented graduates from Russia and determining the role of talent management practices in addressing this problem. Based on the primary data collected from Russian talented graduates, five groups of factors that influence their migration decisions are determined, namely individual-level, business-level and external country-level push factors, international experience and closeness to family. Talent attraction, development and retention practices are proved to be an effective organizational tool of managing brain drain and brain gain processes on the country level.
Keywords	Talent management, international talent migration, brain drain, brain gain

TABLE OF CONTENTS

Introduction	6
Chapter 1. THEORETICAL FOUNDATIONS OF TALENT MIGRATION AND TALENT MANAGEMENT	11
1.1. Talent migration	11
1.2. Talent management	21
1.3. Global talent management as a mean of reversing brain drain	30
Summary of chapter 1	38
Chapter 2. RESEARCH METHODOLOGY	41
2.1. Setting and data	41
2.2. Questionnaire design	44
2.3. Variables and measures	45
Summary of chapter 2	48
Chapter 3. RESULTS AND DISCUSSION.....	50
3.1. Factors of talent migration from Russia	50
3.2. Role of talent management practices in reversing brain drain	63
Summary of chapter 3	68
Conclusion.....	70
List of references	76
Appendix 1. The questionnaire.....	93
Appendix 2. Correlation matrix — push factors	100
Appendix 3. Correlation matrix — pull factors	102
Appendix 4. Correlation matrix — facilitating factors.....	104

Introduction

Topicality. It is hard to overestimate the importance of talents in nowadays business reality determined by globalization, growing knowledge intensity and increasing role of emerging economies (Schuler, Jackson, and Luo, 2004; Ahammad et al., 2018). Those companies that fail to manage talents properly end up losing their competitive advantage on the global level (Morris, Snell, and Björkman, 2016).

One of the obstacles faced predominantly by firms from developing countries (Marchiori, Shen, and Docquier, 2013) is the fact that due to low international barriers and new reality of global war for talents, talented well-educated employees with high level of human capital have more opportunities than ever to leave a home country to seek better standards of living and career opportunities on developed markets (Clemens, Montenegro, and Pritchett, 2008; Grogger and Hanson, 2008; Tung, 2016). This talent migration phenomenon is often referred to as “brain drain” (Salt, 1997). Despite the ambivalent nature of brain drain outcomes (Doquier and Rapoport, 2009; Coniglio and Brzozowski, 2018; Docquier, 2018), it is its negative effects on source country and local firms that are of particular interest for academics. On the country level, talent outflow reduces per capita growth (Haque and Kim, 1995; Mandelman and Zlate, 2017), erodes domestic knowledge networks (Agrawal et al., 2011), deteriorates country competitiveness (Khilji, Tarique, and Schuler, 2015) and slows down local economic development (Beine et al., 2001). Domestic organizations suffer from decreased firm performance (Latukha, 2015), legitimacy issues (Thunnissen, Boselie, and Fruytier, 2013) and loss of competitive advantage (Tarique and Schuler, 2010).

The concept of global talent management was introduced to let the companies win in this global battle for the best employees. It gained its popularity as a part of strategic management theory for several reasons. First, the companies all over the world acknowledge the importance of talented manager that is able to ensure the success of multinational corporation (MNC), given the increased competition on a global arena (Bartlett and Ghoshal, 1989; Tarique and Schuler, 2018). Moreover, the awareness about the role of global talent management in successful development of competitive advantage enhances as the companies understand that talents may be found on any level of organization (Ready and Conger, 2007). Finally, due to stronger international competition of companies for the same talents (Stahl et al., 2007), the scarcity of talents on the global level becomes evident (Cascio and Boudreau, 2016). As opposed to talent migration, the concept of talent management is a comparatively new research area. This phenomenon has been thoroughly reviewed in theoretical and empirical studies in the context of European, Asian and North American countries. A number of scientific papers are devoted to the discussion of talent definition standalone (e.g. Tansley, 2011; Nijs et al., 2014; Ganaie and Haque, 2017). While most of the

research remain focused on the analysis of talent management concept in general (see Aston and Morton, 2005; Collings and Mellahi, 2009; Tarique and Schuler, 2010), some authors discuss discrete talent management practices (e.g. Vaiman, Scullion, and Collings, 2012; Garavan, Carbery, and Rock, 2012; DeTuncq and Schmidt, 2013). Due to significant number of such practices, scholars tend to allocate them in accordance to three major dimensions: talent attraction, development and retention.

Despite the clear importance of talent management for organizational success, according to The Boston Consulting Group (2015), the companies experience many difficulties in this area. MNCs can hardly identify talented employees, especially if they are located in geographically remote areas (Collings, Scullion, and Morley, 2007; Saadat and Eskandari, 2016).

Recent studies claim that the war for talents is about to break out again different from what it used to be (KPMG, 2014). New emerging professional roles, increasing amount of young skilled employees and global environment challenge talent management functions in companies all over the world. However, emerging markets, which still lack managerial skills despite their huge role in world economy (Aulakh, 2007; Budhwar et al, 2017), experience the biggest pressure.

Russia currently faces the most intensive talent outflow in its newest history: the annual number of highly qualified emigrants doubled since 2013 and totaled in 44 thousands of people in 2016 (Russian Academy of Science, 2018). At least quarter of migrants leave the country to obtain better career opportunities and working conditions, and only one third of Russian emigrants consider returning to the home country (Russian Federal State Statistics Service, 2017). Despite the governmental effort, the trend remains negative: since 1990s the number of scientists decreased at least three times compared to 2% increase in developed European countries or 8% raise in developing China (Russian Academy of Science, 2018). All this reveals the urgent need for finding new approaches to retaining talents within the country, and this study proposes talent management to be companies' response to that. It is especially relevant as talent management systems are underdeveloped in Russian companies: they are often isolated from overall organizational strategy and the implementation of talent management practices lacks regularity (Latukha, 2014).

Research gap. The scholars have been involved in research on global migration for more than a century. While studies exploring the international migration traditionally were economic in nature, its branch devoted to migration of talented individuals endowed with substantial level of human capital, i.e. the phenomenon of brain drain, got considerable popularity with business community. Here, the works that focus on specific groups of migrants (see Gibson and Mckenzie, 2011; Bassioni, Adzaho, and Niyukuri, 2016) are of particular interest. Within the talent migration theory, the special attention has been historically paid to identification of factors that drive this process. The classical research (e.g. Sjaastad, 1962; Hirschman, 1970; Portes, 1976) provides a

macro perspective on this issue, whereas more recent studies (including Tung, 2008; Papademetriou and Sumption, 2013; Beamond et al., 2016; Al Ariss and Sidani, 2016 and others) follow more detailed approach. At this time, one of the most commonly addressed classifications of talent migration factors remains to be push and pull approach introduced by Lewin (1951). Some researches (e.g. Kaufmann and Malul, 2015) also mention factors that do not fall under one of these groups though have influence over migration likelihood of individual. Talking about migration, many papers mention the influence it has over different parties: among them, for example, Bhagwati and Hamada (1974), Tung (2008) and Khilji et al. (2015).

While scholars actively discuss policy implications that could mitigate brain drain adverse influence, a role of managerial actions and, specifically, talent management practices is understudied. There are only few researches touching on this point, like one of Hooks et al. (2006), which addressed how human resource management practices can mitigate push factors that make valuable employees to emigrate, and reverse the brain drain process on an organizational level. Within human resource management framework, talent management is perceived as the main tool of attracting, developing and retaining talents (Tarique and Schuler, 2009; Collings, 2014), which strongly implies its potential application to the problem of talent migration. Putting together the facts that talented management practices in general (Latukha, 2015) and talent development practices in particular (Latukha, 2018) are linked to a firm's performance, the role of talent management in attraction and retention of employees, skill and knowledge outflow from emerging economies, *the necessity for further investigation of the role of talent management practices in addressing brain drain, specifically in preventing talent migration from emerging markets*, becomes evident.

Research problem. Discussing factors of talent migration, recent studies (e.g. Mellahi, Budhwar, and Li, 2010; Al Ariss and Sidani, 2016; Transparency International, 2016) mainly link factors that provoke brain drain to country-level determinants which makes it hard to be changed in short-term perspective. The author of this master thesis claims that talent management practices may contribute to addressing the brain gain phenomenon by providing mechanisms for talent attraction and retention.

Research **object** of this study is talented graduates (i.e. the last year students of bachelor or master programs). The **context** of this research is Russia. Research **subject** is factors influencing migration intention and talent management practices.

Research goal of this master thesis is to define factors that influence talent migration from Russia and to investigate the role of talent management practices in preventing talented graduates' migration from Russia.

To fulfill this goal, theoretical, methodological and empirical *objectives* were formulated for this study.

Theoretical objectives are:

1. To review and analyze relevant theories and concepts in talent migration and talent management areas;
2. To identify key factors that stimulate talent migration and analyze their peculiarities in the context of emerging markets, specifically in Russia;
3. To identify key talent management practices and review their application in the firms operating in emerging markets, specifically in Russia;
4. To find the link between talent migration and talent management concepts and to prove their theoretical relevance for this research.

Methodological objectives are:

1. To develop a set of measures based on literature review to operationalize factors of talent migration;
2. To develop a questionnaire to find out opinion of talented Russian graduates about different factors of talent migration and talent management practices.

Empirical objectives are:

1. To identify the relationship between factors of talent migration and migration intention of talented Russian graduates;
2. To evaluate the role of talent management practices in reversing the migration intention.

This master thesis consists of introduction, three chapters and conclusion. The structure of thesis is determined by the set objectives. The work was divided in six major stages.

During the *first stage*, the concept of talent migration was studied through an overview of related literature, identification of major types of talent migration, classification of its determining factors and recognition of core talent migration outcomes.

The *second stage* implied review of academic literature dedicated to talent definition, general concept of talent management and its application to global context, and major talent management practices.

The *third stage* included establishment of theoretical premises of existence of relationship between talent migration and global talent management and its overview within Russian context.

The *stage four* was dedicated to formulation of three research questions based on literature review:

RQ1. What factors influence migration intention of talented graduates in Russia?

RQ2. How push, pull and facilitating factors influence migration intention of Russian talented graduates?

RQ3. What is the role of talent management practices in preventing brain drain in Russian context?

According to formulated research questions, the research methodology was designed, the questionnaire was developed, the respondents' selection criteria and main channels of questionnaire distribution were determined.

The *fifth stage* involved response collection and data analysis. According to the results of factor analysis, there are four groups of push and pull factors that might influence migration intention of talented graduates in Russia: internal and external country-level push and pull factors; business-level push and pull factors and individual-level push and pull factors. Additionally, three groups of facilitating factors were determined: family closeness, international experience and cultural adaptiveness. The results of logistic regressions analysis proved that combination of push, pull and facilitating factors better explains migration decision of talented graduates in Russia than these factors standalone. Moreover, they determined that higher relevance of external country-level, industry-level and individual-level push factors and international experience increase the probability of positive migration decision of talented graduates in Russia, and family closeness decreases it. The review of results of descriptive statistics helped to reveal talent management practices that play more important role in changing migration decision for Russian talented graduates. Finally, Kruskal-Wallis test showed that the role of talent attraction practices is higher for those who are currently considering migration as well as for those who feel higher impact of external country-level, industry-level and individual-level push factors over their migration decision. As far as talent development and talent retention practices are concerned, the analysis revealed significantly higher role of them only in case of individuals who assess impact of external country-level and industry-level push factors over their migration decision as substantial.

During the *last stage* obtained results were analyzed in terms of its theoretical and managerial applicability, implications for business were formulated, and major conclusions were defined.

Chapter 1. THEORETICAL FOUNDATIONS OF TALENT MIGRATION AND TALENT MANAGEMENT

1.1. Talent migration

1.1.1. Talent migration overview

In general, labor migration is referred to as relocation of people from one country to another with the goal of improving living conditions, obtaining better higher education or getting employed on more favorable conditions. In academic field it is much more common to discuss migration of highly skilled employees rather than migration in a broader sense.

There are multitude of works that discuss the reasons why some qualified employees decide to migrate. The traditional approach to explaining this phenomenon finds its cause in inconsistency of different countries in terms of their economic or political environment driven by globalization processes (Matthews and Zander, 2000). Portes (1976) claim that international migration is a way such employees react to the imbalance between different nations. This supports earlier developed “exit and voice” framework by Hirschman (1970) that suggests that decision to stay in home country signals individual’s eagerness to voice to improve the current situation, while decision to migrate may be perceived as choice to avoid the problem.

The most popular theory, though, remains to be the one proposed in one of the earliest studies on migration topic carried out by American researcher Sjaastad (1962). According to it, individuals and households migrate in order to increase their human capital and, consequently, their ability to generate higher incomes throughout their lives. Thus, this theory suggests that positive decision towards migration is only made when expected benefits outweigh associated expenses.

The human capital theory has list of advantages compared to other approaches to elucidating migration phenomenon. First, it provides explanation to difference in perception of migration value by individuals of different age groups by introducing time lag in obtaining benefits from migration. Secondly, this theory, as opposed to many other economic researches, is not limited to considering only economic gains and costs that migration may bring; on the contrary, it proposes the idea that they might be in a non-monetary form.

Brain drain and brain gain

Closely tied with human capital theory, the concept of *brain drain* is widely spread in contemporary literature on international migration. For the first time, this term was proposed by The Royal Society of London in the early 1950s in its attempt to address the issue of migration of local scientists and academics to North America in post-World War II period (Cervantes and Guellec, 2002).

Salt (1997) define brain drain as transfer of huge amount of skilled and educated individuals toward one direction. Within this concept, the term “brain” reflects the high level of competence and potential of the individuals that leave home regions, while “drain” implies considerably higher outflow of these people compared to ordinary conditions. Bushnell and Choy (2001) provide similar definition to one suggested by Salt, and claim that brain drain describes the situation when many skilled and educated individuals leave their countries of origin (COOs). Dodani and E LaPorte (2005) offer expanded definition of brain drain, identifying it as migration of skilled human resources in search of better living standard and quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide for trade, education, etc.

Currently, many academics (e.g. Gibson and Mckenzie, 2011; Bassioni, Adzaho, and Niyukuri, 2016) give more precision to what groups of migrants are referred to when brain drain concept is concerned, examining this issue in context of different industries and occupations. The most attention this concept receives with respect to different countries and regions (Davenport, 2004; Pang, Lansang, and Haines, 2002).

Inseparable from brain drain, *brain gain* phenomenon also receives robust attention in talent migration literature. It is interesting, though, that the understanding of this term is not consistent in academic literature. Thus, some authors use it to address the inflow of talent that DCs experience with talent migration process (Tung, 2008). In most of the sources, brain gain is explained as situation when individuals invest in their human capital with endeavor to migrate abroad but stay or return to their home countries for some reasons, increasing total human capital of COO (Mayr and Peri, 2008; Boncea, 2015; Hussain, 2015).

As it stems from the latter approach to brain gain conceptualization, the return migration to COO is a crucial scenario that might ensure brain gain effect. It is discussed, for example, by Beine, Docquier, and Rapoport (2001). Borjas and Bratsberg (1996) prove that average skilled workers are more likely to return back to their home country compared to highly skilled employees. Surprisingly, Stark et al. (1997) demonstrate that the likelihood of brain gain is higher when high-skilled workers migrate permanently, and low-skilled individuals experience temporary migration. It is explained by the fact that those workers who initially obtain lower level of skills have more room for improvement in terms of human capital increase. Grecu and Titan (2016) note that retention rate of migrated talents might be increased if the state and the companies take relevant actions. The importance of timely and active participation in this area is driven by the findings of Lien and Wang (2005) that claim that despite the increased attention to brain gain effect from academics, brain drain remains to be a more likely outcome of talent migration.

Reflecting the spiral nature of brain drain and brain gain effects, the concept of *brain circulation* emerged lately. Tung (2008: 298) refers to it as “triangular human talent flow”. The idea behind this model is that the brain exchanges that happen between countries forces rise in temporary migration and return rates (Pellegrino, 2001; Tung, 2008).

There are four developments that enabled the brain circulation: (1) globalization that ensures the interconnectedness of the countries all over the world; (2) reduced migration barriers; (3) increased number of countries where dual citizenship is permitted, which encourages international mobility; and (4) incurrence of boundaryless careers concept that implies aspiration of highly skilled employees to constantly change their jobs in tracing satisfaction regardless the country of the suitable offer (Tung, 1998; Stahl et al., 2002).

Notwithstanding the optimistic view of this theory on talent migration phenomenon, brain circulation perspective is criticized for ignoring set of factors that put restrictions on the individual’s ability to transfer acquired skills, knowledge and other dimensions of human capital back to COO. Tung and Lazarova (2006) notice the cultural shock of returnees caused by adoption of DC’s political, socio-economic and cultural values (Harvey, 1989) that hinders effective operation of the individuals within COO context. Additionally, Meyer (2001) claims that workers are not able to apply many obtained skills back home as they are ‘socio-skills’ in their nature, i.e. are tightly connected to social relations within which they were acquired. Williams et al. (2004) support this idea by introducing the example of scientists with postdoctoral fellowships overseas. Some authors ascribe ineffectiveness of skills transfer to economic disappointment experienced by returning employees. Harvey (1989) provides an example of managers that find themselves earning less when they return to home countries after obtaining trainings overseas than those managers that do not possess similar experience. As a result, this demotivates them from fully applying new skills and knowledge in this organization. Balaz, Williams, and Kollar (2004) go along with these findings and claim that in such situation it is very likely that these managers will look for opportunities of permanent migration in the future. Overall, it seems to be obvious that to make brain circulation beneficial for a particular company, it is especially important to manage this process properly during all stages.

In order to provide companies with practical recommendations, academics study talent migration from various perspectives.

One of the key aspects in this regard is geographical specifics that determine talent migration directions, process characteristics and overall trends.

Some studies make generalizations regarding talent migration patterns. Thus, Levy (2003) assume that developed countries often act as DCs while developing countries are more often COOs of migrating talents. Gibson and Mckenzie (2011) stress out such common characteristics of DCs

as innovativeness, life environment, sufficient R&D investments and high salary levels. There are some works, though, that challenge the assumption about large gaps in economic development of DCs and COOs, claiming that migration flows between countries where this gap is small may be remarkable (Saint-Paul, 2004; Smith and Favell, 2006).

Other academics, on the contrary, investigate context of concrete countries and analyze talent migration process within it. Examples of these studies are Grecu and Titan (2016) that rank EU countries regarding their capacity to attract and retain talents; Petroff (2016) and Boncea (2015) that focus on Romanian labor market; Qin (2015) that studies migration of Indian engineers; Ha, Yi, and Zhang (2016) who analyze phenomenon of talent migration in the context of China, and others.

Along with global and cross-national mobility, internal migration flows also gain attention in the contemporary literature. The most remarkable examples are studies on the United States (Ottaviano and Peri, 2012; Partridge et al., 2012), Britain (Gagliardi, 2015), Germany (Parikh and Van Leuvensteijn, 2003), Austria (Tang et al., 2014), and China (Han and Li, 2017; Liu, Shen, Xu, and Wang, 2017).

Another prominent research dimension is research subject. Currently, there are several studies on talent migration that focus on one particular social group. An interesting example is the study of Kaufmann and Malul (2015) who examine entrepreneurs' migration behavior using geographic-based model. Huge number of studies (e.g. Bassioni, Adzaho, and Niyukuri, 2016) focus on drivers, challenges and consequences of scientists' migration. Petroff (2016) argues that most of the papers limit their research to elitist professional groups and proposes another approach by introducing range of profiles that are exposed to international migration. The author introduces middle-class semi-skilled migrants and potentially skilled migrants (international students) groups and claims them to be the main contributors to a win-win situation determined by brain circulation effect.

As far as talent migration is concerned, students are currently of rising interest of academic society despite the fact that they do not belong to skilled workforce yet (see e.g. Salt, 1997, and Iredale, 2001). The globalization processes took over the education system: it might be observed through the standardization of educational programs, the introduction of international exchange programs, the organization of international internships, the appearance of foreign subsidiaries of large universities. All of this is undertaken in order to support effective process of migration for high potential students and to ensure brain gain effect (Trofimova, 2012). Some researchers find empirical evidence of its effectiveness: study of Spilimbergo (2009), for example, confirms positive impact of returning students on democratic institutions in COO. The bad news regarding

student migration is that according to Dako-Gyeke (2015, 2016) and Soon (2012), most of the students do not have an intention to return in their COO after acquiring education abroad.

1.1.2. Factors influencing talent migration

International migration is driven by number of diverse factors, e.g. socio-economic, natural-climatic, ecological, demographic and political, etc. Academics have developed various conceptual approaches to determination of factors driving talent migration (King, 2012). Already discussed earlier, one stream of scholars explain this phenomenon by introducing the concept of economics and political imbalance between countries (Sassen, 1991). According to them, talent migration is stimulated by difference in development level of states and subsequent inequality in their relationship. Portes (1976: 491) notice that “the structure of interchanges between central and peripheral economics are reflected in individual actors” through outflow of skilled employees.

The idea of asymmetry of economies of different countries being the source of individual urge for migration also serves as a basis for macro model of neoclassical economic theory (Harris and Todaro, 1970). What differentiates it from the first stream is transition from idea of subordination relationship between more and less developed countries; the migration is claimed to be forced by uneven workforce and capital allocation. More specifically, the migration is supposed to be directed towards countries where labor is scarce from countries where it is easily accessible; the result of migration, in this case, is supposed to be equalization of labor and capital in all regions.

Further elaboration on migration-driving factors revealed the necessity of more structured approach. One of the most widely used classifications consists of two broad categories of drivers: push and pull factors (Baruch et al., 2007). The model was first introduced by Lewin (1951) and is commonly addressed when international labor migration is discussed to explain the reasons of patterns of labor inflow and outflow, including those referred to brain drain and brain gain (Altbach, 2004). Push-pull framework operationalizes talent migration causes through a combination of push factors, i.e. negative factors that push individuals from location where these factors are observed; and pull factors, i.e. positive factors that make other locations relatively more attractive.

The discussion on push and pull factors is impossible without sticking to the context of specific countries or, at least, groups of countries with similar characteristics. While there are some works devoted to migration between developed countries, most of them focus on talent migration directed from emerging to developed economies. Hereafter push and pull factors of this particular migration flow will be discussed.

Contemporary studies consider the whole range of *push factors* that are likely to drive talented employees from emerging markets abroad. Some of the researchers in this area highlight factors specific for particular groups of talents (e.g. Chikanda, 2011), though studies that provide

a broader view on push factors, i.e. reviewing push factors that might be applied to wide range of talented individuals, are of particular interest for this study.

A huge sector of global talent mobility literature elaborates on all types of country-characterizing factors. Transparency International (2016) stress out such relevant for emerging economies push drivers as high corruption and inequality levels, low press freedom, dependent judgement systems, and low standards in regards to public officials. Yeoh and Eng (2008) enrich this list with bureaucratic state policies, later followed by Beechler and Woodward (2009) who claim that non-transparent government policies and programs drive talents out of the country. Al Ariss and Sidani (2016) add to that unstable governmental regimes that result in increased political and economic risks and insufficient infrastructure development in country. It is important to mention such factors as low level and pace of country economic development (Beamond et al., 2016). These drivers are tightly connected to those distinguished by Tung (2008) and Baruch et al. (2007), namely low standards of living and insufficient social support and poor healthcare system, correspondingly. Tung and Lazarova (2006) supplement list of push factors with high production costs that may drive entrepreneurs out of the country to seek better economic options and shortage of direct investments in country or their irrelevant for a specific individual direction. A number of authors put emphasis on importance of a favorable position of a country within global community. Collings (2014) accentuates on the necessity for integration on the global level; consequently, lack of it might become a cause for emigration of talents. Similar ideas are proposed by Khilji et al. (2015) and Minbaeva and Collings (2013): according to the authors, strategic alliances and cross-country agreements on economic cooperation is crucial for retaining talents in COO. Finally, some authors (Carr et al., 2005; Clemens et al., 2008; and Mattoo et al., 2008 are among them) propose extensive competition among talents on the country level to be the important driver of brain drain as locals prefer to leave the country in order to work in environment of lower competition and, thus, ensure more stability.

Despite the majority of studies determine push factors on the country-level, more and more academics nowadays focus on drivers caused by business environment. Kim (1998) notices that emigration of individuals with high human capital is often caused by lack of overall competitiveness or innovativeness of selected industry which is associated with limited opportunities for their professional development. Gibson and McKenzie (2014) elaborate on this idea and add underinvestment in R&D, limited access to unique resources, and low probabilities of obtaining grant funding as important push factors of talent migration. This can be caused, among other reasons, by lack of governmental support towards particular industries. Similarly to country-level, excessive competition within particular industry might cause specialists that want to develop in it to leave to countries where finding job would be easier. Thus, Cooke, Saini, and Wang (2014)

discuss difficulties in career development and imbalance between acquired skillset and real market job offers to be the source of talents' considerations upon relocations. Baruch et al. (2007) add lack of international allocations, poor networking opportunities, salaries that do not correspond to workload, weak social support and insufficient responsibility at work. Some migrants are argued to make the relocation decision due to workplace safety issues (Tung and Lazarova, 2006).

Some of the studies mention more individual-oriented factors, such as situation of status inconsistencies (Moeller et al., 2016; Zhang and Peltokorpi, 2016), lack of diversity (McPhail, McNulty and Hutchings, 2016), perceived political, economic and social freedom and equality (Al Ariss and Sidani, 2016), or opportunities for self-expression and actualization (Hofstede, 2001).

Pull factors in the context of global talent migration are described as “high-quality infrastructure, competitive market conditions and business environment” (GTCI, 2017: 99). As far as pull factors are concerned, they usually are the reverse options of push factors. In other words, whatever pushes the individual from his or her COO, the opposite nature of this factor attracts, if present, to destination countries (DCs).

According to the literature, from the country perspective, this group includes such factors as availability of critical mass of talents (Pedersen et al., 2008), superior living conditions, comparatively better healthcare and education system (GTCI, 2017). In addition to them, the academics identify transparent and well-structured economic policies and programs (Beechler and Woodward, 2009), as factors that attract talents to countries.

As far as business level is concerned, Baruch (2004) introduces professional development opportunities, increase in individual's income and elevated likelihood of employment as important pull factors. Papademetriou and Sumption (2013) continue this list by highlighting the importance of dynamic environment for international talent attraction.

Speaking about pull factors, it is interesting to consider those drivers that trigger reverse migration of talents. Although limited in number, the studies concerning this issue name such factors as strong social or family ties in case when family members or other important for talent individuals stay in COO (Baruch et al., 2007) and, consequently, possibility of family reunion (Faini, 2007) and patriotic sentiment (Qari et al., 2012).

In spite of popularity of classical push-pull model of talent migration factors, it receives critiques of academics that find it oversimplified and, thus, unable to properly explain complex migration phenomenon (de Haas, 2011). Van Hear, Bakewell and Long (2017) notice that most of the studies in this area are limited to providing list of factors without making any attempt to combine them into more explanatory framework. In order to tackle this gap, the approach to classification of push and pull factors is proposed in Table 1 based on the idea that factors tend to

work together as complex constructs rather than separately (Van Hear et al., 2017) and in accordance with patterns detected from literature review.

Table 1. Classification of push and pull factors of talent migration

Level	Factors	Adopted from
Individual-level	Personal reasons	Hofstede (2001),
	Attachment to country	Qari et al. (2012),
	Self-actualization opportunities	McPhail et al. (2016),
	Ethnicity, culture, gender, nationality, language and sexual orientation diversity	Transparency International (2016),
	Equality	Zhang and Peltokorpi (2016)
Business-level	Status inconsistencies	
	Average salary level	
	R&D investments	
	Governmental support of specific industries	Tung and Lazarova (2006),
	Access to unique resources	Mattoo et al. (2008),
	Industry competitiveness	Gibson and McKenzie (2014),
Country-level	Industry innovativeness	GTCI (2017)
	Misuse of specialists	
	Competition among talents on the industry level	
	Healthcare system	
	Competition among talents on the country level	
	Bureaucracy	
	Transparency of governmental policy	
	Press freedom	
	Independence of judicial system	Wright et al. (2005),
	Integrity of civil servants	Thorn and Holm-Nielsen (2006),
	Stability of governmental regime	Tung and Lazarova (2006),
	Political risks	Baruch et al. (2007),
	Economic risks	Mattoo et al. (2008),
	Level of economic development of country	Yeoh and Eng (2008),
	Pace of economic development of country	Al Ariss and Sidani (2016),
Institutional infrastructure development	Beamond et al. (2016),	
Corruption	Transparency International (2016)	
Direction of investments		
Production costs		
Economic cooperation of country with international players		
Immigration policy		
Country integration in international community		

There are also factors that are discussed to affect talent migration while cannot be assigned purely neither to push, nor to pull factors groups; this group is proposed to be referred to as *facilitating* factors. Focusing on students that came to study in the United Kingdom and the United States, Baruch et al. (2007) suggests cultural adaptiveness and strength of family ties to be such factors. The authors prove that the decision of temporally migrated students to stay in the DC is positively associated with the easiness of adaptation to the new cultures and is negatively associated with the level of students' closeness to family members that are left in COO. However, the influence of this factors should be further investigated in regards to initial migration decision, as the influencing factors might differ depending on the migration type. Another factor of this

additional groups international experience, mentioned by Tung and Lazarova (2006). According to the authors, the intensive experience of travelling and working abroad may lead to increased affection of person towards one or more foreign countries and strengthen their feeling of not belonging to COO. Significantly, this feeling was found to be more actively shared by those people who intended to leave the country, which suggests the relationship between the factor and migration decision. Table 2 summarizes identified facilitating factors in one classification.

Table 2. Classification of facilitating factors

Type	Factor	Based on
Family ties	Closeness to family	Hofstede (1984), Touliatos et al., (2001), Baruch et al. (2007)
	Importance of living with family	
	Importance of family ties	
	Family dependence in career choice	
	Family grew when abroad	
International experience	International study experience	Tung and Lazarova (2006)
	International volunteering experience	
	International internship	
	International working experience	
	International study experience	
	International tourism experience	
	Work in international groups	
Cultural adaptiveness	Ease of adaptation	Baruch et al. (2007)
	Support in adaptation process	
	Ease of barriers overcoming	
	Receptivity to other cultures	

1.1.3. Talent migration outcomes

Speaking about talent migration, it is impossible to avoid discussion of its outcomes. Vast and wide, talent migration literature focuses on the influence this phenomenon has on developed DCs, though research on developing COOs have gained more popularity over last decades (e.g. Bhagwati, 1983). However, its effect on society and economy is not totally clear. Even though negative influence of talent migration over COOs is of greater interest for academics at this point, there is a number of studies, which suggest that, determined by specific factors, positive impact may be observed as well (Stark and Wang, 2002).

There is an empirical evidence that migration can have negative impact both on COO, when brain drain happens, and on DC in case of reverse brain drain. In different researches brain drain could be referred as a negative externality on society left in COO, as depletion of domestic

knowledge networks happens (Agrawal et al., 2011) in result to imperfect replacement of skilled workers by unskilled (Piketty, 1997). Haque and Kim (1995) argue that it leads to the decrease of the per capita growth in the home country. Therefore, skilled workers with intermediate-level abilities who stay in the source country are also damaged by brain drain (Miyagiwa, 1991). Due to the fact that skilled emigration negatively affects COO's employment level as the most skilled employees leave the country, there is a negative welfare effect for COO (Bhagwati and Hamada, 1974). According to the research by Katz and Stark (1987), the losses associated with brain drain is not just a number of immigrants but talent embodied in them. In its turn, reverse emigration harms DC, as resources like taxes spent on development of immigrants do not pay off and leak to COO.

On the other hand, there are cases when migration of skilled workers is beneficial. Kuhn and McAusland (2006) provide the example of positive effect of brain drain: if migration happens to environment of higher productivity global innovation increases resulting in more advanced and cheaper good, and COO gains from import of such products. Carra, Inkson, and Thorn (2005), who referred to migration as to "talent flow" instead of "brain drain", identify the set of improvements, which lead to win-win situation between both home and host countries. Those developments (see Tung, 2008) include globalization, which increases interdependence of economies; decrease of barriers for migration in both home and host countries; reduction of bureaucracy barriers for immigration (for example, the allowance to hold double citizenship); the establishment of career opportunities which are not subject to physical and national boundaries (Arthur and Rousseau, 1996). Researchers empirically confirm that the development of such environment, which allows skilled workers to be mobile across country borders to accomplish all career goals and ambitions (Stahl, Miller, and Tung, 2002), positively affects international exchange of ideas (Agrawal et al., 2011), stimulates knowledge flow (Carr et al., 2005), learning exchange (Furuya et al., 2009) and innovation distribution (Oettl and Agrawal, 2008). Therefore, migration of skilled workers between countries leads to benefits and win-win for both sides (Tung, 2008).

Thus, despite negative effects on COO and DC if they are considered separately, if perceived as a big picture and effectively managed, labor migration can be beneficial to wide range of sides including the migrants, their communities, COO, DC, employers. COO is able to gain due to migration if the relieved employment is active and contributes through transfer of knowledge, business creation and development of business networks. At the same time if DC suffers from labor shortage compensate it and stimulate mobility.

1.2. Talent management

1.2.1. Talent definition within theory of talent management

Before getting to the discussion of talent management concept, it is important to build an understanding of what ‘talent’ means within this theory. According to Tansley (2011), conceptualization of talent is a key to making firm’s talent management policies and practices robust. Nijs et al. (2014) add to that by stating that being able to deliberately define talent is crucial for organizational performance.

However, defining talent keeps to be a challenge that has not yet been solved neither by companies (Wooldridge, 2006), nor by academics (Tansley, 2011; Nijs et al., 2014) even though it was extensively addressed (e.g. Brown and Tannock, 2009; Tansley, 2011; Nilsson and Ellström, 2012). Moreover, in many cases the term ‘talent’ remains being taken for granted (e.g. Capelli, 2008; Collings and Mellahi, 2009) and is not explicitly defined (Gallardo-Gallardo, Dries, and González-Cruz, 2013).

It is easy to observe that current studies on talent definition are not consistent in regards to research object: while some authors treat talent as an attribute that person may or may not possess (see Michaels, Handfield-Jones, and Axelrod, 2001; Cheese, Thomas, and Craig, 2008), others claim it to be a type of person (e.g. Williams, 2000; Silzer and Dowell, 2010; Schuler, 2015). Gallardo-Gallardo et al. (2013) refer to this as *object and subject approaches* to talent definition, correspondingly. These dimensions are, however, not internally coherent as well.

Object approach to talent definition

There are plenty of characteristics mentioned by academics that are associated with talent. These are, for example, ability (Williams, 2000; Silzer and Dowell, 2010), capability (Stahl et al., 2007), experience (Cheese et al., 2008), knowledge (Michaels et al., 2001, Bethke-Langenegger, 2012), behavior (Cheese et al., 2008), and skills (Michaels et al., 2001; Cheese et al., 2008; Silzer and Dowell, 2010).

Gallardo-Gallardo et al. (2013) identify three dimensions of talent-as-object approach: talent as *natural ability*, *mastery of developed skills*, and *fit between personal characteristics and context*.

Talent as natural ability approach reflects one of the oldest discussions in the area of talent management on innate or acquired nature of talent. Academics that refer to it usually define talent as a mix of personal characteristics, including intelligence, creativity, innovativeness, and personal skills (Hinrichs, 1966). Within this approach, it is believed that talent cannot and, thus, should not be managed but should rather be enabled by managerial actions (Buckingham and Vosburgh, 2001; Davies and Davies, 2010).

The opposite approach to understanding talent as natural ability is perceiving *talent as mastery*. According to it, talent is the highest level of excellence to which the skills can be developed. Pfeffer and Sutton (2006) agree that talent is always conditioned by experience and effort. In their study dedicated to talent operationalization in different areas, Ericsson, Prietula, and Cokely (2007) follow this line and claim that in most of the cases talent is achieved rather than given with birth. Many researches trying to conceptualize talent tie this term to performance or other evidence that could verify talent presence: e.g. Ericsson et al. (2007) bond talent with superior performance, De Haro (2010) claim that without evidence one should talk about giftedness rather than talent.

The last approach — *talent as fit* — eliminates the importance of nature-nurture debates at all. In this approach, the key idea is in subjectivity and relativity of talent itself (González-Cruz, Martínez-Fuentes, and Pardo-del-Val, 2009). Hence, talent is not an absolute construct but rather a matter of fit of specific characteristics, abilities and skills to certain context. Pfeffer (2001) identify three dimensions that matter when talking about this fit: company's culture, environment and type of work. This approach finds support in business as well: according to Coulson-Thomas (2012), it is not rare that people that perform brilliantly in one context show poor result in other.

Overall, it is believed that organizations do not focus on the source of talent but rather on the value it brings to the company (Silzer and Dowell, 2010). On the other hand, the perception of management of one's ability to further develop influences the decision-making and talent identification results significantly (Heslin, Latham, and Vandewalle, 2005). It leads to the challenge that often appears in HR business practice, namely the tension between attraction of external talents versus development of existing employees.

Subject approach to talent definition

Subject approach may be further divided into inclusive and exclusive approaches.

The *inclusive* approach supports the idea of treating all people in the organization as talents. O'Reilly and Pfeffer (2000) and Buckingham and Vosburgh (2001) explain the rationale behind it by claiming that every employee has own strengths and, thus, brings value to the company. This idea got further supported by authors studying source of competitive advantages of organizations in context of knowledge-based economies: they state that human resources is a key to maximization of company' profits, as opposed to other types of resources (Tulgan, 2002), and firm's performance depends on performance of its every employee.

According to Leigh (2009), this treatment of talents is widely followed in business practice, as almost half of the studied companies classified all their employees as talents. This is especially relevant within the services industry (Gallardo-Gallardo et al., 2013) due to the peculiarities of business model that is typically built around people.

The *exclusive* approach to talent determination suggests recognition of some employees as the elite of the organization (Gallardo-Gallardo et al., 2013) and application of the term ‘talent’ only to these people. Generally, academics distinguish two dimensions that companies implementing exclusive approach should focus on when selecting talents: current performance and potential.

Currently, most of the studies discussing talents as distinct employees pay more attention to their current propensity to outperform colleagues, following *talents as high performers* approach (Gallardo-Gallardo et al., 2013). Williams (2000) defines talents as staff members that are persistent in their ability to achieve outstanding results; Stahl et al. (2007) emphasize both top-rank capabilities and performance of these people; Silzer and Dowell (2010) and Bethke-Langenegger (2012) add to that exceptional skills and abilities — both specialized and general ones. Within exclusive approach, talents are considered to be those employees that demonstrate all aforementioned characteristics or behaviors in a stronger manner compared to others: Smart (2005) refers to them as the best of the class, and Ulrich and Smallwood (2012) as top 10% of all workforce.

Number of academics that see talents as employees that show *high level of potential* but are not necessarily already high performers is less numerous. Reflecting on potential, Silzer and Church (2009) define it as an ability of employees to “effectively perform and contribute in broader or different roles in the organization at some point in the future” (p. 379) due to their possession of certain qualities (e.g., characteristics, motivation, skills, abilities, and experiences). High potential employees are usually associated with higher pace of development and are believed to differ from others in terms of needs, motivation and behavior (Pepermans, Vloeberghs, and Perkisas, 2003). Potential of employees is sometimes associated with their potential to move to managerial positions within organization (Tansley, 2011).

Some studies follow mixed exclusive approach, saying that talents are usually those who show both high level of performance and potential (Chartered Institute of Personnel and Development, 2007).

The discussion on which approach — inclusive or exclusive — should be applied in organization is still open. As the inclusive approach encourages equality in treatment of employees by company management, it is believed to lead to improved work climate (Bothner, Podolny, and Smith, 2011) and raise of morale of all employees (Groysberg, Nanda, and Nohria, 2004). Moreover, according to some research, it prevents labor scarcities as all employees get equally developed (Yost and Chang, 2009). At the same time, there are some studies that criticize this approach. Gallardo-Gallardo et al. (2013) notice that treatment of all employees as talents blurs the frontiers between strategic human resource management and talent management.

Exclusive approach to talent definition, on the other hand, finds more support in this regards as it is believed to be more cost-effective and efficient (Collings and Mellahi, 2009), and investments in limited number of employees rather than in all workforce is claimed to bring higher returns (Bothner et al., 2011). Moreover, as it is mentioned in research of Netessine and Yakubovich (2012) and Höglund (2012), this approach encourages those employees that were not identified as talents to work harder or leave the company which increases overall performance of the firm. It is likely that it is due to these reasons that this approach was found to be more popular with business practitioners (Ready, Conger, and Hill, 2010). As for the criticism of the exclusive approach, academics mention subjectivity of performance measurement (Silzer and Church, 2010), low accuracy of identification of the best employees under certain circumstances (Netessine and Yakubovich, 2012), questioning of the assumption about direct relationship between past and future performance (Martin and Schmidt, 2010), increased feedback sensitivity and fear of failures among employees treated as talents (Kotlyar and Karakowsky, 2012), and overall decrease of morale of employees that were not identified as talents though still represent the majority of organization (DeLong and Vijayaraghavan, 2003).

1.2.2. Emergence and development of talent management theory

In last decade talent management has been recognized as one of the key managerial activities. It was more than twenty years ago, though, when the phenomenon of ‘the war for talents’ got coined by McKinsey consultants (Michaels, Handfield-Jones, and Axelrod, 2001). Nevertheless, the concept of managing talented employees in a special way got its popularity even earlier, with the improvement of the economic landscape after the end of World War II (Cappelli, 2008).

Currently, exploration of talent management in the academic sense goes within various directions, including international and strategic human resource management, organizational behavior and career management (Gallardo-Gallardo et al., 2015). Despite that, the debates around the conceptual boundaries of talent management are still ongoing. Aston and Morton (2005) notice that there is no single version of its definition in contemporary academic literature dedicated to this topic yet. Thus, some academics see talent management as a mindset that treats talent as a source of organizational success (Creelman, 2004), while others claim it to be acknowledgement the importance of human capital and creation of proper plan on meeting the demand for it (Cappelli, 2008). All in all, talent management is often referred to as managerial actions that target employees identified as talents and are aimed at bringing these people to right positions at right point of time (Blass, 2007; Latukha, 2015).

Nevertheless, one may observe that there are several commonly addressed approaches to talent management that are tightly connected to different perceptions of talent discussed in previous paragraph.

The first stream of authors (e.g. Lewis and Heckman, 2006) follow the talent-as-object approach and emphasize the importance of creation and development of pools of talents. According to them, it is crucial for companies to indicate real needs of employees and meet them; the focus of these papers lies on career development. This type of scholars usually build their studies upon literature on personnel planning and development.

Some scholars follow subject-inclusive approach to talent definition and use the term talent management as synonym to more general human resource management term. As a result, they usually limit their research to discussion of separate HR practices, e.g. attraction and recruitment, leadership development, career planning, etc.

Researchers that belong to the third type attach importance to managing specific employees that were identified by company management as talents, i.e. support subject-exclusive talent definition approach. This type is represented, for example, by research of Heinen and O'Neill (2004).

Currently the most actively developing stream, first highlighted by Collings and Mellahi (2009), is the one that mixes talent-as-fit and subject-exclusive approaches to talent conceptualization. According to relevant research, the focus of talent management should be on (1) identification of key positions, the contribution of which has direct influence on company being able to attain its competitive advantage worldwide; (2) formation of talent pool that consists of company employees that show both high performance and high potential and are prospectively able to fill these positions; and (3) creation of human resource management system that would enable the company to fill key positions with the best of the suitable employees exactly when it is needed, and, moreover, would ensure their further contribution to company's success (Collings and Mellahi, 2009).

Within none of the described approaches to talent management, though, the clear understanding of what should be the source for talents in the companies was not developed. Traditionally, scholars used to focus on existing employees as opposed to external candidates. Joyce and Slocum (2012) notice that organizations tend to fail to benefit from talented management teams and emphasize importance of managerial actions in the area of talent management aimed at their subordinates. With the internalization of economy, though, the focus has shifted towards attraction of talents to company from all over the world, attaching more value to external sources of talents. Thus, some scholars, including Earley and Gibson (2002) and Baba et al. (2004), tighten talent management phenomenon to multinational corporations (MNCs)

claiming that these companies have favorable position on the market compared to local organizations as they have access to wider talent pool which enables them to increase internal knowledge base. Recent studies tend to follow more balanced approach, equally highlighting the importance of attraction of new talents and development and retention of already hired employees.

Interestingly, there is an obvious shift towards selected category of companies as far as the context of contemporary studies is concerned. Collings et al. (2011) notice that most of the studies on talent management focus on private sector firms, MNCs and US-operating organizations.

Despite the fact that in early works on the talent management there was almost no emphasis on the global nature of this phenomenon, most of the studies were performed in the context of companies that have operations abroad. Eventually, the increasing internalization of business has led to an evolution of talent management into a concept of *global talent management*. According to Tarique and Schuler (2010), there is even less understanding among academics of what global talent management exactly is than in case with talent management.

Global nature of international companies' operations triggers many challenges that talent management system is supposed to tackle. First, the idea of treating the whole world as a source of talents leads to the reality where all MNCs compete for the same people, increasing global talent shortage (Michaels, Handfield-Jones, and Axelrod, 2001) and enhancing the complexity of attraction and retention of the most suitable employees (Stahl et al., 2007; Schuler, Jackson, and Tarique, 2011). Interestingly, the second major challenge to some degree cuts across the first one, as it implies the need for reduced number of talents employed in organization, unhindered relocation of operations all over the world and highly competent talents at lowest wages as it enables companies to cut costs (Schuler et al., 2011). This controversy between companies' goals, i.e. hiring the best employees and, at the same time, cutting costs, is another challenge itself.

Further elaborating on emergence of global talent management concept, McDonnell et al. (2010) come up with three reasons for popularity of global application of talent management theory. First, they claim that managers that have the competence to control international operations are the key source of company's global success (Shen and Darby, 2006). Second, it is discussed to be challenging for companies to identify, locate and retain this kind of managers in international corporations (Scullion and Collings, 2006). Constant increase in number of MNCs and fast development of emerging markets exacerbates this problem as demand for talented managers rises rapidly (Collings, Scullion, and Morley, 2007). Finally, the nature of operations in MNCs requires more complex skillset for manager to be successful (Guthridge and Komm, 2008), making talent management both more important and more complicated. Similarly, global scale of operations ensures higher cost of failure in these companies (Sparrow, Brewster, and Harris, 2004).

More recent works on global talent management tie this concept to the theory of international human resource management (IHRM), particularly to those branches that emphasize its strategic nature. Due to that, discussing global talent management, it is important to differentiate between these concepts (Latukha, 2015), and Tarique and Schuler (2010) contribute to that significantly.

In a broad sense, global talent management implies company's actions to attract, select, develop and retain the best employees whose positions are key for the organization at the global scale. Collings and Scullion (2007: 102) come up with a widely supported by other scholars definition to this concept, describing global talent management as “the strategic integration of resourcing and development at the international level” that “involves the proactive identification, development and strategic deployment of high performing and high-potential strategic employees on a global scale.” The notion of global talent management reflects the gap between the strategic goals of international companies and the peculiarities of the management of employees in host countries. Tarique and Schuler (2010) deepen the classical definition of global talent management, emphasizing the need for (1) a regularity in usage of IHRM practices, (2) compliance of practices used with overall strategy of the firm.

1.2.3. Talent management practices

Defining talent management, academics often refer to practices that comprise talent management system. Scullion et al. (2010) describe it as systematic attraction, development, engagement and deployment of talents. Iles et al. (2010) and Silzer and Dowell (2010) claim that talent management is nothing but a set of typical HR processes, i.e. recruitment, selection, development, training, performance appraisal and retention. Identification of concrete practices is crucial for successful operationalization and implementation of any talent management model. More thorough analysis of contemporaneous studies enables to determine three main groups of practices, namely (1) talent attraction, (2) talent development and (3) talent retention (Tarique and Schuler, 2010).

Talent attraction

Talent attraction implies wide range of managerial activities, including, for example, creation and development of positive reputation of the company in the field of human resource management, attraction of competent employees with interesting tasks, recruitment of employees on key positions, etc. Company's ability to attract talented employees is often perceived equal to it possessing strong employer brand or reputation, which have served as a research object of some academic papers dedicated to talent management. Thus, for instance, Vaiman, Scullion, and Collings (2012) prove the importance of employer brand, claiming that its formation, being a result of all organizational efforts aimed at circulating the perception of company as of desired employer

on the market, influences positively both attraction and retention of key employees. Research on reputation, defined as evaluation of company's philosophy, policies and practices by stakeholders (Hannon and Milkovich, 1996), demonstrate that affirmative reputation of the organization in regards to its human resource management may positively influence its ability to attract those employees that are identified by company as talents (Holland, Sheenan, and DeCieri, 2007). Some academics pay closer attention to mechanics of employer brand creation in a form that would attract right talents. These are, for instance, Koys (1997) and Ferris et al. (2007).

Along with studies in the area of employer brand and the reputation, there is a number of papers devoted to a more simplified model of the company's attractiveness in the labor market. For example, Chapman et al. (2005) discuss the importance of the overall attractiveness of organization in success of talent attraction initiatives. Some authors focus on the identification and exploration of specific factors — both organizational and individual — that influence the final decision of the candidate on the choice of a company as his or her employer (e.g. Lievens et al. 2001).

Talent development

The initiatives that aim at development of talented employees usually consist of many components, including training, career management and career development, organizational development. According to Garavan, Carbery, and Rock (2012: 12), there are four types of programs that company may implement in order to develop its talents: (1) formal programs; (2) relationship based developmental experiences; (3) job-based developmental experiences; and (4) informal/non-formal developmental activities. The first type is mostly aimed at middle and senior managers, as well as talents that possess expertise relevant to business needs. It includes a number of different programs, e.g. professional skills and competencies development programs or personal growth programs (Conger, 2010; Garavan et al., 2012). The second type implies collaboration with colleagues, mentors, supervisors, consumers and suppliers, and is considered to be the key initiative for the development of talented employees (McCauley and Douglas, 2004; Rock and Garavan, 2006), as the practices applied within this framework enable employees to discover new horizons and reconsider previously accepted ideas, processes and routines (Balkundi and Kilduff, 2006). It is possible to ensure effect of the third type of development programs only when the following requirements are met: (1) comfort zone of the trained employee is violated; (2) the nature of the performed work is cross-functional (Ohlott, 2004). Finally, the last group of the programs includes unplanned trainings without clear result (Marsick and Watkins, 2001). This type currently gains increasing popularity in business community and among academics (Garavan et al., 2012).

Many academics that study development of talented employees choose successors as their research subject. Dickson, Hartog, and Mitchelson (2003) identify trends and cross-cultural

differences in the training of future top managers. Bartlett and Ghoshal (2003) reveal competencies that enable future leaders to work effectively in the international arena and, consequently, propose what should the company seek and develop in their talents. Caligiuri and DiSanto (2001) and Stahl et al. (2007) offer their own models of competence development. Morrison (2000) discusses such talent development practices as short- and long-term international relocations, work within international teams and cross-cultural training. Caligiuri and Tarique (2009) critically evaluate the beneficiaries of the talent development process questioning the equality of benefits for all participants in the process. Studying the effectiveness of development process, Caligiuri (2000) notice that training programs are effective only when employees succeed un them from the very beginning. Finally, it is important to note that the talent management system can become a source of competitive advantage of a firm only when talent development practices, especially those devoted to developing the leadership qualities of future managers, are integrated into the culture of the company and receive sufficient support from top management (Seigel, 2008).

Talent retention

As far as the retention practices are concerned, a large section of papers focus on the methods of increase of the employees' involvement in organizational operations. Studies that offer wide range of general retention practices as opposed to industry or company specific ones are of particular interest. In one of such papers Lockwood (2008) emphasizes importance of the awareness of cultural and national characteristics of the country where practices are planned to be deployed. Stahl et al. (2012) and DeTuncq and Schmidt (2013) discuss performance management and reward systems management as crucial talent retention practices; Varlamova (2004) mentions higher than average salaries and expanded social package. Some academics elaborate on talent retention in the context of international business as it enables, in particular, to reduce staff turnover that results from talents returning to their home countries (Lazarova and Cerdin, 2007).

It is not only the practices themselves that matter in talent retention effectiveness but, even more importantly, the employees' perception of these practices. Hoglund (2012) assesses the employees' perception of the remuneration policy and its influence on the demonstration of the qualities inherent for talents and the desire of workers to develop their skills. The results of the research show that violation of a psychological contract leads to the loss of trust between the employer and the employee and increases the probability of losing valuable employees. Similar results are obtained by Sonnenberg, Zijdeveld and Brinks (2014), who, assessing the impact of employees' perception of talent management practices in their engagement and desire to leave, argue that the mismatch between employer's and employee's perception of the latter being/not being a talent mediates this relationship.

1.3. Global talent management as a mean of reversing brain drain

1.3.1. Turning brain drain into brain gain

The research on brain drain prevention and mitigation of negative outcomes talent migration brings to COO is almost as old as research on talent migration itself. While many studies focus on methods of returning already migrated individuals (e.g. Tung, 2008; Crowley-Henry and Al Ariss, 2016; Mahadevan and Kilian-Yasin, 2017) or retaining returnees in country (e.g. Kenney, Breznitz, and Murphree, 2013; Miao and Wang, 2017), some scholars claim that it is easier and more beneficial to prevent talent migration in the first place (Kenney et al., 2013).

Most of the existing studies limit their focus to governmental actions as the way of reversing brain drain in the country. Among them, there are several aspects that gain the particular attention from the scholars' side. These are, for example, the state retention policies (Soon, 2010), investments in local institutions (Kenney et al., 2013), levels of democracy and urbanization (Weinberg, 2011), physical capital level (Soon, 2010) and links with COO, including involvement in diaspora networks (Baruffaldi and Landoni, 2012). The most widely discussed issue however remains to be the role of improved educational system. Soon (2010) claims that by ensuring the adequate supply and high quality of tertiary education the government is able to prevent the migration in the first place. Mattoo, Neagu, and Özden (2008) suggest that allocation of resources for education in a way that would reflect the real employment situation will help to prevent high-potential individuals from seeking education opportunities abroad in order to avoid the situation of specialists' misuse. This implication supports earlier findings of Kenney et al. (2013) who have identified that people tend to leave their COO permanently if they obtain education in an area where country does not have enough employment capacity and Soon (2010) who found that by granting skill use opportunities, the government retains individuals who invest in increase of their human capital in COO.

Papademetriou and Sumption (2013) incorporate governmental efforts towards reversing brain drain under one model that is not referred to as national talent management system though is close to it by its nature. It includes country policies that are aimed at attracting, developing and retaining highly skilled individuals, the state-level equivalents of discussed earlier talent attraction, development and retention practices. The authors highlight the importance of such governmental actions as introduction of sophisticated immigration policy, infrastructure development, research investment, education, workforce training, assessing immigration priorities, introduction of employer selection or hybrid selection systems, work with top foreign students, rewarding systems for the immigrants that follow the rules of the game, and creation of adaptive and flexible institutions, as all of them serve the basis of the system that would enable the country to increase

its cumulative human capital. The drawback of this system is that it solely aims at immigrants and neglects crucial role of local citizens in achieving brain gain effect.

Khilji et al. (2015) describes similar country-level talent management system that should enable the countries to compete for talent effectively (Lanvin and Evans, 2013). As opposed to Papademetriou and Sumption, Khilji et al. emphasize the imperative to capture the value internal talents may bring as well as to remain the focus on foreign immigrants and diasporas. The authors propose the sophisticated model of ensuring development of internal human capital through involvement of national diaspora in virtual networks (Carr et al., 2005) and creation of environment that would reinforce social and national learning. They also add creation of research, innovation and entrepreneurship opportunities as a mean of talent outflow minimization (Cervantes and Guellec, 2002).

Country-specific examples of introduction of talent management systems on the national level for the purpose of brain drain reduction are of particular interest for current research. Daugėlienė and Marcinkevičienė (2009), for instance, examine the case of brain drain experienced in Lithuania and suggest some talent management policies (e.g. attraction of the international knowledge-intensive firms, higher salaries for more talented professionals, creation of knowledge hubs, etc.) for attracting talents to the country. Ng (2013) studies an example of Singapore and introduces national education system as an effective way of bringing high-caliber talents from all over the world. While both studies bring some clarity to the field of talent immigration, prevention of talent emigration remains untouched. One of the recent studies is conducted by Azman, Sirat and Pang (2016) in the context of Malaysia. The authors describe state initiatives undertaken in the country for returning local emigrated talents and attracting top talents from abroad, e.g. introduction of employer-independent 10-years visa, increase of foreign awareness of local job opportunities, returning experts program, etc. In contrast to previously discussed studies, the necessity of retaining local high performing and high potential specialists, notably well-educated students and recent graduates of domestic universities, is highlighted. The great role in that is assigned to internship programs with top Malaysian employers as well as to improvement of students' skillsets through enhancement of education system and provision of additional training programs on workplaces. Thus, the active involvement of organizations is assumed to be a crucial part of success of national talent management system, though this requires more thorough investigation.

The introduction of country-level policies and systems is both cost- and time-consuming. Moreover, their impact is not necessarily observed in short-term perspective (Azman et al., 2016). This drives the need for more short-term-oriented approaches to tackling brain drain issue. Current research, however, can hardly provide any. The scholars that study national talent flows and brain

drain effect, in particular, tend to keep the macro perspective in suggesting the methods of solving this problem. Similarly, those academics that focus on managerial actions follow micro perspective and usually narrow their research to internal outcomes these action may drive.

The discussion of push, pull and facilitating factors itself has brought some insights in regards to possible organizational participation in reversing brain drain as business-related factors were identified in the literature. The companies are quite flexible in respect to their control, which allows organizations to eliminate at least part of the factors influencing migration decision. However, it is unclear whether the company has any options in at least mitigating the other factors that do not fall under its direct control. Significantly limited, some of the studies, however, cross micro-macro perspectives borders and introduce organizational effort as a mean of overcoming brain drain. Saxenian (2005), for example, proposes an adaptation of overall company strategy to global competition landscape to be an effective way of fighting country-level talent outflows. More specifically, she provides an example of how high-tech business in Taiwan and China adjusts their strategies to reduce the number of local emigrants moving to Silicon Valley. Hooks et al. (2006) introduce high commitment management as a method of reversing brain outflow from New Zealand. According to the authors, provision of challenging work and wide career opportunities, ensuring the certain level of autonomy and creation of atmosphere of engagement on workplace allow to both retain local talents in country and to attract foreign specialists. As these practices are typically addressed within talent management theory, it is possible to conjecture the positive influence talent management practices may have over brain drain reversion.

The study of Collings (2014) supports this assumption. Bringing together global mobility and global talent management theories, he touches upon the role firm-level talent management systems play in global flow of talents. While Collings remains within micro-perspective as he focuses on global mobility as an element of staffing systems of MNCs, he builds a theoretical basis for connection of mobility and global talent management systems that may be easily expanded to national talent flow level by grounding himself on human and social capital theories. By introducing global talent management practices and routines, the companies are suggested to leverage the advantages human capital may bring to them.

Therefore, there are some premises for talent management playing an important role not only in facilitating effective mobility of employees within MNCs, but also in prevention of country-level talent outflow. Consequently, the role of organizational talent management systems should be recognized on different levels to ensure both the benefits it brings to the firm and achievement of brain gain as opposed to brain drain. In fact, it is crucial to explore whether implementation of talent management practices in local companies helps in overcoming individual

and country-level push and pull factors (see Collings, 2014; Schuler, 2015; Crowley-Henry and Al Ariss, 2016).

Based on the evidence from the literature on topics of talent migration and talent management, the following theoretical model explaining the relationship between push, pull and facilitating factors, organizational talent management system, migration decision of local talents and national talent migration situation may be proposed (Figure 1).

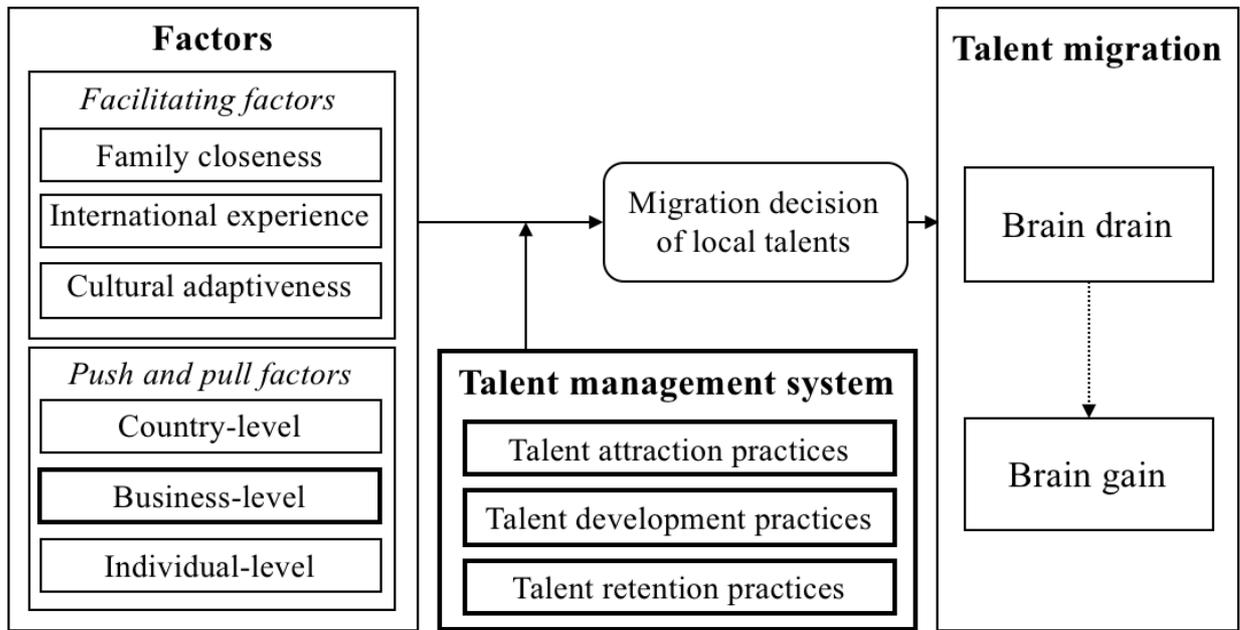


Figure 1. Theoretical framework of talent migration

The framework consists of four main blocks. The first block describes the factors that influence talent migration and is subdivided into two parts: facilitating factors (in accordance with Tung and Lazarova, 2006 and Baruch et al., 2007) and push and pull factors (Lewin, 1951). Within the push and pull factors group, three levels of factors are preliminary recognized based on the literature review: country-level, business-level and individual-level. The business-level push factors are recognized to be prone to organizational influence, while others remain outside the scope of firm's control. All the factors are proposed to be associated with migration decision of local talents.

The second block represents the talent management system deployed in local organizations. In accordance with the literature, three groups of practices were recognized for system operationalization, namely talent attraction, talent development and talent retention practices (Latukha, 2015). Similarly to business-level push factors, this block is considered to be under the full influence of local organizations and thus represents the applied tool for influencing migration decision of local talented individuals.

The third and fourth blocks are tightly connected to each other. In accordance with the idea developed by Kenney et al. (2013), the focus of this study is put on prevention of initial migration

rather than attraction of already emigrated individuals. The migration decision of local talents, as it was already mentioned, is associated with push factors and is proposed to be influenced by talent management systems. In their term, migration decisions of local talents contribute, along with migration behavior of other talent groups, to the country's talent migration type and intensity. Potentially, this model proposes managerial actions to be the mean of conversing brain drain into brain gain.

1.3.2. Russian perspective on talent migration and talent management

The further discussion about talent migration and ways of influencing its direction requires introduction of country-specific context. The research is proposed to be conducted in the context of Russia for several reasons. Russian Federation is recognized to be the major post-Soviet country of emigration (Korobkov and Zaionchkovskaia, 2012); moreover, the migration intensity and variety of its forms have significantly increased during the last decade (Iontsev, Ryazantsev, and Iontseva, 2016). According to Russian Academy of Science, the annual number of highly qualified emigrants doubled since 2013 and totaled in 44 thousands of people in 2016 (Russian Academy of Science, 2018). It affects not only the demographic situation in Russia, but also its intellectual potential: considerable number of Russian emigrants are either high potential graduates seeking better postgraduate education opportunities or qualified specialists that look for more attractive career options (Russian Federal State Statistics Service, 2017). Tung (2008) claims that the case of youngsters leaving emerging markets for studies or initial work experience gain often leads to drastic brain drain effects. Iontsev and Magomedova (2015) notice increase in number of students and recent graduates that do not return to Russia. This dictates the necessity for investigation of the migration behavior of this talent group in more precision.

Discussing characteristics of talent migration in Russia, it is crucial to note that since push and pull factors are believed to be determined by the global trends in mobility in general, the specific environment of country where the person lives, and the particular company and industry he or she is employed in, the related peculiarities of the environment of emerging markets should be scrutinized. There is a number of drawbacks emerging countries are usually associated with, One of the fundamental features of these countries is their lower economic development compared to developed economies (e.g., Beamond, Farndale, and Härtel, 2016). These countries are claimed to have poorly developed institutional infrastructure that prevents efficient performance of global business, unstable governmental regimes, insufficient protection for employees at work (Al Ariss and Sidani, 2016). Emerging markets tend to have more collectivistic cultures compared to developed economies (Hofstede, 2001), which results in priority of harmony and loyalty in formation of companies' cultures, tight connection between group members and more active involvement of family in work-related decisions. On the other hand, there are some benefits

emerging economies may offer to local and incoming talents. These are, for example, low cost of production, new market development possibilities, profitable terms of M&A activities, and increasing amounts of foreign direct investments (Tung and Lazarova, 2006).

The dual nature of national peculiarities leads to undulatory situation in respect to talent migration directions and characteristics in emerging markets. Thus, these countries tend to find themselves in disadvantageous position as they lose best talents to more developed economies (Geesen, 1998) and end up with smaller talent pools they have to choose from (Papademetriou and Sumption, 2013). Such a huge outflow of individuals with high levels of human capital often results into country losing its investment attractiveness for MNCs (Tung and Lazarova, 2006). However, recent updates in state systems of emerging countries have facilitated their development. According to Papademetriou and Sumption (2013), these countries become more prolific in managing global talents that are able to contribute significantly to further growth of local economies.

Taking into account dependence of migration patterns on country's path in regards to economic development, it seems natural to pay closer attention on the papers investigating talent migration in Baltic and Central and East European (CEE) countries as many of them, similarly to Russia, experienced the transition from socialist to market economies.

Tung and Lazarova (2006) study experience of ex-host country nationals from CEE countries, including Russia. The interesting finding in regards to the current topic is that the research participants were found to be driven abroad by career-related, quality of life and family-related motives, with the former factor playing the hugest role. Kazlauskienė and Rinkevičius (2006) investigate brain drain causes and effects on the example of highly-skilled migrants from Lithuania. The results show that economic factors have the strongest impact over migration decision of the talented individuals, followed by comparative lack of opportunities for professional realization and some characteristics of governmental institutions (e.g. flexibility of academics system, fairness and transparency of juridical-political system, etc.) It is worth noting that the authors prove that pull factors have more power in determining the intention to leave the country compared to push factors. The context of the same country though in respect to high potential students is studied in the paper of Daugėlienė and Marcinkevičienė (2009). According to the results of this study, the most influencing factors driving the local emigration are also quality of life- and career-related, which supports previous findings. Contradictory results are obtained in recent research of Petković and Dordević (2013) who examine push and pull factors' effect in Serbia, as according to them push factors play greater role in driving talent outflow.

As far as Russian context is considered, there is an obvious shortfall of research in this area (Korobkov and Zaionchkovskaia, 2012). Existing research is primarily focused on narrower

definition of brain drain and is limited to exploration of scientists' migration, leaving the migration reasons, patterns and. One of the early studies on talent emigration from Russia is authored by Naumova (1998). Focused on intelligentsia, she identifies the reasons of their emigration in 90s, among which she highlights poor financing of fundamental science, unfair policy in the field of wages and salaries, and raise of unemployment rates in country. Ushkalov and Malakha (2000) support these findings by mentioning crisis of Russian science to be the most important factor pushing intellectuals out of the country. By this term, the authors imply low salaries, poor scientific infrastructure, low demand for the research results, etc. According to them, all this leads to situation when individuals that possess high level of human capital either change the area of their employment or leave Russia. Similar factors are identified in later studies, e.g. in Trofimova (2012), Ryazantsev and Pismennaya (2013). The latter study also suggests the prevailing importance of push factors in Russian context; however, there is no statistical support to this assumption. One of the recent studies by Ledeneva (2014) touches upon interesting point: according to it, the reason for intellectual migration lies in the gap between personal development of an individual, his or her needs and possibilities, from the one side, and opportunities provided for meeting these needs from the other. The discussed earlier factors of talent migration are treated by the author as migration motives. Similarly to already discussed studies, Ledeneva distinguishes between two types of them: career- and quality of life-related.

All in all, contemporary literature on talent migration in the context of emerging markets and Russia in particular does not provide comprehensive understanding of the local peculiarities of this phenomenon. More specifically, as far as migration driving factors are concerned, incomplete and controversial results are observed for the discussed context. However, understanding of the causes of talent migration is argued to be the crucial step for preventing brain drain (Baruch et al., 2007). Due to that, first two research questions may be formulated:

RQ1. What factors influence migration intention of talented graduates in Russia?

RQ2. How push, pull and facilitating factors influence migration intention of Russian talented graduates?

Despite the constantly increasing outflow of talents from Russia, according to Iontsev et al. (2016), governmental attempts to reverse this situation currently do not have any considerable positive outcomes. On the contrary, they are claimed to be rather destructive as they exacerbate social polarization of Russian scholars and the problems of the degradation of scientific schools, driving new migration flows (Iontsev et al., 2016: 506). Due to that, the urgent need for undertaking additional actions on organizational level becomes observable. Yet, the Russian context of human resource management is also understudied, especially in the field of talent management systems and practices (Holden and Vaiman, 2013; Latukha, 2015, 2018).

Talent management is a relatively young concept for Russia, however it is gaining popularity rapidly (Simonova, 2010). Due to that reason the papers of Russian authors, most of whom are managers of different levels, are mainly focused on describing the application of separate talent management practices in the context of particular companies, and therefore possess more practical-oriented value than theoretical.

One of the main peculiarities of human resources management (HRM) in Russia is determined by the fact that personnel management in most Russian companies is perceived exclusively as a support function. Nevertheless, recent works (e.g. Latukha, 2015) indicate that Russian organizations experience gradual shift from operational HRM to its strategic realization. This, in turn, changes manager-subordinate relationship between companies' management and HRM specialists to their perception as business partners. It leads to a growing interest for talent management systems and practices. However, this process is proceeding rather slowly, and remains a major task that Russian businesses must solve in the future (Shakhbazov, 2015).

Low engagement of top management into implementation of talent management systems is a serious barrier to effective use of talent management practices in Russia: company managers often refuse to invest in talent management systems, justifying their choice by the lack of visible related financial outcomes (Latukha, 2015). In addition, Russian companies are often characterized by a high level of bureaucracy, lack of freedom in decision-making, focus on short-term results, and low innovativeness (Latukha, 2015), all of which hinders the development of talent management in country. Finally, according to the experts, the culture of doing business and the institution of business education have emerged in Russia quite recently, which also slows down the progress in introduction of talent management (Fey and Shekshnia, 2011; Latukha, 2015).

Over the last two decades, many Russian companies have been seeking the sources of competitive advantage in local markets to enter the global market (Panibratov, 2012). This ensures new challenges for talent management: the complexity of cross-cultural communication and interaction between headquarters and divisions. Holden and Vaiman (2013) note that Russians tend to share the opinion about their talent being of more value for MNCs than for domestic organizations. This attitude is often discussed to be a reason for locals' decision to migrate (Kalyukov, 2015).

The current situation of the economic crisis surprisingly has a beneficial effect on the emergence and development of talent management programs. The programs dedicated to development of high potential young specialists (current last year students or recent university graduates) are of particular interest for the companies. There are at least two reasons for this: first, young employees are cheaper for organizations due to their low salary expectations; second, they

are expected to facilitate the business development enabled by post-crisis economic growth (Grigorieva, 2016).

While the importance of talent management in formation of firm's competitive advantage on both local and global markets gets progressively admitted by Russian companies, hardly any of them perceive it as a mean of preventing talent migration on the national scale. To provide local companies with enhanced understanding of talent management, the third research question is formulated:

RQ3. What is the role of talent management practices in preventing brain drain in Russian context?

Summary of chapter 1

In this chapter theoretical foundations of talent migration and talent management were reviewed.

The concept of talent migration — relocation of talented individuals from one country to another — has been discussed by academics for several decades. This phenomenon got explained from the perspective of different theories, but the human capital theory remains to be the most prominent in this regards as it provides comprehensive explanation to behavior of different groups of migrating individuals and suggests a range of reasons without limiting them to particular type. Closely connected to this theory, brain drain, i.e. migration of highly skilled individuals that leads to decrease of overall human capital in home country, is a truly global issue experienced by most of the states (Stolz and Baten, 2012). Despite the long history of research on this topic and the diversity of academics' perspectives in its regards, talent migration theory remains criticized for lack of “causal explanations of the determinants of the process” (Qin, 2015), which, in turn, limits national ability to reverse brain drain and initialize brain gain process.

In order to bring clarity to this field, the factors driving talent migration were discussed. In order to do that, classical push-pull model was followed. Despite the fact that scholars tend to discuss these factors altogether and there is an observed lack of more sophisticated framework that could better explain complex phenomenon of brain drain (de Haas, 2011; Van Hear et al., 2017), the literature overview enables to identify some patterns in their identification that allow to tackle this problem. Thus, based on these patterns, three levels of push and pull factors were suggested as elements of such framework: country-level that includes policy-related and economics-focused factors; business-level that includes factors characterizing industries, and individual-level that incorporates factors reflecting individual beliefs, value and experience. The push-pull model was additionally enriched by introduction of facilitating factors: international experience, family closeness and cultural adaptiveness.

While it is repeatedly discussed that the outcomes of talent migration process are tightly connected to both governmental and managerial efforts in the area, organizational role in it remains heavily understudied and requires additional development.

In contrast to talent migration, talent management is a relatively new area of academic research. Overall, talent management concept is far from being clearly conceptualized at this point. From the overview of approaches to talent management currently discussed in the literature, it is obvious that research on this topic is inconsistent so far and requires further development. Thus, most of the studies focus on object or talent-as-high-performance exclusive subject approach to talent definition and almost none of them touch upon talent-as-high-potential subject model. Taking into account that the studies emphasize the raising role of emigration of students, who are often perceived as carriers of high potential, in enhancing brain drain (Iredale, 2001), this gap becomes especially serious. Moreover, most of papers have organizational perspective on talent management (Thunnissen et al., 2013), while employee's point of view tend to be understudied (Thunnissen, 2016).

There are two main challenges that those studying concept of global talent management commonly face. The first and the most important challenge is the lack of consensus on practical, conceptual and theoretical meaning of global talent management phenomenon (Lewis and Heckman, 2006; Tarique and Schuler, 2009). Referring to this, McDonnell et al. (2010: 151) even notice that "the clearest inference from these perspectives is that there is nothing clear about talent management." The second challenge, tightly connected to the first one, is somewhat hindered positioning of global talent management against international or strategic HRM in the literature (Tarique and Schuler, 2009).

Currently, three main areas of talent management practices are identified: attraction, development and retention. Speaking about attraction, researchers tend to emphasize the need to create and develop an employer brand and the overall attractiveness of a company on the labor market. The development of talented employees gets frequently considered in a global context, and here the most actively discussed practices are programs that ensure the development of the future business leaders. As for the retention practices, scholars highlight companies' attempts to reduce staff turnover caused by, among other reasons, international appointments of talents and associated with them international migration processes.

Although firm-level talent management systems were introduced to let organizations win in the global battle for the best individuals, until this point they were hardly viewed as a mean of dealing with brain drain phenomenon on the national level. Most of the studies that propose ways of turning brain drain into brain gain focus on governmental efforts and neglect the role of local firms in this process. While some academics do refer to country-level talent management systems

as an effective way of retaining talents in the country or bringing them back (e.g. Papademetriou and Sumption, 2013; Khilji et al., 2015), corporate talent management systems seem to be easier adapted in shorter perspective as they involve fewer stakeholders and, consequently, are more flexible. As a result, they are anticipated to bring faster results, which makes them of interest for current study.

The decision of choosing Russia as a focus of this study is based on several reasons. From the one side, brain drain is claimed to be especially relevant for developing economies, which implies the necessity of the research in emerging markets' context. Russia is one of the most interesting developing economies that struggles heavily from the phenomenon of brain drain, which is failed to be mitigated on institutional level. Despite there is a significant number of studies on factors driving talent migration from developing countries, including China (Ha, Yi, and Zhang, 2016), India (Qin, 2015), CEE countries (e.g. Tung and Lazarova, 2006) and others, the obtained results are contradictory (as in Daugėlienė and Marcinkevičienė, 2009 and Petković and Dordević, 2013), which does not allow to apply them to other countries' context, and existing Russia-focused studies lack comprehensive approach and empirical basis. At the same time, there is an observable lack of research on talent management topic that would be deployed in Russian context, even though existing studies highlight many country-specific peculiarities that dictate the necessity of further research in this area.

Based on discussed evidence, three research questions were raised, namely what factors influence migration intention of talented graduates in Russia, how push, pull and facilitating factors influence migration intention of Russian talented graduates, and what is the role of talent management practices in preventing brain drain in Russian context.

Chapter 2. RESEARCH METHODOLOGY

This chapter is dedicated to determination, justification and detailed description of applied research methodology. It includes discussion on research context and explanation of the rationale that lies behind choosing talented graduates as the research subject. The data collection process is detailed and the sample is profiled. Moreover, this chapter provides the questionnaire design and characterizes major variables used in the study.

Since the main goal of this study is to identify the patterns in a relationship between push, pull and facilitating factors and to reveal the role of talent management practices in mitigation of these factors, the explanatory type of the research is approached. The empirical study is quantitative by its nature, cross-sectional and is conducted one-phase.

This research is aimed at fulfilling several objectives. First, there is a need for empirical justification of push and pull factors classification proposed earlier in theoretical section based on literature review. Second, the relationship between different factors and migration intention should be examined, for which the determined groups of factors should be used. Finally, it is important to give an overview of the role of talent management practices in reversing brain drain.

2.1. Setting and data

The empirical study is conducted using primary data from 430 last year bachelor and master students. Graduates were chosen as an object of this research due to number of premises. First, the previous studies highlight the importance of focus on separate groups of migrants as they tend to have different relocation goals and, consequently, are likely to be driven by different factors and to follow different migration behavior (Qin, 2015). Graduating students, in particular, are believed to be one of the groups of particular interest for local organizations, as they ensure inflow of new knowledge and skills to company.

To reach the participants, the database of applicants of annual conference “Management of the Future — 2018”, organized by Graduate School of Management of Saint Petersburg State University, was used. The database initially included 3292 individuals, making the response rate equal to 13%. The respondents were reached through mass e-mails that explained the goal of this research and had a direct link to the questionnaire.

The fit of respondents to the concept of talent is determined by the nature of the database. “Management of the Future” is a platform for interaction between the best Russian students and the leading Russian companies (Management of the Future, 2018). Over the seven years since its emergence, the conference has built strong reputation, which ensures high quality of applications. The students are expected to have characteristics that are often attributed to talents: to be intelligent (Michaels et al., 2001), possess unique knowledge and skills (Lewis and Heckman, 2006), and demonstrate remarkable achievements in the fields of study and business (Stahl et al., 2007).

Because of this, the participants may be referred to as talents in accordance with subject exclusive talent definition.

As the conference does not have any restrictions in regards to applicant's citizenship as long as he or she speaks fluent Russian, the additional admissibility criteria of possessing Russian citizenship was introduced. After its implementation, 397 responses were left and were used for further analysis, which is an adequate sample size (Tabachnick and Fidell, 2012).

Sample profile

The complete demographic profile of the respondents is presented in Table 3. The majority (62.5%) of the sample is represented by females. The respondents are predominantly from the two biggest Russian cities: Moscow (19.9%) and Saint-Petersburg (12.8%). Others are smaller Russian cities that students consider to be cities of their constant residence. Educational level of respondents is almost equally distributed between undergraduate and graduate programs. The majority of participants are doing their degrees in economics and management (66.5%) and engineering (10.3%). Other technical specializations like math and IT are represented less with 6.3% and 5.3% shares respectively. The language proficiency characteristic required additional attention as language skills may have an influence on migration decision and patterns. As may be observed from the table, the vast majority of respondents possess adequate English proficiency: 53.4% have intermediate to upper intermediate English which allows them to understand main ideas of complex texts and interact with others with certain degree of fluency; 24.7% of respondents are proficient English users and are fluent at speaking the language. Noteworthy is that extremely low percentage of people participated in the survey do not speak English at all.

Table 3. Demographic profiles of respondents

Characteristics	Frequency	Percentage (% out of total N = 397)
GENDER		
Male	149	37.5
Female	248	62.5
CITY OF ORIGIN		
Moscow	79	19.9
Saint Petersburg	51	12.8
Irkutsk	18	4.5
Tomsk	16	4.0
Novosibirsk	14	3.5
Others	219	55.2
EDUCATION QUALIFICATION		
Bachelor	195	49.1
Master	202	50.9
MAJOR		
Economics and management	264	66.5
Engineering	41	10.3
Mixed	26	6.5
Math	25	6.3
IT	21	5.3
Others	20	5.0
ENGLISH PROFICIENCY		
A1/A2	83	20.9
B1/B2	212	53.4
C1/C2	98	24.7
Doesn't speak	4	1.0

Source: Author's compilation of primary data

Note: English proficiency is evaluated according to CEFR (Common European Framework of Reference for Languages) standard

Regarding working profiles of respondents (Table 4), it is interesting to note that only 13.9% of them have no working experience, and mostly they spent less than a year (35.3%) or 1-3 year (37.8%) working. Only 10.6% of respondents are professionally inactive meaning that they are neither working nor looking for a job. Among professionally active students there is a significant share of those who already work full-time (25.2%), while others either work part-time (26.4%) or look for a job. In the future the majority of respondents are inclined to be employed as managers (61.7%) or professionals (18.6%), civil services and academic occupation are considerably less popular. Finally, an important observation is that students largely prefer information-based and knowledge intensive industries of quaternary (IT, telecommunication, media etc.) and quinary (top-management in strategically important areas like government, healthcare, researches etc.) economy sectors with 34.8% and 23.9% respectively. Primary sector, which includes industries based on raw materials extraction and collection, is significantly less popular with only 3.8% share.

This fact is especially disturbing regarding Russian economy, which is largely based on oil, gas and other natural resources extraction.

Table 4. Working profiles of respondents

Characteristics	Frequency	Percentage (% out of total N = 397)
WORK EXPERIENCE		
<1 year	140	35,3
1-3 years	150	37,8
3-6 years	36	9,1
>6 years	16	4,0
No experience	55	13,9
CURRENT EMPLOYMENT		
Employed, <39 hours per week	105	26,4
Employed, >40 hours per week	100	25,2
Unemployed, looking for job	150	37,8
Unemployed, not looking for job	42	10,6
DESIRED CAREER PATH		
Managerial	245	61,7
Professional	74	18,6
Civil service	30	7,6
Academic	28	7,1
Other	20	5,0
INDUSTRY PREFERENCES		
Primary sector	15	3,8
Secondary sector	51	12,8
Tertiary sector	30	7,6
Quaternary sector	138	34,8
Quinary sector	95	23,9

Source: Author's compilation of primary data

2.2. Questionnaire design

For getting empirical data, the survey was used as research strategy. This is dictated by the number of reasons. First, this study is explanatory and deductive in its nature, and surveys are often associated with this type of research (Saunders et al., 2009). Moreover, to fulfill the research goal, the collection of considerable amount of data is required, and survey allows to collect it in an effective way.

To ensure that the questions are similarly interpreted by different respondents (Robson, 2002), the questionnaire was first tested with experts, which helped to review both its structure and specific items formulation.

The questionnaire consists of 47 questions, aggregated into 11 major blocks. The first block is dedicated to identification of demographic profiles of respondents and includes questions about

age, gender, home country and city, native language and foreign languages proficiency. The second block measures family ties of respondents and asks about marital status, existence of dependent relatives, geographical location of family members, and individual's evaluation of his or her closeness to family. The third block investigates the international experience of the respondent by asking about his or her study, work and tourism experience in foreign countries. Block four focuses on cultural adjustment abilities of the participant. The fifth block explores the educational background of individual and contains questions about qualification, country and city of study, the field of study. The next group of questions touch upon respondent's migration intention, including the country and city of prospective migration. Career expectations of the participant are discussed in the seventh and eighth blocks of the questionnaire. In the former one, the work experience, employment status, and desired career direction are discovered. The latter block contains questions about career preferences in terms of company size, ownership status, country of origin, scale of operations, and industry. Block nine evaluates the respondent's perception of local labor market.

Blocks ten and eleven are the biggest and the most important blocks for this study. Questions in the tenth block are devoted to push and pull factors of migration. Divided into three additional subgroups, the questions evaluate the influence of three different levels of these factors (individual, industry, and country) over one's propensity to migrate. Apart from measuring the influence of these factors, this block also explores their relevance to individual's home country and country of prospective migration.

Finally, the last block examines the role of global talent management in reversing migration decisions. This block considers three types of talent management practices, i.e. talent attraction, development and retention practices.

2.3. Variables and measures

Since the theoretical model that serves as a basis for current research involves a whole range of diverse interrelations, a number of empirical models have to be tested. To do that, various measures are introduced.

Push and pull factors

Different push and pull factors comprise the first two sets of independent variables used in current research. As this master thesis is one of the first attempts to study the influence of the discussed factors on different levels, there are hardly any established constructs that could be used as a ready-to-use scale. Consequently, the need for development of the scale that would measure the influence of particular push and pull factors on individual's migration decision is evident.

First, the items that would comprise this scale should be identified. In order to do that, the literature on talent migration drivers was scrutinized and structured (an overview is presented in

part 1.1.2 of this master thesis). In total, 33 items are proposed for measurement of push and pull factors' influence, all presented earlier in Table 1.

All of the items are used for operationalization of both push and pull factors. The questionnaire measures (1) the level of influence of these factors on potential migration decision of the individual and (2) their relevance for home and destination countries.

The questions on factors' influence are Likert-style rating questions by their nature as they are purposed to collect opinion data (Saunders et al., 2009). The respondents were asked to assess to which extent the proposed items might influence their migration decision. For ensuring the common understanding of the questions, most of the items (except personal reasons) are offered with adjectives that describe its negative state (e.g. for 'average sales level' the wording 'low average salary for your profession' is used). For evaluation, the 7-point Likert scale is proposed, where 1 = 'Weakly influences', 7 = 'Strongly influences'.

The relevance of each of the items for COO and DC is measured through questions where the respondent has to evaluate whether they do or do not characterize the home country (with negative interpretation of the items) and country of desired migration (with positive interpretation of the items, e.g. 'high average salary for your profession'). For the analysis purposes, the responses are encoded with the binary code, where '0' stands for item irrelevance and '1' indicates its relevance.

In order to get the measures that would characterize the real situations of participants' COO and DCs, new variables are defined as a multiplication of item's influence on its relevance. This ensures the consistency of independent and dependent variables, and, as a result, enables obtaining of meaningful results.

To reduce the number of variables, the factor analysis was conducted (refer to chapter 3.1 for more detailed information about the process and the results). As a result, 4 variables measuring push factors and another 4 variables measuring pull factors on individual, business, internal country and external country levels were used for further analysis. These variables are calculated as a mean of items associated with the factors.

Facilitating factors

In accordance with literature review, another set of variables, namely those associated with facilitating factors, are taken into account in current research. Similarly to the case of push and pull factors, there is no established scale measuring these factors currently described in related literature. Due to that, the scale was developed based on literature review: 16 items are proposed for measuring this type of factors in correspondence with Table 2.

All three dimensions (family ties, international experience and cultural adaptivity) are measured using Likert-style rating scales. For family ties addressing items, the agreement of the respondent with the related statements is measured with 7-points Likert scale where 1 = ‘Strongly disagree’ and 7 = ‘Strongly agree’. To evaluate the international experience of the participant 7-points amount rating is proposed, where 1 stands for absence of particular type of experience or small degree of influence it had over the person and 7 implies high degree of influence of gained experience. Cultural adaptivity is again assessed with 7-points agreement scale.

The factor analysis was deployed for items comprising facilitating factors in order to decrease the number of variables, which resulted in limiting them to three dimensions (see chapter 3.1) in full correspondence with theory-based assumptions.

Migration intention

Migration intention of participants is acting as dependent variable within the first part of empirical study where the factors that have an influence on it are identified; and as independent variable for the second part of empirical study where the role of talent management practices in overcoming brain drain is analyzed.

To identify the migration intention of the individual, the questionnaire contains a dichotomous question about his or her willingness to migrate with yes/no answer options. The answers to this question are encoded in a binary manner with ‘0’ indicating absence of migration intention and ‘1’ denoting positive migration decision.

Talent management practices

To evaluate the role of talent management practices in changing migration intention, the constructs utilized by Latukha (2015) were adopted and adjusted. Talent management practices are aligned to three dimensions, namely talent attraction, talent development and talent retention.

The scale recognizes 12 talent attraction, 11 talent development and 11 talent retention practices, all described in Table 5.

As the original study of Latukha (2015) focuses on the utilization of these practices by companies, the scale had to be adjusted to fit the subject of current research. First, the scale is changed from 5-points Likert scale to 7-points Likert scale to ensure the consistency of measures.

Moreover, instead of measuring the intensity of practices implementation, the perceived importance of application of these practices to participant for changing his or her migration decision is assessed.

Table 5. Items describing talent management practices

Dimension	Items
Talent attraction	Competitive salary Interesting job with possibilities to complete challenging assignments Strong employer brand Support of global actors Attractive location of worksite International nature of operations Employment of high caliber talents Possibilities of international work Foreign recruitment support Focus on diversity and inclusivity Implementation of CSR practices Absence of language barriers
Talent development	Collaboration with universities and training centers Support of employees' education High quality learning and development opportunities Career development and advancement opportunities E-learning and long-distance learning opportunities Individual development plans Concurrent utilization of in-house corporate university and external training programs Job rotations Training programs for newcomers Developed IT infrastructure Engagement in R&D activities
Talent retention	Performance-based remuneration Variety of compensation and benefit programs Clear, transparent, and fair compensation and benefit programs Nonfinancial benefits Atmosphere of high motivation and flexibility Culture of accountability and high performance Values that comply with ethical and moral norms Freedom in decision making Job security Employees' engagement Participation in social and community events

Source: adopted from Latukha (2015)

Summary of chapter 2

This chapter presents the reasoning behind the choice of study subject, sampling procedure and the methodology of building and verifying the questionnaire.

As the whole population of potential emigrants is highly heterogeneous in terms of their reasons for emigration, choice of destination countries etc., the research focuses on the single relatively homogeneous group of high-profile graduates. To reach this group, applicants of the conference "Management of the Future" were chosen as participants. The choice is beneficial in two ways: firstly, the applicants are last year undergraduate and graduate students of the best Russian and foreign universities, which makes them an attractive target for local employers;

secondly, the conference has high standards for individual achievements, knowledge and skills of participants, which automatically repel low-profile students, allowing to consider applicants to be talents. Sample profile indirectly supports these deductions: e.g., the majority of applicants have generally high level of English skills and have working experience.

For retrieving information from the group the survey was chosen as research method because it allows gathering huge amount of structured data and enables its utilization in a quantitative study. Due to the novelty of the research the questionnaire was developed by the author of the thesis, and later tested by experts to guarantee its quality. The questionnaire consists of eleven blocks. In the first nine blocks of the questionnaire respondents specify their demographic profiles, family characteristics, international experience, cultural adjustment abilities, educational background, migration intentions, career expectations and work experience, and, finally, perception of a local labor market. The next two blocks evaluate push and pull factors of migration and talent management practices as a tool to turn migration back.

There are five groups of variables used for the empirical study. The first three groups measure the influence of push, pull and facilitating factors, all acting as independent variables and measured with Likert scale. The variable that indicates the migration intention is binary in nature and performs both as independent and dependent variable in different stages of the research. Finally, the last block of variables measures the role of talent management practices using Likert scale and acts as dependent variable.

Chapter 3. RESULTS AND DISCUSSION

This chapter is dedicated to the description and discussion of research findings: the results of statistical analysis, namely factor analysis, logistic regressions and Kruskal-Wallis test, are provided, interpreted and applied to business context.

To answer the research questions developed in the result of the literature review, a number of statistical tests should be run with the use of software for statistical analysis IBM SPSS Statistics 24. Factor analysis and logistic regressions are approached to identify the factors that influence migration intention of talented Russian graduates, while descriptive statistics and Kruskal-Wallis test are utilized to assess the role of talent management practices in changing their migration decision.

3.1. Factors of talent migration from Russia

In order to identify the factors that influence migration intention of Russian talented graduates, it is necessary to reduce number of variables to a smaller set of meaningful dimensions. For this purpose, factor analysis is used.

The factor analysis is run in three stages, separately for each of three groups of drivers, namely for push, pull, and facilitating factors. For all three subsamples, the KMO was calculated and presented in Table 6.

Table 6. The KMO statistics

Subsample	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
Push factors	0.931
Pull factors	0.910
Facilitating factors	0.817

Source: Author's Compilation of Primary Data.

For push and pull factors subsamples, the values of KMO statistics are accepted as marvelous, and for facilitating factors subsample they are considered to be meritorious (Hutcheson and Sofroniou, 1999).

Push factors

Prior to factor extraction, the correlation matrix was created (see Appendix 2) to ensure adequate level of correlation between items. Even though the Bartlett's test was significant ($p < 0.001$), in accordance with Field (2009), items that had many correlations below 0.3 (items measuring the influence of personal reasons, attachment to country, ethnical, culture, gender, nationality, language and sexual orientation diversity, and competition among talents on the industry and country levels) were excluded.

The factors were extracted using alpha factoring extraction method. To decide on the number of factors, Kaiser's criterion (Kaiser, 1960) for eigenvalues greater than 1 was followed. As the factors are expected to correlate due to their nature, the oblique rotation was chosen for better discrimination between factors. More specifically, Promax with Kaiser normalization was approached as rotation method.

After the first iteration, items measuring the influence of political risks and institutional infrastructure development were also excluded as they showed all factor loading less than 0.4 (Stevens, 2002). In the second iteration, four factors were extracted that cumulatively explain 47.24% of variance. Table 7 contains the pattern matrix that reflects factor loadings for all items. Factor loadings lower than 0.4 are omitted in the table.

Table 7. Pattern matrix — push factors

Items	Factors				α	
	1	2	3	4		
Self-actualization opportunities				0.595	0.68	
Equality				0.548		
Status inconsistencies				0.591		
Salary level		0.491			0.82	
R&D investments		0.676				
Governmental support		0.629				
Access to unique resources		0.616				
Industry competitiveness		0.490				
Industry innovativeness		0.681				
Misuse of specialists		0.638				
Healthcare system	0.421					0.9
Bureaucracy	0.704					
Transparency of governmental policy	0.747					
Press freedom	0.721					
Independence of judicial system	0.773					
Integrity of civil servants	0.696					
Stability of governmental regime			0.540		0.82	
Economic risks	0.509					
Level of economic development of country			0.423			
Pace of economic development of country	0.462					
Corruption	0.761				0.82	
Direction of investments			0.592			
Production costs			0.455			
Economic cooperation of country with international players			0.762			
Country integration in international community			0.676			

Source: Author's Compilation of Primary Data. Note: α = Cronbach's reliability coefficient.

To validate the results, reliability of the scale was checked using Cronbach's alpha measure (also presented in Table 7). It turned out to be very close (for factor 4) or well above (for factors 1, 2 and 3) the cut-off point of 0.7 suggested by Kline (1999). As the current study is an initial stage of the research dedicated to talent migration factors in Russian context, the guidelines provided by Nunnally (1978) were followed and all factors were considered as reliable as their measures of Cronbach's alpha were higher than 0.5.

The first factor includes 9 items, 7 items comprise factor 2, factor 3 consists of 6 items, and factor 4 is the smallest one with 3 items included.

The first factor incorporates the state of the healthcare system in country, the typical level of bureaucracy, the transparency of governmental policy, the level of press freedom, the level of independence of judicial system, the required level of integrity of civil servants in country, the amount of economic risks, the pace of development of local economy and the level of corruption. It is easy to notice that all the mentioned items characterize the country as a whole and result directly from governmental decisions in different areas. The evaluation of these items is rather objective and is likely to be coherent among different social groups. The described items are often perceived as factors influencing the standard of living in the country. Moreover, the results associated with these items tend to have significant impact on most of country population which makes them easily observable from within. Due to these reasons, this factor may be named as *internal country-level push factors*.

The second factor is comprised by such items as stability of governmental regime, the level of economic development of country, the main streams of direct foreign investments, the production costs, the intensity of economic cooperation of the country with international players, and the level of state integration in international community. Again, these are the characteristics of the whole country. Unlike the previous factor, though, this one has more signaling power for external stakeholders rather than for internal ones. One may claim that altogether these items may determine the attractiveness of a country for external investors or set the bar of international opportunities available for local specialists. Furthermore, some of the items associated with this factor are not as observable from within the system as those constituting the previous one. Based on this, this factor is addressed as *external country-level push factors*.

The third factor in the push group includes the level of salary typical for the industry, the amount of R&D investments usually made in the industry, the intensity of support the government shows for the industry, the level of access of local players to unique resources, the overall competitiveness of the industry, the intensity of innovativeness of the industry and the situation of specialists' misuse. These items do not address the whole country as previous ones but are particular industry-focused. The results associated with the factor are more company-oriented

rather than individual-oriented. Thus, this factor may be indicated as one combining *business-level push factors*.

The last extracted push factor is loaded by the following items: perceived opportunities for self-actualization, perceived equality of society and existence of the situation of status inconsistencies. These items are different from items comprising other factors in two ways. First, their perception is very individual and may vary even within one social group. This is due to the fact that the evaluation of these factors is based on one's background, beliefs, values and experience rather than on objective reality. Second, people tend to be very sensible to the factors of this type, they often comprise taboos in society. Bearing that in mind, the aggregative factor is referred to as *individual-level push factors*.

Table 8 gives an overview of the retrieved factors.

Table 8. Factors description — push factors

Factor name	Items included	Factor description
Internal country-level push factors	<i>Healthcare system</i> <i>Bureaucracy</i> <i>Transparency of governmental policy</i> <i>Press freedom</i> <i>Independence of judicial system</i> <i>Integrity of civil servants</i> <i>Economic risks</i> <i>Pace of economic development of country</i> <i>Corruption</i>	Included items describe the general situation in the country. They are likely to have similar influence on most of the country population. These items are better observed from inside
External country-level push factors	<i>Stability of governmental regime</i> <i>Level of economic development of country</i> <i>Direction of investments</i> <i>Production costs</i> <i>Economic cooperation of country with international players</i> <i>Country integration in international community</i>	Included items describe the general situation in the country. Unlike the previous type, not all population of country may feel the influence of the items of this level. They are likely, though, to have an impact on external investment decisions
Business-level push factors	<i>Salary level</i> <i>R&D investments</i> <i>Governmental support</i> <i>Access to unique resources</i> <i>Industry competitiveness</i> <i>Industry innovativeness</i> <i>Misuse of specialists</i>	These items characterize the business environment of country and are rather particular industry-oriented
Individual-level push factors	<i>Self-actualization opportunities</i> <i>Equality</i> <i>Status inconsistencies</i>	The items comprising this factor are personalized as their perception is highly influenced by individual's values, beliefs and background

After the factor analysis, the four new variables were calculated as means of items that comprised the corresponding factors.

Pull factors

Similarly to the push factors' analysis, the factor extraction in the case of pull factors started with creation of correlation matrix (Appendix 3). Items characterizing the influence of personal reasons, attachment to country, status inconsistencies, ethnical, culture, gender, nationality, language and sexual orientation diversity, and competition among talents on the industry level were excluded as they did not show correlation higher than 0.3 with sufficient number of other items.

Since the nature of pull factors is very close to one of push factors, the same extraction and rotation methods were used. Again, the factors were extracted in two iterations. After the first one, additional items (healthcare system, transparency of governmental policy, press freedom, integrity of civil servants, production costs and competition among talents on the country level) were taken out of the model as they did not show considerable factor loading or loaded more than one factor. In the result of the second iteration, 4 factors with eigenvalues >1 got extracted. These factors explain 46% of the variance. The pattern matrix is presented in Table 9. Factor loading lower than 0.4 got automatically suppressed.

Table 9. Pattern matrix — pull factors

	Factor				α
	1	2	3	4	
Self-actualization opportunities			0.555		0.76
Equality			0.442		
Salary level		0.405			0.77
R&D investments		0.545			
Governmental support		0.623			
Access to unique resources		0.493			
Industry competitiveness		0.596			
Industry innovativeness		0.663			
Misuse of specialists		0.405			
Bureaucracy	0.641				0.89
Independence of judicial system	0.693				
Stability of governmental regime	0.565				
Political risks	0.674				
Economic risks	0.693				
Level of economic development of country	0.506				
Pace of economic development of country	0.559				
Institutional infrastructure development				0.418	0.82
Corruption	0.705				
Direction of investments				0.490	
Economic cooperation of country with international players				0.802	
Country integration in international community				0.688	
Immigration policy				0.532	

Source: Author's Compilation of Primary Data. Note: α = Cronbach's reliability coefficient.

The validity of the determination of factors was checked by calculating Cronbach's alpha (see Table 9 for results). As the results exceed cut-off point of 0.7, all of the factors are accepted as valid.

The first factor comprises 8 items, the second one includes 7 items; only 2 items constitute the third factor, and factor 4 encompasses 5 factors.

The factors analysis deployed for pull factors resulted in classification of the items being very similar to push factors' results. What should be considered is the differences in items constituting each of the levels.

The country-level factors show the most variance in terms of items that comprise them. Thus, for example, the stability of political regime, the political risks and the level of economic development relate to the internal country-level pull factors, while in case of push factors they are either comprising the group of external country-level factors (the stability of political regime and the level of economic development-measuring items) or omitted (the item associated with political risks). The rationale behind that might be the focus of participants of this study: being young specialists, they tend to evaluate their migration possibilities from the employment perspective and, consequently, put more emphasis on those factors that indicate their opportunities for international career in particular country (named *external country-level pull factors*) or have direct influence on their prospective working life (*internal country-level pull factors*). This also explains the elimination of items evaluating the bureaucracy level, the transparency of governmental policy, the freedom of press or the requirement for civil servants' integrity from the pull factors' analysis — they are rather associated with everyday life and, consequently, are of lower priority for career-focused graduates.

The *business-level pull factors* are completely coherent with the business-level push factors in terms of the set of items that comprise these factors. This is seen as the result of the global nature of business.

Finally, there is some disparity between the items constituting the *individual-level* push and pull factors. More specifically, in the latter case, status inconsistencies-related item get omitted. This difference is understandable, though, since status inconsistency reflects the current situation within particular moment of time and context and, as a result, can hardly be accurately assumed in respect to the country the individual does not live in.

The brief description of the extracted factors is provided in Table 10.

Table 10. Factors description — pull factors

Factor name	Items included	Factor description
Internal country-level pull factors	<i>Bureaucracy</i> <i>Independence of judicial system</i> <i>Stability of governmental regime</i> <i>Political risks</i> <i>Economic risks</i> <i>Level of economic development of country</i> <i>Pace of economic development of country</i> <i>Corruption</i>	Overall situation in the country is described with this factor. Items are likely to have similar influence on most of the country population though remain observable for foreigners
External country-level pull factors	<i>Institutional infrastructure development</i> <i>Direction of investments</i> <i>Economic cooperation of country with international players</i> <i>Country integration in international community</i> <i>Immigration policy</i>	Included items describe the overall situation in the country. Unlike the previous factor, not all population of country may feel the influence of the items of this level. Items comprising this factor act as signal for external communities, including external investors
Business-level pull factors	<i>Salary level</i> <i>R&D investments</i> <i>Governmental support</i> <i>Access to unique resources</i> <i>Industry competitiveness</i> <i>Industry innovativeness</i> <i>Misuse of specialists</i>	These items characterize the business environment of country and are rather particular industry-oriented
Individual-level pull factors	<i>Self-actualization opportunities</i> <i>Equality</i>	The items comprising this factor are personalized as their perception is highly influenced by individual's values, beliefs and background

New variables were calculated as means of corresponding items to recognize the results of this factor analysis.

Facilitating factors

The third and the last run of factor analysis was done to determine aggregating dimensions of facilitating factors. One more time, the analysis started with correlation matrix, depicted in Appendix 4. As all items had sufficient number of correlation coefficients higher than 0.4 and Bartlett's test was significant ($p < 0.001$), none of the items was eliminated from the set.

For facilitating factors principal component analysis was used as an extraction method with varimax with Kaiser normalization for rotation as the determined factors are proposed to be independent (Field, 2009). Factor analysis was run in single iteration, three factors were extracted based on Kaiser's criterion of eigenvalue being higher than 1 with total variance explanation equaled to 58.5%. Rotated component matrix is presented in Table 11.

Table 11. Rotated component matrix — facilitating factors

	Factors			α
	1	2	3	
International study experience	0.780			0.81
International volunteering experience	0.752			
International internship	0.778			
International working experience	0.609			
International research experience	0.583			
International tourism experience	0.598			
Work in international groups	0.683			
Ease of adaptation		0.875		0.88
Support in adaptation process		0.783		
Ease of barriers overcoming		0.876		
Receptivity to other cultures		0.837		
Closeness to family			0.663	0.81
Importance of living with family			0.828	
Family grew when abroad			0.790	
Importance of family ties			0.761	
Family dependence in career choice			0.681	

Source: Author's Compilation of Primary Data. Note: α = Cronbach's reliability coefficient.

It may be observed from the Table 11 that Cronbach's alpha is higher than 0.7 for all three extracted factors which allows to consider all of them as valid.

Thus, the first factor includes 7 items, 4 items comprise the second factor, and the last, third factor includes another 5 items.

Three distinguished factors may be referred to as international experience, cultural adaptiveness and family closeness. The international experience factor reflects both the intensity of this experience for particular individual and the degree to which it affected him or her personally. It is important that all types of international experience are taken into account, including academic, working and travelling, as all of them may significantly affect one's attitude towards COO and DC. The cultural adaptiveness is a construct that assesses one's ability to easily adopt to new cultures. The assumption regarding this factor is that people with more positive experience of adjustment to cultures in the past are more open to positive migration decision. Finally, family ties factor is the only potentially restricting factor revealed. The relationship between person and his or her family members might create significant barriers to relocation abroad. Table 12 gives an overview of discussed factors.

Table 12. Factors description — facilitating factors

Factor name	Items included	Factor description
International experience	<i>International study experience</i> <i>International volunteering experience</i> <i>International internship</i> <i>International working experience</i> <i>International research experience</i> <i>International tourism experience</i> <i>Work in international groups</i>	Items comprising this factor consider the influence the international experience had over an individual
Cultural adaptiveness	<i>Ease of adaptation</i> <i>Support in adaptation process</i> <i>Ease of barriers overcoming</i> <i>Receptivity to other cultures</i>	Factor measures the extent to which an individual is able to easily adapt to new cultures
Family closeness	<i>Closeness to family</i> <i>Importance of living with family</i> <i>Family grew when abroad</i> <i>Importance of family ties</i> <i>Family dependence in career choice</i>	Items included in this factor touch upon family ties of an individual and his or her affection towards family members

Three new variables are determined in a result of factor analysis by calculating the mean of items comprising each of factors.

To reveal what push, pull and facilitating factors affect the migration intention of Russian talented graduates and evaluate the extent to which they are doing that, the regression analysis should be employed. Since the model includes binary categorical variable (migration intention) as dependent one, the binary logistic regression is approached.

During the first step, the most appropriate model should be chosen. For this sake, three models are run. The first one only includes push factors, the second one combines push and pull factors and, eventually, the last one consists of all three types of factors, i.e. push, pull and facilitating. Table 13 represents the results for all three models.

Table 13. The results of logistic regressions

	Model 1	Model 2	Model 3
LR chi ² (4)	57.76	63.42	82.81
Prob>chi ²	0.00***	0.00***	0.00***
Pseudo R ²	0.19	0.21	0.27
	Odds ratios		
Individual-level push factors	1.46***	1.45***	1.45***
Business-level push factors	1.19	1.19*	1.24*
Internal country-level push factors	0.94	0.93	0.92
External country-level push factors	1.23*	1.24*	1.22*
Individual-level pull factors		0.69	0.61
Business-level pull factors		1.11	1.17
Internal country-level pull factors		1.32	1.42
External country-level pull factors		0.70	0.63
Family closeness			0.66*
International experience			1.51***
Cultural adaptiveness			1.13
Cons	.014***	.015***	0.01**

Source: Author's Compilation of Primary Data

Note: *p<0.1, **p<0.05, ***p<0.01

It might be observed from the table that all three models are statistically significant (p<0.01). What differentiates them is the values of pseudo R-square, with the highest one observed in the case of the third model. As pseudo R-square cannot be interpreted the same way as R-square in ordinary least squares regressions (Long and Freese, 2006), it does not provide any information about the amount of variance any of these models explain. However, it does evaluate the relative fit of the model. Thus, the model that includes push, pull and facilitating factors has the best fit among all three models, and due to that the further analysis is done on its example. This finding corresponds to recent research of Van Hear et al. (2017), who propose factors of different types to be functioning in combination rather than separately from each other. The model is able to predict 89.9% of cases, and according to Homer-Lemeshow test, there is no evidence of lack of model fit (Hosmer-Lemeshow chi-squared value of 9.4 with a p-value of 0.31).

After the model was chosen, its content is to be analyzed. Table 13 contains the data about the significance of the variables within the model and their odds ratios. Five variables turn out to have significant influence over the possibility of positive migration decision of an individual, namely individual-level push factors (p<0.01), business-level push factors (p<0.1), external

country-level push factors ($p < 0.1$), family closeness ($p < 0.1$) and international experience ($p < 0.01$). Internal country-level push factors, all types of pull factors and cultural adaptiveness do not show any evidence of being statistically significant within the model. To understand what exact influence the significant variables have over the possibility of positive migration decision, their odds ratios require the analysis. Almost all statistically significant variables have an odd ratio > 1 , with only family closeness factor showing odds ratio below 1. Consequently, four factors might be associated with an increase of probability of decision to migrate outside the country, namely individual-level push factors (OR = 1.45), business-level push factors (OR = 1.24), external country-level push factors (OR = 1.22) and international experience of an individual (OR = 1.51). Family closeness, on the contrary, is associated with lower willingness to leave the country (OR = 0.66).

It is crucial to discuss the possible reasons behind these results and recognize the value of these findings for managerial implication.

In the considered model, the higher relevance of individual-level push factors is found to *increase* the possibility of positive migration decision. In other words, talented graduate is more likely to leave Russia if he or she feels that there is lack of opportunities for self-actualization in the country, finds local society unequal, or experiences situation of social inconsistencies. There is a number of reasons that may explain the high determining power of these factors. First, their psychological affinity might have an enormous influence. As it was mentioned earlier, the evaluation of factors of this level results from personal experience and, thus, reflect the range of individual's beliefs and values that are claimed to be the major determinant of human behavior (Fishbein and Ajzen, 1975). Moreover, the individualistic nature of the generation to which studied graduates belong comprises the second reason. Finally, it is widely discussed (e.g. in Trofimova, 2012) that high-profile individuals tend to focus on non-economic factors when considering international relocations, which is proposed to be the case for talented graduates as well.

Frustration in regards to COO from the perspective of business-level factors also *raises* the likelihood of graduates' positive migration decision, supporting studies of Baruch et al. (2007), Cooke et al. (2014) and others. The rationale behind that was already partly covered earlier in this master thesis. The career-focused attitude of the studied group should be considered. Being the last year students in business-oriented majors, they tend to view the migration as an opportunity to find better work in the first place. As a result, the factors that characterize the business situation in Russia matter for their choice. Furthermore, this factor includes the drivers that reflect not only the already available working options but also the prospective opportunities for professional development of graduates, e.g. the amount of R&D investments and overall innovativeness of the industry, governmental support the industry receives, and the access to unique resources it

provides. Finally, as students that form the sample are primarily from top-ranked Russian and foreign universities, the fit between their skills and the offered work is of high priority for them as it ensures “return on investments” of their time and effort. In Russia, though, it is common for organizations to offer graduates jobs where low expertise is required, which violates this fit and results in increased probability of talents’ emigration.

The last group of push factors that shows statistical significance of the *positive* influence it has over the probability of migration is external country-level push factors. As it was discussed earlier, the items included in this factor have high signaling power for external investors and reflect the international business opportunities available for local players. Consequently, low level of country development in regards to them is likely to imply low attractiveness of local projects for foreign stakeholders and, at the same time, indicate limited access of specialists working for local companies to advantages global business environment may provide. Taking into account the high importance of direct foreign investments for migration decision (Gibson and McKenzie, 2014) and the high potential studied graduates possess, this signifies low value both own business and paid labor may bring for them, which makes non-return migration the way of increasing this value.

Another two groups of factors that are proved to have influence over migration intention are facilitating ones, namely family closeness and international experience. The results obtained in regards to facilitating factors are similar to those discussed by Baruch et al. (2007). As expected, the former factor has *negative influence* on the possibility of graduate choosing migration option, since high affection to family members ties them to COO even if they see better opportunities elsewhere. International experience, on the contrary, *increases* this possibility within the studied model. The suggested reasoning for this finding is that disadvantages of current situation may become obvious only after it gets compared with other examples, and international trips provide this opportunity.

It might be even more interesting to discuss the factors that *do not show any statistically significant evidence* of having an influence over migration intention of talented graduates in Russia. The first one is the only push factor that was left behind, including items that describe internal situation in country. Despite this finding being contradicting to some of the earlier studies that claim economic-related factors to be the most crucial for migration determination (e.g. Organiściak-Krzykowska, 2017), there are several reasons that could determine insignificance of this level within studied model despite the obvious premises of its strong impact over migration patterns. First of all, since all students that participated in research were raised in Russia, it might be the case that they got used to the symptoms of unsatisfactory results shown in regards to discussed items (e.g. poor healthcare system, high bureaucracy level, etc.); this became the everyday reality they barely notice. Another reason might be determined by comparatively young

average age of respondents, due to which they may have not yet experienced defects of state systems in depth personally, or were able to overcome them without considerable efforts from their side thanks to flexibility common for people of this generation. Moreover, the peculiarities of participants' education may have an impact on the obtained results: taking into account the sample is largely comprised by graduates with major in management and economics, it is logical to assume that they possess more thorough understanding of all the processes that underlie the internal country-level factors' development and, consequently, are less prone to their influence. Finally, it is quite possible that taken into account the fact that most of respondents live in Russian megacities and study in the best universities, they do not face the worst manifestation of these factors.

As far as pull factors are concerned, an important aspect should be taken into account. Thus, in spite of the fact that none of the levels of pull factors are found to have significant influence over talented graduates' migration decision, the model shows better fit when these factors get included. This controversy may be triggered by heterogeneity of studied sample in terms of specific DC the participants want to move to. As all countries vary significantly in terms of factors of all levels, this inconsistency within sample could have led to mixed results. Another possible reason is that even though pull factors are important for formation of relocation intention, the relationship between pull factors and possibility of positive migration decision may be not linear, which results in statistical insignificance of pull factors in regression model. In accordance to this assumption, the push factors may be perceived as an initial driver that triggers positive migration decision of person, while pull factors might be mostly seen as determinants of choice of specific DC and be more important on the next stage. This assumption is supported by Van Hear et al. (2017) who refer to pull factors as to drivers that keep the process of migration going once it started rather than acting as an initial trigger of migration decision.

Among facilitating factors, one's ability to adjust to new cultures is the only one that did not show significance in determining possibility of decision to migrate in contradiction to the findings of Baruch et al. (2007). Two causes might be proposed to explain this finding. The first one is peculiarities of the international experience the studied graduates tend to have. Both touristic and academic types of experience that most of the participants indicated as relevant usually imply low necessity for adjustments since it is either organized by professionals in a way that minimizes the number of potentially uncomfortable situations (in case of tourism) or happens in multinational context (in case of academic exchange or study abroad) that decreases the level of stress per se. The second one suggests that for an individual it does not matter in the end whether he or she is bad at adjusting to new cultures if there are important factors that push him or her out of the country.

3.2. Role of talent management practices in reversing brain drain

There are two stages of revealing the role of talent management practices in reversing brain drain from talented graduates' side in Russian context. First of all, it is very useful to look at the descriptive statistics results that would give an overview of the respondents' perception of the talent management practices' role. Table 14 describes specific talent management practices studied in this research.

Table 14. Respondents' evaluation of the role of talent management practices over their potential migration decision

	Mean	Median	Max	Min	Std. Dev	Obs
TALENT ATTRACTION PRACTICES						
Interesting job with possibilities to complete challenging assignments	6.08	7.00	7.00	1.00	1.36	397
Competitive salary	5.91	6.00	7.00	1.00	1.31	397
Employment of high caliber talents	5.69	6.00	7.00	1.00	1.50	397
Possibilities of international work	5.63	6.00	7.00	1.00	1.51	397
Strong employer brand	5.60	6.00	7.00	1.00	1.52	397
International nature of operations	5.35	6.00	7.00	1.00	1.57	397
Support of global actors	5.32	6.00	7.00	1.00	1.58	397
Foreign recruitment support	5.20	6.00	7.00	1.00	1.72	397
Attractive location of worksite	5.12	5.00	7.00	1.00	1.58	397
Implementation of CSR practices	4.93	5.00	7.00	1.00	1.82	397
Absence of language barriers	4.46	5.00	7.00	1.00	1.96	397
Focus on diversity and inclusivity	4.35	5.00	7.00	1.00	2.00	397
<i>Overall</i>	5.30	5.50	7.00	1.00	1.14	397
TALENT DEVELOPMENT PRACTICES						
Career development and advancement opportunities	6.12	7.00	7.00	1.00	1.31	397
High quality learning and development opportunities	5.98	6.00	7.00	1.00	1.33	397
Support of employees' education	5.76	6.00	7.00	1.00	1.45	397
Individual development plans	5.49	6.00	7.00	1.00	1.59	397
Training programs for newcomers	5.58	6.00	7.00	1.00	1.52	397
Developed IT infrastructure	5.58	6.00	7.00	1.00	1.54	397
Engagement in R&D activities	5.21	6.00	7.00	1.00	1.71	397
E-learning and long-distance learning opportunities	5.19	5.00	7.00	1.00	1.67	397
Concurrent utilization of in-house corporate university and external training programs	5.19	6.00	7.00	1.00	1.68	397
Job rotations	5.15	6.00	7.00	1.00	1.70	397
Collaboration with universities and training centers	4.99	5.00	7.00	1.00	1.68	397
<i>Overall</i>	5.48	5.64	7.00	1.00	1.20	397
TALENT RETENTION PRACTICES						
Atmosphere of high motivation and flexibility	5.87	6.00	7.00	1.00	1.36	397
Clear, transparent, and fair compensation and benefit programs	5.84	6.00	7.00	1.00	1.40	397
Performance-based remuneration	5.80	6.00	7.00	1.00	1.40	397
Employees' engagement	5.78	6.00	7.00	1.00	1.31	397
Variety of compensation and benefit programs	5.64	6.00	7.00	1.00	1.45	397
Job security	5.62	6.00	7.00	1.00	1.41	397
Values that comply with ethical and moral norms	5.55	6.00	7.00	1.00	1.44	397
Freedom in decision making	5.54	6.00	7.00	1.00	1.38	397
Culture of accountability and high performance	5.50	6.00	7.00	1.00	1.48	397
Nonfinancial benefits	5.43	6.00	7.00	1.00	1.52	397
Participation in social and community events	5.27	6.00	7.00	1.00	1.69	397
<i>Overall</i>	5.62	5.82	7.00	1.00	1.15	397

The table shows that talent retention practices play overall more important role in changing migration decision when offered by local employee than other sets of practices, showing mean 5.62 compared to 5.3 for talent attraction and 5.48 for talent development practices.

As could be seen from talent attraction practices statistics, the most important practices for the respondents are interesting and challenging job and competitive salary with respective means of 6.08 and 5.91. Respondents are quite unanimous in valuation of these practices as they have the least standard deviation of all talent attraction items. Implementation of CSR practices, absence of language barriers and focus on diversity and integrity are estimated the lowest with the means below 5 (4.93; 4.46; 4.35). In addition to this, these three items have the highest standard deviation of 1.86, 1.96 and 2.

The similar situation is in talent development practices section. There are two items, which are prominently higher: career development and advancement opportunities and high-quality learning and development opportunities with the highest means of 6.12 and 5.98 and lowest standard deviation of 1.31 and 1.33 respectively. Again, there is one item with prominently lower mean value, collaboration with universities and training centers, which is the only value with the mean below 5, but its standard deviation is not that different from other means as in the previous example.

The range of means of the last group of practices is the lowest among all three groups — 0.6 vs 1.73 and 1.13 in the first and second groups respectively. Unlike other groups standard deviations are close to each other with only one slight increase to 1.67 when it comes to the last item of participation in social and community events. The highest valued items are atmosphere of high motivation and flexibility and clear, transparent, and fair compensation and benefit programs.

The survey participants' evaluation of the *role of talent management practices* over potential change of their migration decision requires thorough discussion. As far as broader categories of talent management practices are concerned, all three of them are identified as important for reversing one's desire to emigrate (means > 5).

The highest impact is found to be made by talent retention practices. Since this group is mainly comprised by practices that contribute significantly to the process of self-actualization of a person, this finding fits perfectly to the previously discussed outcomes concerning superior role of individual-level push factors in determining migration decision of talented graduates. An important note here is that retention practices focus heavily on non-economic benefits that person may obtain by performing the work, which supports the assumption about stronger power of non-financial motivation sources in case of workers with high human capital level (Chamorro-Premuzic, 2013). More specifically, the results of the current study suggest that the graduates are

responsive to provided possibility of reaching internal harmony, social integrity and self-perception as a valuable part of a bigger whole.

Development practices show the second result among aggregated talent management practices in regards to their ability to make talented graduates re-consider decision to migrate. This result is tightly connected to aforementioned career-focused attitude of the participants of this study. Moreover, it is closely related to the discovered earlier positive relationship between talent migration intention and business-level push factors. As talented graduates make migration decision seeking better career options, it is quite predictable that local companies implementing talent development practices are likely to keep talents in COO as they signal about opportunities for talents' professional realization. The peculiarity worth mentioning is that talent development practices chosen by participants as the most influencing keep balance between professional and personal development of employees, which is important to keep in mind when implementing practices of this block in the organization.

The least impressive results in regards to potential of reversing brain drain are demonstrated by talent attraction practices. It might be explained by the fact that this group includes a number of practices that are rather irrelevant to individual's self-perception or self-actualization (e.g. employer brand, CSR practices implementation, etc.) Moreover, most of these practices are only visible during the initial stage of cooperation between talent and organization and lose their importance as far as more long-term perspective is considered.

It is interesting that as far as specific practices are overviewed, the most highly assessed ones are found to belong to all three groups of talent management practices. These are career development and advancement opportunities, interesting job, high quality learning, competitive salary, and clear, transparent and fair compensation and benefits programs. This observation allows to suggest the necessity of balance in implication of talent management practices. Lower standard deviation coefficients of these practices indicate their overall universality within studied group, which is an important remark for human resource managers.

Most of the least influencing practices (i.e. focus on diversity and inclusivity, absence of language barriers, implementation of CSR practices and attractive location of worksite) belong to talent attraction group. At the same time, the standard deviation coefficients demonstrated by these practices are also comparatively high, which means that they still may be effective for selected group of graduates. However, as far as more general approach is discussed, these practices are not likely to have required influence over migration decision, and companies should not pin their efforts on them.

Kruskal-Wallis test is another analysis technique deployed in this study. It is addressed in order to bring more specifics to the last research question and to identify whether there are any

significant differences in perception of the role of talent management practices by various subgroups of the studied sample.

The first Kruskal-Wallis test is run to compare the sensitivity to the three dimensions of talent management practices of those who do and do not intend to migrate. The results are presented in Table 15.

Table 15. Kruskal-Wallis test results — migration intention

	Mean		Mean Square	Sig.
	Plan to migrate	Don't plan to migrate		
Talent attraction	5.68	5.25	8.584	0.01***
Talent development	5.51	5.47	0.062	0.81
Talent retention	5.45	5.65	1.885	0.48

Source: Author's Compilation of Primary Data

Note: *p<0.1, **p<0.05, ***p<0.01

The results of the test show that the difference is statistically significant only in respect to talent attraction practices. Thus, for students who have made the decision to migrate, talent attraction practices turn out to be more influencing compared to those who are thinking of staying in Russia. It might be explained by assuming that the former group feels more bargaining power in their relationship with local employers as they either already have some options abroad or highly assess their chances of getting work there. As a result, they are more prone to those practices that would signal that local employer values this individual.

Another set of tests is undertaken to identify whether specific factors and graduates' attitude towards them are connected to perception of talent management practices. For that sake, factors that were identified as significant in influencing the possibility of decision to migrate are analyzed. For these factors, the sample is divided in two subsamples based on their relevance to each of the respondents (i.e., factor evaluation < 4 indicates this factor being not relevant, and factor evaluation \geq 4 implies its relevance for respondent). Table 16 contains the results of these tests.

Table 16. Kruskal-Wallis test results — factor relevance

	Mean		Mean Square	Sig.
	Factor is relevant	Factor is irrelevant		
INDIVIDUAL-LEVEL PUSH FACTORS				
Talent attraction	5.47	5.23	5.087	0.03**
Talent development	5.56	5.44	1.205	0.45
Talent retention	5.69	5.59	0.818	0.39
BUSINESS-LEVEL PUSH FACTORS				
Talent attraction	5.60	5.11	23.18	0.00***
Talent development	5.75	5.29	19.77	0.00***
Talent retention	5.84	5.48	12.05	0.00***
EXTERNAL COUNTRY-LEVEL PUSH FACTORS				
Talent attraction	5.67	5.14	24.24	0.00***
Talent development	5.74	5.36	12.36	0.00***
Talent retention	5.86	5.52	9.58	0.00***
FAMILY TIES				
Talent attraction	5.30	5.31	0.00	0.82
Talent development	5.45	5.55	0.71	0.93
Talent retention	5.65	5.55	0.67	0.31
INTERNATIONAL EXPERIENCE				
Talent attraction	5.49	5.26	3.24	0.11
Talent development	5.61	5.45	1.51	0.18
Talent retention	5.57	5.64	0.29	0.97

Source: Author's Compilation of Primary Data

Note: *p<0.1, **p<0.05, ***p<0.01

For individual-level push factors, there is a statistically significant difference in perception of talent attraction practices, which implies that individuals with higher relevance of such factors tend to value these practices more. The rationale behind this is very similar to one provided in previous paragraph: bearing in mind that individual level is comprised by factors reflecting one's perception of self-actualization opportunities, level of equality and existence of status inconsistencies situation in particular country, company is able to influence the migration decision by providing environment that would meet the expectations of an individual; and attraction practices, in turn, ensure this environment.

In case of graduates who find business-level and external country-level factors relevant, all three groups of talent management practices are found to have statistically higher influence over talents' potential decision to migrate as opposed to students who are less affected by these factors. As it was discussed earlier, these two groups of factors have strong signaling power about opportunities for professional development and realization an individual has in particular country. Consequently, the goal of the company that wants to keep or return talented individual in COO is

to show the chances it may provide in this sphere. As far as specific practices are concerned, it may be observed that all three groups include those items that address the need for professional development, e.g. ensuring interesting job with possibilities to complete challenging assignments and provision of opportunities for international work that belong to talent attraction group, support of career development and advancement opportunities and high quality learning and development opportunities that comprise talent development group or sustainment of the atmosphere of high motivation and flexibility and encouragement of freedom in decision making in talent retention practices group.

Finally, the analysis showed no significant difference in importance of any type of talent management practices depending on the relevance of facilitating factors, which implies similar effect all talent management practices have on studied graduates regardless their closeness to family or international experience they possess. However, the role of talent management practices remains quite high for both groups, which additionally highlights the necessity of their implementation in companies.

Summary of chapter 3

This chapter plays a key role in this master thesis as it contains the main findings considering factors influencing the migration decision of Russian talented graduates and the role of talent management practices in reversing this decision obtained in the result of statistical analysis of the data received via on-line questionnaire.

The data analysis was deployed in four stages, all of them carried out with the use of software package IBM SPSS Statistics 24. The first and the second stages helped to answer the first research question, targeted at identification of factors that influence migration intention of talented graduates in Russia, the second stage additionally tackled the second research question, i.e. how push, pull and facilitating factors influence migration intention of Russian talented graduates; finally, the stages three and four aim at providing insights regarding the third research question dedicated to determination of the role of talent management practices in preventing brain drain in Russian context.

The first stage was dedicated to decrease of number of variables associated with different push, pull and facilitating factors that were derived earlier in the result of literature review. The factor analysis, employed for this purpose, allows to identify four groups of push and pull factors, namely individual-level, business-level, external country-level and internal country-level push and pull factors; and three groups of facilitating factors, namely international experience, cultural adaptiveness and family closeness. Cronbach's alpha measures prove the reliability of acquired factor groups.

Further step implied investigation of the relationship between graduates' assessment of push, pull and facilitating factors and their intention to migrate from Russia. As the migration decision was measured with the binary scale, the logistic regression was used for this analysis. The analysis of three models comprised by different groups of factors showed that combination of push, pull and enabling factors explains migration decision better than these factors standalone. According to the results of the model that incorporated all three types of factors, five groups of factors were found to have an influence over decision of talented graduates from Russia to leave their COO, i.e. individual-level, business-level and external country-level push factors, international experience and closeness to family. High relevance of all mentioned groups of push factors was proven to increase the probability of graduates' positive migration decision. Stronger family attachment of individual, on the contrary, was detected to decrease the probability of his/her positive migration decision. Finally, one's stronger international experience was found to result in increase of the probability of positive migration decision.

The third stage included the descriptive analysis of the role talent management practices have in changing the migration decision of talented Russian graduates. The results showed that implementation of all three groups of practices, i.e. talent attraction, talent development and talent retention practices, may lead to change of their decision to leave Russia. Some of the practices turned out to have stronger impact in this regards (for example, interesting job with possibilities to complete challenging assignments, competitive salary, career development and advancement opportunities, high quality learning and development opportunities and atmosphere of high motivation and flexibility) while others raise more concerns in respect to their influencing power (e.g. implementation of CSR practices, absence of language barriers, focus on diversity and inclusivity or collaboration with universities and training centers).

During the final stage of statistical analysis, the set of Kruskal-Wallis tests was run in order to give more precision to understanding of the talent management practices' role for different groups of talented graduates. According to the results, talent attraction practices become more important if person has already decided to migrate or finds individual-level, business-level and external country-level push factors relevant, while talent development and talent retention practices have more impact for those who are mostly driven by business-level and external country-level push factors.

Conclusion

This master thesis aimed at defining factors that influence talent migration from Russia and investigation of the role of talent management practices in preventing talented graduates' migration from Russia. In order to fulfil this goal, a number of objectives were met.

First of all, talent migration theories were reviewed and analyzed. As a result, human capital theory was proposed as the most prominent theoretical foundation of talent migration phenomenon. Brain drain and brain gain concepts were introduced in order to obtain better understanding of the nature and the outcomes of talent migration. As migration of talents is claimed to lead to brain drain and, consequently, decrease of national human capital more often than to its increase in the result of brain gain process, it was important to identify common factors that stimulate talent migration and analyze their peculiarities in the context of Russia. For that purpose, push-pull approach to their classification was adopted and enriched through introduction of three levels of factors, namely country-level, business-level and individual-level. Moreover, the additional type of factors — facilitating — was introduced based on the literature review. Since identification of drivers of talent migration was believed to underlie the ability to reverse brain drain, and the literature failed to provide unambiguous answer to that question in regards to Russia, it was necessary to find out what factors influence migration intention of talented graduates in Russia and how push, pull and facilitating factors influence migration intention of Russian talented graduates. To do that, the quantitative research was conducted. Statistical analysis allowed to slightly amend the proposed classification of talent migration drivers. While business- and individual-level groups of factors were fully verified by factor analysis, country-level factors got allocated to two new groups: internal and external country-level push and pull factors, where the former described overall situation in the country and was proposed to be better observed from inside, and the latter group included factors that are likely to have an impact on external investment decisions because of their external orientation. Facilitating factors were validated in full correspondence to proposed structure.

Despite the theoretical premises of influence of all of the factor groups, only five of them were found to be related to probability of positive migration decision within studied sample, which are individual-, business- and external country-level push factors, closeness to family and international experience. The positive relationship between individual-level push factors and the possibility of positive migration decision is proposed to results from higher psychological affinity of these factors to talented individuals compared to other factors, an individualistic behavior common for generation studied graduates belong to, which makes factors that are more personal-oriented more relevant than more collectivistic drivers, and discussed in previous studies overall importance of non-economic factors for people with high human capital level. As far as relevance

of business-level factors is concerned, the rationale behind it is suggested to be based on career-focused attitude of studied group and increased requirements in regards to return on investments in education caused by high quality of educational background of respondents. As for the importance of external country-level push factors, a low level of country development in regards to them is likely to signal about low value any kind of work in local environment may bring to studied graduates, which makes non-return migration the way of increasing this value. Family closeness and international experience are proposed to be significant for migration decision since high affection to family members ties students to home countries even if they see better opportunities elsewhere, while intensive international experience, on the contrary, increases possibility of migration because it makes disadvantages of current situation more obvious as it provides benchmarks from abroad.

Talent management was proposed to be an instrument that allows to fight the national problem of brain drain on the level of separate firms. On the one hand, it was suggested to be an additional help to governmental policies and efforts as currently they seem to be insufficient standalone. On the other hand, implementation of talent management practices was proposed to show faster results and be able to easier adapt to changing conditions of labor market. As the role of managerial actions, specifically in the area of talent management, in tackling problems related to talent migration is not covered in contemporary literature yet, it was crucial to understand whether talent management practices are able to contribute to prevention of brain drain in Russian context. The results of analysis showed that talent attraction, talent development and talent retention practices are of average to high influence over migration decision. Interestingly, all three groups of practices were discovered to be of higher impact for those students who are prone to driving factors of business- and external-country levels, which additionally highlights the crucial role of these practices in reversing brain drain. Moreover, it was found out that talent attraction practices are of higher value for those graduates who have already decided to migrate as well as for those who find individual-level factors relevant, which implies necessity of additional attention towards these practices from the employers' side.

Based on the results of the research, a number of **theoretical** and **managerial implications** might be derived.

Theoretical contributions

There are several aspects in which this master thesis contributes to contemporary academics literature.

First of all, it expands the theoretical research dedicated to talent migration phenomenon. Grounded on literature review, it brings together and binds several dimensions of talent migration theory, namely concepts of brain drain, brain gain and brain circulation, factors driving talents out

and to the countries and outcomes talent migration potentially brings to COO and DC. This deepens research of such authors as Saxenian (2005), Hussain (2015), Qin (2015) and others.

This master thesis contributes to the studies on factors driving talent migration that are currently criticized for oversimplified approach to determination of factors and, thus, inability to properly explain complex migration phenomenon (de Haas, 2011; Van Hear, Bakewell and Long, 2017). It does it, in the first place, by detection of new group of facilitating factors — i.e. factors that cannot be assigned neither to push nor to pull group, though still have influence over one's migration decision — based on thorough review of previous studies. Moreover, the subcategorization of push and pull factors into four levels — individual, business, external and internal country — ensures more structured approach to drivers' identification. The proposed framework better explains the decisions made in regards to international migration than classical push-pull approach, which makes its development an important contribution to the field of talent migration literature. Furthermore, the approach to measurement of the influence of driving factors defined in this study can be adopted in further research.

The talent management literature is refined as well. In this paper, the different approaches to talent definition were reviewed, which proceeds with and expands studies of Tansley (2011), Gallardo-Gallardo et al. (2013), etc. More specifically, this master thesis contributes to the stream of the literature that treats talent as high potential which is found to be rather understudied. What is also important, in this study the employees' (or, more accurately for students' case, prospective employees') point of view was followed, which fills the gap identified by Thunnissen (2016). Furthermore, this master thesis helps to specify talent management concept (McDonnell et al., 2010) by introducing it through set of specific talent management practices.

What is crucial, this paper bridges talent migration and firm-level talent management, which develops earlier studies of Saxenian (2005), Papademetriou and Sumption (2013) and Collings (2014) towards new direction. This master thesis is the first to bring conscious talent management practices as a tool of managing talent flows on a national level, which significantly contributes to both research fields. Thus, it amplifies talent migration literature by introducing additional tool of addressing brain drain phenomenon, and enriches talent management area by adding new perspective on the role of talent management practices and expanding their application from the level of discrete companies to whole countries.

Finally, some additional evidence is brought to country-specific understanding of talent migration and the role of talent management in it. By focusing on the context of Russia, this study tackles the issue of controversial or partial results in emerging markets context and contributes to such papers as Tung and Lazarova (2006), Kazlauskienė and Rinkevičius (2006), Daugėlienė and

Marcinkevičienė (2009), Petković and Dorđević (2013), Ryazantsev and Pismennaya (2013), Ledeneva (2014) and others.

Managerial implications

As far as managerial implications are concerned, this master thesis ensures two important lessons for Russian organizations. The identified significance of business-level push factors is thought-provoking by itself since it implies the ability of companies to contribute to reverse of brain drain in the country. As this is the only level of push factors that the organizations have direct influence on, it is crucial to work towards elimination of the negative effects they have over Russian talented graduates that drive them to relocate. More specifically, the companies should work towards several directions. First, it is important to ensure globally competitive salaries for local specialists. For this purpose, companies should constantly analyze the level of compensations provided not only by similar companies from COO, but also in those countries that often become DCs for talented graduates from Russia. Bearing in mind difference in resources the companies from various countries possess due to disparities in level of national economic development, the Russian companies should consider introduction of special development programs that would ensure internationally competitive salaries at least for those students that are identified as talents by the company. These programs can also help to tackle another source of graduates' migration intention, namely situations of talented individuals being hired for initial positions that neither offer adequate level of responsibility, nor challenge graduates' skills. To ensure effectiveness of such development programs in addressing this issue, the companies should make sure that they, on the one hand, imply fulfillment of interesting projects that are relevant to real business situations and needs, and, on the other hand, to combine work with intensive training process to fill in possible gaps in graduates' education. Moreover, the increase of R&D investments is crucial as it boosts innovativeness of the company in particular and the industry it belongs to in general and, consequently, attract graduates that decide to migrate seeking for professional development opportunities. It would also contribute to organizational competitiveness on the global level. In order to further enhance it, the companies should use more successful foreign companies as benchmarks. Finally, in order to draw in more governmental attention and support to the industry, the organizations should tightly cooperate with local authorities through joint projects and programs aimed at fulfilling national-level goals.

Since the relevance of factors that are out of the organizational direct control was identified in regards to talented Russian graduates, local firms are proposed to adopt talent management practices in order to address the negative influence of these factors indirectly. The research showed that it is important to build talent management system that will be balanced in regards to implementation of all three groups of talent management practices, i.e. talent attraction, talent

development and talent retention. As some of the practices have shown stronger power to change migration decisions, the organizations are proposed to invest more time and budgets in their implementation. These practices are: career development and advancement opportunities, interesting job with possibilities to complete challenging assignments, high quality learning and development opportunities, competitive salary, atmosphere of high motivation and flexibility, clear, transparent, fair compensation and benefit programs, performance-based remuneration, employees' engagement, support of employees' education and employment of high caliber talents. Companies are encouraged to assign higher priority for implementation of these practices in their HR routines. At the same time, some of the practices were identified as less influential (e.g. focus on diversity and inclusivity, absence of language barriers, implementation of CSR practices and attractive location of worksite) and, thus, are recommended to be downgraded in firm's priority list.

By eliminating business-level factors of talent migration and introducing talent management practices as a mean of addressing other significant factors, Russian companies will be able to heavily contribute to mitigation of the risk of talent outflow not only on the scale of separate organizations, but also on the level of the whole country. As a result, the role of organizations will change, as their power in solving problems of national importance will become evident.

Limitations and future research

It is important to note that current research has a few limitations as it is a first step in opening "black box" of the role of talent management in reversing brain drain.

In particular, this study did not look deeper into respondents' characteristics and their relevance to the obtained results; however, there are some premises of some of them being important. Thus, for instance, gender-specific analysis might show interesting results, especially since family ties were found to be significantly related to the possibility of positive migration decision, and women are believed to be more affected to families compared to men. At the same time, the participants of the study were relatively young and most of them did not have children or dependent relatives, which made it impossible to examine broader impact of family ties on migration propensity. Moreover, the educational background and work experience of respondents were not thoroughly investigated, while they might cause the difference in perception of both migration factors' and talent management practices' importance. In this paper, the sample was mostly represented by business and economics students which limits generalizability of findings to graduates of other majors, and future studies are encouraged to involve more students of other profiles in similar research. Finally, the city of origin was not considered in this study, and the fact

that majority of respondents come from the biggest Russian cities might have affected their assessment of migration-driving factors.

Apart from investigation of various characteristics of talented graduates, there are some additional directions that might be followed for further research. To start with, individuals with high level of human capital other than talented graduates should be involved, as it is likely that combination of migration drivers and role of talent management practices in changing relocation decision vary for different talent groups. Moreover, it is important to study talent migration in a more long-term perspective to obtain better understanding of the influence of pull factors and to make sure that various changing motives of migrants get considered. To do that, longitudinal tests can be approached. At last, moderating role of talent management practices requires further investigation.

List of references

1. Agrawal, A., Kapur, D., McHale, J., and Oettl, A. (2011). Brain drain or brain bank? The impact of skilled emigration on poor-country innovation. *Journal of Urban Economics*, 69(1), 43-55.
2. Ahammad, M.F., Glaister, K.W., Sarala, R.M., and Glaister, A.J. (2018). Strategic Talent Management in Emerging Markets. *Thunderbird International Business Review*, 60(1): 5-8.
3. Al Ariss, A., and Sidani, Y. (2016). Comparative international human resource management: Future research directions. *Human Resource Management Review*, 26(4), 352–358.
4. Altbach, P.G. (2004). Globalisation and the university: Myths and realities in an unequal world. *Tertiary Education and Management*, 10(1): 3-25.
5. Arthur, M.B., and Rousseau, D.M. (1996). The boundaryless career as a new employment principle. In M. B. Arthur, and D. M. Rousseau (Ed.), *The boundaryless career* (pp. 3–20), New York , NY: Oxford University Press.
6. Aston, C. and Morton, L. (2005). Managing talent for competitive advantage: Taking a systematic approach to talent management. *Strategic HR Review*, 4, 28–31.
7. Aulakh, P.S. (2007). Emerging multinationals from developing economies: motivations paths and performance. *Journal of International Management*, 13(3): 338–355.
8. Azman, N., Sirat, M., and Pang, V. (2016). Managing and mobilising talent in Malaysia: issues, challenges and policy implications for Malaysian universities. *Journal of higher education policy and management*, 38(3): 316-332.
9. Baba, M.L., Gluesing, J., Ratner, H., and Wagner, K.H. (2004). The context of knowing: Natural history of a globally distributed team. *Journal of Organizational Behavior*, 25: 547-587.
10. Balaz, V., Williams, A., and Kollar, D. (2004). Temporary versus permanent youth brain drain: economic implications. *International Migration*, 42(4): 3-34.
11. Balkundi, P. and Kilduff, M. (2006). The ties that lead: A social network approach to leadership. *The Leadership Quarterly*, 17(4): 419-439.
12. Bartlett, C. and Ghoshal, S. (1989). *Managing across borders: The transnational solution*. Cambridge, MA: Harvard Business Press.
13. Bartlett, C. and Ghoshal, S. (2003). What is a global manager? *Harvard Business Review*.
14. Baruch, Y. (2004). *Managing careers: Theory and practice*. Harlow: FT-Prentice Hall/Pearson.

15. Baruch, Y., Budhwar, P.S., and Khatri, N. (2007). Brain drain: Inclination to stay abroad after studies. *Journal of World Business*, 42(1), 99-112.
16. Baruffaldi, S. and Landoni, P. (2012). Return mobility and scientific productivity of researchers working abroad: the role of home country linkages. *Research Policy*, 41 (9): 1655–1665.
17. Bassioni, G., Adzaho, G., and Niyukuri, D. (2016). Brain drain: Entice Africa's scientists to stay. *Nature*, 535(7611): 231–231.
18. Beamond, M.T., Farndale, E., and Härtel, C.E. (2016). MNE translation of corporate talent management strategies to subsidiaries in emerging economies. *Journal of World Business*, 51(4): 499–510.
19. Beechler, S., and Woodward, I.C. (2009). The global “war for talent.” *Journal of International Management*, 15(3), 273–285.
20. Beine, M., Docquier, F., and Rapoport, H. (2001). Brain drain and economic growth: theory and evidence. *Journal of Development Economics*, 64(1), 275-289.
21. Bethke-Langenegger, P. (2012). The differentiated workforce: Effects of categorization in talent management on workforce level. Working paper, № 18. *Switzerland: Department of Business Administration, University of Zurich*.
22. Bhagwati, J. (1983) International Factor Mobility, *Cambridge, MA: MIT Press*.
23. Bhagwati, J. and Hamada, K. (1974). The brain drain, international integration of markets for professionals and unemployment: a theoretical analysis. *Journal of Development Economics*, 1(1): 19-42.
24. Blass, E. (2007). Talent Management: Maximizing Talent for Business Performance. *London: Chartered Management Institute; Ashridge Consulting*.
25. Boncea, I. (2015). Turning brain drain into brain gain: evidence from Romania's medical sector. *Procedia Economics and Finance*, 20: 80–87.
26. Borjas, G. and Bratsberg, B. (1996). Who Leaves? The Outmigration of the Foreign-Born. *Review of Economics and Statistics*, 78: 165-176.
27. Bothner, M.S., Podolny, J.M., and Smith, E.B. (2011). Organizing Contests for Status: The Matthew Effect vs. the Mark Effect. *Management Science*, 57(3): 439-457.
28. Brown, P. and Tannock, S. (2009). Education, meritocracy and the global war for talent. *Journal of Education Policy*, 24(4): 377-392.
29. Buckingham, M. and Vosburgh, R.M. (2001). The 21st century human resources function: it's the talent, stupid! *Human Resource Planning*, 24(4): 17-23.

30. Budhwar, P., Tung, R.L., Varma, A., and Do, H. (2017). Developments in Human Resource Management in MNCs from BRICS Nations: A Review and Future Research Agenda. *Journal of International Management*, 23(2): 111-123.
31. Bushnell, P. and Choy, W.K. (2001). Go west, young man, go west? *Treasury Working Paper, Wellington*.
32. Caligiuri, P. (2000). The big five personality characteristics as predictors of expatriate success. *Personnel Psychology*, 53: 67–88.
33. Caligiuri, P., and Di Santo, V. (2001). Global competence: What is it, and can it be developed through global assignments? *Human Resource Planning*, 3: 27–38.
34. Caligiuri, P., and Tarique, I. (2009). Predicting effectiveness in global leadership activities. *Journal of World Business*, 44: 336–346.
35. Cappelli, P. (2005). Will there be a labor shortage? *Human Resource Management*, 44: 143–149.
36. Carra, S., Inkson, K., and Thorn, K. (2005). From global careers to talent flow: Reinterpreting ‘brain drain’. *Journal of World Business*, 40: 386–398.
37. Cascio, W., and Boudreau, J. W. (2016). The search for global competence: From international HR to talent management. *Journal of World Business*, 51: 103-114.
38. Cervantes, M. and Guellec, D. (2002) The Brain Drain: Old Myths, New Realities. *OECD Observer*, 230: 40–42.
39. Chamorro-Premuzic, T. (2013). Does Money Really Affect Motivation? A Review of the Research. *Harvard Business Review*. (Retrieved from: <https://hbr.org/2013/04/does-money-really-affect-motiv>)
40. Chapman, D., Uggerslev, K., Carroll, S., Piasentin, K., and Jones, D. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90: 928–944.
41. Cheese, P., Thomas, R.J., and Craig, E. (2008) The Talent Powered Organization: Strategies for Globalization, Talent Management and High Performance. *London: Kogan Page Ltd*.
42. Chikanda, A. (2011). The changing patterns of physician migration from Zimbabwe since 1990. *International Journal of Migration, Health and Social Care*, 7(2): 77-92.
43. CIPD (2012). Learning and talent development 2012. (Retrieved from: <http://www.cipd.co.uk/hr-resources/survey-reports/learning-talent-development-2012.aspx>)
44. Clemens, M. A., Montenegro, C. E., and Pritchett, L. (2008). The Place Premium: Wage Differences for Identical Workers across the Us Border. *World Bank Policy Research (Working Paper No. 4671)*.

45. Collings, D. G., and Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19, 304–313.
46. Collings, D.G. (2014). Toward mature talent management: beyond shareholder value. *Human Resource Development Quarterly*, 25(3): 301-319.
47. Collings, D.G., Scullion, H., and Morley, M.J. (2007). Changing patterns of global staffing in the multinational eEnterprise: Challenges to the conventional expatriate assignment and emerging alternatives. *Journal of World Business*, 42: 198–213.
48. Collings, D.G., Scullion, H., and Vaiman, V. (2011). European Perspectives on Talent Management. *European Journal of International Management*, 5: 453–462.
49. Conger, J. (2010). Developing leadership talent: Delivering on the promise of structured programs. *Strategy-driven talent management: A leadership imperative*: 281-311.
50. Coniglio, N.D. and Brzozowski, J. (2018). Migration and development at home: Bitter or sweet return? Evidence from Poland. *European Urban and Regional Studies*, 25(1): 85-105.
51. Cooke, F.L., Saini, D.S., and Wang, J. (2014). Talent management in China and India: A comparison of management perceptions and human resource practices. *Journal of World Business*, 49(2): 225–235.
52. Coulson-Thomas, C. (2012). Talent management and building high performance organisations. *Industrial and commercial trading*, 44(7): 429-436.
53. Creelman, D. (2004). Return on Investment in Talent Management: Measures You Can Put to Work Right Now. *Washington, DC: Human Capital Institute*.
54. Crowley-Henry, M., and Al Ariss, A. (2016). Talent management of skilled migrants: propositions and an agenda for future research. *The International Journal of Human Resource Management*: 1–26.
55. Dako-Gyeke, M. (2015). We never plan to return home: Voices of pre-migrant Ghanaian youth. *Journal of Youth Studies*, 19(2), 1–14.
56. Dako-Gyeke, M. (2016). Exploring the migration intentions of Ghanaian youth: A qualitative study. *Journal of International Migration and Integration*, 17(3): 723–744.
57. Daugėlienė, R. and Marcinkevičienė, R. (2009). Brain drain problem in Lithuania: possible actions for its' solution via brain gain. *European Integration Studies*, 3: 14-22.
58. Davenport, S. (2004). Panic and panacea: Brain drain and science and technology human capital policy. *Research Policy*, 33(4): 617–630.
59. Davies, B. and Davies, B.J. (2010). Talent Management in Academies. *International Journal of Educational Management*, 24: 418–426.

60. de Haas, H. 2011. The Determinants of International Migration: Conceptualizing Policy, Origin and Destination Effects. *Oxford: International Migration Institute. IMI Working Paper No. 32.*
61. De Haro, J.M. (2010). Talent management, but of what talent? Ten questions to delimitate the talent concept in organizations. *Capital Humano*, 242: 72-78.
62. DeLong, T.G. and Vijayaraghavan, V. (2003). Let's hear it for B players. *Harvard Business Review*, 81(6): 96-102.
63. DeTuncq, T.H., and Schmidt, L. (2013). Examining integrated talent management. *T+D. Human Capital*, 24 (5): 31-35.
64. Dickson, M., Hartog, D., and Mitchelson, J. (2003). Research on leadership in a cross- cultural context: Making progress, and raising new questions. *The Leadership Quarterly*, 14: 729–768.
65. Docquier, F. (2018). Long-term trends in international migration: lessons from macroeconomic model. *Economics and Business Review*, 4(1): 3-15.
66. Docquier, F., and Rapoport, H. (2009). Skilled Migration: The Perspective of Developing Countries. In: Bhagwati, Jagdish N.; Hanson, Gordon H., editors. *Skilled Migration Today: Prospects, Problems, and Policies. Oxford: Oxford University Press.*
67. Earley, P.C. and Gibson, C.B. (2002). *Multinational teams: New perspectives. Lawrence Earlbaum Associates.*
68. Ericsson, K. A., Prietula, M. J., and Cokely, E. T. (2007). The making of an expert. *Harvard Business Review*, 85: 114–121.
69. Faini, R. (2007). Remittances and the Brain Drain: Do More Skilled Migrants Remit More? *The World Bank Economic Review*, 21(2): 177–191.
70. Ferris, G., Perrewé, P., Ranft, A., Zinko, R., Stoner, J., Brouer, R., et al. (2007). Human resources reputation and effectiveness. *Human Resource Management Review*, 17: 117–130.
71. Fey, C. and Shekshnia, S. (2011). The key commandments for doing business in Russia. *Organizational Dynamic*, 40(1): 57–66.
72. Field, A. (2009) *Discovering Statistics Using SPSS. 3rd Edition, Sage Publications Ltd., London.*
73. Fishbein, M., and Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. *Reading, MA: Addison-Wesley.*
74. Furuya, N., Stevens, M.J., Bird, A., Oddou, G., and Mendenhall, M. (2009). Managing the learning and transfer of global management competence: antecedents and outcomes of Japanese repatriation effectiveness. *Journal of International Business Studies*, 40(2): 200– 215.

75. Gagliardi, L. (2015). Does skilled migration foster innovative performance? Evidence from British local areas. *Papers in Regional Science*, 94(4): 773–794.
76. Gallardo-Gallardo, E., Dries, N., and Gonzalez-Cruz, T. (2013). What is the meaning of “talent” in the world of work? *Human Resource Management Review*, 23: 290-300.
77. Gallardo-Gallardo, E., Nijs, S., Dries, N., and Gallo, P. (2015). Towards an understanding of talent management as a phenomenon-driven field using bibliometric and content analysis. *Human Resource Management Review*, 25: 264-279.
78. Ganaie, H.U. and Haque, M.I. (2017). Talent management and value creation: a conceptual framework. *Academy of Strategic Management Journal*, 16(2): 1-9.
79. Garavan, T.N., Carbery, R., and Rock, A. (2012). Mapping talent development: definition, scope and architecture. *European Journal of Training and Development*, 36(1): 5-24.
80. Geesen, M. (1998). Brain Hemorrhage. *The New Republic*, 14–16.
81. Gibson, J. and McKenzie, D. (2011). Eight questions about brain drain. *Journal of Economic Perspectives*, 25 (3): 107–128.
82. Gibson, J., and McKenzie, D. (2014). Scientific mobility and knowledge networks in high emigration countries: Evidence from the Pacific. *Research Policy*, 43(9): 1486-1495.
83. Global Talent Competitiveness Index Report. (2017). *INSEAD*. (Retrieved from: <https://www.insead.edu/news/2017-global-talent-competitiveness-index-davos>).
84. González-Cruz, T. Martínez-Fuentes, C., and Pardo-del-Val, M. (2009). La gestión del talento en la empresa industrial española. *Economía Industrial*, 374: 21-35.
85. Grecu, M., and Titan, E. (2016). Brain drain — brain gain, evidence from European Union. *Journal Of Applied Quantitative Methods*: 61-69.
86. Grigorieva, E. (2016). The budgets are optimized, but no one will save money on talents. *Pharmperosnnel*. (Retrieved from: <http://pharmpersonal.ru/publs/statji/novaja-upravlenie-personalom/bjudzhety-optimizirujut-no-na-talantax-ekonomitj-ne-budut.html>)
87. Grogger, J., and Hanson, G.H. (2008). Income Maximization and the Selection and Sorting of International Migrants, *NBER Working Paper 13821*.
88. Groysberg, B., Nanda, A., and Nohria, N. (2004). The Risky Business of Hiring Stars. *Harvard Business Review*, 82: 92–100.
89. Guthridge, M., and Komm, A. B. (2008). Why multinationals struggle to manage talent. *The McKinsey Quarterly*, May: 1–5.
90. Ha, W., Yi, O. and Zhang, J. (2016). Brain drain, brain gain, and economic growth in China. *China Economic Review*, 38: 322-337.
91. Hannon, J., and Milkovich, G. (1996). The effect of human resource reputation signals on share prices: An event study. *Human Resource Management*, 35: 405–424.

92. Haque, N.U., and Kim, S.J. (1995). A Human capital flight B: impact of migration on income and growth. *IMF Staff Papers* 42 Ž3.: 77–607.
93. Harris, J. and Todaro, M. (1970). Migration, unemployment and development: a two- sector analysis. *The American Economic Review*, 60(1): 126–142.
94. Harvey, M. (1989). Repatriation of corporate executives: an empirical study. *Journal of International Business Studies*, 20(1): 131–144.
95. Heinen J. and O’Neill C. (2004). Managing Talent to Maximize Performance. *Employment Relations Today*, 31(2): 67–82.
96. Heslin, P.A., Latham, G.P., and Vandewalle, D. (2005). The effect of implicit person theory on performance appraisals. *Journal of Applied Psychology*, 90: 842–856.
97. Hinrichs, J.R. (1966). High-talent personnel: Managing a critical resource. *New York, NY: American Management Association*.
98. Hirschman, A.O. (1970). Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States. *Cambridge, MA: Harvard University Press*.
99. Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. *Thousand Oaks: Sage*.
100. Höglund, M. (2012). Quid pro quo? Examining talent management through the lens of psychological contracts. *Personnel Review*, 41(2): 126-142.
101. Holden, N. and Vaiman, V. (2013). Talent management in Russia: not so much war for talent as wariness of talent. *Critical Perspectives on International Business*, 9(1/2): 129–146.
102. Holland, P., Sheenan, C., and De Cieri, H. (2007). Attracting and retaining talent: Exploring human resources development trends in Australia. *Human Resource Development International*, 10: 247–262.
103. Hooks, J., Edgar, F., Inkson, K., Carr, S.C., Edwards, M., Jackson, D., Thorn, K., Allfree, N. (2007). Building organisational commitment to counteract brain drain from Southern Hemisphere accountancy firms. *Research and Practice in Human Resource Management*, 15(1): 1-22.
104. Hussain, S.M. (2015). Reversing the brain drain: is it beneficial? *World Development*, 67: 310-322.
105. Huteson, G. and Sofroniou, N. (1999) The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models. *Sage Publication, Thousand Oaks, CA*.
106. Iles, P., X. Chuai, and Preece, B. (2010). Talent Management and HRM in Multinational Companies in Beijing: Definitions, Differences and Drivers. *Journal of World Business*, 45(2): 179–89.

107. Iontsev, V.A. and Magamedova, A.G. (2015). Demographic aspects of human capital development in Russia and its regions. *Economy of Region*, 3(43): 89–102.
108. Iontsev, V.A., Ryazantsev, S.V., and Iontseva, S.V. (2016). Emigration from Russia: New Trends and Forms. *Economy of Region*, 12(2): 499-509.
109. Iredale, R. (2001). The migration of professionals: theories and typologies. *International Migration*, 39(5): 7–26.
110. Joyce, W.F., and Slocum, J.W. (2012). Top management talent, strategic capabilities, and firm performance. *Organizational Dynamics*, 41(3): 183–193.
111. Kaiser, H.F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20: 141-151.
112. Kalyukov, E. (2015). Brain drain from Russia has increased during last 1,5 years. *RBC*. (Retrieved from: <http://www.rbc.ru/society/24/03/2015/551134c29a7947727d49866d>)
113. Katz, E. and Stark, O. (1987). International Migration under Asymmetric Information. *Economic Journal*, 97: 718-726.
114. Kaufmann, D., and Malul, M. (2015). The dynamic brain drain of entrepreneurs in peripheral regions. *European Planning Studies*, 23(7): 1345-1356.
115. Kazlauskienė, A. and Rinkevičius, L. (2006). Lithuanian “Brain Drain” Causes: Push and Pull Factors. *Engineering economics*, 1(46): 27-37.
116. Kenney, M., Breznitz, D., Murphree, M., 2013. Coming back home after the sun rises: returnee entrepreneurs and growth of high tech industries. *Research Policy*, 42 (2): 391–407.
117. Khilji, S.E., Tarique, I., and Schuler, R.S. (2015). Incorporating the macro view in global talent management. *Human Resource Management Review*, 25(3): 236–248.
118. Kim, L. (1998). Technology policies and strategies for developing countries: lessons from the Korean experience. *Technology Analysis & Strategic Management*, 10(3): 311–324.
119. King, R. (2012). Geography and migration studies: retrospect and prospect. *Population, Space and Place*, 18(2): 134–153.
120. Kline, P. (1999) A Handbook of Psychological Testing, 2nd edn. *London: Routledge*.
121. Korobkov, A.V. and Zaionchkovskaia, Z.A. (2012). Russian brain drain: Myths v. reality. *Communist and Post-Communist Studies*, 45: 327–341.
122. Kotlyar, I. and Karakowsky, L. (2012). The Influence of Team Demographic Composition on Individual Helping Behavior. *Psychology*, 3: 1010-1017.
123. Koys, D. (1997). Human resource management and Fortune’s corporate reputation survey. *Employee Responsibilities and Rights Journal*, 10: 93–101.

124. KPMG. (2014). War for talent-time to change direction. Key findings from KPMG's HR Center of Excellence Survey. (Retrieved from: <https://home.kpmg.com/content/dam/kpmg/pdf/2014/07/war-for-talent.pdf>)
125. Kuhn, P., and McAusland, C. (2006). The International Migration of Knowledge Workers: When is Brain Drain Beneficial. *NBER Working Paper 12761*.
126. Lanvin, B., and Evans, P. (2013). The Global Talent Competitiveness Index 2013. *Human Capital Leadership Institute (INSEAD and Adecco Group)*.
127. Latukha, M. (2014). Talent management: theoretical approaches and Russian companies' experience. *Vestnik Sankt-Peterburgskogo Universiteta, Seriya 8: Management*, 4: 46-67.
128. Latukha, M. (2015). Talent management in Russian companies: domestic challenges and international experience. *The International Journal of Human Resource Management*, 26(8), 1051–1075.
129. Latukha, M. (2018). Talent development and a firm's performance: Evidence from Russian companies. *Journal of General Management*, 43(2): 51-62.
130. Lazarova, M.B., and Cerdin, J.L. (2007). Revisiting repatriation concerns: Organizational support versus career and contextual influence. *Journal of International Business Studies*, 38: 404–429.
131. Ledeneva, V.Y. (2014). Intellectual migration: global and Russian tendencies. *Sociology of Education*, 2: 106-113.
132. Leigh, A. (2009). Research topic: Talent management. *People Management*, 33.
133. Levy, L.F. (2003). The first world's role in the third world brain drain. *British Medical Journal*, 327: 170-177.
134. Lewin, K. (1951). *Field Theory in Social Science: Selected Theoretical Papers*. New York, NY: Harper.
135. Lewis R.E., Heckman R. (2006) Talent Management: A Critical Review. *Human Resource Management Review*, 16: 139-154.
136. Lien, D. and Wang, Y. (2005). Brain drain or brain gain: a revisit. *Journal Of Popular Economics*, 18: 153-163.
137. Lievens, F., Decaestecker, C., Coetsier, P., and Geirnaert, J. (2001). Organizational attractiveness for prospective applicants: A person-organization fit perspective. *Applied Psychology: An International Review*, 50: 81–108.
138. Liu, Y., Shen, J., Xu, W., and Wang, G. (2017). From school to university to work: Migration of highly educated youths in China. *The Annals of Regional Science*, 59(3), 651–676.

139. Lockwood, N. (2008). Leveraging employee engagement for competitive advantage: HR's strategic role. *Society for Human Resource Management*, 22: 2-11.
140. Long, J.S. and Freese, J. (2006). Regression Models for Categorical Dependent Variables using Stata, 2nd Edition. *StataCorp LP*.
141. Mahadevan, J., and Kilian-Yasin, K. (2017). Dominant discourse, orientalism and the need for reflexive HRM: Skilled Muslim migrants in the German context. *The International Journal of Human Resource Management*, 28(8): 1140-1162.
142. Mandelman, F.S. and Zlate, A. (2017). Economic aspects of international labour migration. *International Finance*, 20(1): 100-112.
143. Marchiori, L., Shen, I.L., and Docquier, F. (2013). Brain drain on globalization: a general equilibrium analysis from the sending countries' perspective. *Economic Inquiry*, 51(2): 1582-1602.
144. Marsick, V.J. and Watkins, K.E. (2001). Informal and incidental learning. *New Directions For Adult And Continuing Education*, 89: 25-34.
145. Martin, J., and Schmidt, C. (2010). How to Keep Your Top Talent. *Harvard Business Review*, 88: 54–61.
146. Matthews, P., and Zander, B. (2000). *Exodus. The Listener*, 30: 17–22.
147. Mattoo, A., Neagu, I.C. and Özden, Ç. (2008). Brain waste? Educated immigrants in the US labor market. *Journal of Development Economics*, 87(2): 255-269.
148. Mayr, K. and Peri, G. (2008). Return migration as channel of brain gain(CReAM Discussion Paper Series No. 0804). Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London. (Retrieved from: <http://ideas.repec.org/p/crm/wpaper/0804.html>).
149. McCauley, C.D. and Douglas, C.A. (2004). Developmental relationships. In McCauley, C.D. and Velsor, E.V. (Eds), *The Center for Creative Leadership Handbook of Leadership Development*, 2nd ed., *Jossey-Bass, San Francisco, CA*.
150. McDonnell, A., Lamare, R., Gunnigle, P., and Lavelle, J. (2010). Developing tomorrow's leaders — evidence of global talent management in multinational enterprises. *Journal of World Business*, 45: 150–160.
151. McPhail, R., McNulty, Y., and Hutchings, K. (2016). Lesbian and gay expatriation: Opportunities, barriers and challenges for global mobility. *The International Journal of Human Resource Management*, 27(3): 382-406.
152. Mellahi, K., and Collings, D.G. (2010). The Barriers to Effective Global Talent Management: The Example of Corporate Élités in MNEs. *Journal of World Business*, 45: 143–149.

153. Mellahi, K., Budhwar, P.S., and Li, B. (2010). A study of the relationship between exit, voice, loyalty and neglect and commitment in India. *Human Relations*, 63(3): 349-369.
154. Meyer, J. (2001). Network approach versus brain drain: lessons from the diaspora. *International Migration*, 39(5): 91–110.
155. Miao, L., and Wang, H. (2017). Reverse Migration in China: Contemporary Chinese Returnees. In *International Migration of China: Status, Policy and Social Responses to the Globalization of Migration* (pp. 53–84). *Singapore: Springer Singapore*.
156. Michaels, E., Handfield-Jones, H. and Axelrod, B. (2001), *The War for Talent*, *Harvard Business Press, Boston, MA*.
157. Minbaeva, D., and Collings, D.G. (2013). Seven myths of global talent management. *The International Journal of Human Resource Management*, 24(9): 1762–1776.
158. Miyagiwa, K. (1991). Scale Economies in Education and the Brain Drain Problem. *International Economic Review*, 32(3): 743-759.
159. Moeller, M., Maley, J., Harvey, M., and Kiessling, T. (2016). Global talent management and in-patriate social capital building: a status inconsistency perspective. *The International Journal of Human Resource Management*, 27(9): 991–1012.
160. Morris, S., Snell, S. & Björkman, I. (2016). *Journal of International Business Studies*, 47(6): 723-747.
161. Morrison, A.J. (2000). Developing a global leadership model. *Human Resource Management*, 39(2/3): 117-131.
162. Naumova, T.V. (1998). Russia's "Brain Drain". *Russian Social Science Review*, 39(2): 49-56.
163. Netessine, S. and Yakubovich, V. (2012). The Darwinian workplace. *Harvard Business Review*, May 1: 25-28.
164. Ng, P.T. (2013). The global war for talent: responses and challenges in the Singapore higher education system. *Journal of Higher Education Policy and Management*, 35(3): 280–292.
165. Nijs, S., Gallardo-Gallardo, E., Dries, N., and Sels, L. (2014). A multidisciplinary review into the definition, operationalization and measurement of talent. *Journal of World Business*, 49: 180-191.
166. Nilsson, S. and Ellström, P.E. (2012). Employability and talent management: challenges for HRD practices. *European Journal of Training and Development*, 36(1): 26-45.
167. Nunnally, J.C. (1978). *Psychometric theory* (2nd ed.). *New York: McGraw-Hill*.
168. O'Reilly III, C.A. and Pfeffer, J. (2000). Unlocking the hidden value in organizations. *Employment Relations Today*, 27(2): 63-80.

169. Oettl, A., and Agrawal, A. (2008). International labor mobility and knowledge flow externalities. *Journal of International Business Studies*, 39(8): 1242-1260.
170. Ohlott, P.J. (2004). Job assignments. *The Center for Creative Leadership handbook of leadership development*: 151-182.
171. Organiściak-Krzykowska, A. (2017). The Determinants and the Size of International Migration in Central and Eastern Europe After 2004. *Comparative Economic Research*, 20(4): 159-177.
172. Ottaviano, G.I.P. and Peri, G. (2012). Rethinking the effect of immigration on wages. *Journal of the European Economic Association*, 10(1): 152–197.
173. Pang, T., Lansang, M.A., and Haines, A. (2002). Brain drain and health professionals: A global problem needs global solutions. *British Medical Journal*, 324: 499–500.
174. Panibratov, A. (2012). Russian multinationals: From regional supremacy to global lead. *Routledge, London, U.K.*
175. Papademetriou, D.G., and Sumption, M. (2013). Attracting and Selecting from the Global Talent Pool – Policy challenges. *Migration Policy Institute*, 16.
176. Parikh, A., and Van Leuvensteijn, M. (2003). Internal migration in regions of Germany: A panel data analysis. *Applied Economics Quarterly*, 49(2): 173–192.
177. Partridge, M.D., Rickman, D.S., Olfert, M.R., and Ali, K. (2012). Dwindling US internal migration: Evidence of spatial equilibrium or structural shifts in local labor markets? *Regional Science and Urban Economics*, 42(1): 375–388.
178. Pedersen, P.J., Pytlikova, M., and Smith, N. (2008). Selection and network effects—Migration flows into OECD countries 1990–2000. *European Economic Review*, 52(7): 1160-1186.
179. Pellegrino, A. (2001). Trends in Latin American skilled migration: brain drain versus brain exchange? *International Migration*, 39(5): 111–132.
180. Pepermans, R., Vloeberghs, D., and Perkisas, B. (2003). High potential identification policies: An empirical study among Belgian companies. *The Journal of Management Development*, 22: 660–678.
181. Petković, M. and Dordević, B. (2013). Global talent management as a factor of multinational companies' competitiveness. *Ekonomске Teme*, 51(4): 791-810.
182. Petroff, A. (2016). Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain. *European Societies*, 18(1).
183. Pfeffer, J. (2001). Fighting the war for talent is hazardous to your organization's health. *Organizational Dynamics*, 29(4): 248–259.

184. Pfeffer, J., and Sutton, R. I. (2006). Evidence-based management. *Harvard Business Review*, 84: 62–74.
185. Piketty, T. (1997). Immigration et justice sociale. *Revue Economique*, 48(9): 1291–1309
186. Porter, M.E. (1990). The Competitive Advantage of Nations. *New York: The Free Press*.
187. Portes, A. (1976). Determinants of the Brain Drain. *International Migration Review*, 10(4): 489–508.
188. Qari, S., Konrad, K.A. and Geys, B. (2012). Patriotism, taxation and international mobility. *Public Choice*, 151(3-4): 695-717.
189. Qin, F. (2015). Global talent, local careers: Circular migration of top Indian engineers and professionals. *Research Policy*, 44: 405-420.
190. Ready D.A., Hill L.A., Conger J.A. (2008). Are you a high potential? *Harvard Business Review*, 88(6): 78-84.
191. Ready, D.A., and Conger, J.A. (2007). Make Your Company a Talent Factory. *Harvard Business Review*, 85(6): 9–77.
192. Roberts, K., Kossek, E. E., and Ozeki, C. (1998). Managing the global workforce: Challenges and strategies. *The Academy of Management Executive*, 12(4): 93–106.
193. Robson, C. (2002). Real World Research. A Resource for Social Scientists and Practitioner Researches, 2nd edition. *Blackwell: Oxford*.
194. Rock, A.D. and Garavan, T.N. (2006). Reconceptualizing developmental relationships. *Human Resource Development Review*, 5 (3): 330-354.
195. Russian Academy of Science. (2018). Russian Academy of Science claims that brain drain from Russia increased three times. *RBC*. (Retrieved from: <https://www.rbc.ru/society/29/03/2018/5abcc9f59a7947e576977387>)
196. Russian Federal State Statistics Service. (2018). Brain drain from Russia has increased. *Vedomosti*. (Retrieved from: <https://www.vedomosti.ru/economics/articles/2018/01/23/748694-utechka-mozgov>)
197. Ryazantsev, S.V. and Pismennaya, E.E. (2013). Emigration of scientists from Russia: brain drain or brain circulation. *Sociology of Science*: 24-34.
198. Saadat, V. and Eskandari, Z. (2016). Talent management: The great challenge of leading organizations. *International Journal of Organizational Leadership*, 5(2): 103-109.
199. Saint-Paul, G. (2004). The brain drain: some evidence from European expatriates in the United States. Institute for the Study of Labor (IZA) *Discussion Paper Series No. 1310*, Bonn.

200. Salt, J. (1997). *International Movements of the Highly-Skilled*, OECD NEIM Division Occasional Paper No. 3, Paris.
201. Sassen, S. (1988). *The Mobility of Labor and Capital: A Study in International Investment and Labor Flow*. Cambridge University Press, New York.
202. Saunders, M., Lewis, P. and Thornhill, A. (2009). *Research methods for business students*. Harlow: Financial Times Prentice Hall.
203. Saxenian, A. (2005). From brain drain to brain circulation: transnational communities and regional upgrading in India and China. *Studies in Comparative International Development (SCID)*, 40(2), 35-61.
204. Schuler, R.S. (2015). The five-C framework for managing talent. *Organizational Dynamics*, 44: 15–29.
205. Schuler, R.S., Jackson, S.E., and Luo, Y. (2004). *Managing Human Resources in Cross-border Alliances*. New York: Routledge.
206. Schuler, R.S., Jackson, S.E., and Tarique, I. (2011). Global talent management and global talent challenges: Strategic opportunities for IHRM. *Journal of World Business*, 46(4): 506–516.
207. Scullion, H., and Collings, D. G. (2006). *Global staffing*. New York: Routledge.
208. Scullion, H., Collings, D. G., and Caligiuri, P. (2010). Global talent management. *Journal of World Business*, 45: 105–108.
209. Seigel, J. (2008). Global talent management at Novartis. *Harvard Business School, Case 9: 708-486*.
210. Shakhbazov, A. Perspectives of HR in Russia. *Studying center "Business class"*. (Retrieved from: <http://www.class.ru/hrclub/notabene/notabene2/>).
211. Shen, J. and Darby, R. (2006). Training and management development in Chinese multinational enterprises. *Employee Relations*, 28(4): 342-362.
212. Silzer, R., and Church, A.H. (2009). The pearls and perils of identifying potential. *Industrial and Organizational Psychology*, 2: 377–412.
213. Silzer, R., and Church, A.H. (2010). Identifying and assessing high-potential talent: Current organizational practices. From: *Strategy-driven talent management*: 213-279.
214. Silzer, R., and Dowell, B. (Eds.). (2010). *Strategy-driven talent management*. San Francisco, CA: Jossey-Bass.
215. Sjaastad, L. (1962). The costs and returns of human migration. *The Journal of Political Economy*, 70(5): 80–93.
216. Smart, B. (2005). *Topgrading: How Leading Companies Win by Hiring, Coaching and Keeping the Best People*. N.Y.: Penguin Group, USA.

217. Smith, M.P. and Favell, A. (2006). *The Human Face of Global Mobility: International Highly Skilled Migration in Europe, North America and the Asia-Pacific*. Transaction Publishers, New Brunswick, NJ.
218. Sonnenberg, M., Zijdeveld, V., and Brinks, M. (2014). The role of talent-perception incongruence in effective talent management. *Journal of World Business*, 49: 272–280.
219. Soon, J.J. (2010). The determinants of students' return intentions: A partial proportional odds model. *Journal of Choice Modelling*, 3(2): 89–112.
220. Soon, J.J. (2012). Home is where the heart is? Factors determining international students' destination country upon completion of studies abroad. *Journal of Ethnic and Migration Studies*, 38(1): 147–162.
221. Sparrow, P. R., Brewster, C., and Harris, H. (2004). *Globalizing Human Resource Management*. London and New York: Routledge.
222. Spilimbergo, A. (2009). Democracy and Foreign Education. *American Economic Review*, 99(1): 528-543.
223. Stahl, G. K., Miller, E. L. and Tung, R. L. (2002). Toward the boundaryless career: A closer look at the expatriate career concept and the perceived implications of an international Assignment. *Journal of World Business*, 37(3): 1–12.
224. Stahl, G.K., Björkman, I., Farndale, E., Morris, S.S., Paauwe, J., Stiles, P., Trevor, J., and Wright, P.M. (2012). Six Principles of Effective Global talent management. *MIT Sloan Management Review*, 53: 24–32.
225. Stahl, G.K., Björkman, I., Farndale, E., Morris, S.S., Paauwe, J., Stiles, P., Trevor, J., and Wright, P.M. (2007). *Global Talent Management: How Leading Multinationals Build and Sustain Their Talent Pipeline*. Faculty and research working paper, INSEAD, Fontainebleau, France.
226. Stark, O. and Wang, Y. (2002). Inducing Human Capital Formation: Migration as a Substitute for Subsidies. *Journal of Development Economics*, 86: 29–46.
227. Stark, O., Helmenstein, C., and Prskawetz, A. (1997). A Brain Gain with a Brain Drain. *Economic Letters*, 55(2): 227–34.
228. Stevens, J. (2002). Applied Multivariate Statistics For The Social Sciences. *Journal of Educational Statistics*, 47(2): 593-619.
229. Stolz, Y., and Baten, J. (2012). Brain drain in the age of mass migration: Does relative inequality explain migrant selectivity? *Explorations in Economic History*, 49(2): 205–220.
230. Dodani, S. and E LaPorte, R. (2005). Brain drain from developing countries: How can brain drain be converted into wisdom gain? *Journal of the Royal Society of Medicines*, 98(11): 487–49.

231. Tabachnick, B.G. and Fidell, L.S. (2012) Using Multivariate Statistics. 6h Edition, *Person Education, Boston*.
232. Tang, A. Z. R., Rowe, F., Corcoran, J., and Sigler, T. (2014). Where are the overseas graduates staying on? Overseas graduate migration and rural attachment in Australia. *Applied Geography*, 53: 66–76.
233. Tansley, C. (2011). What Do We Mean by the Term ‘Talent’ in Talent Management? *Industrial and Commercial Training*, 43(5): 266–274.
234. Tarique, I. and Schuler, R. (2018). A multi-level framework for understanding global talent managementsystems for high talent expatriates within and across subsidiaries of MNEs. *Journal of Global Mobility*, 6(1): 79-101.
235. Tarique, I. and Schuler, R.S. (2010). Global talent management: literature review, integrative framework, and suggestions for further research. *Journal of World Business*, 45(2), 122-133.
236. The Boston Consulting Group. (2007). The future of HR: Key challenges through 2015. *Dusseldorf: Boston Consulting Group*.
237. Thorn, K. and Holm-Nielsen, L.B. (2006). International Mobility of Researchers and Scientists: Policy Options for Turning a Drain into a Gain. *WIDER Working Paper Series 083, World Institute for Development Economic Research (UNU-WIDER)*.
238. Thunnissen, M. (2016). Talent management. For what, how and how well? An empirical exploration of talent management in practice. *Employee Relations*, 38(1): 57-72.
239. Thunnissen, M., Boselie, P., and Fruytier, B. (2013). A review of talent management: Infancy or adolescence?. *International Journal of Human Resource Management*, 24(9): 1744–1761.
240. Touliatos, J., Perlmutter, B.F., Straus, M.A., and Holden, G.W. (2001). Handbook of family measurement techniques. 1–3. *Thousand Oaks, CA: Sage*.
241. Transparency International. (2016). National integrity system assessments. (Retrieved from: <https://www.transparency.org/whatwedo/nis>)
242. Trofimova, T. (2012). Innovation economy and transformation of migration processes. *Vestnik VSGUTU*: 105-108.
243. Tulgan, B. (2002). Winning the Talent Wars: How to Build a Lean, Flexible, High-Performance Workplace. *W. W. Norton and Company*.
244. Tung, R.L. (1998). American expatriates abroad: From neophytes to cosmopolitans. *Journal of World Business*, 33: 125–144.
245. Tung, R.L. (2008). Brain circulation, diaspora, and international competitiveness. *European Management Journal*, 26(5): 298–304.

246. Tung, R.L. (2016). New perspectives on human resource management in a global context. *Journal of World Business*, 51(1): 142-152.
247. Tung, R.L., and Lazarova, M.B. (2006). Brain drain versus brain gain: An exploratory study of ex-host country nationals in central and east Europe. *International Journal of Human Resource Management*, 17: 1853–1872.
248. Ulrich, D. and Smallwood, N. (2012). What is talent? *Leader to Leader*, 63: 55-61.
249. Ushkalov, I.G. and Malakha, I.A. Brain drain as global phenomenon and its peculiarities in Russia. *Sociology of Science*: 110-117.
250. Vaiman, V., Scullion, H., and Collings, D. (2012). Talent management decision making. *Management Decision*, 50(5): 925–941.
251. Van Hear, N., Bakewell, O, and Long, K. (2017). Push-pull plus: reconsidering the drivers of migration. *Journal of Ethnic and Migration Studies*, 44(6): 927-944.
252. Varlamova, E. (2004). How do companies retain talented employees. *Managing Human Potential*, 1: 14-18.
253. Weinberg, B. (2011). Developing science: scientific performance and brain drains in the developing world. *Journal of Development Economics*, 95 (1), 95–104.
254. Williams, A.M., et al. (2004). International labour mobility and uneven regional development in Europe. *European Urban and Regional Studies*, 11(1): 27–46.
255. Williams, R. (2000). The business of memes: Memetic possibilities for marketing and management. *Management Decision*, 38: 272-279.
256. Wooldridge, A. (2006). The battle for brainpower. *Economist*, 381(8498): 3-5.
257. Wright, M., Filatotchev, I., Hoskisson, R.E., and Peng, M.W. (2005). Strategy research in emerging economies: Challenging the conventional wisdom. *Journal of Management Studies*, 42(1): 1-33.
258. Yeoh, B.S.A. and Eng, L.A. (2008). Guest editors' introduction: “talent” migration in and out of Asia: challenges for policies and places. *Asian Population Studies*, 4(3): 235–45.
259. Yost, P.R., and Chang, G. (2009). Everyone is equal, but some are more equal than others. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 2: 442–445.
260. Zhang, L.E., and Peltokorpi, V. (2016). Multifaceted effects of host country language proficiency in expatriate cross-cultural adjustments: a qualitative study in China. *The International Journal of Human Resource Management*, 27(13): 1448-1469.

Appendix 1. The questionnaire

GLOBAL TALENT MOBILITY SURVEY

The research team of the Center for the Study of Emerging Market and Russian MNEs (Graduate School of Management, St.Petersburg University, Russia) is conducting a survey that aims to identify the push and pull factors of talent migration in emerging markets.

We highly appreciate your interest in your support of scientific activities of our school! Filling up the questionnaire will take you approximately 10 minutes. Our target audience are full-time university / college students

Confidentiality is guaranteed! The data collected as the result of this survey will be used exclusively in scientific purposes. The results of the study will be aggregated, and none of responses will be presented out of context.

*Required

Respondent's profile	Please fill in or select appropriate response
Age*	
Gender*	<input type="checkbox"/> Male <input type="checkbox"/> Female
City of origin or HOME city (city of permanent resident)*	
Country of origin or HOME country (country of permanent resident)*	
Nationality* (indicate if more than one)	
Native language(s)*	
English language proficiency*	<input type="checkbox"/> A1 Beginner Can understand and use familiar everyday expressions and very basic phrases, Can introduce themselves and others and can ask and answer questions about personal details, Can interact in a simple way <input type="checkbox"/> A2 Elementary Can understand sentences and frequently used expressions related to areas of most immediate relevance, Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar matters, Can describe in simple terms aspects of their background, immediate environment and matters of immediate need <input type="checkbox"/> B1 Intermediate Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, Can deal with most situations likely to arise while travelling in an area where the language is spoken, Can produce simple connected text on topics that are familiar or of personal interest, Can describe experiences and events and briefly give reasons and explanations for opinions and plans <input type="checkbox"/> B2 Upper intermediate Can understand the main ideas of complex text on both concrete and abstract topics, Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party, Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue <input type="checkbox"/> C1 Advanced Can understand a wide range of demanding, longer clauses, and recognize implicit meaning, Can express ideas fluently and spontaneously without much obvious searching for expressions, Can use language flexibly and effectively for social, academic and professional purposes, Can produce clear, well-structured, detailed text on complex subjects <input type="checkbox"/> C2 Proficiency Can understand with ease virtually everything heard or read, Can summarize information from different spoken and written sources, Can express themselves spontaneously, very fluently and precisely, differentiating finer shades of meaning
Please indicate the level of proficiency of other languages besides your native language and English*	Options: A1, A2, B1, B2, C1, C2 (see previous question for detailed description) Example: Spanish (A2)

Family ties	Please fill in or select appropriate response
What is your marital status?*	<input type="checkbox"/> Single (never married) <input type="checkbox"/> Married, or in partnership (both partners of the same nationality) <input type="checkbox"/> Married, or in partnership (both partners of the different nationalities) <input type="checkbox"/> Other:

Do you have dependents (e.g., parents, children) who live with you and who receive more than half of their support from you?*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other						
Family ties	Please fill in or select appropriate response						
Do parent(s), brother(s) or sister(s), cousins or equivalent and remote relative(s) live in the same city/country as you are now?*	<input type="checkbox"/> Yes <input type="checkbox"/> No, we live in the same country, but in different cities. <input type="checkbox"/> No, we live in different countries. <input type="checkbox"/> Other:						
Please rate your agreement with each of the following statements*:	1 = Strongly disagree		4=Neutral / Undecided		7 = Strongly agree		
<i>My family and I are very close.</i>	1	2	3	4	5	6	7
<i>Living with my family is important to me.</i>	1	2	3	4	5	6	7
<i>I miss my family when I stay abroad.</i>	1	2	3	4	5	6	7
<i>Family ties are very important to me.</i>	1	2	3	4	5	6	7
<i>While choosing my career path I always consider my family's location.</i>	1	2	3	4	5	6	7

International experience								
Please indicate to what degree the following types of international experience affected you personally*:	1 = absence of this type of experience or small degree		4 = Average degree			7 = High degree		
<i>Academic study abroad (e.g., exchange semester)</i>	1	2	3	4	5	6	7	
<i>Volunteering / Unpaid service abroad</i>	1	2	3	4	5	6	7	
<i>Professional paid work abroad</i>	1	2	3	4	5	6	7	
<i>Research project</i>	1	2	3	4	5	6	7	
<i>Internship abroad</i>	1	2	3	4	5	6	7	
<i>Travelling and tourist experience</i>	1	2	3	4	5	6	7	
<i>Working with foreigners and international groups</i>	1	2	3	4	5	6	7	

Cultural adaptation / adjustment							
Please rate your agreement with each of the following statements*:	1= Strongly disagree		4=Neutral / Undecided		7= Strongly agree		
<i>My adjustment process is usually quite smooth</i>	1	2	3	4	5	6	7
<i>I receive considerable support in my adjustment</i>	1	2	3	4	5	6	7
<i>All in all, I easily overcome cultural differences</i>	1	2	3	4	5	6	7
<i>I'm very open to new cultures</i>	1	2	3	4	5	6	7

Educational profile	Please fill in or select appropriate response
What degree or qualification are you currently pursuing?*	<input type="checkbox"/> Bachelor <input type="checkbox"/> Specialist <input type="checkbox"/> Master <input type="checkbox"/> PhD student
Are you currently studying in some place other than your HOME city and/or country?*	<input type="checkbox"/> Yes, I am studying in another country. <input type="checkbox"/> Yes, I am studying in another city, but within my HOME country. <input type="checkbox"/> No, I am studying in my home city.
In which city and country is your university located?*	City: _____, Country: _____
Describe your main field of study*	<input type="checkbox"/> Mathematical and natural sciences (e.g., mechanics, applied mathematics, physics, astronomy, computer science, chemistry) <input type="checkbox"/> Engineering and technology (e.g., computer / radio / nuclear / heat power / oil and gas engineering, information security, electronics, communications systems, industrial ecology and biotechnology, applied geology, mining, nanotechnology, ground and water transportation, shipbuilding, construction / materials / aviation & rocket-space technology, architecture, etc.) <input type="checkbox"/> Healthcare and medical science (e.g., veterinary science, preventive medicine, science of health, etc.) <input type="checkbox"/> Social sciences (e.g., economics and management, psychology, sociology, political science, legal science, regional studies, mass media, etc.) <input type="checkbox"/> Education <input type="checkbox"/> Humanities and liberal arts (e.g., linguistics, literature, theology, history and archaeology, philosophy and ethics, physical culture and sports, etc.) <input type="checkbox"/> Art and culture (e.g., art studies, fine and applied arts, cultural studies, performing arts, creative writing, music, etc.) <input type="checkbox"/> Mixed

Propensity to stay in home country after graduation*	<input type="checkbox"/> I intend to reside in my home country / return to my home country (in the case if you are currently studying abroad). <input type="checkbox"/> I intend to leave my home country / not to return to my home country and move to another location.
--	---

<i>Answer the following 3 questions only if you chose the second option in the previous question.</i>	
Specify where you plan to move after graduation	<input type="checkbox"/> The country in which I am currently studying (if it differs from the country of permanent residence / home country) <input type="checkbox"/> Another country
Please indicate potential destination city and country (i.e., location you plan to move to after graduation)	Example: London, Great Britain
Please rate the degree of your desire to move after graduation	1= No desire or weak desire, 4 = Moderate desire, 7 = Strong desire
	1 2 3 4 5 6 7

Career expectations	Please fill in or select appropriate response
Do you have any work experience?*	<input type="checkbox"/> No <input type="checkbox"/> Yes, < 1 year of experience. <input type="checkbox"/> Yes, 1 - 3 years of experience. <input type="checkbox"/> Yes, 3 - 6 years of experience. <input type="checkbox"/> Yes, > 6 years of experience.
What is your current employment status?*	<input type="checkbox"/> Unemployed and not currently looking for work <input type="checkbox"/> Unemployed and currently looking for work <input type="checkbox"/> Employed part time (up to 39 hours per week) <input type="checkbox"/> Employed full time (40 or more hours per week)
If everything was possible for you, what occupation or job would you like to have as your lifetime career?*	<input type="checkbox"/> Managerial <input type="checkbox"/> Professional <input type="checkbox"/> Civil service <input type="checkbox"/> Academic <input type="checkbox"/> Other:
Taking into account reality factors, what occupation or job would you expect to have as your lifetime career?*	<input type="checkbox"/> Managerial <input type="checkbox"/> Professional <input type="checkbox"/> Civil service <input type="checkbox"/> Academic <input type="checkbox"/> Other:

What type(s) of companies would you be interested in working for?	
Company size*	<input type="checkbox"/> Does not matter <input type="checkbox"/> Micro company (up to 15 employees) <input type="checkbox"/> Small sized company (16 - 50 employees) <input type="checkbox"/> Medium sized company (51-250 employees) <input type="checkbox"/> Large sized company (251+ employees)
State ownership*	<input type="checkbox"/> Does not matter <input type="checkbox"/> Wholly privately owned company (firms without any state entity as an investor) <input type="checkbox"/> State owned company (the firm is supported by state majority capital)
Country of origin of the company*	<input type="checkbox"/> Does not matter <input type="checkbox"/> Home country / country of permanent residence <input type="checkbox"/> Another country
Geographical scope of operations*	<input type="checkbox"/> Does not matter <input type="checkbox"/> Domestic market <input type="checkbox"/> Regional market <input type="checkbox"/> Global market
Type of industry*	<input type="checkbox"/> Does not matter <input type="checkbox"/> Primary industries (e.g. mining, agriculture, or forestry, that is concerned with obtaining or providing natural raw materials for conversion into commodities and products for the consumer) <input type="checkbox"/> Secondary industries (~ manufacturing industry, construction, etc.) <input type="checkbox"/> Tertiary industries (~ services industry, tourism, etc.) <input type="checkbox"/> Quaternary industries (~ high tech industries, finance, etc.)

Perception of labour market in home city and country (city / country of permanent residence)							
Please rate your agreement with each of the following statements* :	1=Strongly disagree			4=Neutral / Undecided		7= Strongly agree	
<i>My opportunities for advancement in home CITY (or city of permanent residence) are limited.</i>	1	2	3	4	5	6	7
<i>My opportunities for advancement in home COUNTRY (or country of permanent residence) are limited.</i>	1	2	3	4	5	6	7
<i>I have a good chance of getting good job advancement in home CITY (or city of permanent residence).</i>	1	2	3	4	5	6	7
<i>I have a good chance of getting good job advancement in home COUNTRY (or country of permanent residence).</i>	1	2	3	4	5	6	7
<i>There are plenty of good jobs in home CITY (or city of permanent residence) for those who want to get ahead.</i>	1	2	3	4	5	6	7
<i>There are plenty of good jobs in home COUNTRY (or country of permanent residence) for those who want to get ahead.</i>	1	2	3	4	5	6	7

Push and pull factors of talent migration								
Please evaluate to what extent the following factors of home country (country of permanent residence) might influence your decision to migrate to another country* Please indicate whether you agree that the factor characterizes for home city / country (city / country of permanent residence)*.	Factor characterizes home city / country (city / country of permanent residence)	1 = Weakly influences			4 = Moderately influences		7 = Strongly influences	
Individual level push factors								
<i>Personal reasons influencing the decision to relocate</i>	–	1	2	3	4	5	6	7
<i>Low level of attachment to home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Fewer opportunities for self-realization</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Lower level of diversity of ethnicity, culture, gender, language, religion, and minorities in society</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Higher level of diversity of ethnicity, culture, gender, language, religion, and minorities in society</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Lower level of political, economic, and/or social freedom and equality</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Larger presence of status inconsistencies (when one differs from others in the group on one or more dimensions, like race, language, religion, age, etc.)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
Industry level push factors								
<i>Lower average salary for your occupation</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Smaller investments in R&D (including lower success rate of grant funding requests and poorly funded scientific laboratories)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Less support provided by state to specific sectors of the economy</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Limited access to unique resources and environment</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Lower level of industry competitiveness</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Lower level of innovation in a specific industry</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Larger presence of brain waste (taking up unskilled jobs despite having professional qualifications)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7
<i>Higher level of competition amongst talents for work in this industry</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7

Please evaluate to what extent the following factors of home country (country of permanent residence) might influence your decision to migrate to another country* Please indicate whether you agree that the factor characterizes for home city / country (city / country of permanent residence)*.	Factor characterizes home city / country (city / country of permanent residence)	1 = Weakly influences			4 = Moderately influences			7 = Strongly influences		
Country level push factors										
<i>Lower quality of social support and healthcare systems at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Higher level of competition between talented individuals for work at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Higher level of bureaucracy at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>More cumbersome and nontransparent state policies at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Lower degree of press freedom at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Less independent judicial system at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Lower standards of integrity for public officials at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Less stable governmental regime of home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>More political risks at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>More economic risks at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Lower level of economic development of home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Lower pace of development of home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Less sufficient institutional infrastructure at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Higher levels of corruption at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Less favorable destination of FDI at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Higher cost of manufacturing at home country (country of permanent residence)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Weaker economic cooperation with other global actors (e.g., other countries)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		
<i>Lower level of integration of home country (country of permanent residence) into global community and economy</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4	5	6	7		

Please indicate whether you agree that the following factors characterize the TARGET city / country*. (i.e., city / country you would consider to relocate to)	
<i>High level of attachment to target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>More opportunities for self-expression at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher level of diversity of ethnicity, culture, language, religion, gender, and minorities in society at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Lower level of diversity of ethnicity, culture, language, religion, gender, and minorities in society at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher levels of political, economic, and/or social freedom and equality at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Fewer cases of status inconsistencies at target location (when one differs from others in the group on one or more dimensions, like race, language, religion, age, etc.)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Please indicate whether you agree that the following factors characterize the TARGET city / country*. (i.e., city / country you would consider to relocate to)	
<i>Higher average salary for your occupation at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Larger investments in R&D (including higher success rate of grant funding requests and well-funded scientific laboratories) at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>More support provided by state to specific sectors of the economy of target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Access to unique resources and environment at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher level of industry competitiveness at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher level of innovation in a specific industry at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Smaller presence of brain waste (taking up unskilled jobs despite having professional qualifications) at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Lower level of competition amongst talents for work in this industry at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher quality social support and healthcare systems at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Favorable immigration and integration policies at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Fewer cumbersome and nontransparent state policies at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher degree of press freedom at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>More independent judicial system at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher standards of integrity for public officials at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>More stable governmental regime at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Fewer political risks at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Fewer economic risks at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher level of economic development of target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher pace of development of target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>More sufficient institutional infrastructure at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Lower levels of corruption at target location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Closer economic cooperation with other global actors (e.g., countries, corporations, etc.)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Higher level of integration into global community, economy</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Global talent management practices							
We suggest that some managerial practices in a particular company may affect the decision to relocate. Please rate the importance of the following statements that might push you to change/adjust your willingness (potential intension) to move.*	1 = Not important		4 = Somewhat important		7 = Very important		
Talent attraction							
<i>The company offers a competitive, above average, salary.</i>	1	2	3	4	5	6	7
<i>The company offers an interesting job with possibilities to complete challenging assignments.</i>	1	2	3	4	5	6	7
<i>The company has an attractive profile and a strong employer brand.</i>	1	2	3	4	5	6	7
<i>The company (and/or the industry the company operates in) is vastly supported by different global actors (e.g., the central / local government, international associations, etc.).</i>	1	2	3	4	5	6	7
<i>Location of worksite is attractive.</i>	1	2	3	4	5	6	7
<i>The company operates internationally.</i>	1	2	3	4	5	6	7
<i>The company is recognized for attracting high caliber talent.</i>	1	2	3	4	5	6	7
<i>The company offers possibilities to work internationally and employs expatriation and inpatriation practices.</i>	1	2	3	4	5	6	7
<i>The company supports foreign recruitment.</i>	1	2	3	4	5	6	7

We suggest that some managerial practices in a particular company may affect the decision to relocate. Please rate the importance of the following statements that might push you to change/adjust your willingness (potential intension) to move.*	1 = Not important	4 = Somewhat important	7 = Very important				
Talent attraction (continued)							
<i>The company employs people of different age, religion, race, gender, etc. and offers equal opportunities to them.</i>	1	2	3	4	5	6	7
<i>The company is socially responsible and invests in supporting the community and improving the environment.</i>	1	2	3	4	5	6	7
<i>Knowing the native language is not essential for working in the company.</i>	1	2	3	4	5	6	7

Talent development							
<i>The company closely collaborates with universities and training centers.</i>	1	2	3	4	5	6	7
<i>The company supports further education of its employees at top universities (including international ones).</i>	1	2	3	4	5	6	7
<i>The company provides a variety of high quality learning and development opportunities.</i>	1	2	3	4	5	6	7
<i>The company offers a variety of career development and advancement opportunities.</i>	1	2	3	4	5	6	7
<i>The company offers e-learning opportunities and long-distance learning.</i>	1	2	3	4	5	6	7
<i>Employees are provided with individual development plans.</i>	1	2	3	4	5	6	7
<i>The company has its own in house university but it also uses external providers to supplement in-house resources.</i>	1	2	3	4	5	6	7
<i>The company's employees are shifted between two or more assignments or jobs at regular intervals (a.k.a. job rotation).</i>	1	2	3	4	5	6	7
<i>The company employs a variety of training programs aimed at newcomers and employees with little experience (e.g., mentorship programs).</i>	1	2	3	4	5	6	7
<i>The company has a highly developed, up-to-date IT infrastructure.</i>	1	2	3	4	5	6	7
<i>The company actively engages in R&D activities and open innovation.</i>	1	2	3	4	5	6	7

Talent retention							
<i>The company employs performance-based remuneration.</i>	1	2	3	4	5	6	7
<i>The company offers a variety of compensation and benefit programs (e.g., additional medical insurance, special loans)</i>	1	2	3	4	5	6	7
<i>Compensation and benefit programs offered by the company are clear, transparent, and fair.</i>	1	2	3	4	5	6	7
<i>The company offers a variety of nonfinancial benefits (e.g., rewards and recognition programs).</i>	1	2	3	4	5	6	7
<i>The company provides desirable working conditions and creates an atmosphere of high motivation and flexibility.</i>	1	2	3	4	5	6	7
<i>The company creates a culture of accountability and high performance.</i>	1	2	3	4	5	6	7
<i>The values of the company comply with ethical and moral norms.</i>	1	2	3	4	5	6	7
<i>The company empowers its employs, providing freedom to them in solving problems and decision making.</i>	1	2	3	4	5	6	7
<i>The company is concerned with job security and employees' health.</i>	1	2	3	4	5	6	7
<i>The company's employees are fully engaged in the working process.</i>	1	2	3	4	5	6	7
<i>The company actively participates in social and community events.</i>	1	2	3	4	5	6	7

Thank you for your participation!

Appendix 2. Correlation matrix — push factors

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Personal reasons	1															
Attachment to country	0.2	1														
Self-actualization opportunities	0.2	0.3	1													
Diversity	0.0	0.0	0.1	1												
Equality	0.1	0.3	0.4	0.1	1											
Status inconsistencies	0.2	0.2	0.4	0.2	0.5	1										
Salary level	0.1	0.1	0.3	0.0	0.2	0.3	1									
R&D investments	0.0	0.1	0.3	0.0	0.2	0.3	0.4	1								
Governmental support	0.0	0.2	0.2	0.0	0.3	0.3	0.4	0.5	1							
Access to unique resources	0.1	0.2	0.2	0.0	0.2	0.2	0.3	0.4	0.5	1						
Industry competitiveness	0.0	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	1					
Industry innovativeness	0.1	0.2	0.2	0.1	0.2	0.3	0.3	0.5	0.4	0.4	0.5	1				
Misuse of specialists	0.0	0.1	0.1	0.0	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.5	1			
Competition among talents on the industry level	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	1		
Healthcare system	0.1	0.2	0.3	0.1	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	1	
Competition among talents on the country level	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.1	1
Bureaucracy	0.0	0.2	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.1	0.4	0.2
Transparency of governmental policy	0.1	0.2	0.2	0.1	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.1	0.4	0.1
Press freedom	0.1	0.2	0.2	0.1	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.0	0.4	0.0
Independence of judicial system	0.1	0.2	0.2	0.0	0.4	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.4	0.1
Integrity of civil servants	0.1	0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.4	0.1
Stability of governmental regime	0.2	0.2	0.3	0.1	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.0	0.1	0.3	0.1
Political risks	0.1	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.4	0.2
Economic risks	0.0	0.2	0.3	0.1	0.4	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.1	0.4	0.2
Level of economic development of country	0.1	0.3	0.3	0.1	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.0	0.5	0.0
Pace of economic development of country	0.1	0.2	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.0	0.4	0.1
Institutional infrastructure development	0.0	0.3	0.3	0.1	0.4	0.3	0.3	0.4	0.3	0.2	0.4	0.4	0.3	0.0	0.4	0.0
Corruption	0.1	0.2	0.2	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.1	0.4	0.1
Direction of investments	0.1	0.3	0.3	0.1	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.1
Production costs	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2
Economic cooperation of country with international players	0.0	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.0	0.3	0.0
Country integration in international community	0.0	0.3	0.3	0.1	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.2	0.0	0.3	0.0

Appendix 2. Correlation matrix — push factors (continued)

Items	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Bureaucracy	1.0															
Transparency of governmental policy	0.5	1.0														
Press freedom	0.4	0.6	1.0													
Independence of judicial system	0.5	0.6	0.6	1.0												
Integrity of civil servants	0.5	0.6	0.5	0.6	1.0											
Stability of governmental regime	0.2	0.3	0.3	0.3	0.3	1.0										
Political risks	0.4	0.4	0.4	0.4	0.4	0.5	1.0									
Economic risks	0.4	0.5	0.4	0.5	0.5	0.3	0.5	1.0								
Level of economic development of country	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.6	1.0							
Pace of economic development of country	0.5	0.5	0.5	0.5	0.5	0.3	0.4	0.6	0.7	1.0						
Institutional infrastructure development	0.4	0.5	0.4	0.4	0.5	0.3	0.4	0.5	0.6	0.6	1.0					
Corruption	0.6	0.5	0.5	0.5	0.6	0.2	0.4	0.5	0.5	0.5	0.5	1.0				
Direction of investments	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	1.0			
Production costs	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.0		
Economic cooperation of country with international players	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.5	0.4	1.0	
Country integration in international community	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.7	1.0

Appendix 3. Correlation matrix — pull factors

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Personal reasons	1															
Attachment to country	0.1	1														
Self-actualization opportunities	0.0	0.1	1													
Diversity	0.0	-0.1	0.0	1												
Equality	0.0	0.1	0.4	0.1	1											
Status inconsistencies	-0.1	0.0	0.1	0.1	0.0	1										
Salary level	0.0	0.1	0.3	0.0	0.2	0.1	1									
R&D investments	0.0	0.0	0.2	0.0	0.2	0.1	0.4	1								
Governmental support	0.0	0.0	0.2	0.0	0.1	0.0	0.3	0.4	1							
Access to unique resources	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.3	1						
Industry competitiveness	0.0	0.0	0.2	0.0	0.2	0.1	0.3	0.3	0.4	0.4	1					
Industry innovativeness	0.0	0.0	0.2	0.0	0.2	0.2	0.3	0.4	0.5	0.3	0.4	1				
Misuse of specialists	-0.1	0.0	0.3	0.0	0.2	0.1	0.4	0.4	0.4	0.2	0.3	0.4	1			
Competition among talents on the industry level	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.3	1		
Healthcare system	0.0	0.1	0.3	0.1	0.3	0.0	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.1	1	
Competition among talents on the country level	0.0	0.2	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.4	0.1	1
Bureaucracy	0.0	0.0	0.2	0.0	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.4
Transparency of governmental policy	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.3
Press freedom	0.0	0.1	0.2	0.0	0.3	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.3	0.2
Independence of judicial system	0.0	0.0	0.2	0.1	0.4	0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.5	0.2
Integrity of civil servants	0.0	0.0	0.3	0.0	0.3	0.0	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.5	0.1
Stability of governmental regime	0.0	0.0	0.2	0.1	0.2	0.0	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.5	0.1
Political risks	0.0	0.1	0.3	0.1	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.4	0.1
Economic risks	0.0	0.1	0.3	0.1	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.4	0.2
Level of economic development of country	0.0	0.0	0.4	0.2	0.4	0.0	0.3	0.3	0.3	0.2	0.3	0.2	0.4	0.1	0.6	0.1
Pace of economic development of country	0.0	0.0	0.3	0.0	0.3	0.0	0.2	0.3	0.4	0.1	0.2	0.3	0.2	0.1	0.4	0.2
Institutional infrastructure development	-0.1	0.0	0.4	0.0	0.4	0.1	0.3	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.6	0.1
Corruption	0.0	0.0	0.3	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.5	0.2
Direction of direct investments	-0.1	0.0	0.2	0.1	0.3	0.1	0.2	0.3	0.3	0.2	0.1	0.3	0.3	0.1	0.5	0.2
Production costs	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.3
Economic cooperation of country with international players	-0.1	0.0	0.2	0.1	0.3	0.0	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.1	0.4	0.1
Country integration in international community	0.0	0.0	0.2	0.2	0.4	0.1	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.4	0.2
Immigration policy	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2

Appendix 3. Correlation matrix — pull factors (continued)

Items	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Bureaucracy	1																
Transparency of governmental policy	0.5	1															
Press freedom	0.4	0.3	1														
Independence of judicial system	0.5	0.4	0.5	1													
Integrity of civil servants	0.4	0.3	0.5	0.6	1												
Stability of governmental regime	0.3	0.4	0.3	0.5	0.3	1											
Political risks	0.4	0.3	0.4	0.5	0.5	0.6	1										
Economic risks	0.5	0.4	0.4	0.5	0.5	0.5	0.6	1									
Level of economic development of country	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.6	1								
Pace of economic development of country	0.4	0.3	0.4	0.5	0.4	0.5	0.5	0.5	0.6	1							
Institutional infrastructure development	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.6	1						
Corruption	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1					
Direction of direct investments	0.3	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.6	0.5	0.6	0.4	1				
Production costs	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	1			
Economic cooperation of country with international players	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.4	0.5	0.2	1		
Country integration in international community	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.6	1	
Immigration policy	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.2	0.4	0.4	1

Appendix 4. Correlation matrix — facilitating factors

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
International study experience	1															
International volunteering experience	0.5	1														
International internship	0.5	0.6	1													
International working experience	0.4	0.4	0.4	1												
International research experience	0.3	0.4	0.4	0.2	1											
International tourism experience	0.5	0.3	0.3	0.2	0.2	1										
Work in international groups	0.5	0.4	0.4	0.3	0.4	0.5	1									
Ease of adaptation	0.1	0.1	0.1	0.1	0.1	0.3	0.3	1								
Support in adaptation process	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.7	1							
Ease of barriers overcoming	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.7	0.6	1						
Receptivity to other cultures	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.7	0.6	0.7	1					
Closeness to family	0.0	0.0	-0.1	-0.1	0.0	0.1	0.0	0.3	0.2	0.3	0.3	1				
Importance of living with family	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.4	1			
Family grew when abroad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.6	1		
Importance of family ties	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.7	0.5	0.6	1	
Family dependence in career choice	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.2	0.6	0.4	0.3	1