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HOW TO CREATE A MUCH MORE ATTRACTIVE LIVING ENVIRONMENT FOR TALENT RETAINING AND ATTRACTING? THE CASE OF SERBIA

KAKO KREIRATI ATRAKTIVNIJE ŽIVOTNO OKRUŽENJE ZA ZADRŽAVANJE I PRIVLAČENJE TALENATA? SLUČAJ SRBIJE

JEL CLASSIFICATION: F22, I23, J61, P11, Q56.

ABSTRACT:

Creating an attractive living environment for retaining and attracting talent is the main strategic goal of today's Serbia and its cities. Talent is not only significant because of its contribution to business entities (increasing competitiveness, profitability, response to rapid changes in the external environment), but also because of its impact on society. However, the question arises: how is knowledge, which is the core of human capital, generated, used and managed? The lack of suitable workforce that employers face in

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Serbia only further emphasizes the importance of taking further actions to improve the conditions for retaining professionals. This includes better working conditions, greater investment in training and addressing the difficulties of balancing work with health issues and caring responsibilities. Known as a global mega-trend, urbanization presents great opportunities for innovation, job creation, economic growth, sustainable development and urban design. Less prominent, but no less important, is the question of how we can ensure that future cities are just and inclusive – meaning cities that put people first, putting equality and social justice at the centre of public policy. In a just city, residents have the power and the resources to collectively shape, change, and plan their future. The fundamental goal of this work is to, by analysing the interdependence of the living environment and the spatial mobility of human capital, arrive at a new paradigm of the appropriate of strategic action by state entities that will contribute to retaining and attracting talent. Therefore, by the end of this century, to increase, and not to decrease the number of inhabitants in Serbia - as shown by UN projections, or at least to remain at the same level.

**KEYWORDS:**

HUMAN CAPITAL, TALENT MANAGEMENT, TALENT ATTRACTING, LIVING ENVIRONMENT, SERBIA

APSTRAKT:

Stvaranje atraktivnog životnog okruženja za zadržavanje i privlačenje talenata je glavni strateški cilj današnje Srbije i njenih gradova. Talenat nije značajan samo zbog njihovog doprinosa privrednim subjektima (povećanje konkurentnosti, profitabilnosti, odgovor na brze promene u spoljnom okruženju), već i zbog uticaja na društvo. Međutim, pitanje je: kako se znanje, koje je srž ljudskog kapitala, generiše, koristi i upravlja s tim? Nedostaci odgovarajuće radne snage sa kojima se poslodavci suočavaju u Srbiji samo dodatno naglašavaju važnost preduzimanja daljih akcija za poboljšanje uslova za zadržavanje stručnjaka. Ovo uključuje bolje uslove rada, veća ulaganja u obuku i rešavanje poteškoća u usklađivanju posla sa zdravstvenim pitanjima i obavezama nege. Poznata kao globalni mega-trend, urbanizacija predstavlja velike mogućnosti za inovacije, otvaranje novih radnih mesta, ekonomski rast, održivi razvoj i urbani dizajn. Manje istaknuto, ali ne manje važno je pitanje kako možemo da osiguramo da budući gradovi budu pravedni i inkluzivni – što znači gradovi koji stavljaju ljude na prvo mesto, a jednakost i socijalnu pravdu u središte politike. U pravednom gradu, stanovnici imaju moć i resurse da zajednički oblikuju, menjaju i planiraju svoju budućnost. Osnovni cilj ovog rada je da se, analizom međuzavisnosti životnog okruženja i prostorne mobilnosti ljudskog kapitala, dođe do nove paradigme odgovarajućeg strateškog delovanja državnih subjekata koje će doprineti zadržavanju i privlačenju talenata. Dakle, do kraja ovog veka da se poveća, a ne da se smanji broj stanovnika u Srbiji – kako pokazuju projekcije UN, ili bar da ostane na istom nivou.

**KLJUČNE REČI:**

LJUDSKI KAPITAL, UPRAVLJANJE TALENTIMA, PRIVLAČENJE TALENATA, ŽIVOTNO OKRUŽENJE, SRBIJA

1. INTRODUCTORY REMARKS

The earliest records of human existence provide evidence that humans have always migrated for environmental reasons (Ferris, 2019). Leaving areas threatened by environmental change, whether due to drought or sudden disaster, is a well-tested strategy that people have used to survive and protect themselves from harm.

The dimensions and intensity of people's mobility is the central phenomenon of every society that marks its vital existence. Human mobility is a response to climate stress and shocks (Cattaneo et al. 2019). Mobility is a key livelihood and risk management strategy, including in the context of climate change. As a livelihood strategy, mobility is used to maximize risk avoidance and spread risk in the context of changing environmental and social pressures (de Haas, 2009, McLeman and Hunter, 2010, Black et al. 2011) and personal aspirations (Wiederkehr et al. 2019, Rao et al. 2020) through an individual's life experience (Cundill et al. 2021). Today, mobility due to climate change contributes to livelihoods and is becoming more and more transparent throughout the world. Different types of mobility are known as long-term strategies that people use in response to environmental pressure (Wiederkehr et al. 2019). Immobility (absence of the possibility of spatial movement) is relevant in this context, as populations may be at considerable risk but lack the capacity or willingness to move geographically. Seeking a place under the sun elsewhere is a particular subjective dimension of the human migration decision that is challenging for researchers. Moreover, the conceptualization of cultural factors in this context has so far shown rather marginal attention (Wiederkehr et al. 2019). The role of place-related cultural factors in migration decisions deserves more attention in general (Adger et al. 2013).

Migration from rural to urban areas has not been sufficiently studied in the context of environmental change, and populations around the world are increasingly moving to cities. Why is urbanization happening and what are the consequences? For most of human history, most people across the world lived in small communities. Over the past few centuries – and particularly in recent decades – this has shifted dramatically. There has been a mass migration of populations from rural to urban areas. More than 4.3 billion people now live in urban areas (Ritchie & Roser, 2018). This means over half of the world (55% in 2017) live in urban settings. Therefore, urbanization is an increasingly significant trend and is bound to have a crucial impact on economic, social and environmental development.

The concepts of eco-efficiency and social inclusion deserve special attention. Rather, it is a management philosophy that encourages municipalities, communities and businesses to seek environmental improvements that generate parallel economic benefits. On the other hand, social inclusiveness refers to the equal treatment of all people in a city in their access to work and services, such as public transport and health care. Inclusivity, above all, refers to planning and decision-making processes that involve a wide range of people from across the city, ranging from experts to ordinary residents, with the aim of considering their input and reaching a common agreement. Together, these concepts maximize the cost-effectiveness of environmental and social benefits (UN ESCAP, 2011).

It should also be said that in terms of economic prosperity, cities are seen as engines of growth. The prosperity of nations is closely related to the way in which the growth of their cities is shaped. People live in cities and so do businesses, which are responsible for a large share of the nation's gross domestic product (GDP). A large number of people live in cities because they have access to employment, education, health care, goods and services. Although cities are the centre of development, city life is not equal for all its inhabitants.

In the literature, there is a mixture of certainty and unpredictability of population change and its interdependence with politics. So, with some confidence, extrapolating the near future from current global population trends, such a future points to great turbulence and disparities ahead.

Regarding quantitative research, comparative analyses and the position of Serbia in the regional and global context, this paper used documents from the International Organization for Migration, the European Parliament, the European Commission and the Republic of Serbia, as well as statistics from the United Nations, the Organization for Economic Cooperation and Development, GTCI, Eurostat and the Republic Institute of Statistics.

The main goal of this paper is to analyse the current situation and point out the possibilities for improving the living environment and creating a more attractive economic and social environment for slowing down the emigration of the working population, with a special emphasis on retaining talent in the home country, as well as stimulating return and circular migrations, and attracting foreigners with different educational profiles. The goal defined in this way requires a systematic approach to the study and monitoring of the competitiveness of Serbia and its cities for talent, in order to reach the most effective response to the current trends of economic migration, while promoting regular, safe and orderly migration. Because predictions of Serbia's demographic future point to the extreme importance of preserving the environment, and thus to the importance of increasing the attractiveness of Serbia and its cities for retaining and attracting human capital, especially career-achieving experts (overachievers) from diaspora and other countries.

2. LITERATURE REVIEW

Environmental migration is a rapidly expanding field of research but it is still very much in its infancy (McLeman et al. 2013). Although scholars have long been interested in how environmental conditions affect human population patterns, current scholarly approaches to the subject emerged in the 1980s, when political ecologists and natural hazards researchers sought to better understand how famines and population displacements emerged in the wake of droughts, floods, and other extreme climate events (Hunter, 2005). Over subsequent decades, as evidence steadily accumulated about the implications of climate change, land degradation, air pollution, biodiversity loss, ocean acidification, and other types of anthropogenic environmental change, concerns have grown correspondingly among researchers, policymakers, and the general public about the potential for large-scale population displacement and migration in the future (Gemenne, 2017).

Impressive theoretical, methodological, and empirical advances have been made in the last four decades, many of them attributable to increasing interaction and collaboration between natural scientists with expertise in bio geophysical processes and social scientists with expertise in social processes and human migration behaviour. Early studies that warned of waves of “environmental refugees” fleeing degraded landscapes and cities have given way to more nuanced approaches that see environmental factors as interacting in context-specific fashion with cultural, demographic, economic, political, and social processes to shape the livelihoods and wellbeing of households and community, with migration being just one of many possible outcomes (Foresight, 2011).

There still remain many areas of environmental migration research that require considerably more theoretical development and empirical evidence. In an oft-cited definition, the International Organization for Migration (IOM) describes environmental migrants as being people who, “predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad” (IOM, 2011: 33). This definition captures a wide range of possible types of migration, from voluntary opportunity-seeking migration to involuntary displacement or forced migration, for periods ranging from temporary to indefinite, and to destinations both near and far. The key criterion that distinguishes environmental migrants from other migrants is that adverse impacts on lives or living conditions, attributable to any type of environmental change, are a predominant factor (but not necessarily the only one) in making the decision to migrate. The IOM’s definition has no particular status in international law but, being highly reflective of the current status of scholarly research, is nonetheless a useful starting point for this literature review.

The idea that environmental events and conditions can influence migration is not especially new. In the later 19th and early 20th centuries, there was a relatively strongly held view among geographers, especially those influenced by the German scholar Friederich Ratzel, that the natural environment exerts a strong influence on global human population patterns (Gemenne, 2017). However, by the 1930s, the racial undertones, questionable methodological assumptions, and implicit apologise for colonialism that characterized this “environmental determinist” approach to population geography eventually led to its abandonment by most geographers and social scientists (McLeman et al. 2021).

Much of the scholarly research in the 1980s and 1990s was descriptive and diagnostic in nature, selecting case studies of obvious environmental disasters and offering broad, normative conclusions and recommendations. In the last two decades, the volume of scholarly research has grown tremendously, with the field of study broadening to look not only at involuntary displacement due to natural disasters or climate change, but as well the longer-term influences of the environment on migration and mobility more generally.

While attempts continue to be made to quantify migration at a global scale, increasing attention is being given to migration decision-making processes at the household and community levels. In this latter regard, the potential for environmental conditions to influence migration decisions has been increasingly described in the context of vulnerability and adaptation, with households seen as using migration strategically to reduce their exposure to environmental risks and to build their capacity to adapt through income diversification and remittances (McLeman et al. 2021).

A far-ranging multi-year study commissioned by the British government (Foresight, 2011), and involving dozens of researchers, conceptualized the influence of the environment on migration as taking place within a much wider set of demographic, cultural, political, and socio-economic processes that interact across scales to influence household-level decision making. Environmental change “encompasses changes in the physical and biogeochemical (chemical, geological and biological) environment, on a large scale, which are caused naturally or under the influence of human activities”, including industrial accidents (Foresight, 2011: 50), either through fast or slow onset events. Environmental change includes both - environmental degradation and climate change. Global environmental changes should also be mentioned (Flavell et al. 2020). Types of influence are: 1) Reactions in the form of mobility to sudden dangers; 2) Reactions in the form of mobility in the context of danger with a slow onset; 3) Links between environmental change, conflict and mobility, and 4) Immobile, “buried” populations.

The term “human mobility” traditionally refers to the ability (capacity and freedom) of movement: “Human mobility [:] the ability of individuals, family or group of people to choose their place of residence” (UNDP, Human Development Report 2009: 15). The term is also increasingly used in relation to the environment and climate change as an umbrella term to describe a range of movement types (voluntary migration, displacement, planned resettlement). “Population mobility [in the context of environmental change] is probably best viewed as organized along a continuum ranging from entirely voluntary migration [...] to entirely forced migration” (Hugo, 1996:107)

Conceptually, human mobility and immobility can be thought of as the result of the interaction between the need, ability and aspiration to migrate (Wiederkehr et al. 2019). The difference between the desire to migrate and actual migration goes back to the link between people’s intentions and behaviour which is the central subject of research on micro-level migration decisions and, in particular, of Carling’s aspiration/capability model (2002). Although it covers varying degrees and balances between choice and coercion, aspiration is understood here as “the belief that migration is preferable to non-migration” (Carling & Schevel, 2018: 946). This can provide a conceptually clearer distinction between particularly vulnerable groups and helps to understand why some people move despite low aspirations to migrate. In this sense, the triad of need for migration, ability and aspiration is operationalized as follows: (1) the need for migration (“must migrate”) - arises from a person’s vulnerability; (2) ability to migrate (“can migrate”) - a person’s ability to leave based on individual characteristics and resources; (3) migration aspiration (“want to migrate”) - a person’s motivation to leave based on risk perception, self-efficacy and place attachment (Wiederkehr et al. 2019). Migration aspirations, in turn, can be strongly influenced by how people perceive their own capacities, i.e. what they think they are capable of; those who believe they face high migration barriers or are able to adapt to the situation may be less inclined to leave their country. In addition, aspirations are shaped by people’s subjective assessment of environmental change and risk, which can, and indeed often does, deviate from objectively measured data (Grothmann & Patt, 2005; Koubi et al. 2016). Beyond self-perceived adaptive capacity and risk perception, it is clear that aspirations are shaped by social norms, values and traditions and should therefore be assessed within the wider social context (De Jong, 2000).

3. MOBILITY OF HUMAN CAPITAL DETERMINANTS

The development of human capital is a critical determinant of the long-term sustainability of human development. The times we live in impose the need to accelerate the evolution of human consciousness and the emergence of mentally self-aware individuals for the most effective approach to ensure a sustainable future. The subject of sustainable development covers a wide range of economic, environmental, political, technological and social issues, including energy, water, mineral resources, climate, urban congestion, population, pollution, industrialization, technological development, public policy, health, education and employment (Šlaus & Jacobs, 2011). Therefore, for all that, education is the primary lever in the development process. A single approach to a topic, such as a focus on technological solutions or public policy issues, can shed light on specific aspects, but also on complex interactions between different dimensions. Problems are compounded when any of these subsystems and elements are considered separate and independent from the choices and actions of human beings (Šlaus & Jacobs, 2011). When the time dimension is included, the challenge becomes even more complex, because over the decades, many of the basic assumptions on which our view of the social phenomenon rests can be radically changed by new and unforeseen evolutionary trends, with great impact and hard-to-predict consequences.

The mobility of human capital is determined by numerous factors of an internal and external nature. Drivers can be understood as forces that lead to the beginning of migration and the perpetuation of the movement of human capital (Van Hear et al. 2018). In order to better understand migration flows, analysts try to distinguish between predisposing, immediate, precipitating and mediating drivers of spatial movement of personnel. Combinations of such drivers shape the conditions, circumstances and environment in which people choose to move or stay where they are, or have that decision imposed on them (Van Hear et al. 2018). In any migratory stream, several sets of drivers may interact to shape the final direction and nature of the movement. The challenge is to determine when and why some drivers are more important than others, which combinations are more powerful than others, and which are more susceptible to change through external intervention. Why do people migrate? And how do they choose where to go? These questions are not only of interest to social scientists, but also to policy makers seeking to direct, increase or decrease immigration and emigration (Carling & Collins, 2017). However, to be effective, migration policy should be understood not only as an independent lever, but within the broader political economy (Van Hear et al. 2018).

Referring to numerous authors who assess the elements of environmental influence on migration, Richard Black creates a specific analytical framework, identifying five “drivers” that influence migration decisions: economic, political, social, demographic and environmental drivers (Black et al. 2011: 55). Actual or perceived spatial and temporal differences in these five dimensions influence movement, similar to Lee’s (1966) conceptualization of “push-pull” factors influencing migration. Economic drivers include employment opportunities and income differences between places. Political drivers cover not only conflict, security, discrimination and persecution, but also public or corporate policies related to, for example, land ownership or forced resettlement. Demographic drivers include the size and structure of the population in the source areas, along with the prevalence of diseases that affect morbidity and mortality. Social drivers include family

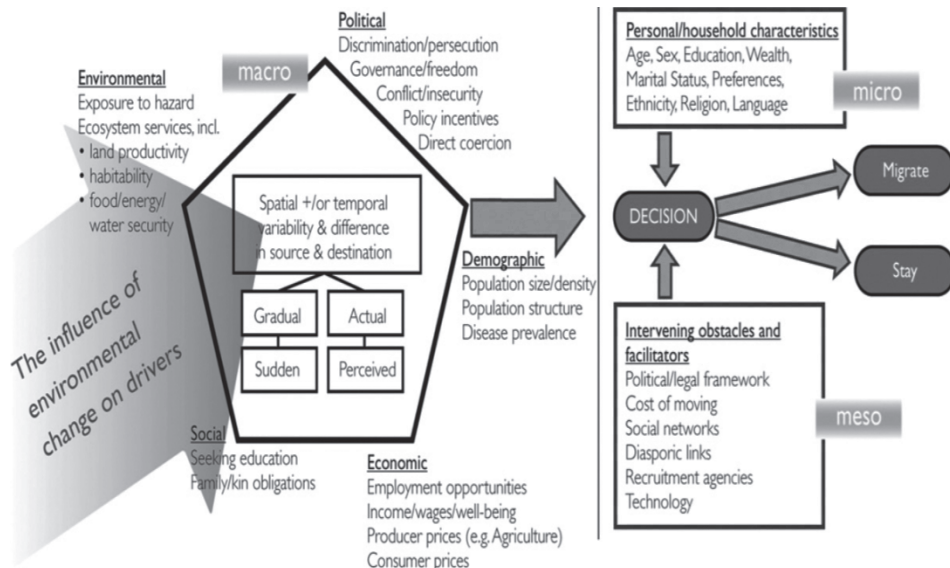
or cultural expectations, the pursuit of educational opportunities, and cultural practices regarding, for example, inheritance or marriage. Environmental drivers of migration are exposure to hazards and availability of ecosystem services. The five movers rarely act in isolation, and the interaction of the five movers determines the details of movement. The nature of these interactions will affect the scale of movements, and movements at different scales – internal compared to international, for example – will be influenced by different interactions between drivers.

All together - the living environment drives migration through mechanisms articulated as the availability and reliability of ecosystem services and exposure to hazards. Individual migration decisions and their flows are influenced by these drivers acting in combination, and the effect of the environment is therefore highly dependent on the economic, political, social and demographic context. Environmental change has the potential to directly affect site hazards.

Changes in the living environment also affect migration indirectly, particularly through economic drivers, for example, changing livelihoods, and political drivers, through influencing conflicts over resources, for example. This analytical framework (Figure 1), applicable to both international and internal migration, emphasizes the role of the human factor in making migration decisions, especially in the context of family and household characteristics, on the one hand, and obstacles and facilitators to movement, on the other.

Therefore, the decision of an individual or a family on whether to migrate or stay is determined by micro and mesa factors. Micro factors include: personal/family characteristics - age, gender, education, wealth, marital status, preferences, ethnicity, religion, language. Meso factors include: intervening obstacles and facilitators – political/legal framework; moving expenses; the social network; ties with the diaspora; employment agencies; technology. When it comes to countries from which migrating human capital is recruited, among the “macro factors” are inadequate human and economic development of the country of origin, demographic growth and urbanization, wars and dictatorships, social factors and environmental changes as the main factors contributing to migration. These are, most often, the main drivers of forced migration, both international and internal. Awareness of living conditions in the rich world—though often grossly exaggerated—contributes to fostering the myth of Western countries as Eldorado (Castelli, 2018). The ease of communication with the diaspora and family members who have migrated earlier strengthens the desire to escape from poverty to a challenging new life abroad.

► FIGURE 1. CONCEPTUAL FRAMEWORK FOR DRIVERS OF POPULATION MIGRATION

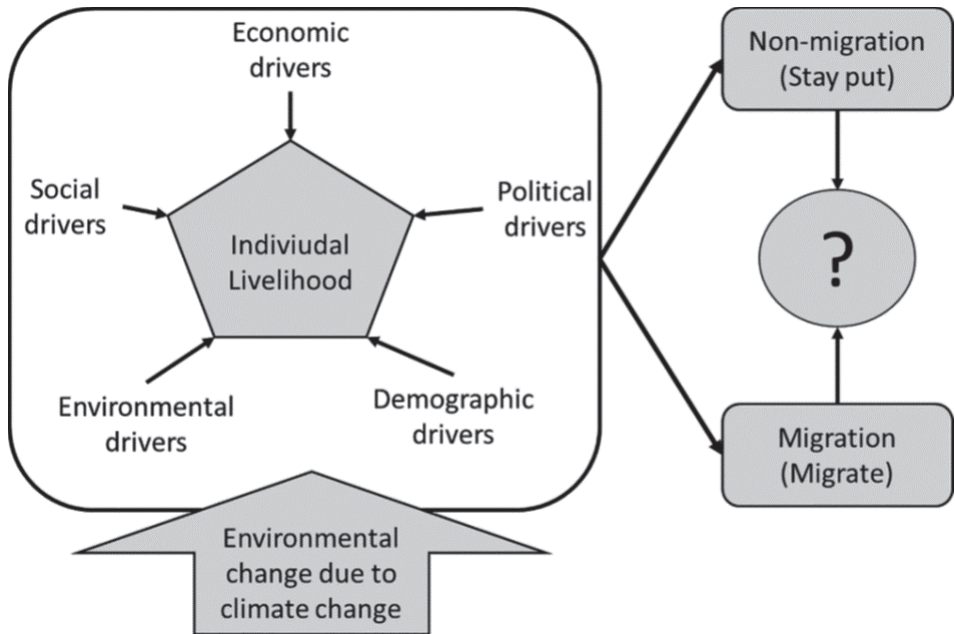


Source: Black et al. 2011, "The effect of environmental change on human migration", *Global Environmental Change*, 21S: 3 -11.

Dutch Professor Bishawjit Mallick, an expert on climate change and international development, at Utrecht University, in the latest study "Environmental non-migration: Analysis of drivers, factors, and their significance" (*World Development Perspectives*, Vol. 29, March 2023), analysing the factors - drivers of migration and their importance, puts social factors in the first place, which earlier Black (2011) in his framework for understanding the impact of environmental changes on migration put in the third place. This analytical concept of Prof. Mallick (2023) is divided into two interrelated contexts of analysis: the living environment (i.e. community level) and the behavioural response (i.e. individual level). In general, the "living environment" is influenced by social, economic, political, demographic and environmental drivers (as shown by the 2011 Foresight analysis) at the community level, while the "behavioural response" of an individual is an activity that is primarily derived from the "living environment" of the respective individual. In this context, the decision to migrate or not to migrate is seen as a personal behavioural response stimulated by "risk perception" and "risk tolerance" (i.e., the ability to cope with risk).

Therefore, all drivers at the community level have an impact on people's environment, which determines the behavioural response at the individual level. In particular, personal risk perception and risk tolerance are also stimulated by life conditions and thus influence behavioural response. However, the behavioural response to risk arises from the individual's aspirations and abilities, and ultimately assesses the voluntary or involuntary nature of migration and non-migration decisions. Overall, Figure 2 includes the context that serves as the logical background for conducting the empirical analysis and contributes to the overarching research objective: the inverse relationship between factors influencing the migration and non-migration decisions of people at risk.

► FIGURE 2. DRIVERS OF MIGRATION AND NON-MIGRATION IN THE FACE OF ENVIRONMENTAL CHANGES



Source: Mallick, Bishawjit. 2023, "Environmental non-migration: Analysis of drivers, factors, and their significance", World Development Perspectives. Volume 29, March 2023, 100475.

The latest edition of the Global Talent Competitiveness Index (GTCI, 2023) marks its tenth anniversary (2013-2023). During that period, the GTCI's intention was to draw attention to the growing challenges countries around the world face when it comes to talent as a leading factor in overall competitiveness, and to highlight best practices in talent management. Over the course of the decade, numerous themes were addressed, with each issue creating its own set of key messages. For example, GTCI addressed various topics including: The Growing Importance of Talent (2014); Talent attraction and international mobility (2015); Talent and Technology (2017); Entrepreneurial talent and global competitiveness (2019); Global Talent in the Age of Artificial Intelligence (2020) and similar topics. Is the world moving towards greater inequality when it comes to countries and talent? Unfortunately, the gap is deepening in favour of the most developed economies and rich countries.

According to the Global Talent Competitiveness Index, Serbia has progressed in the ranking over a ten-year period, from the 78th position out of 104 countries contained in the Report from 2013 to the 53rd position out of 134 countries in 2023. It has progressed in many sectors, but in terms of Serbia's attractiveness for talent and the factors that contribute to talent retention, respondents' perceptions are unfavourable. Namely, according to the "talent attraction" indicator, Serbia is in the 124th position, and according to the "talent retention in the country" indicator, it was in the 127th position out of a total of 134 countries included in the Report for 2023.



4. SERBIA'S POSITION IN THE GLOBAL TALENT COMPETITIVENESS

“I believe that practically all problems in the world arise from inequality of one kind or another.”
— Amartya Sen

“The main force that pushed towards the reduction of inequality has always been the diffusion of knowledge and the spread of education.”
— Thomas Piketty

According to UN projections, some countries are expected to experience population declines of more than 15% by 2050, including Bulgaria, Croatia, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, Serbia and Ukraine. The fertility rate in all European countries is now below the level needed to replace the population in the long term (on average about 2.1 births per woman), and in most cases has been below the replacement level for several decades. Fertility for Europe as a whole is projected to increase from 1.6 births per woman in 2010-2015 to almost 1.8 in the 2045-2050 period. Such an increase, however, will not prevent a likely decrease in the size of the total population (UN, 2017). From a demographic perspective, migration is one of the components of population changes in most countries and regions of the world.

The negative natural growth of population in the Republic of Serbia shows a deepening tendency, from -0.34% in 2020 to -0.61% in 2050, so that in 2100 it would be -0.55% (UN, 2017). Population of Serbia is aging, which increases the old-age dependency ratio. An aging population will have a major impact on society, increasing fiscal and political pressures in the coming decades. It is about the health care system, old age pensions and social protection. Because, in Serbia, the share of the population increases from decade to decade, depending on subsistence. In 2020, the total dependency ratio was 54% (25% was the ratio of children and 29% the dependency ratio of the elderly); in 2050, as the projections show, the coefficient of total dependency will amount to 66%, the coefficient of dependency of children and the elderly (24% and 41%), in order to reach the following values in 2100: total dependency coefficient 82%, children's coefficient 26%, and elderly dependency coefficient 56% (UN, 2017:335). At the same time, UN experts predict that the population of Serbia (including the Autonomous Province of Kosovo and Metohija) will decrease from 8.7 million in 2020 to 7.4 million in 2050, and even 5.5 million in 2100.

The entire European continent is facing a growing demographic deficit (Thränhardt, 2010).

1. The importance of maintaining the demographic and economic balance in Serbia

In Serbia, a growing trend of depopulation, senility and emigration has been evident for a long period of time. Until 2019, the issues of emigration of young and educated people from Serbia was not on the political agenda of the competent authorities of the Repub-

lic. Otherwise, a prerequisite for the successful management of economic migration is the formulation of a clear and coherent strategy, the creation of a legal and institutional framework for its implementation, the consistent and comprehensive implementation of measures and activities, and the provision of effective coordination between all involved actors. Thus, in March 2020, the Government of the Republic of Serbia adopted the Strategy on Economic Migration of the Republic of Serbia for the period 2021-2027.

The goal of the Strategy is a creation of economic and social environment as to slow down emigration of the working population, to strengthen ties with the diaspora, stimulate return and circular migration, and attract foreigners of various educational profiles. The goal defined in this way requires systemic approach to studying and monitoring the listed phenomena, aimed at creating the most efficient response to current economic migration trends, with promotion of regular, safe and orderly migration.

In line with the vision, and indicated principles of the Strategy and overall goal, the following specific, strategic development objectives have been identified by analysing the phenomenon:

- (1) Building and strengthening institutional capacities to monitor and improve the quality of data on economic migration.
- (2) Improving the living and work conditions in economic and social sectors.
- (3) Harmonisation of education system with industry demand, with the focus on tracking investments brought about by the fourth industrial revolution, especially in the sphere of developing new occupations and professional profiles and creating conditions for attracting foreign students.
- (4) Improving cooperation between the diaspora and home country and stimulating transnational entrepreneurship.
- (5) Creating conditions for monitoring, stimulating and supporting circular and return migration.
- (6) Creating conditions for more efficient governance of internal migration flows.

Creating effective measures for the management of economic migration is one of the biggest public policy challenges of the Republic of Serbia. In September 2021, the government adopted a three-year action plan for the implementation of this strategy (2021-2023). In order to achieve the goals set by the Action Plan, it is necessary to significantly more actively create a favourable environment for such a development - since voluntary "migration is the cause and effect of globalization, and their effects on the country of origin of the migrants depend on the internal factors in that country" - the construction relevant capacities for retaining and attracting talent. The diaspora should be more visible on the political agents of the Government of the Republic of Serbia. On the other hand, the civil sector and the media should play a significantly greater role in retaining and attracting talent from the diaspora to the home country.

The GTCI 2023 was published in October 2023 in the city of Fontainebleau (France) by the European Institute of Business Administration (Institut Européen d'Administration des Affaires, known as INSEAD). In the GTCI context, a country's competitiveness for talent represents a set of public policies and examples of good management practices that enable a given country to develop, attract and empower human capital for the purpose of increasing productivity and prosperity of its economy.

Since its first edition in 2013, the annual publication “The Global Talent Competitiveness Index” has consistently pointed to a correlation linking per capita income, on the one hand, and talent performance, on the other. These publications underline that rich countries constitute the majority of talent attraction champions, while most poor economies are denied this opportunity.

The GTCI also consistently sends the message that this correlation is not cemented, but well-balanced and economically sound strategies can enable all types of economies to improve their ability to grow, attract and retain talent. Relevant determinants that provide such possibilities will be presented here.

The Joint Research Centre (JRC) of the European Commission conducted extensive research on the development of composite indicators, and first of all published the Manual on the construction of composite indicators: methodology and instructions for use in cooperation with the Organization for Economic Cooperation and Development (OECD).

2. Composite Indicators

The GTCI framework builds on six pillars: (1) Enable, (2) Attract, (3) Grow, (4) Retain, (5) Vocational and Technical Skills, and (6) Global Knowledge Skills. Each pillar consists of two to three sub-pillars. Each sub-pillar is composed of three to seven indicators. Each sub-pillar score is derived from the simple arithmetic average of its individual indicators. The successive arithmetic aggregation continues at the pillar level.

Overall, the GTCI includes three indices:

- The Talent Competitiveness Input sub-index is the simple average of the first four pillars.
- The Talent Competitiveness Output sub-index is the simple average of the last two pillars.
- The Global Talent Competitiveness Index is the simple average of the six pillars.

Individual Indicators

The GTCI 2023 model includes 69 indicators, which fall into the following categories:

1. Hard/quantitative data (34 indicators)
2. Index/composite indicator data (17 indicators)
3. Survey/qualitative data (18 indicators)

Hard Data

The 34 indicators based on hard data were drawn from a variety of public sources, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), the World Bank, the OECD, and The Conference Board. Most indicators were already scaled at their source and therefore did not need to be re-scaled.

Indices

The 17 indicators measured as indices come from sources such as the World Bank and Transparency

International.

Survey Data

The 18 indicators based on survey data were mainly extracted from the World Economic Forum's Executive Opinion Survey.

Qualitative information tends to provide the most current assessment of certain areas related to talent competitiveness for which hard data either do not exist or have low country coverage.

The 2023 GTCI report covers 134 countries. The most recent data for each country was taken into account in the calculation, with 2011 as the cut-off year.

3. Determinants of overall economic and social development

Table 1 includes the determinants that provide the possibility of overall economic and social development. Within the regulatory landscape, of particular importance are the following: indicators on the efficiency of the executive power, which in the case of Serbia, are not at the required level, the rule of law, political stability, regulatory quality and the fight against corruption.

The market landscape of the state includes: (1) the extent of market dominance;² (2) domestic private sector lending; (3) cluster development; (4) gross expenditure on research and development;³ (5) ICT infrastructure (2021) related to networks and expenditure⁴ and (6) the access sub-pillar is one of the three dimensions included in the technology and urbanization pillar that refers to people living in urban areas as defined by the National Bureau of Statistics.⁵

The business and work environment includes the labour market (labour rights, cooperation between workers and employers), management (professional management; wage and productivity ratio) and technology adoption (enterprise software, it is the software market for enterprises. weighted GDP, 2021; software market indicator for enterprise; refers to the market size of software used, essentially. For large business activities in professional and business environments, including enterprise resource planning, customer

2 It is about the average answer to the question: In your country, how is corporate activity characterized? [1 = dominated by several business groups; 7 = spread among many firms]. Data for| the year 2021. The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather input from business leaders on topics where hard data sources are scarce or non-existent. It is part of an effort to supplement the Global Report on competitiveness in assessing issues that drive national competitiveness.

3 UNESCO Institute for Statistics, UIS.Sta: <http://data.uis.unesco.org/>

4 ICT infrastructure related to networks and costs includes: (1) mobile tariffs, (2) phone prices, (3) Internet access, (4) SMS sent by population aged 15 to 69, (5) population coverage at least 3G level mobile networks, (6) Internet bandwidth, and (7) Internet access in schools.

5 The data is collected and processed by the United Nations Population Division.

relationship management, business intelligence and supply; computing which includes market size for three standard service models: infrastructure, platform and software as a service; the indicator is weighted by national GDP, as well as companies with a website.

Table 2 shows the position of Serbia among 134 countries in terms of factors that determine its attractiveness for talent, occupying 53rd place. The attractiveness is characterized by Serbia's openness to the world (64th position), where according to the indicator "regulatory restrictiveness for foreign direct investments" it is in the 30th position, but according to the indicator "financial globalization" it is in the 64th position. The sub-index of financial globalization (de facto) is one of the dimensions of the KOF Globalization Index. It shows the degree of integration of the country into global financial flows. It consists of five variables: (1) foreign direct investment, (2) portfolio investment, (3) international debt, (4) international reserves, and (5) payments of international obligations. The sub-index is calculated by aggregating five (normalized) variables, where each variable is assigned a specific weight based on principal component analysis (PCA).

The personnel attraction segment contains three very important indicators, namely: "number of adult migrants", in percentage terms, 43rd position, "number of foreign students" (52nd) and "Brain gain", according to which indicator Serbia is in the 124th position. The third segment in this table refers to social inclusion concerns, where there are three indicators, namely: "tolerance of minorities", where Serbia is in the 84th position, "tolerance of immigrants" (51st) and "social mobility" (73rd).⁶ Finally, the fourth segment in table 2 refers to "gender equality" and contains the following indicators: "economic empowerment of women", which occupies the 29th position, "gender parity in high-skilled jobs" (31st), as well as "leadership opportunities for women" (57th).

Table 3 is dedicated to the factors that, taken together, contribute to growth, and one could say to the overall development of Serbia, which will make it a more attractive country with strong capacities that will retain talent. The factors are presented through three segments. The first refers to "formal education", which in the case of Serbia is in the 41st position out of 134 countries included in the Report for the year 2023, where the segment "enrolment in secondary schools and universities" is given separately, with special indicators "attends to secondary schools" (11th position) and "enrolment in tertiary education" (41st). The second segment is entitled "quality of education" which is a determinant of three levels of indicators: "tertiary education expenditure" (50th position), "reading, maths and science" (43rd) and "university ranking" (74th). The third segment refers to "lifelong learning" (86th position), which is given great importance in the literature, including the following indicators, namely: first, "master's education" (57th); second, "prevalence of training in companies" (38th); third, "employee development" (94th).

The fourth segment of the data presented in Table 3 includes indicators related to "access to growth opportunities" (53rd), which INSEAD experts divide into "Empowerment", where are the indicators "delegation of authority" (66th positions), "youth inclusion" (54th), and "collaboration" which includes "the use of virtual social networks" (64th) and "the use of virtual professional networks" (62nd).

6 The "social mobility" indicator represents the average answer to the question: In your country, to what extent do individuals have the opportunity to improve their economic situation through their own efforts, regardless of the socio-economic status of their parents? [1 = not at all; 7 = to a large extent] | In 2021.

Table 4 contains indicators showing the degree of “sustainability” (82nd position), which includes four sub-indicators: “pension coverage” (80th), “social protection” (75th), “retention of talent” (127th) and “environmental performance” (60th) and as well as a “way of life” (41st), where the sub-indexes are: “personal rights” (64th), “personal security” (40th), “density of doctors” (33rd) and “sanitation” (48th).

4. Improving the education system for the purpose of greater involvement of talents in the economy of Serbia is of particular importance

Table 5 shows the state of ranked vocational and technical skills in Serbia among 134 countries that GTCI, 2023 includes and the employability segment. In terms of labour force and population with secondary education, Serbia is highly ranked, in 19th and 16th position, respectively. However, according to the indicator “technicians and associate professionals”, it stands much weaker, and is in the 46th position. Regarding issues related to “employability”, the situation in Serbia is significantly less favourable, especially the indicators “relevance of education system to the economy” (68th position) and “unemployment of the highly educated” (91st), to which the executive power in Serbia should pay special attention.

5. Focusing on the personnel potential of Serbia is of vital importance

Finally, Table 6 refers to the level of knowledge and skills that are of global importance and that largely determine the mobility of human capital, both internally and even more so internationally. The circumstances of such a situation are determined by two factors. In the sphere of the level of knowledge and existing skills, this is indicated by the following indicators: labour force and population with higher education, which are in the 56th and 55th positions, respectively; “professionals” and “researchers” (53rd and 36th positions, respectively), as well as the “digital skills” indicator (56th). The following indicators are presented in the framework of “influence on talents” (44th): “results of innovation” (57th); “export of products of high value of intellectual property and knowledge” (N/A); “software development” (44th); “newly registered jobs” (61st) “articles published in scientific journals” (39th.).

The key messages for the future are (GTCL, 2023):

Firstly, over the coming decade, talent competitiveness will gain even more importance as a critical element of competitiveness, innovation and geopolitical soft power. This will be true for nations, cities and organisations alike.

Second, talent competition will grow fiercer. As uncertainties and international tensions continue to accumulate in trade, in investment, in politics and in diplomacy, we can expect more rather than fewer talent wars. This will be reinforced by growing needs to address domestic tensions in labour markets and growing trend towards nationalist postures and policies around topics such as immigration or ‘friend-shoring’, for example.

Third, significant aspects of the world of work will be uprooted under a combination of increasingly ubiquitous factors including: new expectations and attitudes from younger generations; the emergence of new economic and organisational models; and new possibilities offered by technologies, including AI.

Fourth, cities and regions will pave the way for new talent strategies and talent-based innovation. Quality of life and sustainability will be a critical asset for those aiming at becoming talent hubs.

Fifth, inequalities in global and local labour markets will take different forms and shapes. Talent-focused regulatory policies will be required at the global level to prevent unnecessary tensions, and to allow the planet to fully leverage its human and technological capacities for a better, sustainable, and more equal world.

Sixth, in the rapidly moving and uncertain world of the coming decade, skills and education will remain vital tools to offer workers opportunities to contribute to economies and societies in a meaningful fashion.

6. Strategic planning in focus

The GTCI has also played a pioneering role in exploring the ways in which talent strategies matter at the local level, in particular at the city level. The establishment of a specific Global City Talent Competitiveness Index (GTCI) has created its own invaluable data resource. This has led to useful insights into imaginative talent initiatives that could be developed and implemented at a sub-national level to create jobs and foster competitiveness. Social inclusiveness: Urbanization of poverty and access to basic services. We live in cities because they offer us access to employment, education, health care, goods and services. In other words, cities are centres of development. However, life in a city is not equal for all of its residents (UN ESCAP, 2011). Cities will play an increasingly important role as hubs for entrepreneurial talent. Because entrepreneurial talent is closely related to innovation, building and managing dynamic and open ecosystems that will be an increasingly important part of building an entrepreneurial culture and state of consciousness. The role of talent is already crucial, by city and region. Likewise, incubators and accelerators will gain more and more importance. Currently, most cities tend to draw up talent strategies based on similar criteria. Belgrade is in the 104th position out of a total of 175 cities included in the analysed Report on Global Competitiveness for Talents (GTCI 2022).

To create a shortlist for *fDi's European Cities and Regions of the Future 2022/23*, the fDi Intelligence division of the *Financial Times* collected data using the specialist online FDI tools – fDi Benchmark and fDi Markets as well as other sources. Actually, fDi Intelligence is an English-language bi-monthly news and foreign direct investment (FDI) publication, providing an up-to-date review of global investment activity. Data was collected for 553 locations (367 cities and 148 regions), under five categories: Economic Potential, Human Capital and Lifestyle, Cost Effectiveness, Connectivity and Business Friendliness. Locations scored up to a maximum of 10 points for each data point, which were weighted by importance to the FDI decision making process to compile the subcategory rankings as well as the overall 'European Cities and Regions of the Future 2022/23' ranking.⁷

⁷ *Methodology of population categories.* In order to categorize cities, fDi considered both the population of the immediate city and that of the larger urban zone (LUZ). *City size categories.* Major cities: The cities in this category had an immediate city population of more than 750,000 plus a LUZ of more than 2 million, or a LUZ of over 4 million. Large cities: Cities with an immediate city population over 500,000 plus a LUZ of over 1 million, or a LUZ over 2 million people. Mid-sized cities: Cities with an immediate city population over 200,000 plus a LUZ over 750,000, or an immediate city population over 350,000. Small cities: Cities with an immediate city population between 100,000 and 350,000. Micro cities: Cities with an immediate city population below 100,000. *Regional size categories.* Large regions: More than 4 million people. Mid-sized regions: Between 1.5 and 4 million people. Small regions: Fewer than 1.5 million people.

Having reviewed 75 survey submissions from investment promotion agencies from cities across Europe, the panel of four external judges — belonging to the investment promotion and foreign direct investment industry (FDI) — plus *fDi Intelligence's* editor Jacopo Dettoni awarded the city of Barcelona the title of winner for its investment promotion strategy in the major cities category. Antwerp, Vilnius, Doncaster and Valmiera are recognised as having the best FDI strategies in the Large, Mid-Sized, Small and Micro Cities categories, respectively. In the case of Serbia, Belgrade ranked 10th overall in the category of large cities (*The Financial Times*, 2022: 11).

Human Capital and Lifestyle. According to the criterion “Human Capital and Lifestyle”, Belgrade took the 6th position in the category of large European cities, behind Hamburg, Krakow, Cologne, Rotterdam and Gothenburg, and ahead of Frankfurt, Lyon, Valencia and Dresden (the ten most attractive in this category). *Profitability of capital investment.* When it comes to profitability criteria for foreign direct investments, Belgrade is in the 7th position. However, according to the criteria of “Economic Potential” and “Connectivity - communication”, Belgrade was not among the top ten large cities in Europe. *Business Friendliness.* According to the criterion “Business Friendliness”, Belgrade took the 5th position behind Krakow, Frankfurt, Düsseldorf and Manchester. In the category of medium-sized European cities, no Serbian city was among the top ten.

When it comes to the category of small cities in Europe, Kragujevac took 3rd place, Subotica 6th, and Niš 8th according to the criterion of “Cost Effectiveness” (*The Financial Times*, 2022: 15). In the category of micro European cities of Europe, according to the criterion “Cost Effectiveness”, Leskovac took the 2nd place, and Zrenjanin the 3rd place among the top ten in this category. In this category of European cities, Zrenjanin took the 10th position in the criterion “Strategy for foreign direct investments” (*The Financial Times*, 2022: 23). In the category of small European regions, and according to the criterion “Cost Effectiveness”, Srem came in the 9th position. Finally, in the category of small European regions, and according to the criterion “Strategy for foreign direct investments”, the Niš region took the 8th position (*The Financial Times*, 2022: 36).

Infrastructure determines the competitiveness, liveability and environmental health of cities. There is a strong correlation between the infrastructure and environmental health, economic competitiveness and the quality of life in our cities. Infrastructure has a long lifespan and once built, it locks cities into consumption and production patterns for decades. These patterns can have positive or negative outcomes, depending on how the infrastructure is designed (UN ESCAP, 2011). All urban environments depend on the efficiency of the infrastructural systems that service them. In order to establish and maintain healthy and liveable urban setting, it is necessary to look into the design and organization of infrastructural systems in an integrated manner. We need to design and develop urban infrastructure that is sustainably eco-efficient. The concept of eco-efficiency seeks to develop synergies between the economy and the environment rather than just balance the trade-offs. An eco-efficient approach to urban infrastructure development can help governments save precious financial resources.

Strategic planning is a systematic decision-making process that focuses attention on important issues and on how to resolve them. Strategic planning provides a general

framework for action: a way to determine priorities,⁸ make wise choices and allocate scarce resources (e.g., time, money, skills) to achieve agreed-upon objectives (UN-Habitat, 2009). Why is strategic planning relevant?

All planning – spatial, economic, sectoral, environmental, or organizational – is more effective if it is strategic. Strategic planning has become an important tool for local governments in ensuring efficiency and effectiveness in policy design and implementation, including for infrastructure. Strategic planning helps: (a) to move away from ad-hoc and short-term decision-making; (b) to make the best long-term decisions; (c) implying that a city vision gets translated into objectives, which in turn provide criteria to select win-win policies. Moreover, it ensures the right timing and maximizing of public-private cooperation and public participation (UN ESCAP, 2011).

5. CONCLUSION

Analysis of documentary and statistical materials and relevant theoretical considerations, from a review of extensive literature devoted to general strategic directions of human development adequate for all participants in the mobility of human capital, shows:

that the state administration, through responsible institutions and public policies, can provide an effective combination of relevant drivers that will contribute to the creation of an appropriate environment in the home state and its cities, attractive to young professionals, especially overachievers;

can make ecosystems - quality of education, innovation, work environment and lifestyle - more competitive; so that professionals could see their future in Serbia, which will retain human capital and attract young people from the diaspora and from other countries.

Bearing in mind the targeted future of Serbia's development, the results of the author's research project suggest several important lessons for its demographic and economic future.

First, migration studies were for a long time "...an insufficiently theorized field of social research. This is unfortunate, because a more significant understanding of migration processes can only be achieved if we do not conceptually separate them from the broader

8 One of the priorities for net emigration countries is to increase the inflow of remittances from migrants and expatriates, and the greater part of them to be directed to development projects. The Millennium Development Goal 8 is to develop a global partnership for development, which IOM believes is linked to migration in terms of transfer costs for remittances, which is about 20 percent of money transferred. IOM sees the need for government regulation to reduce remittance costs within the limits of a non-discriminatory and predictable funding system (<https://publications.iom.int/system/files/pdf/mrs20.pdf>).

Remittance costs remained high in the second quarter of 2023 (2023Q2), at more than twice the Sustainable Development Goal (SDG) target of 3 percent by 2030. According to the World Bank's Remittance Prices Worldwide (RPW) database, the global average cost of sending \$200 was 6.2 percent in 2023Q2, up slightly from 6 percent a year earlier. (Beck, Janfils, and Kpodar 2022; Ratha and Riedberg 2005).

The average cost of sending \$200 to the ECA region climbed by more than 40 basis points to 6.9 percent in the second quarter of 2023 from 6.4 percent a year earlier (Leveraging Diaspora Finances for Private Capital Mobilization, Migration and Development *Brief 39*, December 2023).

processes of social change of which they are an integral part” (de Hass, 2021: 1). Aspirations are shaped by people’s subjective assessment of environmental change and risk. Apart from adaptive capacity and risk perception, it is clear that aspirations are formed in accordance with social norms, values and traditions and should therefore be assessed within a wider social context. Recognition that culture shapes all connections between nature and society is growing among scientists concerned with human behaviour under environmental change, counterbalancing a research paradigm that prioritizes objective and material dimensions of adaptive capacity and well-being. Here, “culture” is considered as “a symbol that expresses meaning, including beliefs, rituals, art, and stories that create collective views and behaviours, and on the basis of which problem-response strategies are designed and implemented” (Adger et al. 2013: 112). This can include both tangible and intangible aspects, and is often associated with places that people give meaning to. The lesson that emerges from these views imposes the need for a more extensive multidisciplinary approach to solving the problems discussed here.

Second, theories are very important to policy makers, formulated to clarify cause-and-effect relationships and to explain, predict and understand phenomena; to shape research questions, guide the development of quantitative models, and ultimately inform adaptation policies and programs. The size of expatriate communities and the volume of remittances they send to the homeland have prompted a reorientation of theoretical models, where these enormous resources are in the centre of attention (Guarnizo, 2003). For some authors, remittances can play a key role in solving existing financial bottlenecks and providing the necessary resources for long-term development. However, there is no precedent that any country has taken the road toward sustained development only on the basis of the remittances sent by its expatriates. More importantly, the positive effects of these contributions depend on a number of other factors. Depending on them, migration can lead to vastly different consequences – “economic stagnation, the emptying out of sending places, and the massive loss of talent vs. the energizing of local economies, new productive activities, and significant contributions for scientific and technological development” (Portes, 2006: 21). For labour force migration, the key question is whether the circular character of its flows can be preserved?

Third, in recent times the interdependence of international migration and development has gained importance in the UN development agenda “Transforming our world: Agenda for sustainable development until 2030”. Contemporary directions and flows of migration are determined by global capital flows, supported by super-structural arrangements involving a complex of international institutions, academics, research programs, reports, policy prescriptions, and policy makers that promote the unhindered flows of capital and managed migration. “This complex of institutions, prescriptions and actors are all mobilized model of accumulation” (Canterbury, 2010: 6). The principal fault line in the neoliberal approach to migration and development is the urge to restrict migration due to economic considerations and concerns with matters such as culture and security. In fact, the cultural fear is very much present in Europe where anti-Islam, anti-immigrant, anti-African sentiments are running high. The US “war on terror” is also another driving factor in attempts to restrict immigration. In the final analysis however, profit is winning out over cultural dilution and security concerns, as there is a steady flow of skilled migrants globally (Canterbury, 2010: 37).

Fourth, a prerequisite for the successful management of economic migration are formulating a clear and coherent strategy, creating a legal and institutional framework for its implementation, consistent and comprehensive implementation of measures and activities, and ensuring effective coordination between all involved actors. Creating effective measures for the management of economic migration is one of the biggest public policy challenges of the Republic of Serbia. The priorities of its public policies of strategic importance should be aimed, first of all, at eliminating the weaknesses that are given for Serbia in the Global Talent Competitiveness Index (GTCI).

Fifth, the future of the mobility of Serbia's human capital in the context of the dynamics, quantity and quality of environmental changes in the broader sense of the word (living environment) depends on numerous drivers, obstacles and limitations of an internal and also external nature. Some determinants of mobility are beyond human control, and some can be largely managed by choosing an appropriate strategy for doing the necessary actions. The results of the author's research endeavour suggest public policy priorities. On the external front, for Serbia's international-political and international-economic relations, peace, cooperation and openness are of particular importance in terms of circulation of human capital, freedom of the capital movement, trade and services. On the internal level, public policies rightly emphasize: (a) stronger action in the economy - in terms of improving the regulatory setting; creating a more attractive market, business and work environment; (b) formal education, lifelong learning; access to growth opportunities are also imposed as a necessity to raise their importance to a significantly higher level on the agenda of the general policy of the executive power, and (c) sustainable development, with a special emphasis on environmental protection, as well as the lifestyle itself must be constant political priorities of the future of Serbia.

This, without a doubt, implies that the maximum development of institutions, the rule of law, health and social protection, moral values and solidarity, the fight against exploitation, crime and corruption and the efficiency of the executive power, are at the highest level of responsibility of the state administration. Public policies understood in this way, their effective implementation and democratic management of the entire system, especially ecosystems, can to a significant extent be the answer to the demographic challenges that Serbia is facing, as well as contribute to the retention and inflow of talent and the stabilization of the mobility of human capital, with a sustainable demographic, cultural and economic balance. This implies achieving a balanced interdependence of the environment and spatial mobility of human capital, which could contribute to reversing that by the end of the 21st century, the population of Serbia will increase, not decrease - as predicted by UN experts, or at least to remain at the same level.

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ANNEX

▶ TABLE 1. POSSIBILITIES OF BETTER LIVING ENVIRONMENT FOR TALENTS IN SERBIA

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
1	ENABLE	44.21	62
1.1	Regulatory Landscape	42.81	69
1.1.1	Government effectiveness	44.04	65
1.1.2	Rule of law	42.86	67
1.1.3	Political stability	57.68	70
1.1.4	Regulatory quality	43.45	70
1.1.5	Corruption	26.03	81
1.2.	Market Landscape	42.60	72
1.2.1	Extent of market dominance	38.83	65
1.2.2	Domestic credit to private sector	41.60	79
1.2.3	Cluster development	41.12	75
1.2.4	R&D expenditure	18.41	40
1.2.5	ICT infrastructure	66.09	64
1.2.6	Urbanisation	49.51	85
1,3	<i>Business and Labour Landscape</i>	47.22	55
	<i>Labour Market</i>		
1.3.1	Labour rights	81.10	56
1.3.2	Labour-employer cooperation	32.69	102
	<i>Management Practice</i>		
1.3.3	Professional management	40.55	85
1.3.4	Relationship of pay to productivity	49.17	81
	<i>Technology Adoption</i>		
1.3.5	Enterprise software	18.17	83
1.3.6	Cloud computing	28.42	28
1.3.7	Firms with website	80.41	21

Source: The Global Talent Competitiveness Index 2023, p. 177.

▶ TABLE 2. DETERMINANTS OF SERBIA'S ATTRACTIVENESS FOR TALENT

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
2	ATTRACT	54.78	48
2.1	External Openness	47.53	63
	<i>Attract Business</i>		
2.1.1	FDI regulatory restrictiveness	87.57	30
2.1.2	Financial globalisation	62.35	64
	<i>Attract People</i>		
2.1.3	Migrant stock	57.04	43

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
2.1.4	International students	16.30	52
2.1.5	Brain gain	14.38	124
2.2	Internal Openness	62.02	42
	<i>Social Inclusion</i>		
2.2.1	Tolerance of minorities	30.85	84
2.2.2	Tolerance of immigrants	66.15	51
2.2.3	Social mobility	42.75	73
	<i>Gender Equality</i>		
2.2.4	Economic empowerment of women	91.15	29
2.2.5	Gender parity in high-skilled jobs	88.14	31
2.2.6	Leadership opportunities for women	53.09	57

Source: The Global Talent Competitiveness Index 2023, p. 177.

▶ **TABLE 3. FACTORS OF FORMATION AND GROWTH OF TALENTED PERSONNEL**

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
3	GROW	41.25	58
3.1	Formal Education	43.25	41
	<i>Enrolment</i>		
3.1.1	Vocational enrolment	55.57	11
3.1.2	Tertiary enrolment	45.34	41
	<i>Quality</i>		
3.1.3	Tertiary education expenditure	63.45	50
3.1.4	Reading, maths, and science	44.27	43
3.1.5	University ranking	7.60	74
3.2	Lifelong Learning	29.81	86
3.2.1	Business masters education	0.00	57
3.2.2	Prevalence of training in firms	45.68	38
3.2.3	Employee development	43.74	94
3.3	Access to Growth Opportunities	50.70	53
	<i>Empowerment</i>		
3.3.1	Delegation of authority	47.19	66
3.3.2	Youth inclusion	68.47	54
	<i>Collaboration</i>		
3.3.3	Use of virtual social networks	65.27	64
3.3.4	Use of virtual professional networks	21.86	62

Source: The Global Talent Competitiveness Index 2023, p. 177.

▶ **TABLE 4. FACTORS CONTRIBUTING TO TALENT RETENTION**

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
4	RETAIN	62.09	58
4.1	Sustainability	46.37	82
4.1.1	Pension coverage	53.03	80
4.1.2	Social protection	45.61	75
4.1.3	Brain retention	12.21	127
4.1.4	Environmental performance	42.37	60
4.1.5	Vulnerable employment	78.64	58
4.2	Lifestyle	77.80	41
4.2.1	Personal rights	75.81	64
4.2.2	Personal safety	79.70	40
4.2.3	Physician density	58.00	33
4.2.4	Sanitation	97.69	48

Source: The Global Talent Competitiveness Index 2023, p. 177.

▶ **TABLE 5. EDUCATIONAL AND TECHNICAL SKILLS**

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
5	VOCATIONAL AND TECHNICAL SKILLS	58.14	41
5.1	Mid-Level Skills	54.58	35
5.1.1	Workforce with secondary education	72.04	19
5.1.2	Population with secondary education	74.01	16
5.1.3	Technicians and associate professionals	43.45	46
5.1.4	Labour productivity per employee	28.82	61
5.2	Employability	61.69	57
5.2.1	Ease of finding skilled employees	64.53	48
5.2.2	Relevance of education system to the economy	41.34	68
5.2.3	Skills matching	75.69	31
5.2.4	Highly educated unemployment	65.20	91

Source: The Global Talent Competitiveness Index 2023, p. 177.

▶ **TABLE 6. GLOBAL KNOWLEDGE AND SKILLS**

	GTCI 2023 COUNTRY PROFILE BY PILLAR	SCORE	RANK
6	GLOBAL KNOWLEDGE - SKILLS	30.88	51
6.1	High-Level Skills	25.51	61
6.1.1	Workforce with tertiary education	31.69	19
6.1.2	Population with tertiary education	27.76	55
6.1.3	Professionals	33.19	53
6.1.4	Researchers	25.51	36
6.1.5	Senior officials and managers	19.47	71
6.1.6	Digital skills	15.42	56
6.2	Talent Impact	36.25	44
6.2.1	Innovation output	37.29	57
6.2.2	High-value exports	n/a	n/a
6.2.3	Software development	71.20	44
6.3.4	New business density	10.82	61
6.25	Scientific journal articles	25.70	39

Source: The Global Talent Competitiveness Index 2023, p. 177.