

WHY PLAN THE ATTRACTION OF YOUNG ICT TALENTS IN THE SCOPE OF THE TALENTMAGNET PROJECT¹⁷

Liliya Ilieva, PhD

University of Ruse “Angel Kanchev”

Phone: +359 887786294

E-mail: lilieva@uni-ruse.bg

Assoc Prof. Nina Bencheva, PhD

Telecommunications Department,

University of Ruse “Angel Kanchev”

Phone: +359 887746257

E-mail: nina@uni-ruse.bg

Abstract: Information and communication technologies (ICT) are a significant driver of economic development and generate jobs not only for the IT industry, but also for other sectors of the economy. Globally, the shortage of highly skilled labour in the field of ICT is increasing and this can affect economic growth. Although the number of ICT specialists in the EU grew more than 50 % from 2011 to 2020, over 9 times higher than the total employment increase during the same period, there is still ICT workforce shortage in all sectors. There are currently more than 350,000 vacancies for digital technology experts in the EU. The COVID-19 pandemic has contributed to a further increase in the demand for such specialists. That is why attracting and retaining such experts is a big challenge, especially in small towns and municipalities. To fill this gap, it is necessary that all stakeholders be involved actively and consciously by developing plans for attracting and retaining young ICT talents at the local level. The introduction of this article presents information on the increasing demand for ICT specialists in the EU and Bulgaria in particular. The paper presents a study of global challenges associated with the competition for ICT talent. The authors' conception of “Talent” and “Talent attraction management (TAM)” is outlined. A study of the factors for destination decision-making of ICT talents is presented. The need to develop a talent attraction and retention plan to enable successful competition for ICT specialists is analyzed. Conclusions are made and recommendations for further work on the topic are proposed.

Keywords: ICT, attraction, retention, TAM, Talent attraction and retention plan.

INTRODUCTION

The great diffusion of information and communication technology (ICT) has triggered a dramatic transformation of the world into society during the last decades, (Bahrini, 2021). ICT diffusion in practically every aspect of life has considerably improved the efficiency of resource allocation, extremely reduced production costs, and promoted much greater demand and investment in all economic sectors. ICT technologies are a significant driver of economic development and generate jobs not only for the IT industry, but also for other sectors of the economy. Globally, the shortage of highly-skilled labour in the field of ICT is increasing and this can affect economic growth. Although the number of ICT specialists in the EU grew more than 50 % from 2011 to 2020, over 9 times higher than total employment increase during the same period, there is still ICT workforce shortage in all sectors (Digital, 2021). There are currently more than 350,000 vacancies for digital technology experts in the EU. Because of COVID-19 pandemic and the surge of doing business remotely, the labour market in the ICT sector is experiencing unprecedented growth. While technology companies are expanding and competition is increasing, organizations everywhere have to rethink their work systems and place higher emphasis on their labour force by attracting and retaining the most skilled individuals who can boost productivity and drive innovation.

Despite its poor performance in terms of overall digitalization, Bulgaria is among the EU Member states in which the share of the ICT sector in the formation of gross value added is relatively higher, ranking the country 5th in the EU (NDP, 2019). According to Eurostat statistics the number

¹⁷ Докладът е представен на заседание на секция 3.2 на 29 октомври 2021 с оригинално заглавие WHY PLAN THE ATTRACTION OF YOUNG ICT TALENTS IN THE SCOPE OF THE TALENTMAGNET PROJECT

of ICT specialists in 2020 is 3.2% of total employment (EUROSTAT, 2021). A potential obstacle to the development of this sector can be identified in the shortage of staff. Unfortunately, the Digital Bulgaria 2025 programme does not analyse the lag of rural areas in terms of human capital. The lag continues and even increases due to the ‘brain-drain’ of educated people to big cities and other more developed countries.

To address the shortfalls of ICT professionals in small and medium cities and regions, it is necessary that interventions be planned to mitigate and or prevent outmigration of talent and to regain skilled workforce. Clearly, formulation of appropriate response is not going to happen by itself or in one day - designing effective measures/policies is a complicated process requiring a robust knowledge base, coordination between different policy- and decision-making bodies and stakeholders and a constant dialogue with talents.

Having realized that, the University of Ruse (UR) took part in a project titled “Improved Institutional Capacities and New Multilevel Governance for Talent Attraction and Retention in the Danube Region - TalentMagnet”, funded under the Danube Transnational Programme. The main goal of the project is to strengthen multilevel governance and improve institutional capacities in the Danube Region to reduce the outmigration of talented young workforce. To this end, the project undertakes to encourage decision-makers at different spatial scales and institutions from the ‘Quadruple Helix’ to engage in regional and urban competitiveness policies that aim to attract and retain skilled and talented individuals.

One of the project deliverables which is a responsibility of UR’s team is to develop a practical guide on preparing and governing local talent attraction and retention plans. The present paper intends to introduce some of the research made for development of the guide and to provide an overview of its introductory sections. It is deemed that the findings of the guide are to a large extent valid for ICT talents as well and their consideration could benefit local stakeholders in their efforts to attract and retain skilled ICT workforce.

OVERVIEW OF GLOBAL CHALLENGES ASSOCIATED WITH THE COMPETITION FOR TALENT

As globalisation deepens, some regions and cities are more and more seriously experiencing the ‘brain-drain’ phenomenon and have come to the realization that the retention and attraction of highly-skilled human capital can be a means for encouraging innovation and sustainable growth. Regional and municipal leaders, along with national decision-makers, will therefore need to focus on both the immediate concerns of their constituencies (creating jobs adjusted to the market needs, alleviating income disparities, improving quality of life, education and environment, etc.) and on developing ‘talent ecosystems’ capable of cultivating, encouraging and empowering creative and knowledgeable individuals (TalentMagnet, 2021).

Researchers point out several key trends shaping the need for creation of talent-friendly environment in cities and regions and for intensification of the ‘war for talent’ in the 21st century:

- *Demographic challenges in industrialized countries related to declining birth rates and aging population.* These create severe shortages in the labour market and push up social spending thus limiting productivity and innovation capacity of businesses and economies.
- *Migration and mobility trends.* While emigration certainly brings positive outcomes for both the migrants and the receiving economy/organization, the effects of large-scale migration on the sending countries/regions are generally negative, esp. if labour outflow is dominated by young and educated people (Atoyan, 2016). On the other hand globalization has caused a rise in employment versatility allowing for flexible schedules and locations and remote-work arrangements. All those work patterns are typical for ICT professionals whose willingness has changed to moving not because of the right job but because of the right place.
- *Growing role of innovation, creativity and knowledge and increased specialization.* Attracting high-skilled talent is a crucial element in the efforts for development and higher productivity. Furthermore, increased specialization around core competences in knowledge economy requires highly specialized skills that might not always be readily available at the

local or regional level. This is especially true when it comes to ICT industry in which firms demand different skills sets than companies based on mechanical technologies (Dachs, 2018).

- *Influx of new technologies* as a driver of modern economies not only demands knowledgeable and educated people as users and operators but also enables talents to work globally and creates opportunities for businesses and regions to make better use of a wider talent pool. The COVID-19 pandemic triggered the deployment of Industry 4.0, digital workflows, robots, automation, use of IoT technologies, video conferencing, cloud services, etc. – all tools developed and utilized by ICT professionals.

The above arguments clearly indicate the economic rationale behind the efforts of policy makers to limit brain-drain, utilize their existing workforce and attract more talented people. To succeed in these endeavours proper planning is essential, as well as understanding the target groups, their needs and preferences and determination and promoting the key strengths of a place that would make it more attractive for talents.

WHAT DO WE MEAN BY ‘TALENT’ AND ‘TALENT ATTRACTION MANAGEMENT’?

To ensure well-coordinated and integrated talent-related policies it is important that a common definition of ‘talent’ be made. Numerous definitions exist in literature, some of which cited in the developed guide, and there is no single and widely accepted one in preference to the others. In consideration also of the rationale for talent attraction, the following definition used in talent management guides (Tendensor, 2014) was accepted, i.e.: ‘*A talent is a person who can contribute to the prosperity of the place (and workplace) in a world where knowledge, creativity and innovation are key factors*’.

Talent attraction management (TAM) shall respectively be understood as ‘*systematically utilizing policies and activities at institutional/local/regional level with the goal to attract, develop, and retain talented individuals with high levels of competency, personality and motivation in line with the strategic directions of the organization/city/region in a dynamic, highly competitive, and global environment*’.

In line with the latter definition the various possible TAM policies and actions could be categorized as:

- *Talent retention*, i.e. creating environment encouraging local talents to stay and better utilizing the local workforce potential;
- *Talent attraction* - involving marketing and branding the organization/place/region as attractive for talents and promoting return migration;
- *Talent reception* - i.e. welcoming external/returning talent and making it feel like home;
- *Talent integration* - embracement of external talent through social and professional networks;
- *Talent reputation* - creating overall attractive image of the organization/place/region.

Organizations/cities/regions can put emphasis on the different groups of activities depending on where insufficiencies or weak links are identified during the development of the local talent attraction and retention plan (LTARP) and in consideration of the particular target group chosen.

As the present paper focuses on ICT professionals, it shall be pointed out that the OECD (2004) distinguishes between two definitions of ICT employment: *ICT sector employment*, defined as employment in industries traditionally identified as belonging to the ICT sector and *ICT skilled employment*, defined as employment in occupations that use ICT to various degrees across all industries. The ICT skilled employment includes three categories of ICT competences: specialists, advanced users and basic users. It is recommended that organizations/cities/regions position themselves depending on the specific talent categories which will be targeted.

FACTORS FOR DESTINATION DECISION-MAKING OF TALENTS

It is possible to identify several major groups of determinants that motivate talent desire to settle in or move to a particular location. It is essential that these be recognized so that the place could be made more attractive to talents and that the most appealing features of its tangible and intangible aspects be communicated. The determinants could be divided into *pull factors* which attract talent and *push factors* that make them look for opportunities elsewhere. Both groups of drivers are affected by the individual and life-course characteristics of the talent (such as age, gender, education, marital status and family background, country of origin, resources, etc.) as individuals respond differently to incentives according to their personal situation, the experience they had in the past, and their expectation for the future. It should therefore be pointed out that there is no single universal framework of factors influencing destination decision-making of talents but nevertheless the below groups proposed by Michele Tuccio (2019) might be taken into account:

(1) *Determinants related to employment, study and earnings* – employment and study opportunities, income and tax, welfare system, political system, etc.;

(2) *Non-pecuniary motivations and amenities* – future prospects and family environment, skills environment, facilities and infrastructure, diversity and inclusiveness, quality of life, environmental conditions, health system, etc.

There are important linkages and overlap between the aforementioned groups of factors that need not to be disregarded. Furthermore, attitudes to life, work, leisure and consumption differ between generations, depending on their past economic conditions, historic development and cultural circumstances.

Diverse research exists on the preferences of talents when choosing a place of residence. According to FYA (2015) one of the most important considerations for talents is the creation of work-life balance. Lepawsky, et al. (2010) in turn claim that there are three main “locations” where people spend their time, i.e. (1) home, (2) work, and (3) free time activities, which cover everything beyond the former two categories or the so called ‘third places’, e.g. cafés or restaurants. The authors believe that good job is not everything one needs. Favourable conditions for renting/buying an apartment/house and quality services related to third places are also required.

The destination decision-making factors for young talents which are most often cited in literature include: sustainable and quality workplaces, flexible work conditions, high salaries and the possibility for gaining international work experience, favourable opportunities for climbing the corporate ladder, costs of living, digital infrastructure, advantageous taxing system, ethnic diversity, thus the opportunity to get to know customs and cuisines, openness, tolerance and social diversity, English-speaking environment, events and gatherings, liveable, yet lively streets, urban architecture, low transport costs and short commuting time between home and work place, ideal neighbourhood for raising children, etc.

The incentives, respectively barriers, to the migration of ICT specialists are quite similar to the ones presented above and include: *Incentives* - wage differentials, well-developed welfare systems, access to good healthcare and education services, cultural and geographic proximity, an enabling environment for entrepreneurs, a vibrant start-up scene, opportunities to work for large and renowned firms, and a high quality of life; *Barriers* - strict visa regulations, including strict visa policies for family reunification, a failure to recognize foreign, qualifications, and restrictive national regulations on specific occupations (ILO, 2019).

Some good practices for attracting ICT specialists are utilized by the cities of Tel Aviv and Munich. Tel Aviv, for example, offers prestigious coding bootcamps to the programmers. It has the highest density of start-ups per capita and pays the highest salaries in Israel. Similarly, programmers working with disruptive technologies like Artificial Intelligence or devices such as drones, feel at home in the capital of Bavaria accommodating giants such as General Electric, IBM or Microsoft. Most of the population in both cities speaks English, which is also of great importance for ICT people.

These professionals are relatively well-paid and remuneration would not be paramount in their settlement choice. Factors such as international environment, density of start-ups, English speaking

population etc. would rather serve as incentives for many ICT professionals. In order to attract and retain these talents, a more detailed analysis of the combination of determinants of their choice of a location will have to be made.

WHY PLANNING FOR TALENT ATTRACTION AND RETENTION?

There is an expression that “failing to plan is planning to fail”. A good plan navigating the interested organizations, local and regional authorities along the way towards the common goal to create talent-friendly environment and reduce brain-drain would therefore be much useful. It will have to include talent attraction and retention priorities, status and improvement actions with deadlines and resources. The guide developed by UR in collaboration with the ‘TalentMagnet’ consortium proposes concrete steps for design and implementation of the LTARPs, as well as specific interventions and participative practices engaging the interested stakeholders. The document can be used only as a starting point and it is recommended that all suggested practices and approaches not be directly applied but adapted to the local context, place-specific circumstances and conditions.

CONCLUSIONS AND FUTURE WORK

In conclusion, proper planning has a critical role for enhancing the place’s position in the competition for the best and brightest individuals. Young ICT professionals are undoubtedly a group of talents for which many stakeholders compete for. It is therefore important that they be targeted with LTARPs tailor-made for the particular location/organization. Such plans may serve as a vehicle for facilitation of decision-making, better alignment of resources and proper communication.

After all, it can be concluded that the workplace and the labour market opportunities are not the only aspects that influence the ultimate decision of young ICT talent in choosing a place of residence. Factors related to lifestyle, personal happiness and quality experiences are all important for shaping one’s opinion. The leadership of each city has to manage all these factors together to be able to build up a successful local plan and strategy for attracting and retaining ICT talents.

To develop tailored TAM policies and actions for ICT talent attraction and retention, the image and reputation of the place in the eyes of inside and outside talent have to be understood and the regarded as necessary conditions impacting talent settlement behavior should be analyzed in light of the possibilities for their improvement. With target groups’ needs, wants and desires in mind, the unique and attractive features of the place/organization will have to be identified and marketed to the talents with the most effective communication activities and messages. All of the above will need to be implemented in collaboration with the ‘Quadruple Helix’ stakeholders.

ACKNOWLEDGMENT

The work presented in this paper is completed as fulfilment of “Improved Institutional Capacities and New Multilevel Governance for Talent Attraction and Retention in the Danube Region - TalentMagnet” project, funded under the Danube Transnational Programme.

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