



Fact Sheet **2023/2024**

Innovation Ecosystem in the
Moravian-Silesian Region

Dear readers,

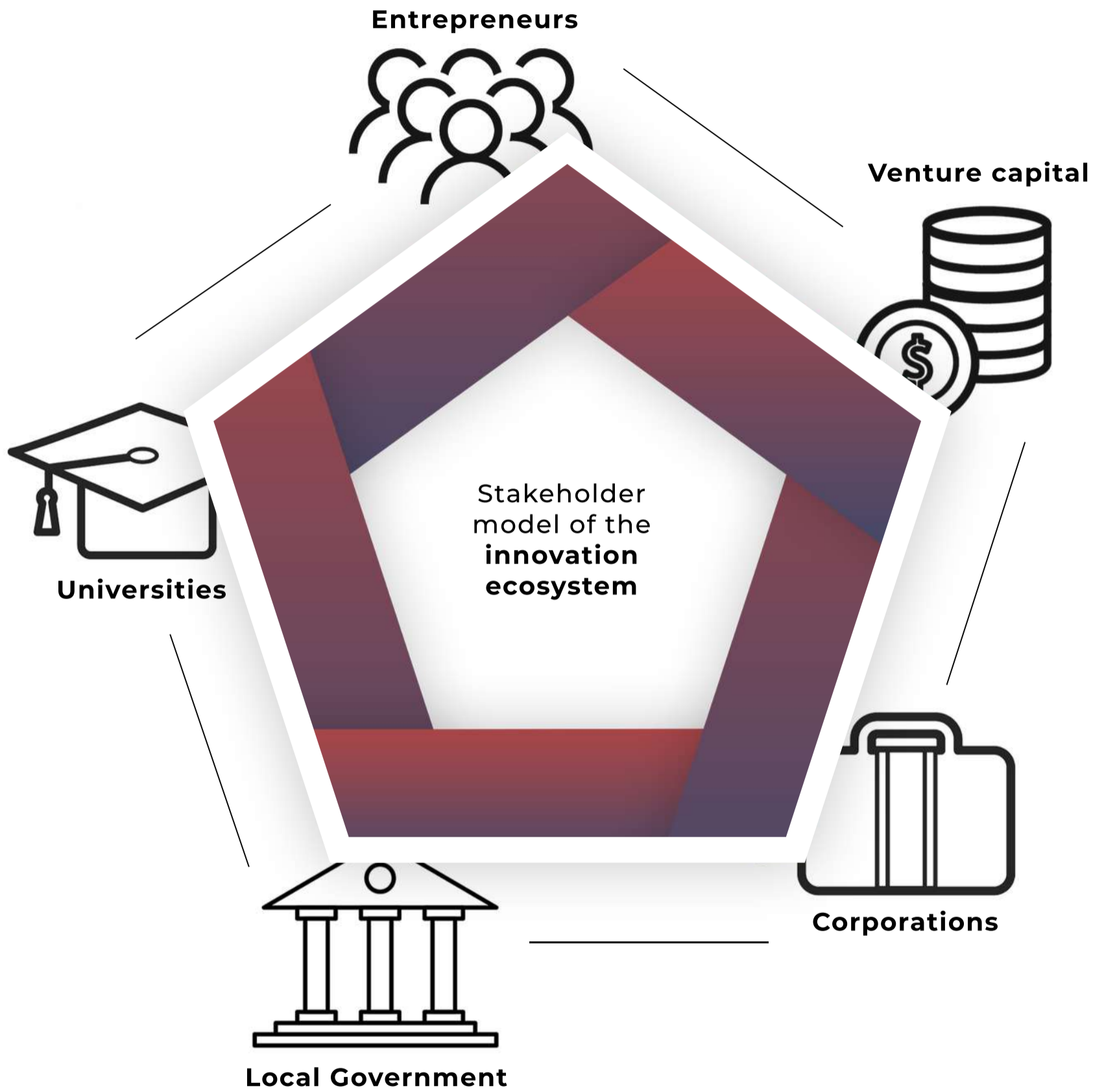
You are holding in your hands a publication intended for all those interested in the future of the Moravian-Silesian Region (hereinafter referred to as the MS Region). The overview of data on the innovation ecosystem of the region, which you will find on the following pages, is based on relevant sources and is the result of cooperation between various actors of the innovation ecosystem. Through the information presented, we want to give you an insight into the state and development of our region, while highlighting its need for growth. We believe that the publication will become a valuable contribution and open a wider discussion on the importance of promoting innovation and entrepreneurship.

The MS Region has undergone a remarkable transformation of its economy in the last 20 years. Ten years ago (in 2013), the unemployment rate was over 10%. Due to the long-term decline of the main sectors of the local economy, the entire north of Moravia has acquired the label of a structurally disadvantaged region. Many young people could not imagine their future here and left their home region after graduating from high school or university. Since then, there has been an unprecedented fall in unemployment across the country. In 2019, the last year before the global pandemic, the unemployment rate in the MS Region was below 5%. Such a low unemployment rate has not been seen in the MS Region in 30 years.

It might seem that the economic transformation of the MS Region has been largely completed. In international comparison, we can observe low unemployment rates, wage growth, inflow of foreign investment, new industries on the rise. There is even a growing number of natives who are considering a return after having secured successful careers in Prague, Brno or abroad, and would now like to live closer to their extended families and friends.

However, the MS Region, like the whole country, is facing the need for another and much more demanding economic transformation than the current one. This is a transition from an economy whose competitiveness is based on low costs (e.g. labour or energy prices) to a knowledge-based economy. In the latter, the long-term prosperity of society is based on the ability to create and, in particular, to utilize new knowledge and technologies on a continuous basis. And in a way that puts less and less pressure on the environment. That is why in 2017, representatives of the MS Region, the City of Ostrava and three public universities established the Moravian-Silesian Innovation Centre, whose mission is to develop a regional innovation ecosystem in the MS Region.





Innovation Ecosystem of the Moravian-Silesian Region

The term "innovation ecosystem" (IE) is increasingly used in professional circles and in the public domain. Its original meaning is gradually expanding. It originally referred to a network of closely collaborating firms and other organisations that create new knowledge and share their expertise, staff and physical capacities to develop new technologies and/or bring entirely new products to market. With the increasing complexity of firms' innovation processes, people also use the term to refer to the wider environment in which this collaborative network of firms and organisations operates. Examples include local open and trusting culture, special technical shared infrastructure, purpose-built training activities, or thematically focused financial institutions.

In this publication we use the expression "regional innovation ecosystem of the MS Region". What do we mean by this? The basic building blocks are entrepreneurs and companies. **Entrepreneurs are the main drivers of innovation processes** in their firms. They are the people who, at their own expense and risk, come up with new products and services, new ways of production and organizational procedures that can raise our standard of living. Without the people who are committed to **entrepreneurial pioneering**, we would not have new, successful companies that create new jobs to replace those that are no longer needed.

Some innovations require a lot of capital and other inputs that only large companies can provide. **Corporations** are therefore another crucial part of the region's innovation ecosystem.

Their focus significantly influences the future paths of ecosystem development, including many startups. Corporations concentrate know-how about markets and trends that shape new opportunities. At the same time, they are a source of managerial skills that are also needed for startups that are gradually turning into corporations through rapid growth.

The third crucial part of a functioning innovation ecosystem is **venture capital**, or rather the people and organisations that decide how to use it. Successful technology startups would grow at slower rates without access to venture capital and all that goes with it (knowledge, experience, contacts). They would often not progress further due to lack of capital and would be stuck at one of the dead ends on the road to globally successful innovation.

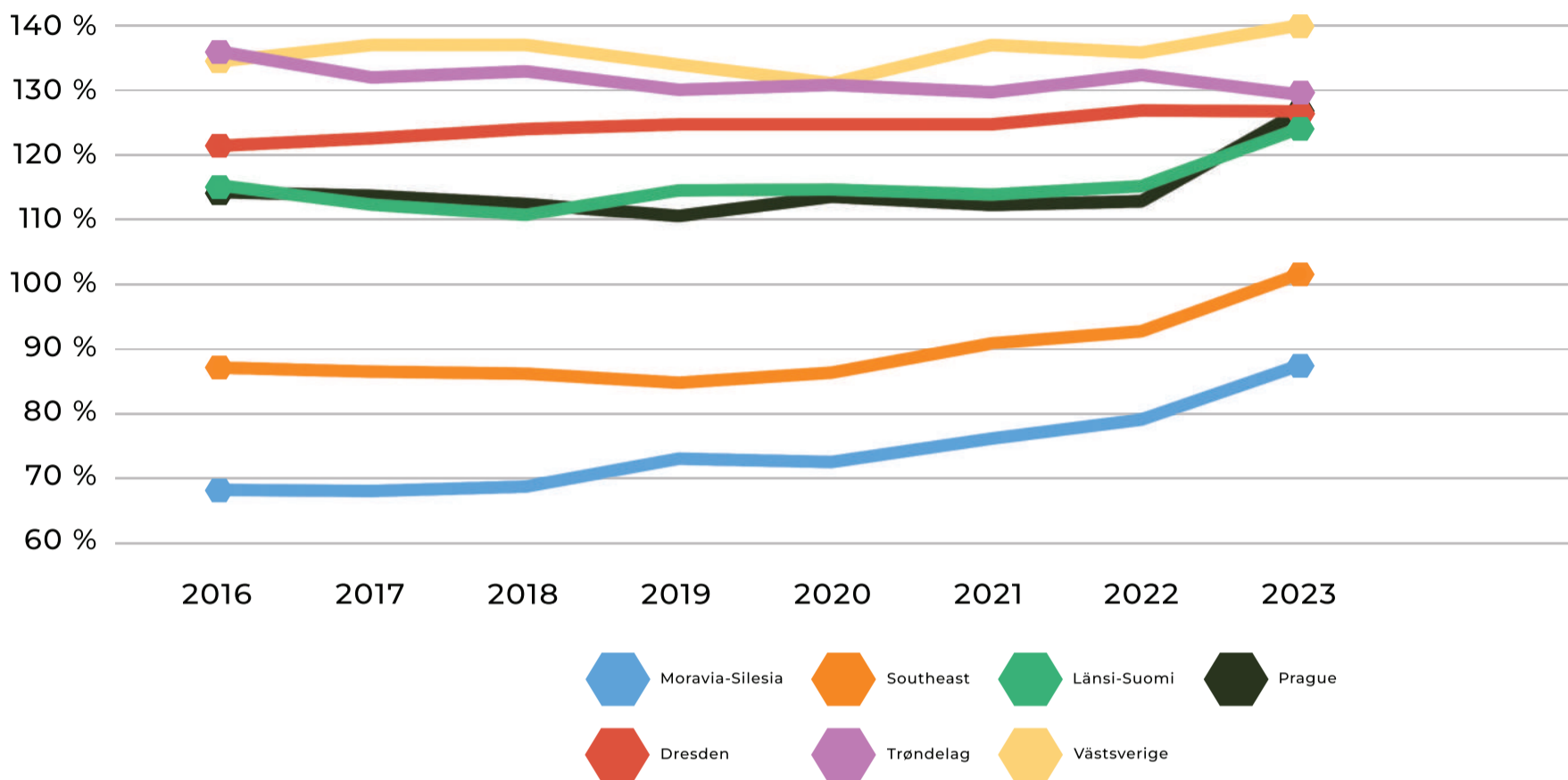
Universities and research organisations are a key part of the region's innovation ecosystem in the long term. Quality research is a key driver of economic growth. This is due to the fact that research results are directly reflected in the university education. New generations of entrepreneurs and their employees thus have increasingly better knowledge and technology at their disposal. Globally, the most successful regional innovation ecosystems are built around cities where the world's best universities are located.

The fifth important part of the region's innovation ecosystem is **regional and local government**. Only the leaders of these governments have a political mandate from their constituents to make a concerted effort to modernize the local economy in the interest of society. It is they who usually invest in local primary and secondary schools, which significantly shape the personality, personal motivation or interest in business of each local resident.

These five main types of actors are therefore included in the regional innovation ecosystem of the MS Region. It particularly refers to their cooperation and joint activities that lead to the improvement of local conditions for entrepreneurship and innovation. The basis of this joint effort is the **Regional Innovation Strategy (RIS) of the MS Region**. It is a shared vision of the region's future prosperity elaborated into strategic goals and specific projects to achieve them. The Moravian-Silesian Innovation Centre Ostrava is responsible for coordinating the activities related to the formulation and implementation of this strategy.

And how is the innovation ecosystem of the MS Region currently doing? It is at an early stage of its development. The local economy is at the beginning of a journey from raw material and low-cost competitiveness to competitiveness based on knowledge, creativity and innovation. Compared to the innovation ecosystems of regions in other developed countries, the MS Region still has a lot of catching up to do, whether in the number of startups with a turnover of over CZK 1 billion or, for example, corporate investment in R&D and venture capital investment in local startups. Nevertheless, a solid foundation is forming for a strong innovation ecosystem that will accelerate the region's move towards a knowledge-based economy.

Regional Innovation Scoreboard



Source: European Commission (2023)

The Regional Innovation Index, known as the Regional Innovation Scoreboard (RIS), provides a comparative analysis of the innovation performance of regions in EU Member States and some neighbouring countries. It is a key tool of the European Commission, derived from the European Innovation Scoreboard, which measures innovation performance at national and regional level (NUTS 2 classification). The RIS is used for both diagnostic and benchmarking purposes and provides important information for the development and implementation of regional innovation policies and strategies. It allows comparing the performance of individual regions, monitoring trends in innovation and identifying needs for targeted investments.

According to the RIS, the Czech Republic has a medium innovation performance. Prague ranks among the innovation leaders in terms of performance and the South-East region (South Moravian Region and Vysočina Region) is among the strong innovators. Moravia-Silesia, which corresponds to the MS Region, is classified as a moderate innovator with strengths in non-research innovation expenditure and weaknesses in the number of university graduates. According to the latest data from 2023, Moravian-Silesia lags behind both the Czech Republic (91.7% of the Czech average) and the EU (86.9% of the EU average). Nevertheless, the trend shows a positive development and a decreasing gap from innovation leaders.



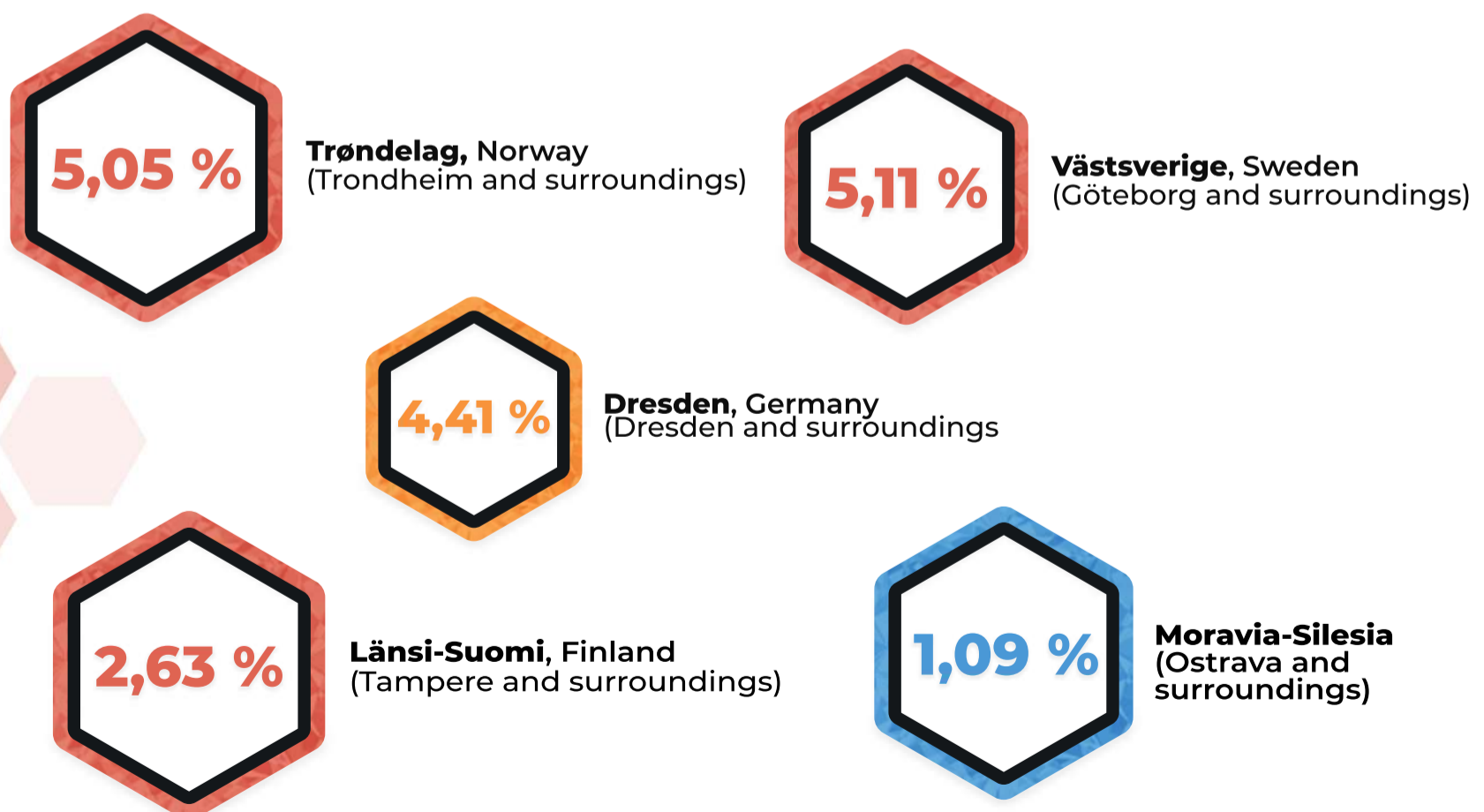
Knowledge Intensity

The knowledge intensity of an economy is a concept that measures how strongly research and development (R&D) activities are represented in a given economy. R&D activities are considered to be the main driver of innovation and economic growth in the long term (10 years or more). It is usually expressed in one of two ways:

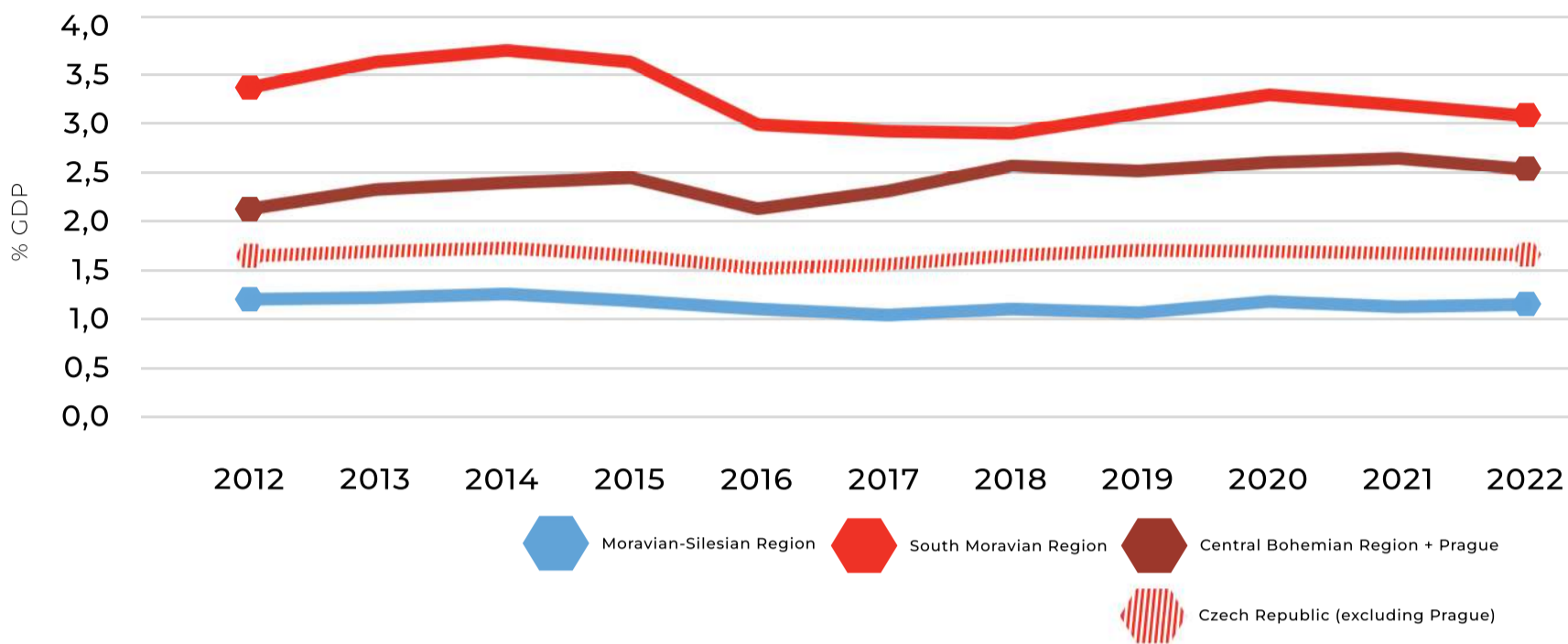
- Number of R&D employees per 1000 economically active population (EAP).
- R&D expenditure as a share of GDP.

R&D activities have the strongest impact on innovation and economic growth when they are closely linked across all stages of technology readiness (lab-to-market). Public research capacity is particularly highly concentrated in major metropolitan areas. In the Czech Republic, Prague is the dominant region in this respect, followed by Brno. To measure the knowledge intensity of the economy in the MS Region, we therefore use the knowledge intensity in the corporate sector in addition to the overall knowledge intensity. Firms build their R&D capacities with a clear innovation strategy. This type of firm activities underpins the higher orders of technological innovation. Their presence in the region creates a demand for high-end professionals. Often these are experts from abroad. At the same time, demands for R&D cooperation with universities and/or other research organisations are a prerequisite.

Share of total R&D expenditure (GERD) to regional GDP according to NUTS2 in 2019



Total knowledge intensity of the economy in the context of the Czech Republic

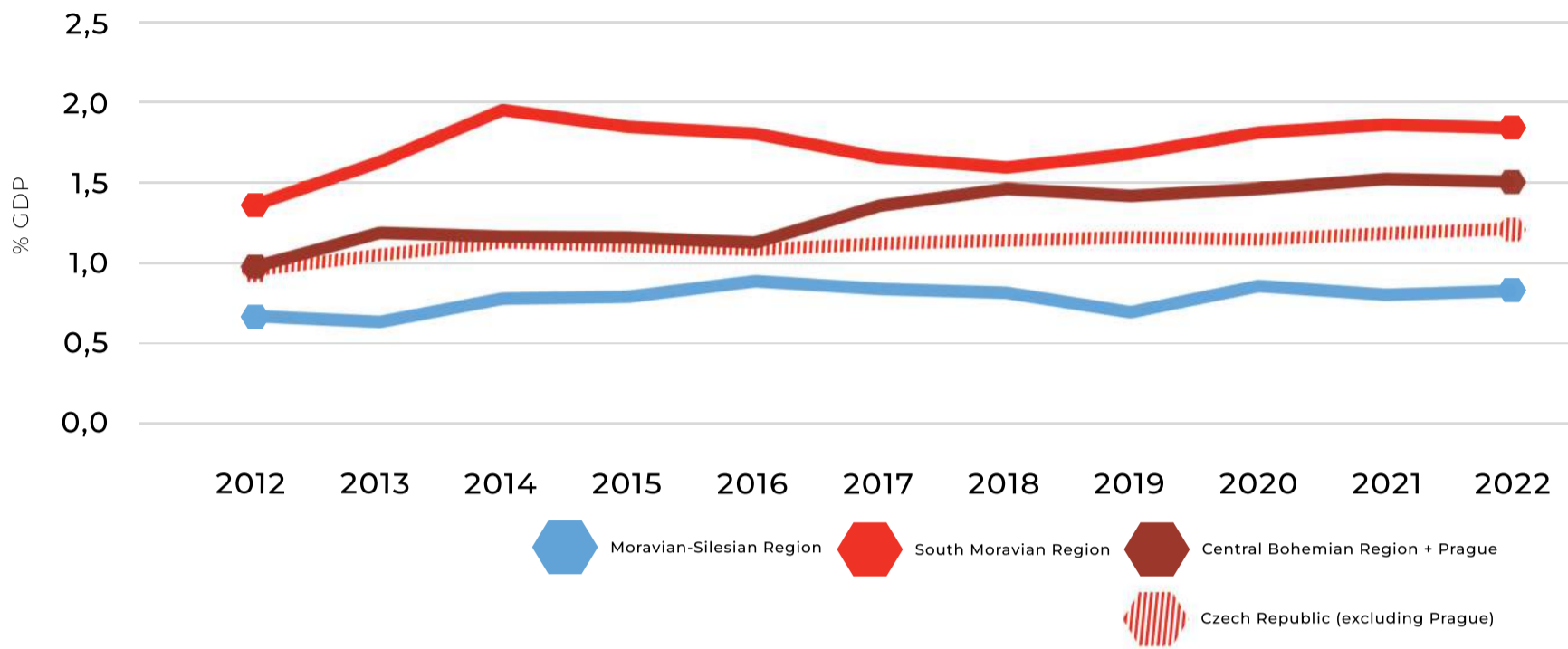


Czech Statistical Office (CZSO), 2023 – research and development indicators

The MS Region is characterized by a significantly lower knowledge intensity of the economy (1.16 % of GDP) compared to the level of the whole Czech Republic. In comparison with Central Bohemia (Prague) and the South Moravian Region (Brno), the knowledge intensity of the economy in the MS Region reaches only half or a third of the level.

In practice, this means that there is a significantly lower number of companies in the MS Region that carry out their own R&D activities. At the same time, there is a lower number of firms that provide global R&D functions for their parent companies. It is these types of firms that attract large numbers of top specialists to the region and generate a crucial volume of demand for R&D cooperation with universities and other research organisations.

Knowledge intensity in the corporate sector in the context of the Czech Republic



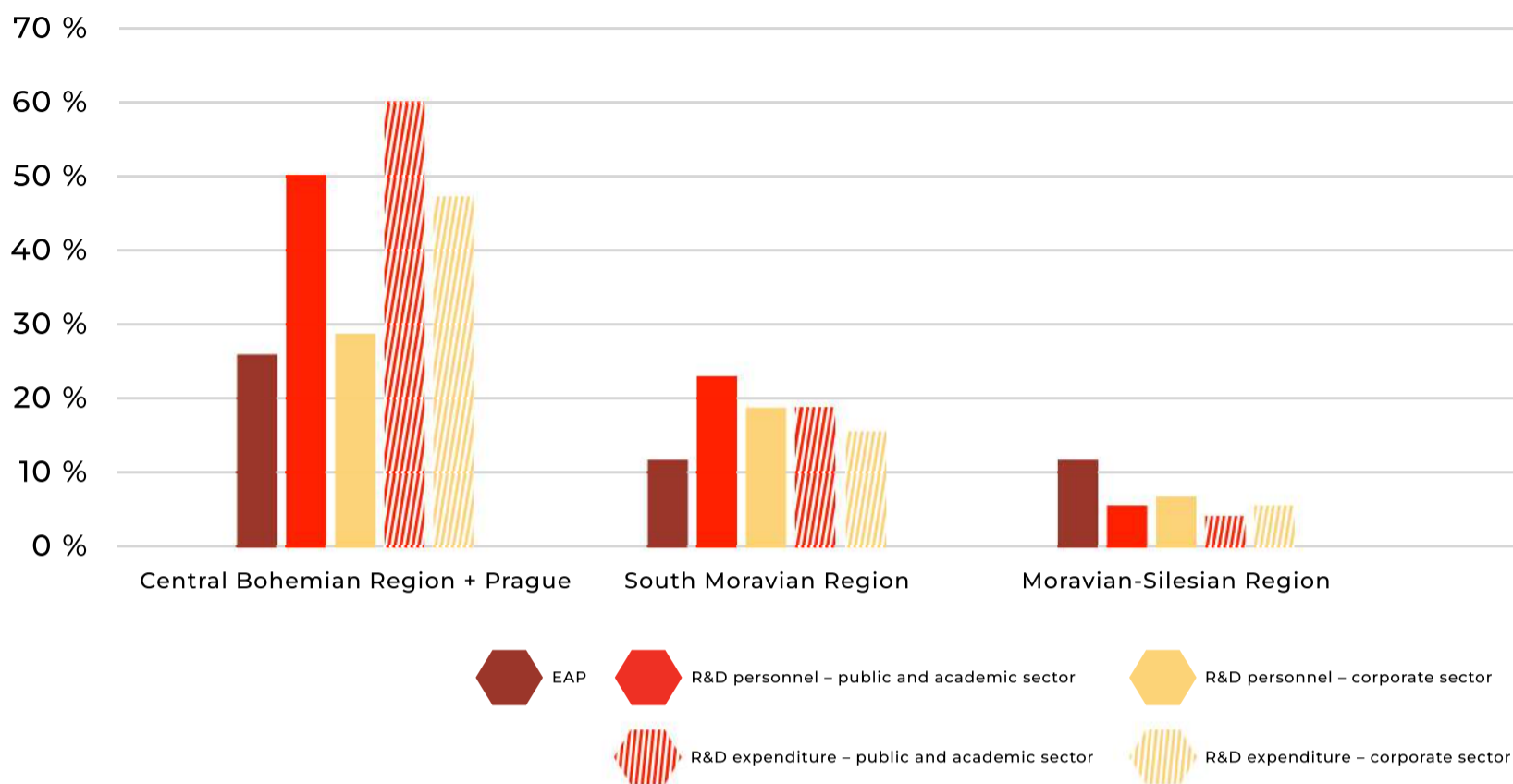
Czech Statistical Office (CZSO), 2023 – research and development indicators

A comparison of knowledge intensity in the corporate sector in recent years reveals its stagnation in the MS Region, while a rather increasing tendency can be observed in Central Bohemia and the South Moravian Region.

There are several reasons for these differences in the knowledge intensity of the corporate sector, and they are mutually influencing:

- One is the structure of the economy, especially the representation of so-called high-tech industries with a significantly higher level of investment in R&D.
- Another reason is the wide gap in the availability of highly qualified people, both senior employees and recent graduates.
- In the long term, one of the main causes is the high concentration of public R&D capacities in Prague and Brno. The scope and especially the quality of public research in these two main "driving" centres of the domestic economy strongly influence the scope and quality of university education. The concentration of capacity and quality of public research and university education inevitably influences knowledge intensity in the corporate sector.

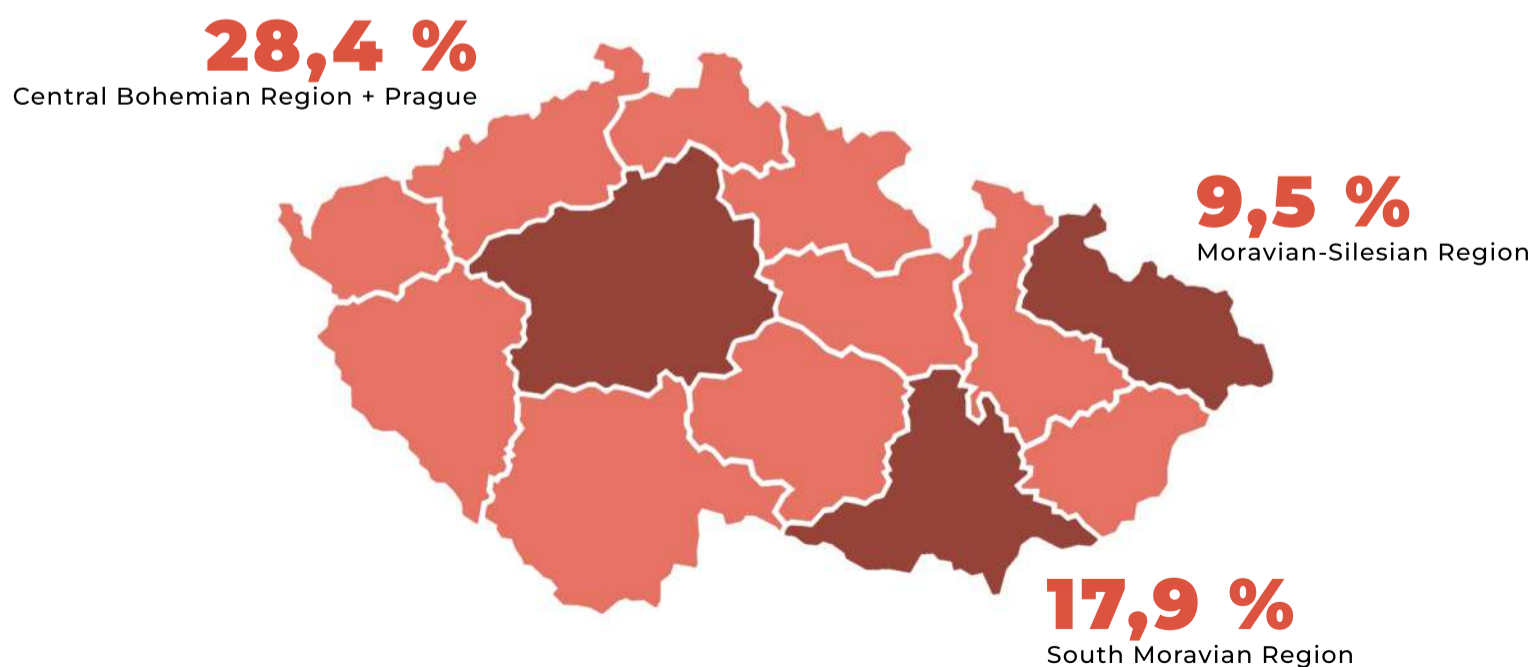
Share of EAP, personnel and R&D expenditure in the Czech Republic in 2022



Source: CZSO (2023) – employment, research and development indicators

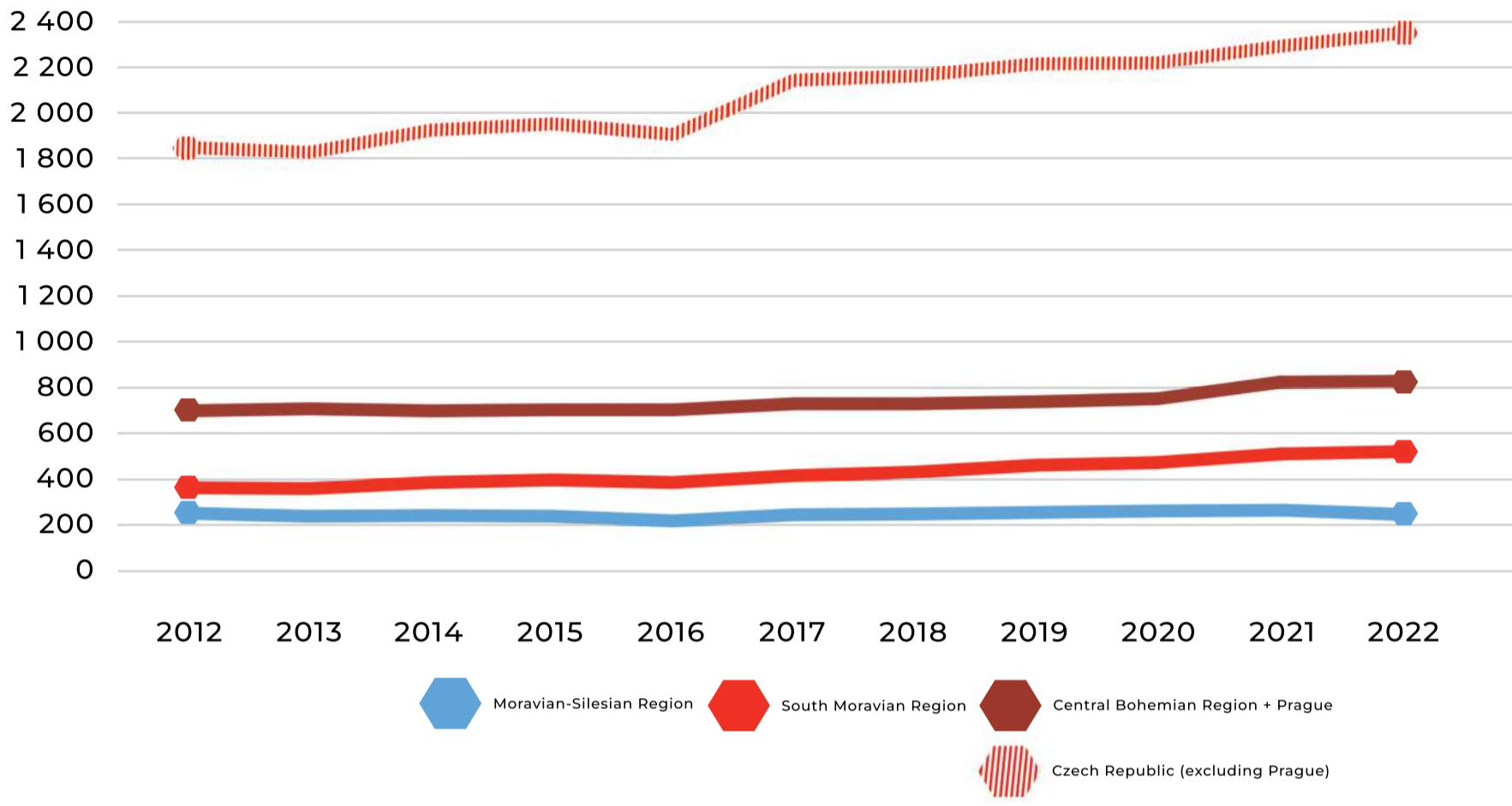
Most of the economically active population is located in Prague and its surroundings, which corresponds to the demographic distribution. There is also naturally the highest concentration of R&D workers and expenditures. In terms of the number of economically active population, the South Moravian Region and the MS Region are almost the same, yet in the MS Region the amount of R&D expenditure and workers is significantly lower.

Share in the total number of enterprises performing R&D in the Czech Republic in 2022



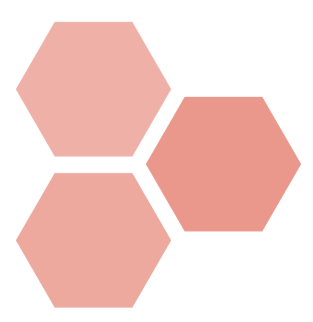
Source: CZSO (2023) – research and development indicators

Enterprises conducting research and development



Source: CZSO (2023) – research and development indicators

The region's innovation ecosystem is thriving with a growing number of companies conducting their own R&D. There are significantly fewer such companies in the MS Region than in Central Bohemia and the South Moravian Region. Over the last 10 years, the most significant growth of these companies has been recorded in the South Moravian Region, which is now at the level of Prague. A positive trend is the growing number of enterprises with their own R&D in all regions and the gradual strengthening of the position of the MS Region within the whole country.





Entrepreneurial activity

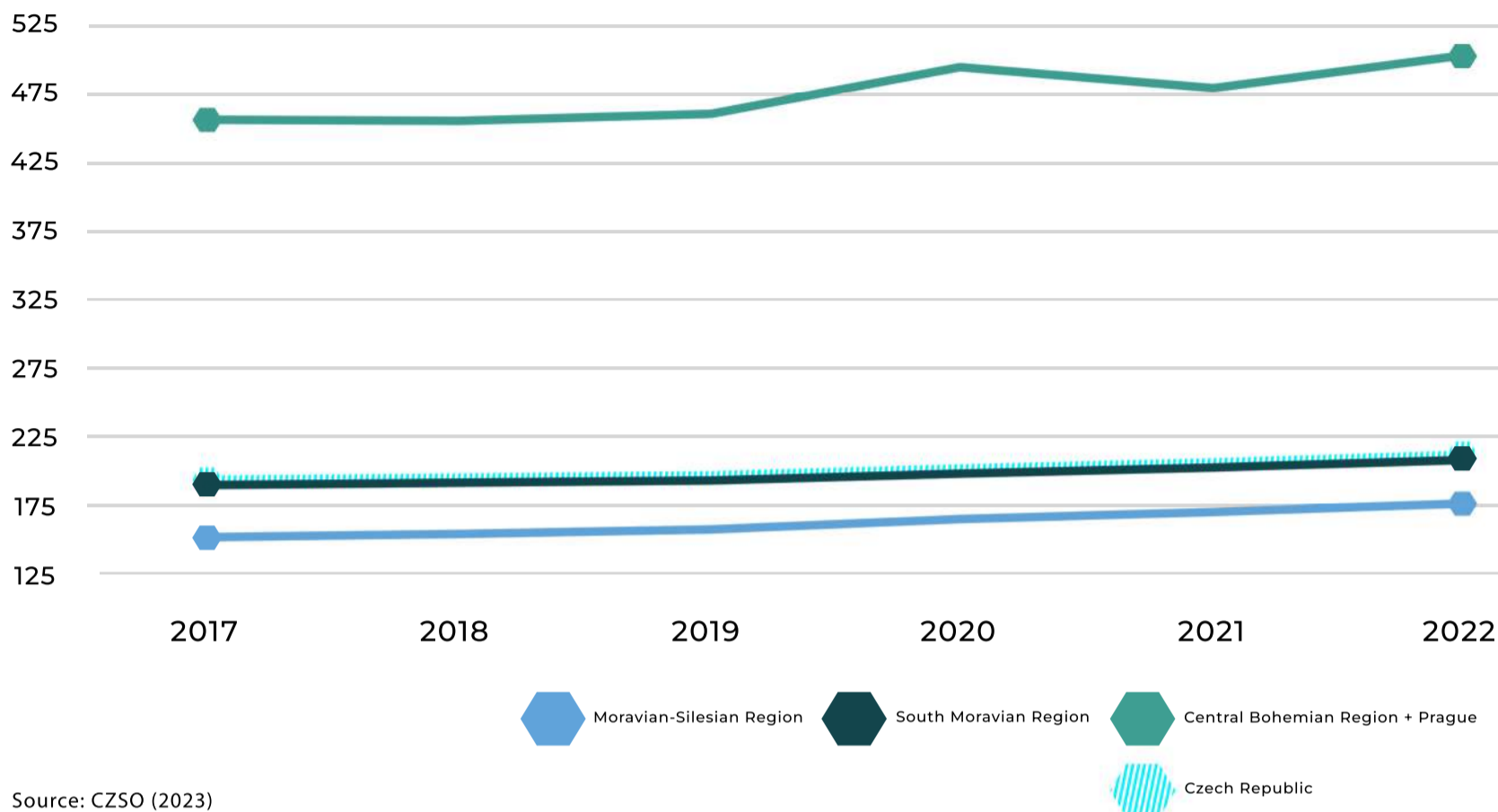
Entrepreneurial activity in the Moravian-Silesian Region

The nature of the innovation ecosystem and the long-term prosperity of a region are strongly influenced by the **intensity of entrepreneurship**. This can be expressed by the number of entrepreneurs or active entrepreneurial entities per 1,000 economically active inhabitants. With a certain degree of simplification, it can be said that the more people in a given region start their own businesses, the better. A larger number of successful firms generates a larger number of entrepreneurial opportunities. At the same time, it creates a greater number and diversity of jobs. The more people who have personal entrepreneurial experience, the more widespread is the entrepreneurial mindset throughout society, as well as the willingness to take risks and the general attitude that encourages experimenting and seeking new opportunities. At the same time, there are more experienced entrepreneurs in the region with equity capital to invest in entirely new **business ventures**. All this strengthens the functionality of the local innovation ecosystem and thus the long-term prosperity of the region.

Efforts to measure the intensity of entrepreneurship are complicated by the difficulty of comparing individual entrepreneurial activities. For example, how can you compare a successful local confectionery with a high-tech company exporting medical devices around the world? The other complication is related to the fact that the lack of attractive jobs may drive local residents to start their own businesses out of necessity rather than interest in building their own successful businesses. Both of these obstacles lead to the need to place comparisons of regions by entrepreneurial intensity in the context of the knowledge intensity of the economy.

Regional **R&D centres of international corporations**, together with emerging **startups** and dynamically growing **scaleups**, also play a major role in increasing entrepreneurial activity in the region. These entities drive innovation, attract investment and strengthen the competitiveness of the regional economy. R&D centres facilitate the transfer of cutting-edge technologies and know-how, while startups and scaleups are synonymous with agility, adaptability and the ability to respond quickly to changing market demands. Collaboration between corporate R&D centres and more agile businesses can lead to synergies that will significantly impact growth and innovation in the region. This symbiosis enables the sharing of experience, the development of professional skills and stimulates the creation of skilled jobs, which contributes to the attractiveness of the region for other investors and talents.

Entrepreneurial intensity – entrepreneurs per 1000 EAPs (ascertained activity)



Source: CZSO (2023)

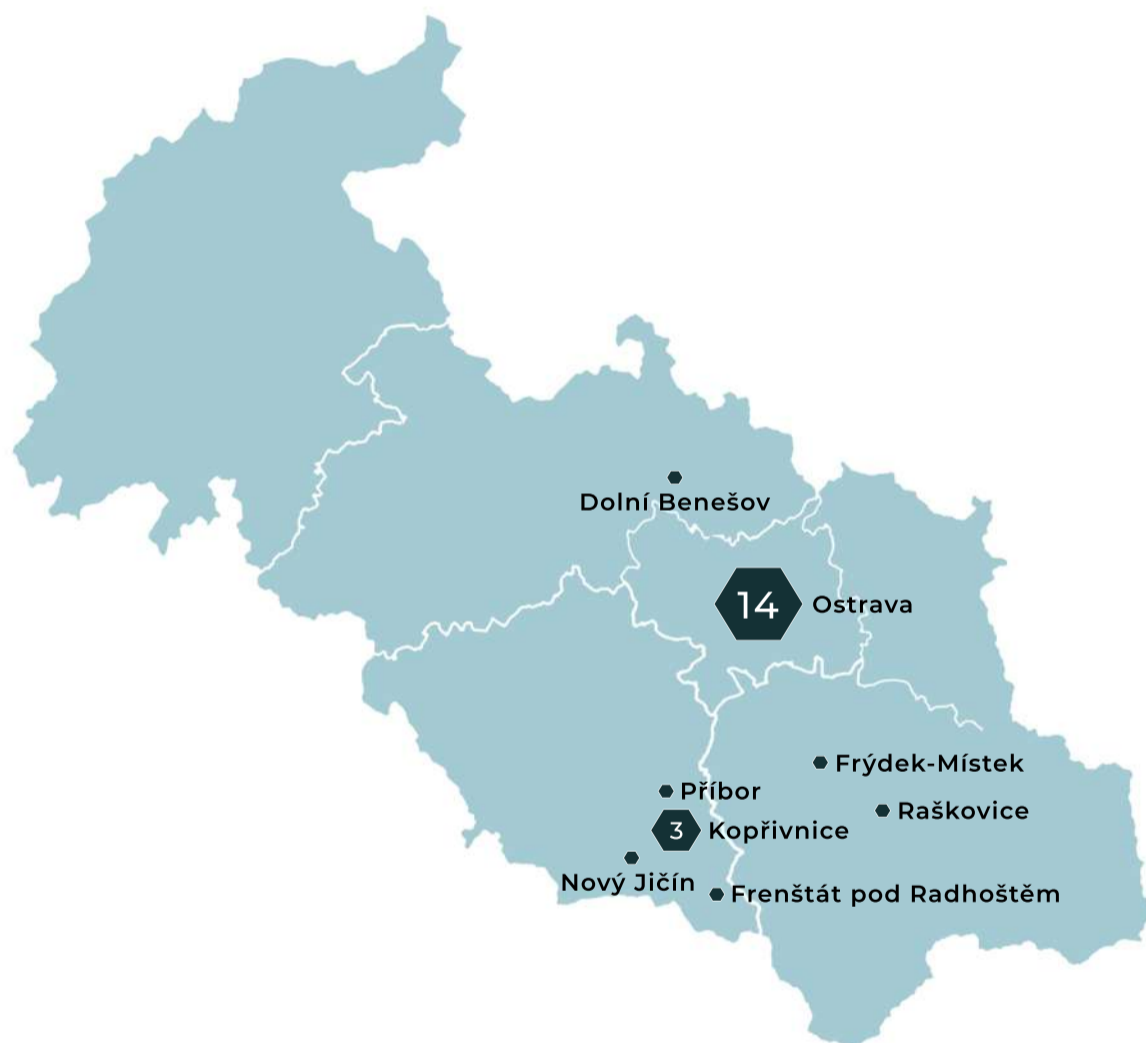
Within the Czech Republic, the MS Region remains among the three regions with the lowest share of entrepreneurs per economically active population. Yet, a slow but steady progress towards the national average can be observed. This indicates an improvement in the local business environment. Regional challenges such as structural transformation and talent drain are gradually being overcome. This trend shows significant potential for future business and entrepreneurship development in the region, which can contribute to economic diversification, job creation and foster innovation.



R&D facilities of international corporations

R&D centres of international corporations can serve as a catalyst for the development of entrepreneurial activity. Their greatest concentration is naturally found in large cities, near universities and in industrial zones. They ensure technology transfer, create skilled jobs and foster cooperation with local firms and the academic sector. These activities increase the innovation capacity of the region, strengthening the economy through investment and cooperation. In addition, they attract and retain talents through attractive research and development opportunities.

These centres also contribute to strengthening international links and foster a culture of innovation and entrepreneurship, which can significantly increase the region's competitiveness. Collaboration with these centres can help entrepreneurs develop innovative products and services, expand entrepreneurial skills and networks, and strengthen the overall entrepreneurial ecosystem.



● R&D facilities of international corporations in the Moravian-Silesian Region

ABB
Aliance Laundry
Armature Group
BorsodChem
Brose CZ
CGI
Dura-Shiloh
HELLA

Ingeteam
Leuze
LIGHTWORKS
Magna
NXP Semiconductors
Plastic Omnium
Porsche Engineering
Services

Siemens
Stora Enso
Tietoevry
Tymphony
Verizon
Vitesco Technologies
VYNCKE

Startups and scaleups in the Moravian-Silesian Region



Autinno is a dynamic spin-off of VŠB – TUO (Technical University of Ostrava) that is conquering the automotive industry with its unique Drive-by-Wire Car Interface 2 system. This serves as an interface for companies to develop assistance systems and automated driving in passenger cars.

Invent Medical is a world leader in the development and manufacture of customized 3D printed orthotic and prosthetic devices. They have also won the prestigious international Red Dot Award for the design of their products that help patients improve the quality of life.



The first fully circular clothing brand. Ostrava-based startup NIL Textile focuses on sustainable fashion made from innovative materials, giving people and companies the opportunity to take a responsible approach and look good at the same time.

Fulfillment is in. As one of the fastest growing companies in Central Europe, Skladon provides its customers with complete logistics services worldwide. Instead of managing their own warehouse and distribution, e-shops can now devote their full attention to their customers.





What do Tesla, Porsche and Ikea have in common? Like many other companies, they use the technology of Ostrava-based startup SprayVision in their paint shops. This combines hardware and software in the painting process to save the amount of paint used and improve the quality of the paint.

No less than 71 international patents protect elements of the revolutionary technology developed by Stimvia. It allows deep structures in the brain to be stimulated in a safe, non-invasive way to treat various chronic diseases. The company is currently in the clinical testing phase.



New business projects, startups and scaleups are key to regional development. This is for many reasons – they foster innovation, technological progress, and economic growth, create new jobs and also offer a platform for the introduction of advanced manufacturing and clean technologies or digital transformation. Scaleups, as growing startups with a proven business model, can play an important role in revitalizing industrial heritage, promoting green technologies and sustainable solutions that respond to local and global environmental challenges, thanks to their ability to scale and expand rapidly. In doing so, they contribute not only to diversifying the economy and increasing the competitiveness of the region, but also to transforming it into an attractive location to invest, live and work. The importance of startups and scaleups in this transformation is invaluable as they bring innovative ideas and technologies that are essential to the prosperity and sustainable development of the MS Region.

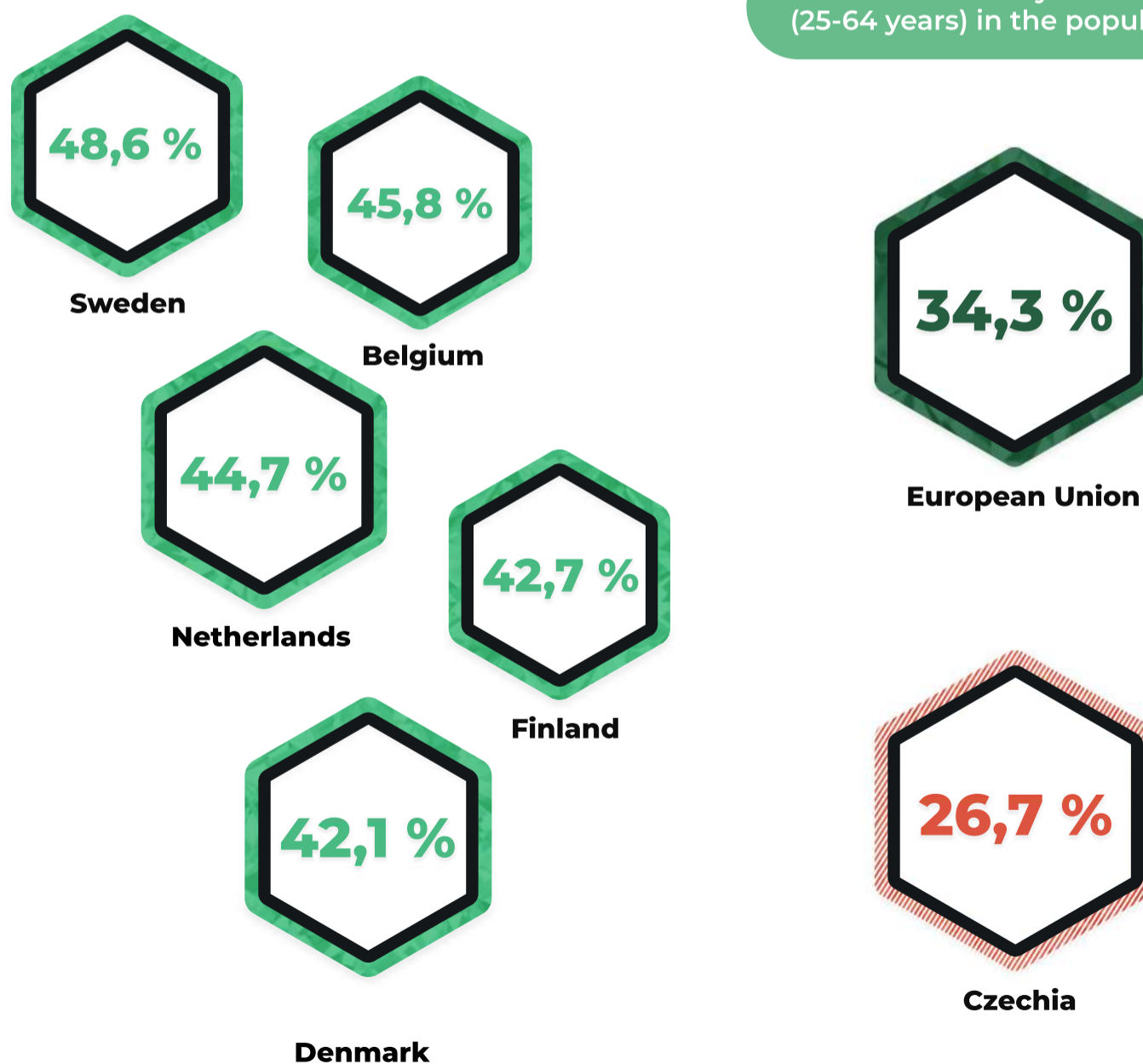


People

People are associated with several key characteristics in which the innovation ecosystem varies considerably from region to region. The total population of a region indicates the approximate size, i.e. the maximum achievable potential. The educational structure, in particular the share of the population with tertiary education, characterises the level of knowledge and competence diffusion in the population of a given region. Successful innovation regions are characterised by population growth and a high share of university-qualified population. Both are due to the high attractiveness of these regions for talented people with top education who move to them as part of internal and international migration. This promotes cultural and opinion diversity fostering a creative and entrepreneurial atmosphere.

Local universities have a major long-term impact on the region's innovation potential. University students and graduates are a key bridge through which new knowledge is disseminated into the whole economy. As the number of students, graduates and the quality of local universities increases, the intensity of the links between academic and business sectors in the region grows directly. Other direct and indirect benefits of the activities of universities and other research organisations

Share of university-educated persons
(25-64 years) in the population in 2022



Brain Drain

People with top education, as well as those with extensive experience and contacts, have a much higher propensity to change their place of residence during their lifetime. The mobility of these people is increasing as the global economy becomes more interconnected. Successful innovation regions benefit from this trend, as these people move in and, given the variety of opportunities, settle permanently. In contrast, regions undergoing long-term stagnation or a challenging economic transition are losing this 'global expert class'. The loss of highly skilled people is much greater for these regions than the gain for regions where many such people already live. The processes by which disadvantaged regions lose brains are collectively referred to as 'selective migration'. The following factors are most dangerous for the innovation ecosystem and the future of the region as a whole:

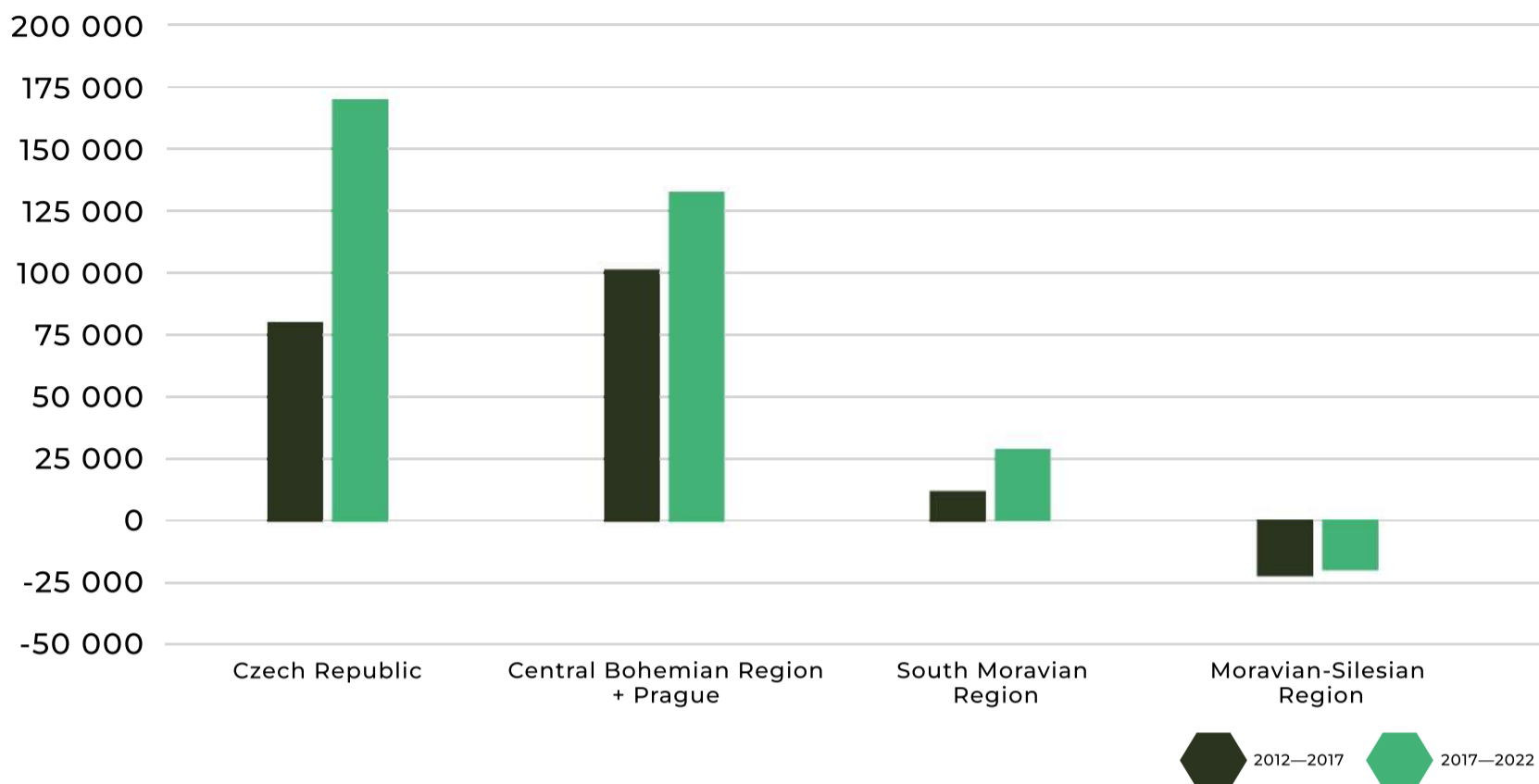
- The low quality and/or attractiveness of tertiary education in the region can lead to a situation where secondary school graduates prefer to study outside their home region. This can lead to a shortage of talented individuals with relevant education in the region.
- The low supply of attractive job opportunities for highly skilled professionals causes a mutual attraction between these opportunities and professionals. Individuals, firms and organizations thus benefit from the proximity to each other. At a time when the region is undergoing economic transformation, it is common for highly skilled workers to leave for better opportunities elsewhere. If this trend is prolonged, the local pool of creative and talented individuals may be depleted, which could limit the formation of new economic activities in the region.



"Brain gain" can bring a number of benefits such as know-how transfer, innovation, and growth in science, technology, and entrepreneurship in the host country. The term is often used in the context of foreign workers bringing their skills and knowledge to a new work environment, which can contribute to economic development and innovation.



Population change 2012—2017—2022

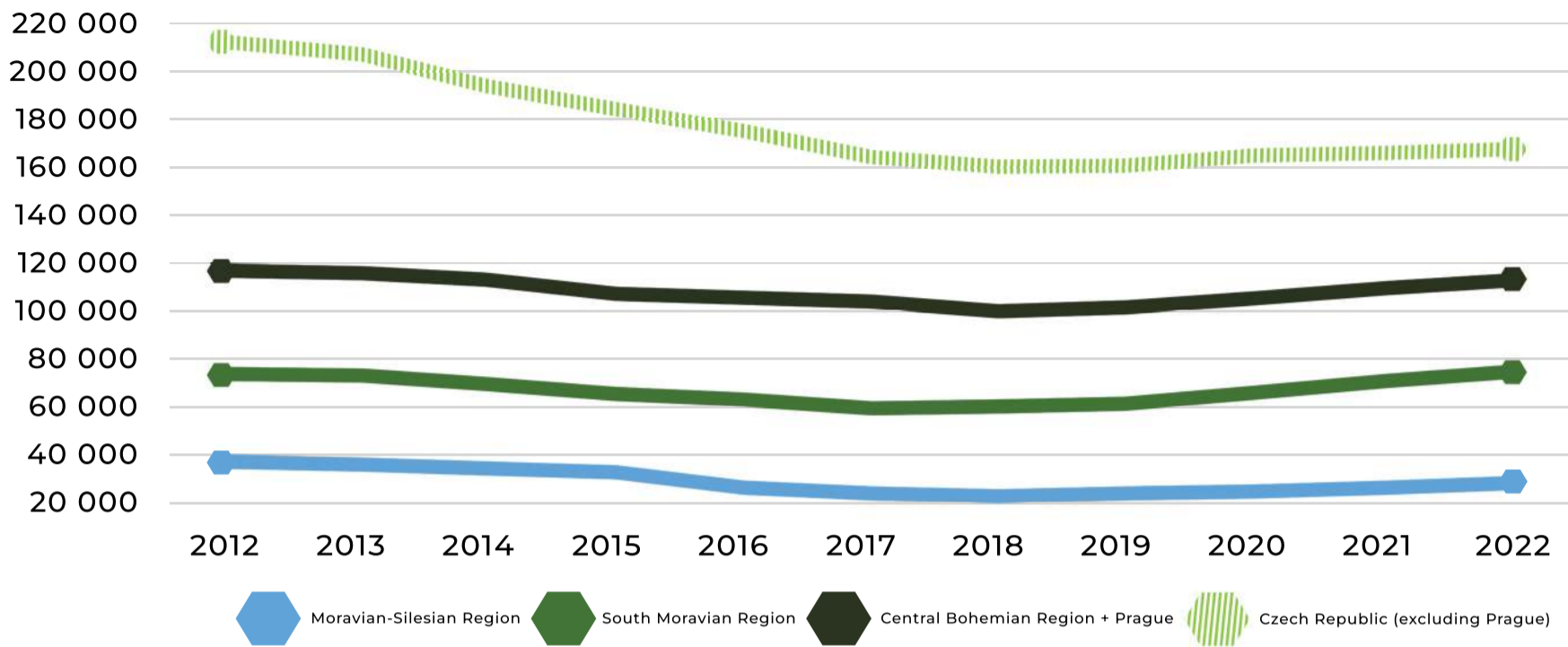


Source: the CZSO (2023) – population indicator: median population

Both the Central Bohemian and South-Moravian metropolises are growing in population. Prague and Brno are the most appealing university towns, attracting many talented young people. At the same time, they concentrate the supply of highly attractive and well-paid job opportunities for a "class" of highly qualified professionals.

The Moravian-Silesian Region and its metropolis are losing population. Combined with a significantly lower share of the population with a completed university education, it can be assumed that the MS Region is facing the phenomenon of "brain drain" (selective migration). To develop the innovation ecosystem in the MS Region, it is necessary to strengthen the attractiveness of higher education in the region and to support the creation of new jobs for top professionals.

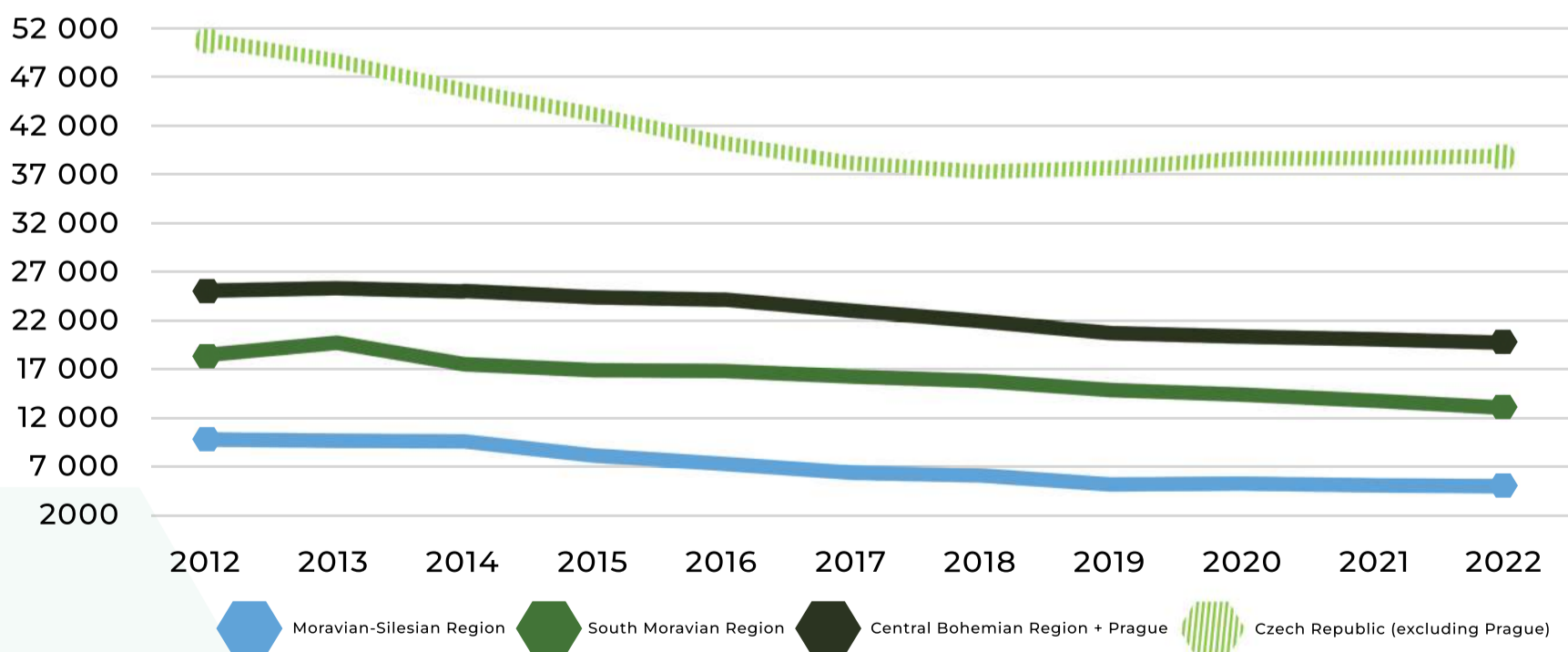
Students of public universities



Source: MEYS – The Ministry of Education, Youth and Sports (2023) – statistics of enrolled university students

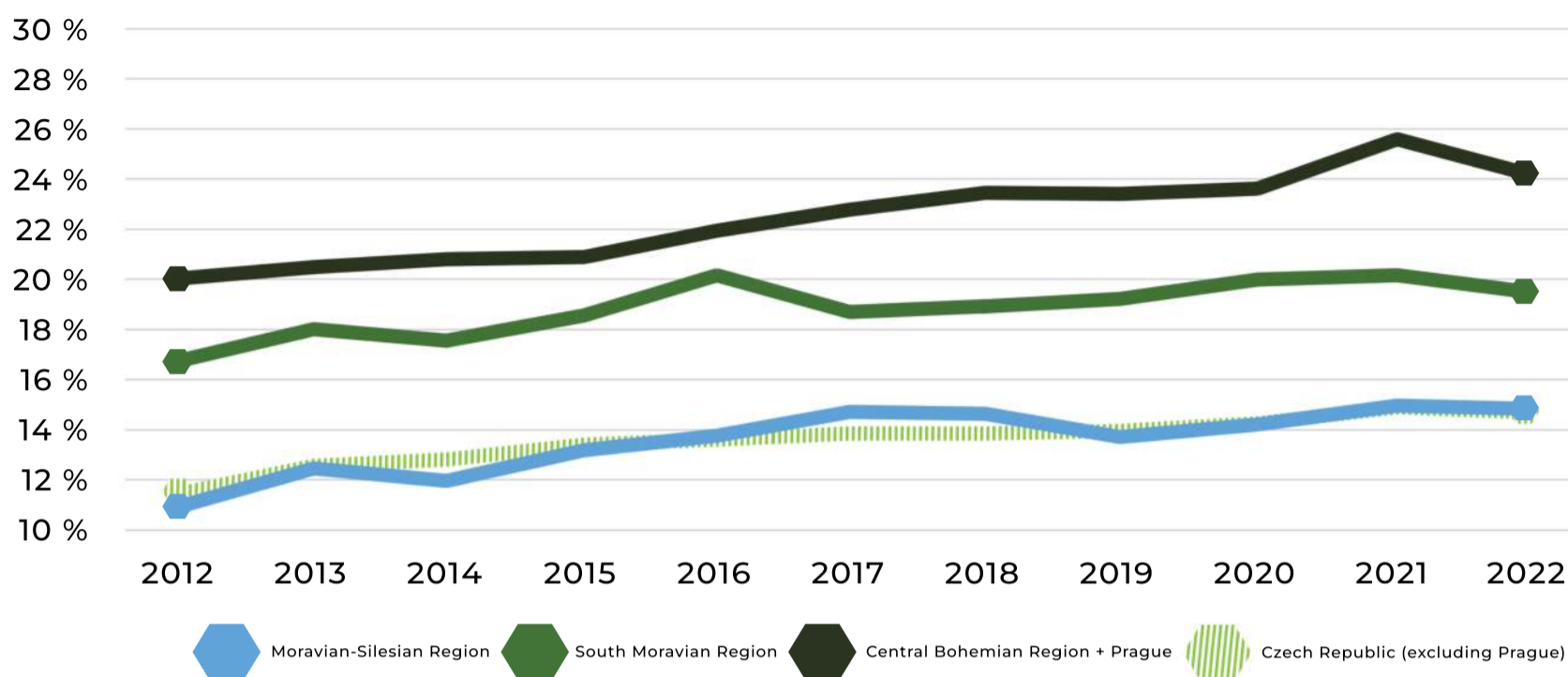
The South Moravian Region has more than twice as many university students as the MS Region, despite the similar population in both regions. At the same time, many applicants for higher education prefer Prague or Brno universities as their first choice. The attractiveness of university studies in a given city/region is the result of a number of factors. Some can be influenced by the universities themselves; others are linked to the attractiveness of the cities where the universities are located.

Graduates of public universities



Source: MEYS – The Ministry of Education, Youth and Sports (2023) – statistics of university graduates

Share of university-educated people in the total population

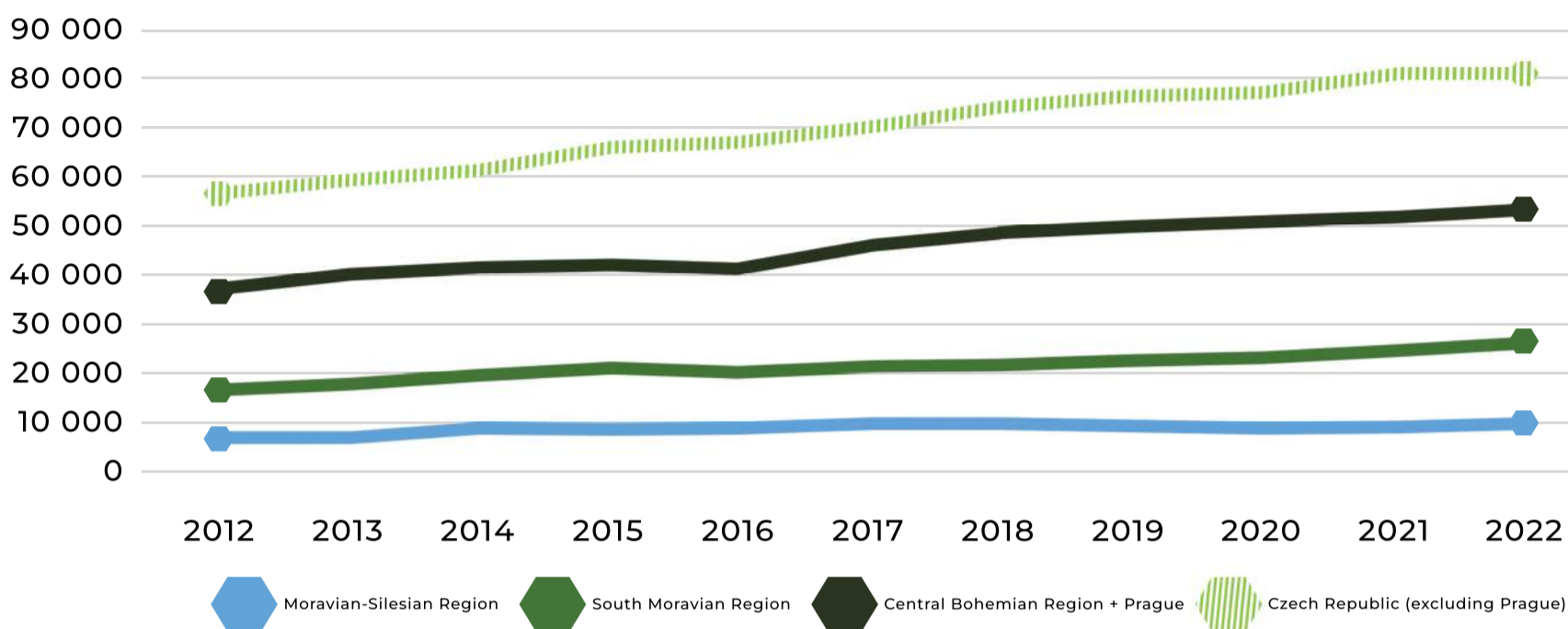


Source: CZSO (2023) – indicators of age and education of the population

The MS Region is characterised by a significantly lower share of the population with completed higher education in the total population than Central Bohemia and the South Moravian Region. This difference is historically determined. The development of Ostrava as a centre of education started much later compared to Prague and Brno. Moreover, a large number of people migrated to the MS Region to work in mines and heavy industry, which was not associated with special qualification requirements.

A small share of university-qualified population means less potential for the creation and development of technology startups. The founders of these companies are in the vast majority of cases people with higher education in technical or scientific fields. Similarly, the lower number of university-educated inhabitants is related to a more modest supply of highly skilled work for companies with very high added value (e.g. research and development or product design).

Employees in research and development



Source: CZSO (2023) – research and development indicators

The lower share of the population with higher education in the MS Region has a direct impact on the number of R&D workers. If the region does not have a sufficient number of university graduates, this may have an impact on the shortage of skilled workforce needed for research and innovation activities. This may discourage firms from establishing or expanding their R&D facilities.

Median wages in CZK/month in the period 2012–2017–2022

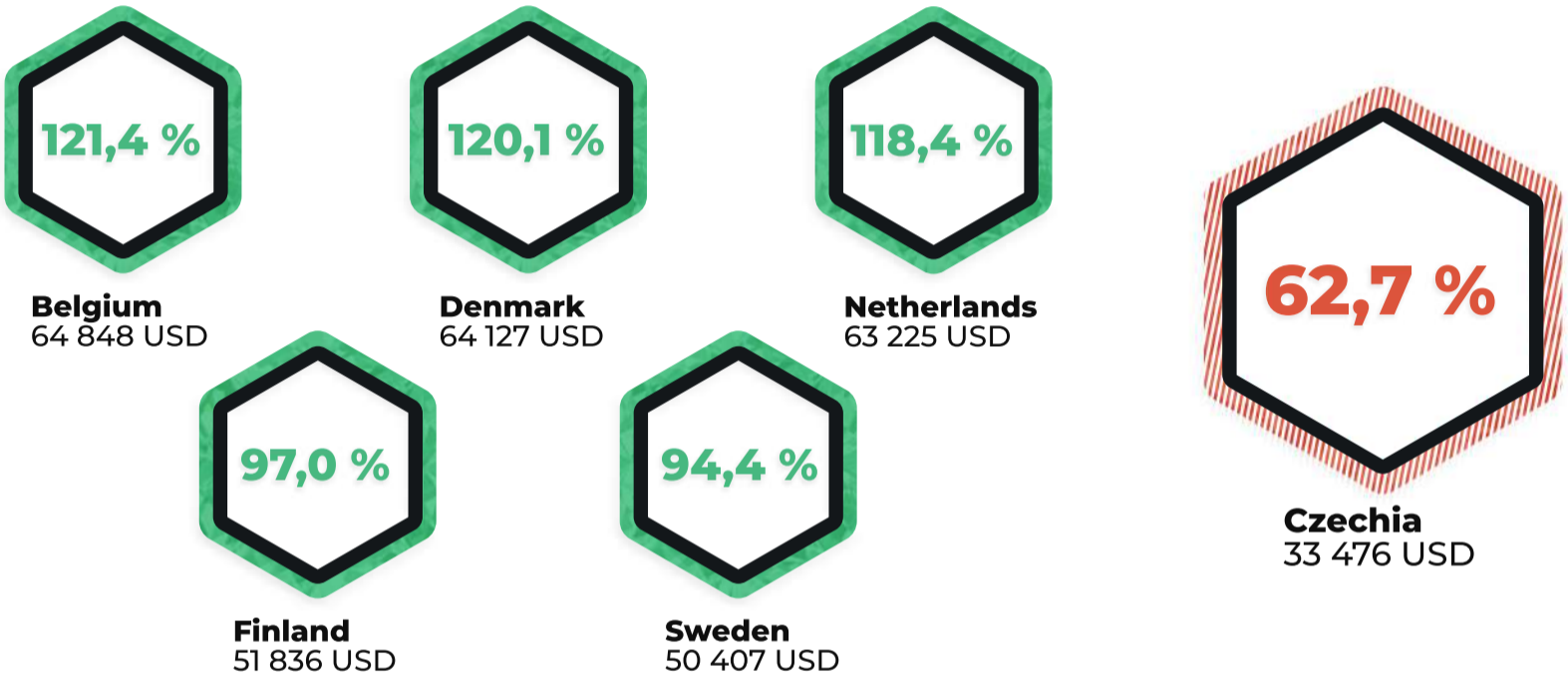
	2012	2017	2022	Growth
Czech Republic	21 997	26 843	37 418	15 421 CZK
Prague	27 182	31 878	43 950	16 768 CZK
Central Bohemian Region	22 576	27 709	38 431	15 855 CZK
South Moravian Region	21 447	26 559	37 733	16 286 CZK
Moravian-Silesian Region	21 838	25 534	35 723	13 885 CZK

Source: CZSO (2023) — development of the Czech labour market

Median wages in the Czech Republic increased in all regions between 2012 and 2022. Prague recorded the highest growth, which shows its economic dominance. The South Moravian Region and the Central Bohemian Region also show a significant shift, while the MS Region, despite improvement, remains behind the national average. This suggests less competitiveness and a potential impact on the region's attractiveness for highly skilled workforce and business innovation.

Wage levels in selected countries in 2022 in purchasing power parity terms

OECD countries **53 416 USD** (OECD – Organisation for Economic Co-operation and Development)



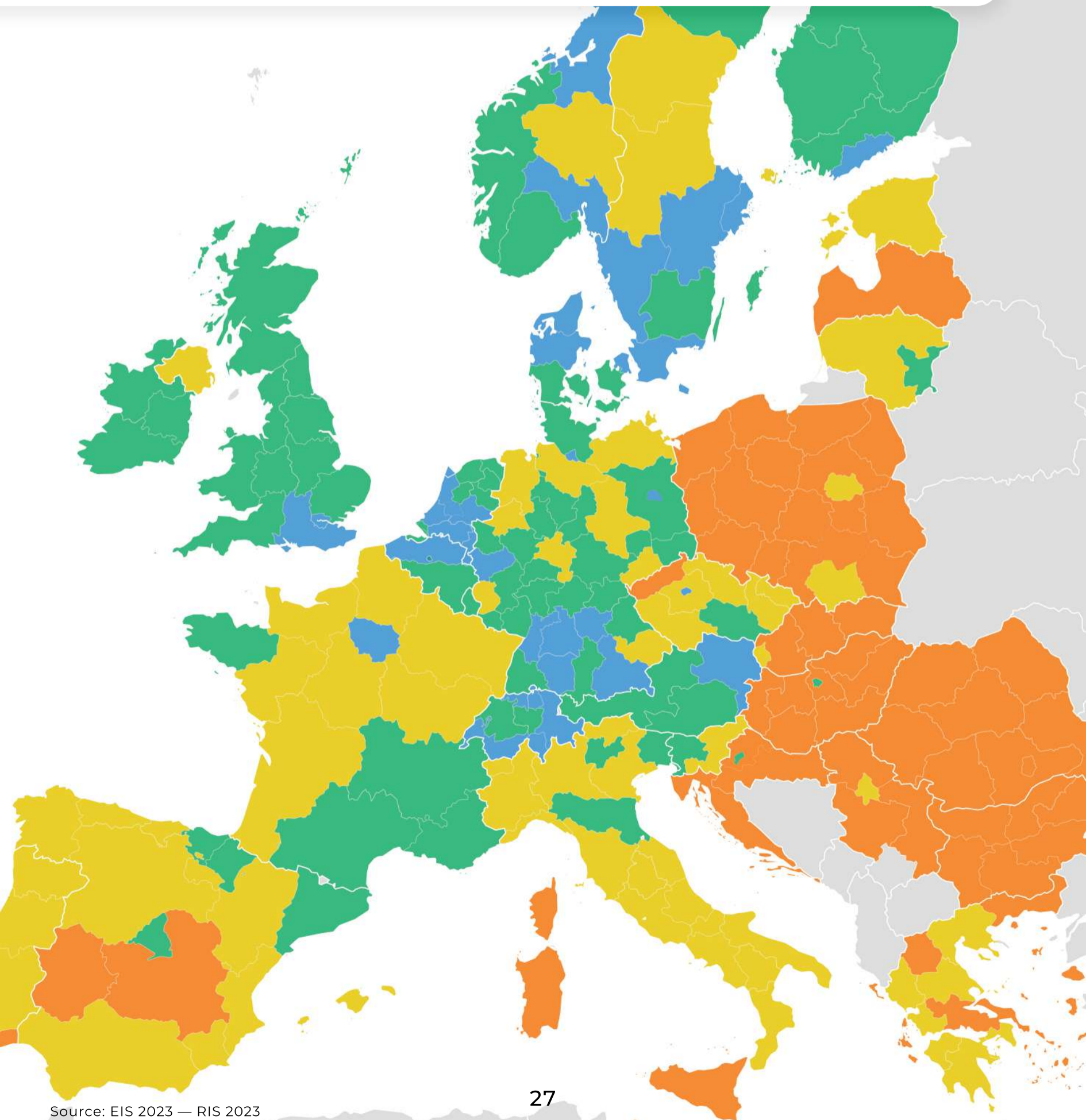
Source: OECD (2023) – OECD average wage indicator

Compared to the OECD average and to Western and Nordic countries, the Czech Republic remains at a lower wage level. This is despite the economic growth achieved during three decades of transformation and two decades of EU membership. Yet we have made progress that reflects the change in innovation performance, as shown by the European Innovation Index. The countries compared are among the European innovation leaders and this position is closely linked to their wage levels. Higher innovation performance often means a stronger economy with more advanced sectors. These can offer better remuneration and attract a talented workforce. A well-developed innovation ecosystem then enables the creation of higher value-added jobs, which contributes to overall wage growth.

Regional Innovation Scoreboard

The RIS compares the research and innovation performance of the so-called NUTS 2 regions (239). Although the Czech Republic and the MS Region rank lower than other regions, the shift and significant potential for further growth is more than evident. If we continue to support the innovation ecosystem and entrepreneurship, we can reduce the gap with innovation leaders and strengthen competitiveness both at regional and national level.

- % Emerging Innovator % Moderate Innovator
- % Strong Innovator % Innovation Leader



Thank you

This publication is the first edition of a comprehensive overview of the state and development of the regional innovation ecosystem not only in the MS Region. Our goal is to provide annual information on how we compare to other regions, based on available data and information from actors in the local innovation ecosystem. This issue is a pilot project, and it also illustrates the potential for collaboration between the regional innovation centre, the university, and young entrepreneurs. Therefore, we would be grateful for your comments and suggestions for modifications or additions so that future editions can provide even more useful information for innovation supporters not only in the MS Region but also in other regions.

You can send us your comments, suggestions, and recommendations to email: **factsheet@ms-ic.cz**.

About the authors:

The Moravian-Silesian Innovation Centre Ostrava is one of the main actors of the region's innovation ecosystem. Through a wide range of services and programmes, it intensively supports the development of the innovation and entrepreneurial potential of the MS Region. It focuses its activities not only on small and medium-sized enterprises and startups, but also on students and other groups of citizens who can significantly influence the prosperity of the local environment. The important pillars of this prosperity are in particular quality education, research and development, and cooperation in the field of new technologies and their introduction into companies.

The Silesian University in Opava, School of Business Administration in Karviná profiles itself as an important educational institution in the innovation ecosystem of the region. This school offers a wide range of academic as well as professionally oriented study programmes, including the study programme Innovative Entrepreneurship, which aims to develop the entrepreneurial and managerial skills of its students. It actively contributes to strengthening the entrepreneurial spirit in the Moravian-Silesian Region through its Business Gate programme and supports the application of new knowledge and skills in practice.

Rokkr Agency is a dynamic graphic design and marketing agency founded by two young entrepreneurs combining their skills. It focuses on providing creative and innovative solutions. With attention to detail and the ability to think outside the conventional box, they help clients achieve their goals and create a distinctive presence in the market.

List of Sources:

Regional Innovation Scoreboard: European Commission (2023):

available from:

https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/regional-innovation-scoreboard_en

Share of R&D expenditure (GERD) to regional GDP by NUTS 2 in 2019: Eurostat (2023):

available from: https://ec.europa.eu/eurostat/databrowser/view/RD_E_GERDREG/default/table?lang=en

Development of the total knowledge intensity of the economy of the MS Region in the context of the Czech Republic: CZSO (2023): available from: https://www.czso.cz/csu/czso/statistika_vyzkumu_a_vyvoje

Knowledge intensity in the corporate sector: CZSO (2023):

available from: https://www.czso.cz/csu/czso/statistika_vyzkumu_a_vyvoje

Distribution of R&D personnel and R&D expenditure in relation to EAP: CZSO (2023): available from:

https://www.czso.cz/csu/czso/statistika_vyzkumu_a_vyvoje, https://www.czso.cz/csu/xt/veda_vyzkum-xt, <https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsps-rocni-prumery>

Share of the number of facilities conducting R&D in the regions to the total number in the Czech Republic in 2022: CZSO (2023): available from:

https://www.czso.cz/csu/czso/statistika_vyzkumu_a_vyvoje

Facilities conducting R&D: CZSO (2023):

available from: https://www.czso.cz/csu/czso/statistika_vyzkumu_a_vyvoje

Entrepreneurs per 1000 EAP: CZSO (2023): available from: https://www.czso.cz/csu/xt/veda_vyzkum-xt,

<https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsps-rocni-prumery>

Wage levels of selected countries in 2022 in purchasing power parity terms: OECD (2023):

available from: <https://data.oecd.org/earnwage/average-wages.htm>

Population share of regions in the Czech Republic in 2012-2022: CZSO (2023):

available from: https://www.czso.cz/csu/czso/obyvatelstvo_lide

R&D workers: CZSO (2023):

available from: https://www.czso.cz/csu/xt/veda_vyzkum-xt

Number of university students: CZSO (2023):

available from: https://dsia.msmt.cz/vystupy/vu_vs.html

Number of university graduates: CZSO (2023):

available from: https://dsia.msmt.cz/vystupy/vu_vs.html

Share of university-educated persons in the total population: CZSO (2023):

available from: <https://www.czso.cz/csu/czso/101r-k-vek-a-vzdelani-populace-1zhmc3bx2m>

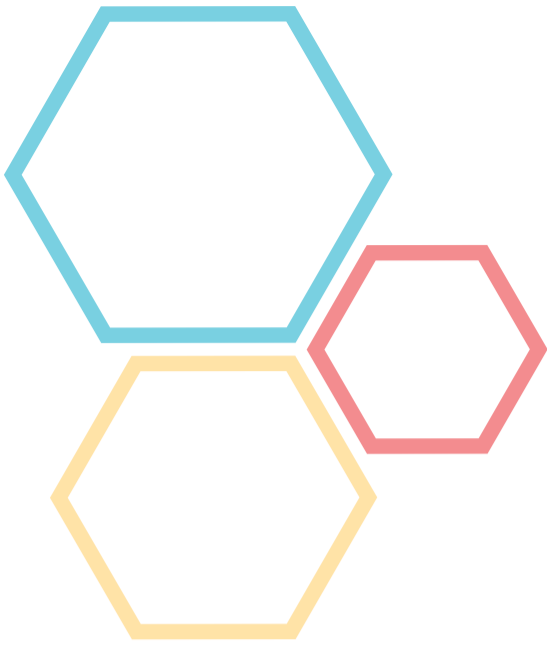
Median wages in CZK/month: CZSO (2023):

available from: <https://www.czso.cz/csu/czso/uplne-naklady-prace-2022>

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