


# KKI

4:1



The innovation  
and start-up ecosystem  
in Poland and Hungary

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# KKI 4:1

Series of the Institute for Foreign Affairs and Trade

Publisher:

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Editor:

Anna Wisniewski – Institute for Foreign Affairs and Trade

Authors:

Piotr Arak - Director, Polish Economic Institute

Mária Molnár-Nagy – University Business Relations Expert, MOLGROUP

Marcin Sowa – Head of Unit, Department of Innovation and Industrial Policy,  
Ministry of Economic Development, Labour and Technology of Poland

László Jónás – Head of Business Development, Design Terminal

Typesetting:

Tamás Lévárt

Cover photo:

[depositphotos.com](https://depositphotos.com)

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*In the 4:1 series of the Institute for Foreign Affairs and Trade, four experts give a short answer to the same question concerning international politics and economics. Our aim is to launch scientific debates in and beyond Hungary and promote dialogue among experts. In this issue our topic is "The innovation and start-up ecosystem in Poland and Hungary".*

*The innovation and start-up ecosystem is key to determining the competitiveness of an economy. To what extent does the Polish and Hungarian economic environment in the Central and Eastern European region help innovation capacity, what is the start-up ecosystem like, what synergies arise, and where are the breakout points? Is it possible to formulate messages and strategic goals for the cooperation of the two countries? These are the questions that we explore in these papers by international authors.*

*The studies have been prepared in the framework of a project supported by the Waclaw Felczak Foundation.*

## **PIOTR ARAK**

**T**he ability of an economy to innovate determines its competitiveness. At the company level, innovations can help develop efficiency, and in times of crisis (such as the COVID-19 pandemic), they can ensure continuity or profitability. The countries of Central and Eastern Europe (including Poland and Hungary) are essentially [moderate innovators](#). One of the key issues when it comes to catching up in economic terms and modernisation in the region is the development of innovative capacity. Start-ups play an important role in this process: they can boost innovative potential significantly, mainly through the technological solutions and innovations they implement.

Despite the pandemic, 2020 was relatively good for Polish start-ups. VC funds invested PLN 2.1 billion in their development, and the total amount invested rose by 70% y/y. Even if we exclude some of the largest financing rounds, which distort the overall picture, investment still grew by almost one-third. Yet there is still the unfulfilled dream of breeding a real Polish unicorn: a young company valued at over USD 1 billion. These kinds of companies have been established in Estonia, Lithuania, and Romania, for instance. With these examples in the region, it should be Poland's ambition to join this elite club.

In recent years, tax systems have become a significant factor when it comes to competition among countries to attract research and development (R&D). Countries are introducing various types of tax breaks, deductions, and special conditions for [R&D centres to attract innovative activities](#).



Poland and Hungary are no exception; in order to catch up to wealthier countries in Western Europe, the tax breaks are relatively generous. Hungary has been developing its tax break system for over a decade, while Poland has ramped up the scale and scope of the instruments available after 2015. In addition to tax breaks, they include a break for the commercialisation of innovative products and a break for robotisation. Poland is consistently striving to create attractive conditions for the development of innovative companies by providing favourable tax rules. The so-called Estonian CIT, which allows enterprises (especially small ones) to postpone the payment of tax on reinvested profits, entered into force this year. This solution seeks to stimulate private investment while increasing innovativeness and enabling new companies to develop. In a survey conducted among Polish start-ups, [46% of respondents](#) hoped that the Estonian CIT would be introduced as a way of settling taxes.

Given the size of the tax breaks for R&D, which can influence where new investments are located, it is worth noting that their levels are similar in Hungary and Poland. In terms of the solutions available in the Visegrad Group, only [Slovakia is ahead of Poland](#).

When looking at the opportunities for the development of the start-up ecosystem, it is also worth noting specific areas in which both countries can draw on their experiences. Poland is highly rated in terms of the openness of public data; last year, it became one of the trendsetters in the [ranking of the European Commission](#) (Hungary is in the beginner group). Access to data is a key resource for creating new services and developing start-ups. Meanwhile, the development of artificial intelligence requires cross-border cooperation due to the required technological facilities, as well as technical and regulatory challenges. This is not limited to joint projects as part of programmes such as Horizon Europe. It also involves fostering networks of scientists and entrepreneurs and creating outstanding leaders through international exchange and foreign experience.

As venture capitalist and trendsetter Tim Draper put it in March 2020, “Now is the perfect time to look into investing in Poland. The region has always had great technology, but now they are starting to connect it to the marketplace. Poland is a generation ahead of other countries in the region in understanding the market system.”

A look at market figures does indicate that Poland is a natural hunting ground for growth opportunities in innovative industries. The possibilities in the CEE region are limitless, but many would agree that Poland is the most interesting market.

## MÁRIA MOLNÁR-NAGY

*This article contains ExtRacts from the MOL Group's [SHAPE TOMORROW STRATEGY](#)*

The MOL Group has just recently updated the long-term strategy of the company, which is now fully integrated with a new sustainability strategy (aligned with the European Green Deal ambitions) and complemented with a vision beyond 2030.

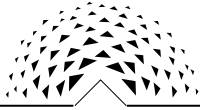
The company's vision is to be a key player in the low-carbon circular economy in Central and Eastern Europe, providing sustainable materials for the economy, low carbon fuels for mobility, and convenient products and services for people on the move.

Our long-term strategy has so far proven to be progressive, credible, and directionally correct. However, green energy transition has accelerated to such an extent that we also need to accelerate our transformation to enhance the MOL Group's resilience and its ability to shape a sustainable future.

The MOL Group's integrated business model provides stable, long-term profitability and allows the company to move in new directions. MOL will spend USD 1bn on new, low-carbon and sustainable businesses in the next five years to become a key player in the CEE circular economy.

In order for our company to achieve its transformation goals and operate in a long-term, sustainable way, the ability to innovate is essential. One of the key criteria of economic growth and modernization in our region is defining a common purpose for collaboration within the so-called 'triple helix', which unites the corporate sector, the state, and academic fields. Based on the concept of the Hungarian Ministry of Innovation and Technology, thematic competence centres established at universities should be the hubs of innovation. This paradigm shift has resulted in several successful university-industry collaborations in the past three years, with significant benefits for corporate companies, SMEs, and universities.

Competence centres have been established at universities of strategic importance to our company, which can provide multidisciplinary solutions to new types of industrial challenges through outstanding infrastructural developments and human competencies. At the same time, they are also becoming important hubs of the Start-up ecosystem by channelling technology needs and corporate challenges into the scientific sphere, thus forming a bridge between the source of the problem and the solution. Rather than strengthening lagging industries, this university-centred innovation strategy of the national economy creates the technologies of the future. With close collaboration and knowledge sharing within the innovation ecosystem, it is much easier to define appropriate directions from the creation of innovative ideas and endeavours.



Universities have a dual capability: a new generation of students (i.e. prospective start-ups) and a great pool of professors and researchers, which grants them the unique potential to serve corporate innovation needs not only in the short term but also in the long term.

The MOL Group has also recognized the importance of these interfaces in its innovation strategy. To meet new market and technology challenges as a result of rapid changes in consumer demand, we recognize the ability to provide a quick and effective response through start-ups, universities, and multi-corporate partnerships. These open innovation partnerships can be eligible for significant EU and state funding, and we can only apply for them successfully if we become active members of a larger community. With this paradigm shift, traditional closed thinking has become open, collaborative innovation.

Our collaboration with the start-up ecosystem is coordinated primarily through EIT KIC organizations and domestic start-up hubs, predominantly monitoring mature-stage and scale-up start-ups whose product or technology has entered the industrial validation phase. For the early stage, on the other hand, a significant state fund and institutional system is available to overcome the initial challenges.

Together with the University of Pannonia, we have been developing the concept of a Circular Economy Science Park since January 2020, which aims to serve as a thematic hub for R&D and innovation activities in this field. Active corporate participation guarantees a business-driven approach, the creation of marketable products and technologies, and the opportunity for start-ups to connect. Finally, it is essential to adapt education to the technological challenges of the future: as an unprecedented transformation is taking place in industry and the economy, we have a duty to train the scientists and engineers of the future. In this way, we can also contribute to the creation of ideas at universities that can later be successful as start-ups.

The programs of the Hungarian National R&D and Innovation Office have successfully established the triple helix model in recent years by bringing closer various sectors and offering benefits to all parties.

We are all now working together to gain a competitive advantage in different fields of science, through which we can carry out innovative activities that will be visible at a regional and international level and thus create significant value for the national economy.

## **MARCIN SOWA**

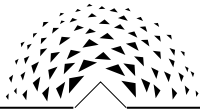
**T**he driving force of economic development should be research and development work that enables the acquisition of the knowledge necessary to introduce new technologies or improve working and production methods. The past four years have been a period of intense change in the development of innovation in Poland. The “Start in Poland” government programme for start-ups

was launched, and a system of tax deductions for R&D and IP Box was introduced. The Łukasiewicz network was also launched, which is the third largest research network in Europe cooperating with start-ups, SMEs, corporations, and market champions.

Entrepreneurs see the need to invest in research and development, and the benefits of doing so are reflected in the amount of funds allocated for this purpose. In 2019, expenditure on research and development works (GERD) amounted to approx. EUR 6.7 billion and increased by 18.1%. The R&D intensity indicator amounted to 1.32% of GDP, the second largest increase in recent years. The growth dynamics of research and development in business continues to be high. These achievements are the result of the reforms undertaken in recent years, which aim at increasing the level of innovation in Poland, especially those that aim at creating a legal framework that encourages entrepreneurs to undertake research and development actions. The government incentives therefore stimulate the creation and development of innovation.

An increasing number of companies base their operation philosophy on innovation based on their own research and works. This is supported by statistics in that the number of companies that have made use of the tax relief for research and development grew by 25% in 2019. An innovative enterprise is one that can create, accept, and sell new products and which has the ability to constantly adapt to the changes taking place in its environment. An innovation-oriented enterprise conducts research and development or buys R&D projects in order to implement them, raises financial capital for this activity, and systematically implements new solutions. Such a company has a large share of new products (products and technologies) in its product portfolio and systematically brings innovations to the market. It is important that the number of such companies should grow constantly.

We have been paying particular attention to the development of start-ups. In June 2016 we launched the "Start in Poland" program for start-ups, which supports young, innovative companies that locate their business in Poland at every stage of their development, starting from the incubation and acceleration phase, to development and international expansion. The program budget is close to EUR 670 million. The acceleration of start-ups has become a Polish brand combining the "light" business model of a young company and its potential with the experience, infrastructure, and resources of private corporations and State Treasury companies. Thanks to this, start-ups have the opportunity to gain experience in building contacts and cooperation with large companies, in addition to gaining business partners and potential investors. The outcome of the program is the commercialization of the innovative solutions proposed by start-ups, including products and services that respond to the identified needs of large enterprises. Using the same model, Poland attracts start-ups from all over the world through the Poland Prize program. We also try to direct programs so that start-ups work on the most future-oriented and sought-after technologies, such as space technologies, fintech, AI-based solutions, or pharmaceutical biotechnology.



An indispensable element of the start-up ecosystem is the VC market, which is experiencing extremely dynamic development and has not been interrupted by the pandemic. In 2020, VC investments amounted to approx. EUR 470 million, an increase of 70% compared to 2019. This is a definite change in trends, since by 2018 the value of investment made by VC funds on the Polish market only amounted to around EUR 40 million per year. We are increasingly facing so-called megarounds - investments in subsequent phases worth between 50 to 80 million EUR. I hope that the main Polish candidates for the title of “unicorn” will come from these companies in the near future. In Poland each stage of start-up financing is developing, but what is particularly pleasing is that it is not only the number of “seed” investments that is growing dynamically but also rounds A and B - which means that start-ups enter the phases of dynamic growth, and they can convince capital to invest.

The development of the start-up ecosystem forces changes in the functioning of the broadly understood institutional and financial environment - starting from shaping entrepreneurial attitudes in primary and secondary education, to the development of financial institutions that provide opportunities of long-term financing and stock exchange trading. At the same time, it improves the social acceptance of business risk and undertaking business activity by owning innovative ideas and the ability to implement them, although these changes require patience. Economic growth is not stimulated exclusively by purely market instruments. Hopes are not realized if there is no social attitude to support and trust them. Social capital reduces transaction costs and lowers the risk of running a business. Hence, all activities contributing to the development of social capital in Poland have a positive impact on the development of the start-up ecosystem.

## **LÁSZLÓ JÓNÁS**

**T**he Covid-19 crisis has shown that continuous innovation and digitization in Hungary and Poland, just like anywhere in the world, is not optional for market actors. Global systems, process engineering, and the degree of digitalization in multinational corporations have allowed for rapid adaptation; at the same time, the crisis has also shown that local and regional companies should not lag behind in this competition either, as their life can depend on it. The crisis has also proved to be an excellent moment to recognize the role of start-up-based innovations in the region and prepare for competition in this area for decades to come.

Most of the world is striving to become a start-up superpower. What can our region do to stand out in this competition? Where do we fit into all this? Given the market size and linguistic diversity that is in the focus of Hungary, Poland, and the region, they should be Business to Business (B2B) start-ups. There is no need to have millions of individual customers in order to scale because one corporation is already an excellent starting point for them to set off on the path to growth.



What makes a B2B start-up successful? What is needed to achieve something from scratch? Market, customers, and clients. In order for Hungary and Poland to share innovation results of the 21<sup>st</sup> century beyond their size, it is not enough to launch cross-border start-up development programs. Start-ups need to be able to enter the market with their products as soon as possible. This can be provided if accelerators that develop start-ups create active relationships with multinational corporations, SMEs, research institutes, and all the market actors necessary for starting a business. For start-ups, rapid access to markets may be the key for Hungary and Poland to be among the winners of innovation competition in the coming decades.

What are we supposed to do to achieve this? At the regulatory level, we need to encourage start-ups and corporations to work together by removing financial burden (or at least a part of it) from the actors. The bottleneck of such collaborations are the resources of both start-ups and corporations, i.e. focusing the scarce capacity of start-ups on a particular customer, and making corporations address issues that do not provide revenue and return immediately, only after the collaboration is established. Both situations can be supported from a regulatory point of view, as long as they help the actors allocate enough resources for a cooperation without it becoming detrimental to their main activity. With this step, the first relationships can be created.

We should launch programs that facilitate this type of business cooperation (such as the V4 Startup Force, the joint initiative of the Visegrad Fund and Design Terminal), thus establishing a mediating medium between the actors. Related to this, we should find organizations that can manage these relationships, build the necessary databases, track participants, and ensure continuity. It is essential that the programs are communicated prominently, thus providing information about the opportunities to as many actors as possible.

We should give priority to cross-border cooperations, as data from recent years shows that a start-up that also has customers outside its home country can expect much greater success than fully local start-ups.

In the field of start-up-related innovation, the primary task of Hungary and Poland is to find their own voice and build targeted capacities connected to it. Given the lessons drawn from the current Covid-19 crisis, it is important that these capacities are flexible and not attached to only one industry but to some attribute that can work in such situations, for example, cooperation between start-ups and corporations. Many studies have addressed this issue, and it is becoming increasingly certain that the “brain” of a start-up, the parts that produce the most added value, will remain where the growth started, even after strong growth. Thus, we could also achieve that Hungary and Poland have their own success stories that do not migrate from the region too early to take root.