Investing in Central & Eastern Europe

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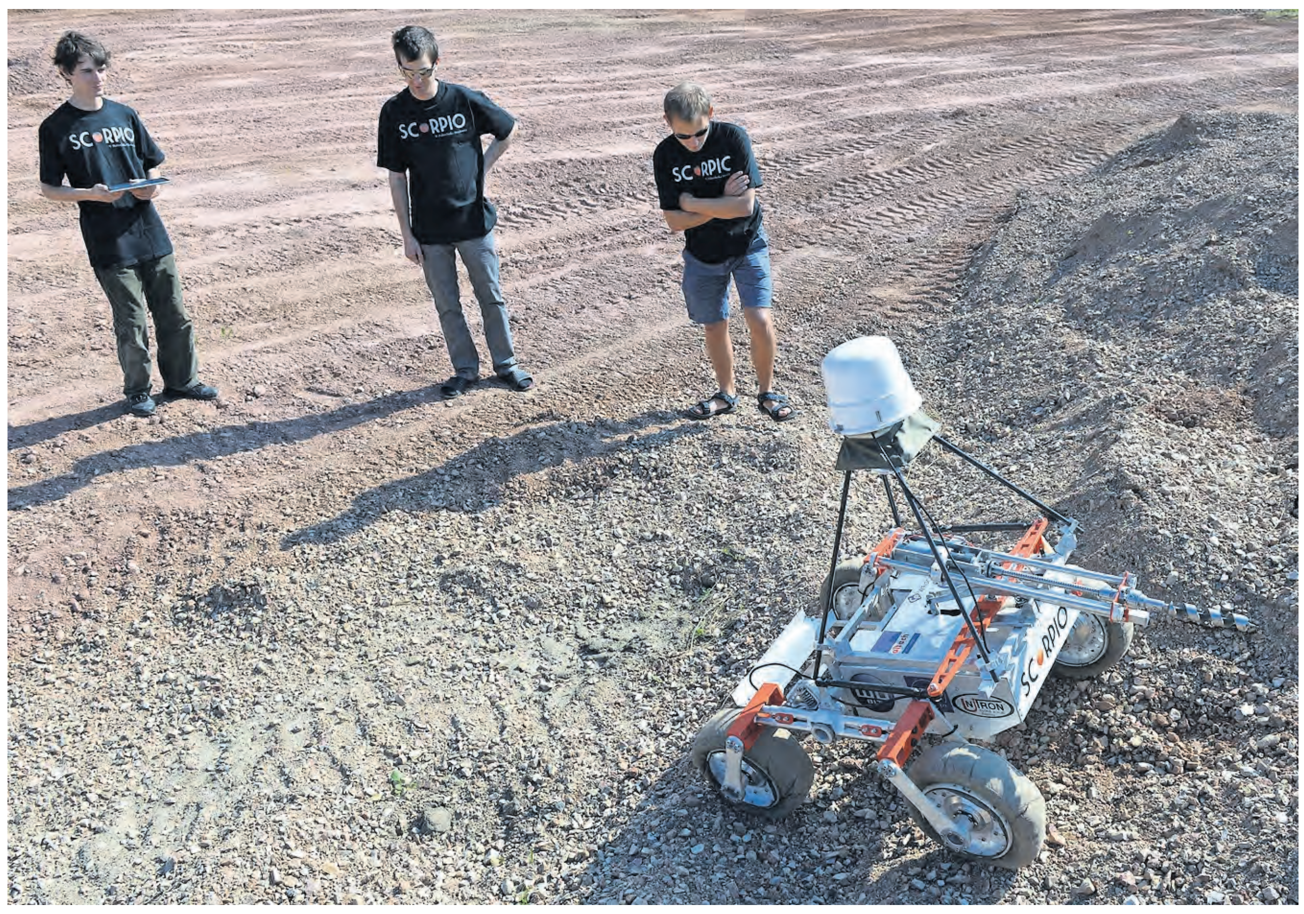
Technology start-ups blow away stereotypes



Groundbreakers: Polish students with their award-winning 'Scorpio' Mars-roving robot — AFP

Growing interest from foreign investors reflects the region's potential for innovation, reports *Henry Foy*

Ionut Budisteanu was 19 when he decided he could do a better job than Google. A Romanian student with an exceptional aptitude for computers, Mr Budisteanu started taking an interest in the technology that underpins Google's much-hyped self-driving cars.

He realised he could replicate it at a fraction of the cost. His system costs $4,000, compared with the $75,000 price tag for the Google car, which many see as the future of transport.

Mr Budisteanu and his home-made self-driving car are at the leading edge of a technology revolution in central and eastern Europe.

Entrepreneurs, programmers and software engineers from the region, drawing on world-class mathematical and engineering education, are piquing the interest of the world's information technology companies and investors, and building a reputation as an emerging technology hub.

"In central Europe, there are a lot of smart people who want to build stuff. It is like a cluster," says Mr Budisteanu, now 20. "From what I know, Romania is the country with the most IT experts in Europe and fifth in the world. The first spark, the first step, is the most important for a maker, for a hobbyist like me."

A key growth market for global investors before the 2008 financial crisis, central and eastern Europe is again rising in significance as a destination for overseas capital, with technology emerging as a one of the most targeted segments.

Mr Budisteanu is one of 100 innovators from the CEE region selected as part of the New Europe 100 project, which aims to raise the profile of emerging entrepreneurs and young businesses.

"The stereotype of the region's industry is manufacturing, basic production businesses. This is changing rapidly, and these are the people who are bringing the change," says Wojciech Przybylski, editor-in-chief of Polish political and cultural journal Res Publica, which compiled the list with support from Google, the Visegrad Fund, which promotes closer integration within the region, and the Financial Times.

"These [100] are the faces of the new region, the names that will rebrand this part of the world."

Creating the next Silicon Valley, the area of northern California that has cultivated some of the world's biggest and most powerful technology firms, is the dream of hundreds of countries and cities, from London and Berlin to Bangalore and Beijing.

But investors betting on central and eastern Europe say the combination of a high level of mathematical education, low overheads and a globalised, westernised young generation makes for a heady and successful mix.

"There is a growing confidence among those who did not grow up under communism, who see the world so much differently from their parents," says Jack Stack, chairman of the supervisory board at Ceska Sporitelna, the Czech Republic's biggest bank by deposits.

"From a private equity point of view, from an investment point of view, people are starting to look much more closely at central and eastern Europe. There is a lot of interest and scouting out of opportunities."

Alongside Mr Budisteanu, who is launching a crowdsourcing campaign to fund the production of his concept, the New Europe 100 list boasts a Hungarian doctor who has created a medical advice website driven by social media, a team of Polish students who have built an award-winning robot that could operate on Mars, and a Slovak inventor of a flying car. "Google begun life as a

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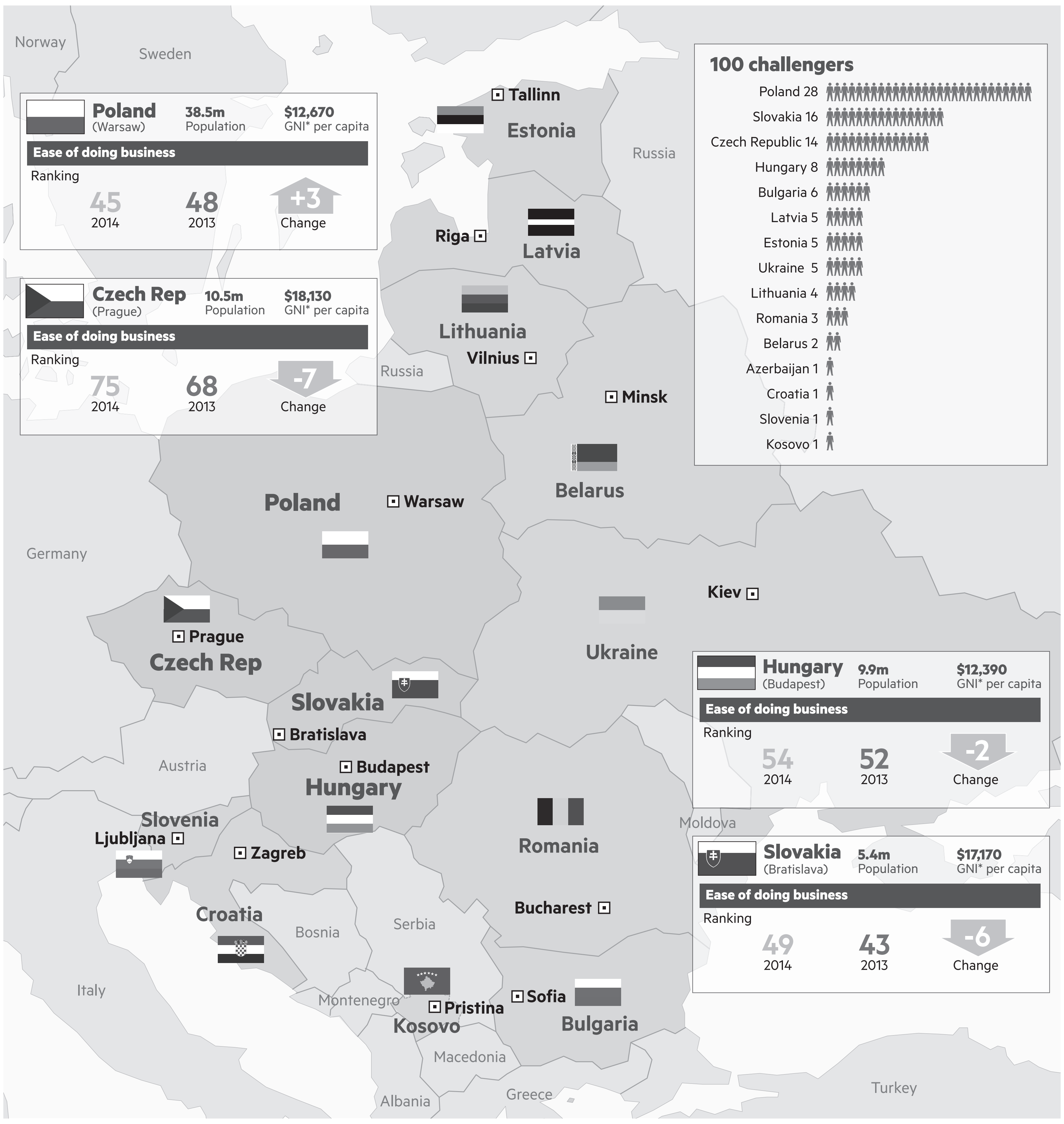
NEWUROPE100

More online
For a list of 'challengers' reshaping the area, visit ne100.org

World Bank rankings on ease of doing business and the New Europe 100 list of challengers



The New Europe 100 is a list of people and organisations who by their innovation, big ideas or social influence have changed the world or their local status quo. The project is intended to raise the profile of world-leading innovation in central and eastern Europe - and to build connections among like-minded people.

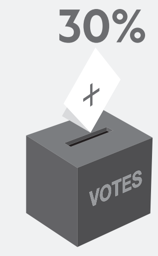
The organisers are: Res Publica, the Warsaw-based journal; Google, the internet search company; and the Visegrad Fund, a regional funder of arts and social projects aiming at promoting greater integration within the region. The Financial Times is a global media partner. Representatives from these four groups considered more than 600 nominations from dozens of institutions in the region and from the general public before settling on a final list of 100 in September.

The 'challengers' were split into the four categories below.
For the complete list and a description of their achievements visit ne100.org.
Join the debate #ne100 and @neweurope100

Business
38%

These 'challengers' are company leaders who are either building digital businesses with big potential or have already achieved significant success. They include the creators of Prezi, the Hungarian presentation software company (see interview page 3), as well as founders of digital start-ups in cities from Bratislava to Vilnius

Society and Politics
30%



The individuals and teams in this category have had a significant impact either on politics at home or beyond their borders, having used digital tools to effect change. Among those recognised are organisers of Estonia's e-government initiatives and the mayor of Ricany in the Czech Republic (see profile page 3), who introduced an electronic auction for citizens' energy supplies

Media and Culture
17%

This group includes journalists, artists and others who have used modern technology in their work including the Belarusian publisher of the first online city magazine in Minsk (see interview page 3), the Ukrainian journalist who used Facebook to help organise the Maidan protests and the organisers of Dokufest, a documentary and short film festival held in Prizren, Kosovo

Science
15%

This category highlights both young scientists at the start of promising careers and established researchers who have gained a worldwide reputation for scientific excellence. They include a 17-year-old Polish schoolgirl who invented a non-invasive method of drug delivery to cancer cells (see article page 3) and a Romanian university student who developed a cheaper alternative to Google's driverless car (see page 1)

Sources: World Bank's Doing Business 2014; FT research; Google * GNI = Gross National Income FT graphic

Bureaucracy remains source of frustration for new businesses

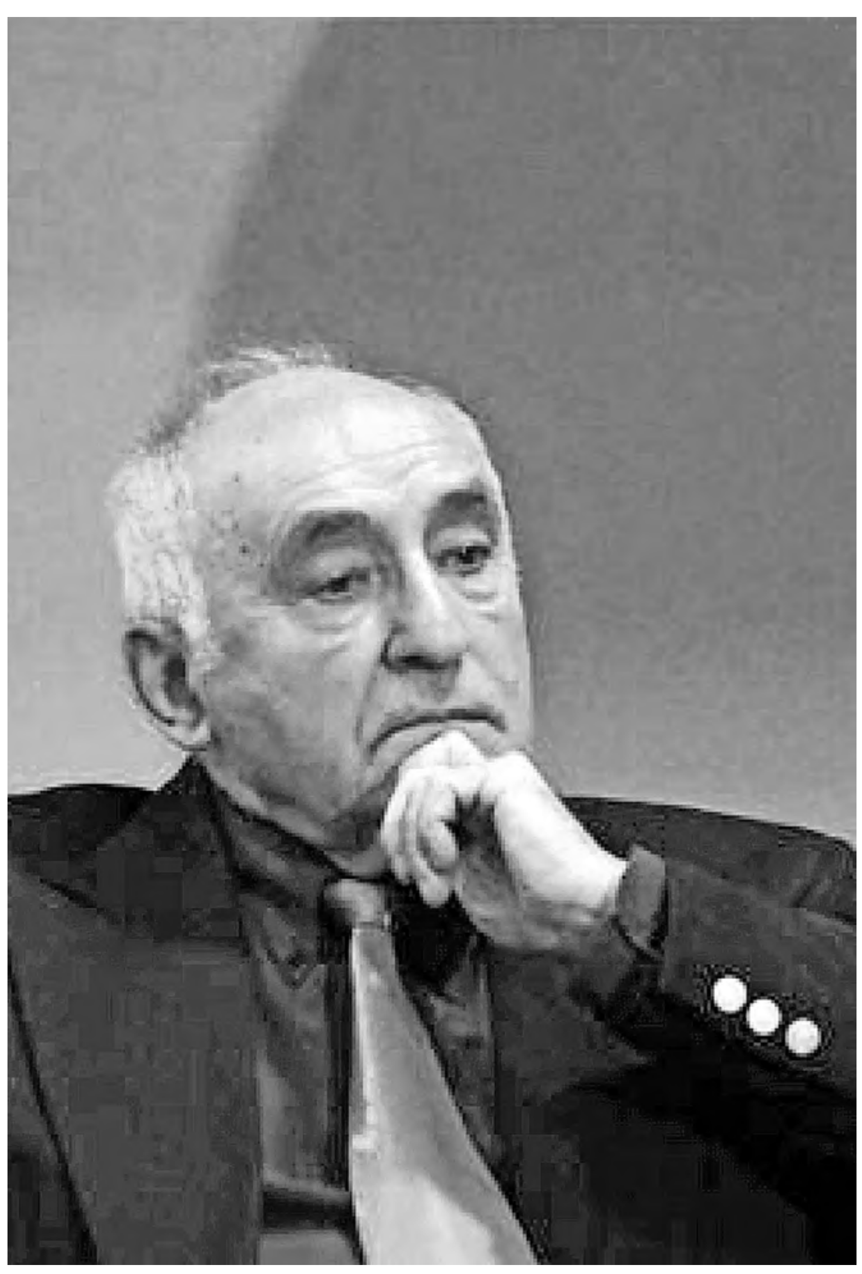
Regulation Countries come well down World Bank ranking for starting new ventures, writes *Henry Foy*

Mieczyslaw Wilczek died only this year, but in the view of many Polish entrepreneurs, his dream died long ago, when successive governments began tinkering with the former industry minister's groundbreaking business legislation.

In 1988, Mr Wilczek, a chemist and businessman, implemented a radical new law unique in communist states that opened a Pandora's box of innovation in Poland.

The Act on Economic Activity, as it was formally known, was tantamount to bringing capitalism to the business world of socialist Poland. It enshrined the right of any Pole to start a business, and removed regulations such as employment caps. At a stroke, he set free suppressed entrepreneurialism across the country. Business groups estimate that 2m companies and 6m jobs were created in the two years that followed. But, after subsequent governments and ministers added amendment after amendment to the act and then replaced it altogether, many people hark back to what they say was a golden age for Polish entrepreneurs.

While Poland, Slovakia and the Czech Republic are at middling levels in the World Bank rankings for ease of doing business, all three are languishing towards the bottom of the ranking for setting up ventures. According to the Bank, which regularly ranks countries in terms of how easy it is to start a business, it is a simpler process for start-ups in Iran, Nepal or Costa Rica than in the Czech Republic, in 146th place, Poland (116th) or Slovakia (108th), despite their membership of the EU.



Mieczyslaw Wilczek: opened a Pandora's box of innovation in Poland

And their governments' recent record of addressing this is patchy.

Poland this year removed requirements for entrepreneurs to register their new company at labour and sanitary inspectorates, saving some paperwork, but Slovakia added more red tape to the formation process for limited liability companies.

The most supportive country in the region has been Hungary, which has taken steps to tackle the problem of bureaucracy stifling innovation. The clearest illustration of a desire for progress is its Runway Budapest 2.0.2.0 project.

Under the initiative, the Hungarian government has pledged to roll out training programmes for entrepreneurs, ease their access to financing and reduce the complexity of tax procedures for start-ups, among other steps.

Today, according to the World Bank, it takes just five days to set up a new business in Hungary, compared with 19 in Slovakia, 20 in the Czech Republic and 30 in Poland.

"The first milestones and programmes are set," says Kalocsai Zsolt, chief executive of RSM in Hungary, a tax and accountancy firm. "However, following the general elections in spring 2014, the Hungarian government needs to concentrate on practical development of the programmes and introduce the related laws and regulations."

The Polish Agency for Enterprise Development (PARP), a government body whose role is to support small businesses, spends most of its resources on giving start-ups the confidence and tools to navigate the company formation process, according to Bozena Lublinska-Kasprzak, the organisation's president.

In an effort to guide start-ups to maturity, PARP has also worked to draw up best practice guides for companies to expand their business and compete overseas.

But Piotr Liss, a tax partner at RSM in Poland, says that many entrepreneurs in central and eastern Europe think that although governments might tinker with minor regulations, they are not doing enough to support them financially. "Many of the actions are prepared in such a way that they have no financial impact on the [entrepreneur's] budget,"

> 'Entrepreneurialism has sprung up in central and eastern Europe as a means of economic survival'

he says. "It is mostly simplification of procedures."

Wojciech Przybylski, editor-in-chief of Polish journal Res Publica, which compiled the New Europe 100 list of top new entrepreneurs in central and eastern Europe, believes government intervention in start-ups in the region makes things harder. Yet innovators will still find a way around it, he says.

"People have had to be so adaptable in this region, given all the various crises we have had here. Entrepreneurialism has sprung up as a means of economic survival."

Technology start-ups blow away the old industrial stereotypes

continued from page 1

start-up in a garage, so we know innovation and great ideas can come from anywhere," says Agata Waclawik-Wejman, Google's head of public policy for central and eastern Europe. "Twenty-five years after the fall of communism, the region has largely achieved the level of freedom and economic development that provides the momentum for strengthening creativity and innovation."

Google, Res Publica and the team behind the New Europe 100 list hope that the recognition from being included on the list will bring the initiatives attention, investor interest and potential business partnerships.

"We have already seen how innovation and entrepreneurship have changed the face of Poland in just 25 years," says Ms Waclawik-Wejman. "A decade or so ago, the conversation was about catching up with the rest of the world, but the aspiration of Polish entrepreneurs today is to be the best in the world."

There are stumbling-blocks, however.

Central and eastern Europe's spending on research and development activities is about 1 per cent of the region's gross domestic product, according to McKinsey, the consultancy. That is half the rate in the western EU, and trails the 1.5 per cent in the Bric economies of Brazil, Russia, India and China.

And low domestic saving and investment rates compared with other emerging economies were exposed when foreign investment slowed, and then disappeared after the 2008 financial crisis.

Others contend that entrepreneurs and technology start-ups depend little on either of those factors.

Graham Conlon, the Ukraine-based international head of mergers and acquisitions and private equity at CMS, a law firm, says: "Eastern Europe has produced very well educated young people who are very savvy in technology. It is a forte for various eastern European markets. There are a lot of IT companies in the region doing very well."

He adds: "Eastern Europe is catching up and the financing is available for well-run companies here. A number of venture capital and private equity funds are dedicated solely to this space."

1%
Research and development spend in central and eastern Europe as proportion of GDP

20%
Share of private equity investment that went into region's technology sectors in 2013

Fully-fledged technology firms in the region have already begun catching the eyes of international investors.

Ceska Sporitelna's Mr Stack thinks foreign investors' level of interest in the region over the past nine months has matched that between 2009 and 2013.

Private equity company CVC Capital Partners made an investment in Czech software security company Avast in March, valuing the business at $1bn.

The communications and computer and consumer electronics sectors accounted for 20 per cent of all private equity investments in the region last year, according to data from the ECVA, the European Private Equity and Venture Capital Association.

Industry watchers say that after funding, the most important area in which central and eastern European entrepreneurs need support is leadership skills, through incubation centres or start-up hubs, or from the management boards of investors.

"These are young guys setting up these businesses," says Mr Conlon at CMS. "They have travelled. They have been educated abroad and have a western outlook. There is definitely a shift in skillset and mentality.

"But unlike the set-up in Silicon Valley, for example, they may have the ideas . . . but they do not necessarily have the experience of managing and running a business and driving growth."

Microsoft has set up innovation centres across the region, including in Poland, Romania and Hungary to support local entrepreneurs, and has two outposts of its Microsoft Ventures initiative in Bulgaria and Ukraine.

The US technology company hopes that by providing resources such as software tools and test devices to start-ups, and by helping prepare fledging businesses for international markets, it can incubate the potential leading global companies of the future.

"Entrepreneurship is at the forefront of igniting economic growth across central and eastern Europe," says Don Grantham, president of Microsoft Central and eastern Europe.

"Driving investments is crucial to the region's productivity, economic development and prosperity, and therefore critical for increasing CEE's relevance in the global economy."

Pole position: investors now look more favourably on the capital of Hungary which is high on the list of countries ranked by number of Nobel laureates – Dreamstime

Budapest builds on talent pool

Business Founder tells *Murad Ahmed* that more relaxed immigration rules help attract foreigners, too

In 2008, Peter Arvai travelled from Sweden to Budapest. He was met at the airport by his uncle. This was at a time when Hungary's economy was suffering from the fallout of the global financial crisis. On the drive back to his home, Mr Arvai's uncle complained about the lack of "fulfilling" jobs in the country and how few global brands it had created.

Over dinner with his uncle, Mr Arvai revealed why he had come to the city: he was about to start a company. "You could see my uncle's jaw drop," he says. "Essentially, he thought this was mad. People move from east to west, so why would I move to Hungary?"

Today, the company Mr Arvai co-founded, Prezi, is one of Europe's leading technology start-ups. It writes presentation software that is used by 45m people, providing simple tools that help users create dynamic presentations.

The 34-year-old accepts that only an unusual set of circumstances allowed his company to thrive. The first circumstance was a unique founding team. Mr Arvai was born to Hungarian parents, grew up in Karlskoga, Sweden, and studied at Stockholm University. He worked at a number of start-ups and made his name as the creator of omvard.se, a website that allows patients to compare hospitals and the quality of their treatments.

The concept behind Prezi was created in Budapest by Adam Somlai-Fischer, an artist and designer, and Peter Halacsy, a computer scientist and university professor who brought in Mr Arvai as chief executive to help turn their ideas into a viable business.

For 18 months, the trio declined to take a salary and pumped in their own money to keep the business afloat. The company has since received $14m in investment, from groups such as Sunstone Capital, a Copenhagen-based fund, and Accel Partners, the US venture capital group that has previously invested in internet companies Facebook, Baidu and Etsy.

Without saying whether Prezi is profitable, Mr Arvai declares it has "not touched a single dollar" of this capital. He says it generates revenues from its "freemium" model, with most users gaining access to software free, and others paying for access to advanced features.

Mr Arvai says the start-up scene in Hungary's capital is beginning to take off, pointing to the success of technology groups such as LogMeIn, a remote working system, and UStream, a video-streaming site. According to CrunchBase, which compiles data on start-ups, some 50 Hungarian technology companies have received investment since 2008. This is small compared with London, which has more than 3,000 tech start-ups, but Mr Arvai says the talent and ideas exist in Budapest to create more companies, especially as investors have begun to look more favourably on the city.

Hungary is high on the list of countries ranked by number of Nobel laureates. It has been easy to persuade engineers and workers from around the world to move to the country, which has more relaxed immigration rules than the US and western Europe. "If you ask me about the amount of talent and creativity that exists between [Stockholm and Budapest] I would say they are comparable," he says. "But Sweden has built a 100-year business brand through Ericsson, Volvo and Ikea."

Last Christmas, the Prezi chief executive visited his uncle again. Much to the nephew's surprise, the older man began brainstorming ideas for companies he might start. "That was a huge thing for me personally," says Mr Arvai. "I had tears in my eyes."

TV host and mayor sparks a revolution in paying for utilities

Society and politics

Online auctions for power supplies could extend to other goods and services, writes *Nicholas Watson*

Vladimir Koren, the mayor of Ricany in the Czech Republic wanted to cut his town's high utility bills. The mayor, who is also a TV presenter, hit on an innovative solution: an electronic auction for electricity and gas supplies for households.

The first auction for a one-year contract with the municipality took place in 2012, in collaboration with eCentre, a Czech company that hosts online auctions for goods and services ranging from petrol to mobile telephony. Result: the municipality's electricity bill was cut by about 25 per cent and that for natural gas by almost 17 per cent.

"Members of the city council could see prices go down in the auction and one of my colleagues turned to me and said: 'What a shame my house couldn't be part of this auction'. And my answer was: 'Why not?'," says Mr Koren, who was elected mayor in 2010 representing the independent grouping Klidne Mesto ("quiet town").

Starting with utilities, Mr Koren, who hosts a popular science programme on state television, launched an information campaign, collecting 518 local households into a group, while eCentre came up with nine suppliers (not, it must be said, the giant state-owned utility CEZ) for the Czech Republic's first e-auction for household electricity and gas, which took place on March 13, 2013 at 13:13. Within an hour, contracts worth Kc27m ($1.25m) had been awarded, cutting the electricity bill for the 518 households by 16.5 per cent and gas by a third. "People saved . . . tens of thousands of crowns for their family budgets," says Mr Koren.

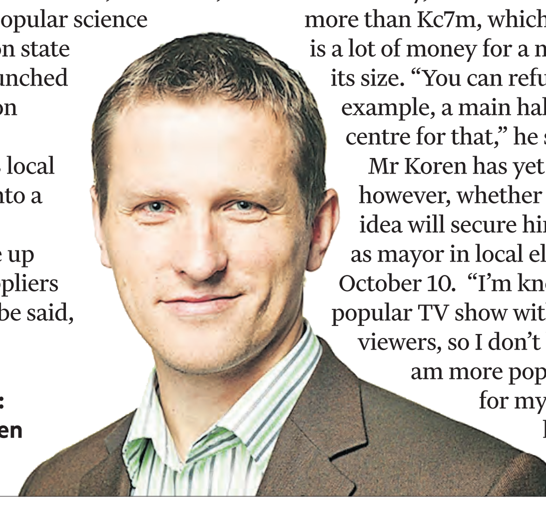
Inevitably, word spread, with municipalities from around the Czech Republic getting in touch to find out how it was done. By the end of 2013, the number of towns and villages organising e-auctions for gas and electricity had reached 652.

This has saved more than Kc21m for more than 21,000 households and Kc56m for more than 2,000 small businesses, sparking hopes of a revolution in how people buy energy supplies.

The model could develop further to produce aggregated management of demand and supply – with companies taking over responsibility for the imbalances of clients, "buying for this aggregated demand directly from the wholesale market, and dispatching this portfolio on the balancing market", says Jan Ondrich, energy economist at Prague-based advisory firm Candole Partners.

In Ricany, the e-auctions have saved more than Kc7m, which Mr Koren says is a lot of money for a municipality of its size. "You can refurbish, for example, a main hall in the cultural centre for that," he says.

Mr Koren has yet to find out, however, whether the trailblazing idea will secure him another term as mayor in local elections on October 10. "I'm known for one popular TV show with more than 1m viewers, so I don't know whether I am more popular for that or for my job as mayor," he says.



Winning the popular vote: Vladimir Koren

Alternative web journals serve up cappuccino reviews and local culture

Media and culture

Sergei Kuznetsov interviews a Belarus publisher who gives a less restricted view online

The former Soviet republic of Belarus has a limited media sector and uses Russian as the lingua franca. But Iryna Vidanava, a Minsk-based publisher, uses online media to give a less restricted view of a country sometimes dubbed the last dictatorship in Europe, as well as providing an outlet for the Belarusian language.

"Belarus has no normal media market because of substantial government regulation," says the 36-year-old.

"We came to a point where we were tired of the fact that Belarus is associated [abroad] with the following things: 'The last dictatorship of Europe', potatoes, Lenin monuments on every square. The country is much more than that, and we are trying to show this other Belarus."

The main vehicle of this campaign is CityDog, an online newspaper which has more than 10,000 unique visitors a day. Topics covered – in Russian – include where to find the best cappuccino in the city, how the grandparents of the current generation of readers dressed in their prime, and why some city residents are happy without accounts on social networks.

What may be considered ordinary material for any city paper in Europe, however, was absent from Belarus a couple of years ago, says Ms Vidanava.

She describes the local media business as very small and distorted, with independent publications unable to survive without external support. Finance for CityDog was originally obtained through a newly created Belarusian advertising agency and commercial sponsors including a mobile network operator Velcom, which had a keen interest in sponsoring news about cyclism and for cyclists in Minsk.

CityDog has since become financially self-sufficient. "However, this is an exception," says the publisher.

She believes that the internet and, in particular, social networks (which played a significant role during the latest protest movements in Ukraine, Venezuela and other countries), have become a platform where people can criticise the Belarusian authorities with some level of security – something most cannot do on the country's streets or squares. "That is why the government is attempting to regulate this sphere," says Ms Vidanava, who speaks from experience.

A decade ago, the government withdrew the licence of her magazine Studentskaya Dumka (Student Thought) which was mainly aimed at a young audience. "It was an independent publication in the Belarusian language for young people," she says. "This fact alone was enough for the authorities."

Subsequent attempts to publish the magazine without a licence and as a CD were also suppressed.

In response, she created a glossy online version, www.34mag.net, in English and the Belarusian language.

Innovative: publisher Iryna Vidanava

Science Young researcher's breakthrough spurs business ambitions

Joanna Jurek, who has just turned 18, has come up with what great scientists have failed to produce during decades of cancer treatment research: a non-invasive method of drug delivery to tumour cells.

In the young Polish researcher's model, molecules of doxorubicin (a drug used in cancer chemotherapy) are attached to nanoparticles of gold, which are used as carriers. The compound is then placed in nanofibres used to sew up surgical wounds following tumour resections.

The bond between the carrier and the drug can only be broken by enzymes produced by tumour cells, allowing for targeted and gradual release of the drug into the system. This limits the risk of cancer progression and mitigates adverse effects of doxorubicin.

"Using doxorubicin poses a problem, since it is a non-selective drug that interferes with the DNA structures of not only tumours but also healthy cells," Ms Jurek explains. "It is also cardiotoxic, which means it can't be given to patients with heart disease – as a result, it is slowly being phased out."

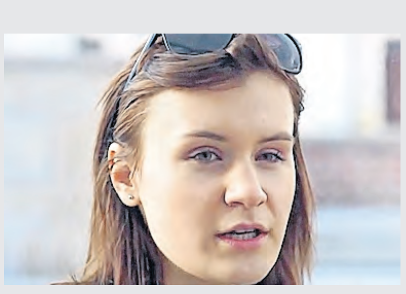
Ms Jurek started developing her project last year during a summer fellowship at the University of Warsaw. It came to fame when she won a prize in the prestigious Intel International Science and Engineering Fair competition for young scientists.

She says she never imagined her idea would bring her international recognition and an offer from Poland's health minister to collaborate with a leading research centre named after the world's most famous Polish scientist.

The Marie Curie Institute of Oncology in Warsaw is giving Ms Jurek space to further her research on drug-delivery systems and to start new projects in her other areas of interest which include skin and bone implants and cell origami.

Ms Jurek, who has still one more year of high school to complete not to mention university, has ambitions beyond the lab. In particular, she would like to develop her own product and set up a company to manufacture and sell her cancer treatment at an affordable price. "I don't want to write scientific papers and hope for someone with means to pick up my research and invest in it. I want to have the means to apply the research myself," she says.

Aleksandra Wisniewska



Applied thinking: Joanna Jurek

From industrial dinosaurs to world-class growth rates

Old vs new The region must move beyond being a manufacturing powerhouse, says *Neil Buckley*

At the sprawling Fiat plant in Kragujevac, southeast of Belgrade, eastern Europe's old economy meets the new.

The site was long occupied by Zastava, a communist-era group turning out clunky Yugo cars. During the 1999 Kosovo war, Nato planes bombed it. But in April 2012, it reopened after a €1bn refurbishment to produce the Fiat 500L people-carrier. Serbia's post-communist modernisation was delayed by the 1990s Yugoslav wars. The rebirth of the plant, however, showed the two-decade process of retooling central and eastern Europe continues.

When the Berlin Wall fell in 1989, former communist bloc countries seemed unlikely candidates for an economic miracle. Much of their industry was outdated and uncompetitive.

But they had potential advantages, too – above all, low wages coupled with high levels of education and skills. They were well-located, close to the west European market, as well as emerging economies such as Turkey. Over the next two decades, central European countries were transformed from industrial dinosaurs into what Pawel Swieboda, president of Demos Europa, a Warsaw-based think-tank, calls a "production hub for the European market", with manufacturing accounting for more than 30 per cent of gross domestic product in Poland, Czech Republic, Slovakia and Hungary.

But with much slower economic growth since the 2008 financial crisis, central European countries face a new challenge: to shift from low-cost manufacturing centres to innovative, knowledge-based economies.

After General Electric of the US took a pioneering stake in Tungsram, the Hungarian lighting producer in 1989, it was followed into the region by other consumer electronics groups such as Philips of the Netherlands, Germany's Siemens, and Samsung and LG of South Korea.

Automakers flocked in, too. Some opened greenfield plants, others took over existing sites, rebuilding them and retraining staff. The best-known example is VW's transformation of Skoda, the Czech automaker, from a company producing a single, outdated model into a world-class manufacturer.

Fiat launched manufacturing operations in Poland by taking over FSM in Tychy, Silesia when it was privatised in 1992. Since the 1970s, it had constructed a Polish version of the Fiat 126. In 1999, France's Renault acquired Dacia of Romania, now maker of the popular, low-cost Logan model.

Today, the Czech Republic and Slovakia, with only 16m people between them, produce more cars than France. Central and eastern European governments helped by creating attractive investment environments through economic reforms; the west European banks that took over large parts of eastern Europe banking provided financing.

EU membership for 11 ex-communist countries since 2004 gave full access to a single European market numbering more than 500m people. The McKinsey Global Institute noted this year that Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Slovenia and Croatia together averaged annual growth of 4.6 per cent from 2000 to 2008, among the best in the world.

"Oligarch" owners have also invested in Russian and Ukrainian natural resources companies and heavy industry, introducing new technology and raising productivity.

The 2008 financial crisis accentuated the shift in manufacturing to Europe's lower-cost centre and east, says Mr Swieboda: "Producers from western European countries came under stress, and they found nearshoring in central Europe to be highly advantageous."

But with most of central and eastern Europe not yet regaining 2008 levels of output – apart from Poland – Mr Swieboda is one of many voices calling for a new growth model. As the wage gap with western Europe narrows, CEE countries must not do all they can to increase productivity in existing manufacturing, but must also do the groundwork for new types of businesses to spring up.

"Creating an environment in which small, innovative companies and mid-caps can thrive is imperative," says Alain Pilloux, managing director for industry and commerce at the European Bank for Reconstruction and Development.

That includes improving road, rail and telecoms links within and between countries, as well as taking particular steps to stimulate innovation and knowledge-based businesses, says Mr Pilloux. These range from better protection for intellectual property rights, to improving the tax treatment of research and development costs.

While international venture capital groups, and technology giants such as Microsoft and Intel, have invested in central Europe's technology scene, homegrown groups from the region remain relatively scarce.

Economic miracles: a Skoda plant in the Czech Republic. In 2000, Volkswagen bought out the company and has transformed its methods and output – Bloomberg

Silicon Valley has lessons for the post-Soviet world

COMMENT

MURAD AHMED

Robert Noyce is not a household name. Perhaps he should be, as his work has helped create the modern world.

Noyce, who died in 1990, was co-inventor of the microchip, the gizmo which made the computing industry possible. He also co-founded two semiconductor makers, Fairchild and Intel. Those companies helped establish northern California's Bay Area as the centre of the technological world. His invention also helped give the region the moniker Silicon Valley.

While in his 50s, Noyce was frequently visited at home by a young man with long hair who would arrive noisily on a motorcycle. The 20-something wanted advice on how to build a lasting technology business of his own. That man was Steve Jobs,co-founder of Apple.

Noyce's mentorship of Jobs hints at why Silicon Valley thrives. The 50-mile strip of land between San Francisco and San Jose is packed with talent and money: leading academic institutions, such as Stanford University, scores of technology companies, including Google and Facebook, and the money men of Sand Hill Road in Menlo Park, home to some of the world's leading technology investors and venture capital funds.

This concentration has produced a unique culture, with knowledge passed from one generation to the next helping to create world-class tech businesses.

So are the digital start-ups that are springing up across disparate locations in Bratislava, Prague and Warsaw destined to fail? Should the tech entrepreneurs across central and eastern Europe just pack up and move to California?

No. And here is why. Niklas Zennstrom, founder of Skype, the global company that first sprang to life in Tallinn, Estonia, suggests that the internet has created a borderless world, where ideas travel further and faster than ever before. No longer would a young Jobs need to forge a relationship with Noyce over a dinner table. Today, they would probably tweet one another.

The physical proximity that gave those living in Silicon Valley an advantage has disappeared. Eastern Europe has strong universities, computer scientists and a skilled workforce. But problems remain; the biggest is access to capital. None of the top-tier technology investment funds in Europe have offices in the region, and locals complain they have to travel west to secure the significant investment that a promising start-up needs to grow.

The Startup Genome project's list of the world's top 20 "ecosystems" features the likes of Tel Aviv, Bangalore and Santiago. The only eastern European city included is Moscow.

This should not be a surprise. In the period when Noyce was advising Jobs on how to build Apple, the Berlin Wall was being pulled down. It has taken decades for the iPhone maker to become the world's most valuable technology company. Over the same period, a market economy was taking root across eastern Europe. Creating sustainable business takes time. So does nation-building.

> Eastern Europe has strong universities, computer scientists and a skilled workforce

But for ideas to spread, people need to interact. One way to ensure that is to shine a spotlight on them.

This is the driving force behind the New Europe 100, a list of people who are transforming technology, science, politics and beyond.

It may lead young Poles, Lithuanians or Ukrainians to peruse this list and seek out a mentor in their field, as Jobs once did with Noyce.

EU-funded venture capital model proves to be double-edged sword

Financing

Influx of EU Jeremie cash boosts start-ups in Hungary but venture capital fund managers are accused of micro-managing and stifling innovation, writes *Kester Eddy*

In 2010, Peter Sasi and his two long-standing business partners came to an impasse. In 15 years working for multinationals and as consultants in Hungary, they had built up significant expertise in the field of enterprise content management – managing documents for large enterprises.

"We realised that if we wanted to grow we would have to go international: Hungary was just too small," says Mr Sasi. But they needed funding and advice. Their company had annual revenues of just Ft110m ($446,000), so the hope was to find a venture capital fund that would understand their vision and needs.

Mr Sasi spent the first three months of 2011 researching the venture capital world before entering negotiations with Primus Capital, a Budapest-based VC fund serving central and eastern Europe.

"We could have 'bootstrapped' [funded ourselves from reinvested profits] for 10-15 years, but we wanted to take the fast lane," Mr Sasi says. It took another nine months before a Ft270m funding package gave Primus some 40 per cent of a new entity, Multipass Solutions, which took ownership of the three partners' ECM Consulting. Two years later, and MPS has expanded into the Gulf and southeast Asia. Revenues this year are expected to reach Ft495m, with further growth in the pipeline.

Mr Sasi's need to expand came at just the right time: in 2010 and 2012, Hungary received money from the EU's Joint European Resources for Micro to Medium Enterprises, otherwise known as Jeremie funding. Under the programme, VC funds had to provide 30 per cent of the initial capital, with Jeremie money making up the remainder. With an additional two programmes launched in 2013, a total of 28 funds were created with total capital of Ft128.4bn.

According to Venture Finance Hungary, the state body responsible for disbursing Jeremie money, the 28 funds had invested Ft57.5bn in 150 companies up to the end of August, the information technology and biotechnology sectors being the chief beneficiaries. "The entire Hungarian VC and start-up scene has been transformed for the better" by the Jeremie programmes, says Laszlo Koranyi, vice-president for international and domestic affairs of NIH, Hungary's National Innovation Office, whose responsibilities include encouraging start-ups.

Ft57.5bn	63%
Total ($236m) of EU Jeremie funds invested in Hungarian companies	Proportion of Hungarian venture capital investments in 2012 funded by Jeremie

Figures from the Hungarian Venture Capital Association reveal Jeremie accounted for 63 per cent of all VC investments nationwide in 2012, putting Hungary "in first place… in the EU in terms of early-stage VC investment as a proportion of gross domestic product".

But Mr Koranyi stresses that "a new way of thinking" has also started to evolve. "Investors started to pay attention to early-stage companies that previously were completely out of their focus," he says. "Start-ups started to understand that they have to focus on the international market to produce high-growth. Equity financing became a real alternative to grant-seeking."

Yet many ask whether the flood of money has helped or hindered long-term growth of innovative companies. Imre Hild, chief executive of iCatapult, a Budapest-based accelerator, says too many VC fund managers have classical private equity backgrounds and do not understand the mindset or needs of entrepreneurial start-ups.

"Their way of thinking is: I have to consider whether I want to buy the company, flip it around and then sell, or I don't want to buy it," says Mr Hild, who himself used to work with VC funds.

The result is that VC funds in Hungary – following private equity practice – have taken controlling stakes in many growth companies and have then sought to micro-manage the founders – a near certain way of denuding the company of energy and innovative thinking.

Ondrej Bartos, a partner at Credo Ventures, an €18m Prague-based VC fund that has invested in 13 companies across the region, though not, so far, in Hungary, says he feels "pretty good" that the Czech Republic has so far failed to access Jeremie funding. "It never works top down," he says. "Governments don't know what they're talking about."

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