

## 12. Skills and R&D in the Czech Republic

### THE CZECH REPUBLIC: THE SKILLS HUB OF CENTRAL EUROPE

The Czech Republic is home to a motivated workforce with a high degree of responsiveness to training and interest in continual professional and personal growth. The Czech Republic is already recognized as a prime location for European services-sector expansion and hosts an increasing number of business-support, research and customer-oriented services including expert solution centres, data processing and call centres as well as regional headquarters, value-added distribution centres and technology parks. Employment in high-tech services and manufacturing is also very prominent in the Czech Republic, providing input for the innovation activities of other firms in all sectors of the economy.

### Top 10 Business Support Services Projects in the Czech Republic

Company	Project Type	No. of employees	Location	No. of languages
Accenture	BPO (fin/acc/HR)	1700	Prague	over 20 languages
IBM	BPO (IT)	2600	Brno	25 languages
Siemens	SSC (fin/acc)/HR, IT	850	Prague, Ostrava	15 languages
Motorola	SSC/CCC/repair centre	520	Brno	9 languages
ExxonMobil	SSC (fin/acc)	1200	Prague	16 languages
DHL	SSC (IT)	1300	Prague	English dominant
SAP	SSC (fin/acc/HR)	400	Prague	17 languages
Honeywell	SSC (fin/acc)/CCC	550	Prague	10 languages
Tieto	IT dev / cust.support	2000	Ostrava	5 languages
TESCO Stores	SSC (fin/acc/IT)	200	Prague	English and CEE languages

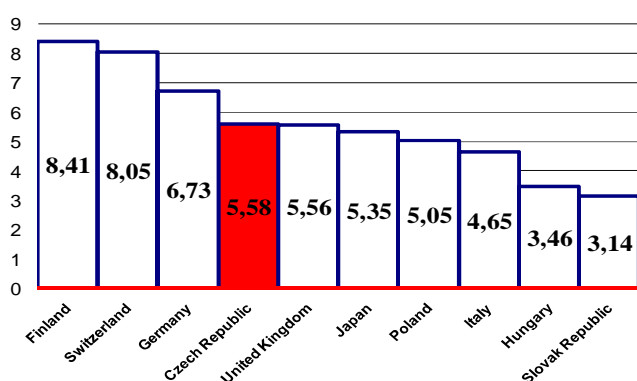
Source: CzechInvest, 2011

### LANGUAGE SKILLS

The Czech Republic devotes special attention to enhancing language skills. The proportion of secondary-level students studying English is as high in vocational courses as in academic areas, and at 95% is high by European standards.

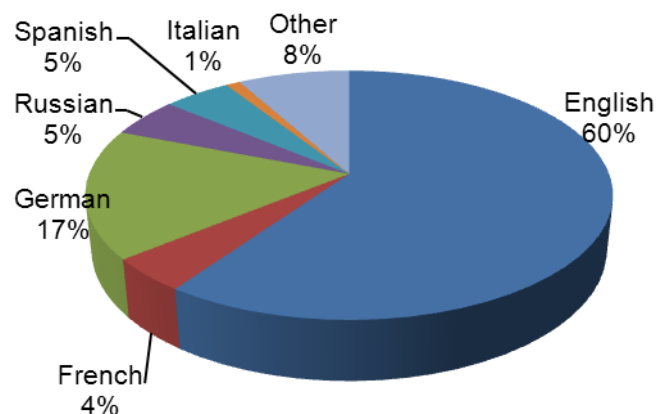
English and German dominate foreign-language education. English predominates in primary schools while German is taught more often at secondary schools. According to the Institute for Information on Education, 79% of university students study one foreign language, 19% study two and 1.7% study three or more foreign languages.

#### Language skills are meeting the needs of enterprises (Max = 10)



Source: IMD World Competitiveness Book, 2011

#### Foreign languages at universities in %

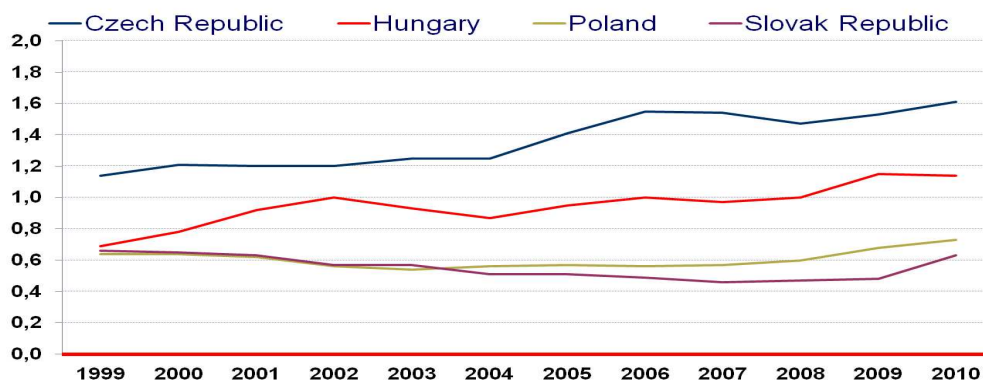


Source: Institute for Information on Education, 2011

## INVESTMENT IN RESEARCH AND DEVELOPMENT

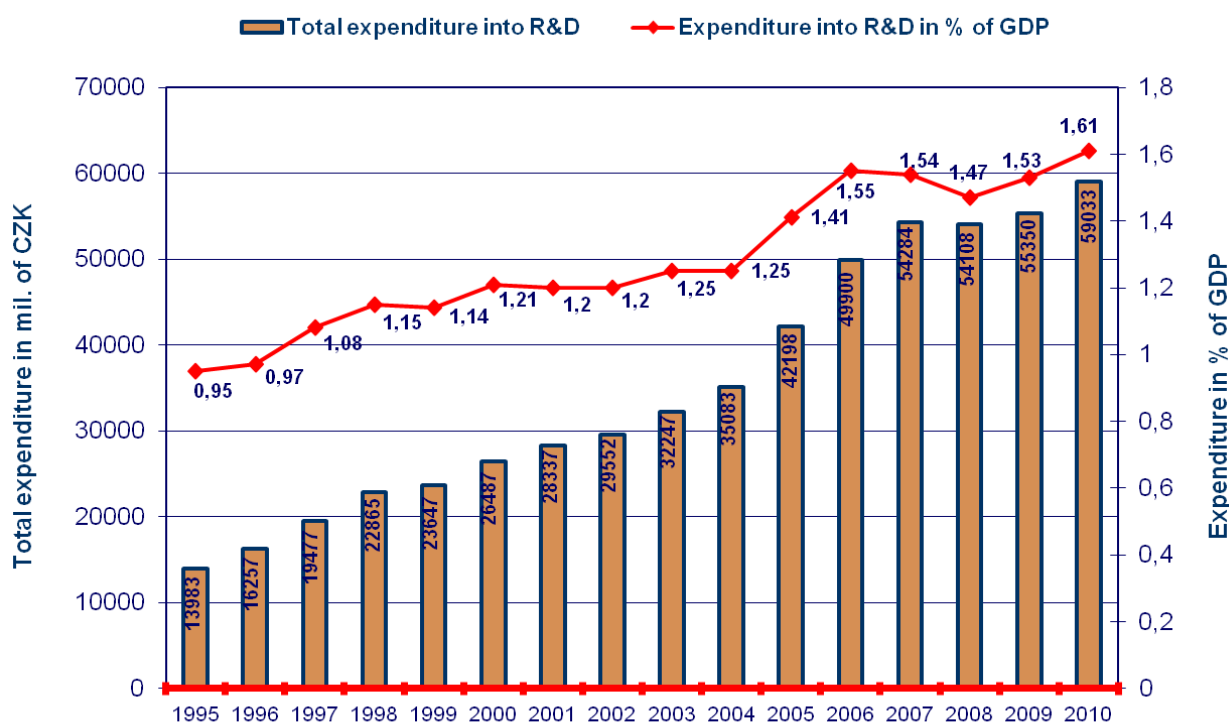
Spending on R&D in the Czech Republic has increased from 0.95% of GDP in 1995 to 1.61 % of GDP in 2010. In 2004 the country became a member of the EU and gained access to a variety of European funds and programmes. Today total expenditure on R&D ranks among the highest in Central and Eastern Europe.

**Total Expenditure on R&D (% of GDP)**



Source: National Statistical Offices, 2012

Total R&D spending in the Czech Republic more than doubled over the past ten years. Total R&D spending (*GERD – gross expenditure on R&D*) is the most well-known and most frequently used indicator for international comparison of research and development. It represents the sum of R&D expenditures from public, private (business or non-business), and foreign sources.



Source: Czech Statistical Office, 2011

## SCIENCE AND TECHNOLOGY PARKS

At science and technology parks, young, innovative firms cross paths with well-established companies with a shared interest in research and development. In relation to science and technology parks the Czech Republic supports cooperation between the research and business spheres through the Operational Programme Enterprise and Innovation (see Fact Sheet No. 5). There are 15 accredited parks, 21 parks in the process of accreditation and 13 parks in preparation located across the Czech Republic.

### Selected Science and Technology Parks

Name	Region	Contact
Technology Centre of the Academy of Sciences of the Czech Republic	Prague	<a href="http://www.tc.cz">http://www.tc.cz</a>
Science and Technology Park of the Aeronautical Research and Testing Institute	Prague	<a href="http://www.vzlu.cz">http://www.vzlu.cz</a>
Innovation Center and Business Incubator CKD	Prague	<a href="http://www.tic-ckd.cz/en/">http://www.tic-ckd.cz/en/</a>
Science and Technology Park, Roztoky near Prague	Prague	<a href="http://www.vtp-roztoky.cz/en">http://www.vtp-roztoky.cz/en</a>
Inovacentrum – Business Incubator of Czech Technical University		<a href="http://www.inovacentrum.cvut.cz/main/en">http://www.inovacentrum.cvut.cz/main/en</a>
Plzen Science and Technology Park	Plzen	<a href="http://www.vtpplzen.cz">http://www.vtpplzen.cz</a>
Plzen Business and Innovation Centre	Plzen	<a href="http://www.bic.cz">http://www.bic.cz</a>
Trebon Innovation Centre	South Bohemia	<a href="http://www.tic.trebon.cz">http://www.tic.trebon.cz</a>
Centre of Biological Technologies in Nove Hradky	South Bohemia	<a href="http://www.greentech.cz/cbt">http://www.greentech.cz/cbt</a>
Science and Technology Park of Palacky University	Olomouc	<a href="http://www.vtpup.cz">http://www.vtpup.cz</a>
Business and Innovation Centre in Ostrava	Moravia-Silesia	<a href="http://www.bicova.cz">http://www.bicova.cz</a>
Ostrava Science and Technology Park	Moravia-Silesia	<a href="http://www.vtppo.cz">http://www.vtppo.cz</a>
Technology and Innovation Centre in Zlin	Zlin	<a href="http://www.ticzlin.cz">http://www.ticzlin.cz</a>
Technology Transfer Centre of Masaryk University	South Moravia	<a href="http://www.muni.cz/ctt">http://www.muni.cz/ctt</a>
Business and Innovation Centre in Brno	South Moravia	<a href="http://www.bicbrno.cz">http://www.bicbrno.cz</a>
South Moravian Innovation Centre	South Moravia	<a href="http://www.jic.cz">http://www.jic.cz</a>

Source: CzechInvest, 2012

## TECHNOLOGY AND IT CENTRES IN THE CZECH REPUBLIC

A growing proportion of FDI is flowing into R&D activities in the Czech Republic. While many R&D activities have been spun off from manufacturing operations, such as Matsushita's R&D centre in Plzen, companies are increasingly establishing R&D centres in the Czech Republic without first having a manufacturing presence. Companies such as Honeywell, Roper Industries, Rockwell Automation, Ricardo, ST Microelectronics, Olympus and AMI Semiconductor provide good examples of such investments. Many companies have also established effective cooperation with Czech universities and research institutes.

## ASSOCIATION OF INNOVATIVE ENTREPRENEURSHIP IN THE CZECH REPUBLIC

The goals of the [AIE CR](#) are fulfilled by 30 subjects associating more than 84000 individuals and more than 1100 legal bodies. Main activity of the AIE CR is research and development in the field of innovative entrepreneurship that is research, development and innovation, technology transfer, new materials and technologies, science and technology parks, innovative firms, innovative processes, innovative infrastructure, innovative potential and conditions for functional innovative market by respecting regulations of the European Union frame.

## GATE2BIOTECH PORTAL

Created by the South Moravian Innovation Centre with support from CzechInvest, the [Gate2Biotech portal](#) brings together the biotechnology community in Central Europe. The primary mission of Gate2Biotech is to facilitate communication within the Czech Republic and internationally and to support the Czech biotechnology sector.

## NANOFIBERS GATEWAY

[NanoFibers Gateway](#) is a global portal, accessed by companies and universities from all over the world. Space has been made available for any new projects or alliances concerned with the development of modern nanofiber applications. The portal was created by a Czech company Nafigate with support from CzechInvest.

## SELECTED TECHNOLOGY AND R&D PROJECTS MEDIATED BY CZECHINVEST

Name	Sector	Country	Year	Region
Lonza Group	Biotechnology	Switzerland	2005	Central Bohemia
VOLKSWAGEN	Automotive	Germany	2004	Central Bohemia
ŠKODA AUTO a.s.	Automotive	CR	2011	Central Bohemia
Behr Czech	Automotive	Germany	2004	Central Bohemia
Ingersoll Rand	Engineering	USA	2004	Central Bohemia
Continental Teves	Automotive	Germany	2004	Hradec Králové
SIEMENS AKTIEN GESELLSCHAFT	Electronics	Germany	2005	Hradec Králové
Denso Corporation	Automotive	Japan	2009	Liberec
TRW Automotive	Automotive	USA	2005	Liberec
Denso	Automotive	Japan	2007	Liberec
ELMARCO s.r.o.	Engineering	CR	2008	Liberec
Hayes Lemmerz International	Automotive	USA	2004	Moravia-Silesia
Autopal	Automotive	USA	2003	Moravia-Silesia
Siemens Automotive Beteiligungs	Automotive	Germany	2006	Moravia-Silesia
Visteon	Automotive	USA	2006	Moravia-Silesia
BANG & OLUFSEN	Electronics	Denmark	2006	Moravia-Silesia
ABB	Engineering	Switzerland/ Sweden	2004	Moravia-Silesia
Roper Industries	Engineering	USA	2004	Moravia-Silesia
HELLA KG Hueck & Co.	Automotive	Germany	2003	Olomouc
Olympus TC	Biotechnology	Japan	2007	Olomouc
Rieter	Engineering	Switzerland	2002	Pardubice
Mercedes-Benz	Automotive	Germany	2003	Plzeň
ZAT	Biotechnology	CR	2006	Plzeň
Matsushita Electric Industrial Co.	Electronics	Japan	2002	Plzeň
Alois Pottinger Maschinenfabrik Gesellschaft	Engineering	Austria	2006	Plzeň
LATECOERE	Automotive	France	2006	Prague
Ricardo	Automotive	UK	2004	Prague
VALEO SYSTEMES THERMIQUES	Automotive	France	2002	Prague
Honeywell	Electronics	Germany/USA	2002	Prague, South Moravia
Bosch	Automotive	Germany	2004	South Bohemia
TRW Automotive	Automotive	Germany	2005	South Bohemia
Emerson Copeland	Electronics	USA	2006	South Moravia
AMIS Holdings	Electronics	USA	2005	South Moravia
ALPS ELECTRIC	Electronics	Japan	2005	South Moravia
APV Invensys	Engineering	UK	2007	South Moravia
Národní Tkáňové Centrum a. s.	Life Sciences	CR	2011	South Moravia
The BOC Group	SSC	UK	2006	South Moravia
Nippon Kayaku	Automotive	Japan	2003	Zlín
ON Semiconductor	Electronics	USA	2004	Zlín

Source: CzechInvest, 2012