

TURKEY: ONE OF THE LATEST COUNTRIES TO JOIN THE UK SCIENCE AND INNOVATION NETWORK. BUT WHY?



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In July 2011, the UK Science and Innovation Network established a new post in Turkey, based at the British Consulate-General Istanbul. At a time of budget freezes affecting science and research in the UK, one has to ask why such a decision was taken and what benefits can be afforded to the UK in building a closer science and research relationship with Turkey. Perhaps a 10% GDP growth in 2010 and the doubling of R&D investment over the last decades is a good place to start to answer that question.

Turkey's dance with Europe started in the 1970s and the accession process to the EU has been a long story with many agreements yet to be made. Yet while the negotiations are far from nearing their conclusion, Turkey has become an increasingly important economic partner for the UK; this was demonstrated by the signing of UK-Turkey Strategic Partnership between David Cameron and Turkish Prime Minister Recep Tayyip Erdoğan in July 2010. The dialogue in the economic arena has been extended to science, technology and innovation, given the growing efforts of Turkey in this field. In its accession bid to the EU, the Science and Research Chapter has been the only chapter so far

where Turkey has satisfied the demands presented by the EU. This Chapter closed in 2006 and since then Turkey has been an increasingly active participant in the 6th and 7th EU Framework Programmes; it is

a percentage of GDP, with 0.84% this is still considerably less than the EU and OECD average. Nevertheless with a growth rate of R&D spend only second to China, the future looks promising. In real terms,

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estimated that Turkey will have contributed around €420 million to the 7th Framework Programme by the end of 2013.

Approaching the centenary in 2023 of the establishment of the Turkish Republic by Kemal Atatürk, Turkey has accelerated its efforts in science and innovation fields and set itself ambitious targets for 2023. "Vision 2023" commits the country's R&D expenditure as a percentage of GDP to rise 2% by 2023. While the growth rate has been extremely impressive, this is nevertheless a challenging target, especially when considering that many leading countries like the UK and on average the EU are currently below 2%. In addition to quantifiable targets, the government and Prime Minister Erdoğan have announced ambitious targets for the centenary such as producing a domestic car, domestic plane and establishing a national space agency.

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the expenditure on R&D has more than trebled in the last decade, which is again substantial.

Countries like Turkey and China show trends that differ from traditional players in science and technology like the UK, USA and Japan. In the last decade these countries have seen a decrease in the share of industry-financed R&D and an increase in the share of government-financed R&D; a troublesome trend in the light of economic difficulties that governments face. On the contrary, the share of industry-financed R&D and industry-performed R&D in Turkey has been increasing in the last decade, showing a similar trend to China. The patent-per-R&D ratio of Turkey has increased considerably over the last decade, again being second only to China, where most countries have seen a decline. Turkey has increased its publications by 106% between 2002 and 2008 and had a 50% increase in the world share of publications.

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The UK has been following the developments in Turkey closely and is taking steps to become a partner with Turkey amongst her traditional collaborations such as the USA, Germany and Japan. On 26 September 2011, the UK-Turkey Knowledge Partnership was signed between the UK Secretary of State for Business, Vince Cable, and Turkish Minister of Economy, Zafer Çağlayan. The concept for the Partnership was proposed by Lord Green during his visit to Turkey in April 2011 and it aims to promote new opportunities for collaboration between the research and education institutions, businesses and governments of both countries. The Partnership's stakeholders from the UK side are UK Trade and Investment, Science and Innovation Network and the British Council, which makes it possible to realise opportunities across a spectrum ranging from education to trade. One of the first activities to follow the launch was the UK-Turkey Higher Education



Institutional Partnership call by British Council, which will see 22 projects being funded that include universities and industry from the UK and Turkey.

In the previous 12 months alone, Turkey has received several high-level UK visitors. Vince Cable launched the UK-Turkey Knowledge Partnership in Sabanci University Nanotechnology Application and Research Centre as well as meeting a number of ministers and businesses in Turkey. UK Minister for Universities and Science, David Willetts, came to Turkey in April this year with the largest delegation of university vice-chancellors ever to visit

Turkey. David Willetts met Nihat Ergün, Minister of Science, Industry and Technology where he announced the Knowledge Pathway visa scheme which will ease the visa application process for senior academics in Turkey.

While many positive developments are going forward, Turkey also faces some challenges in its growing

the resignation of around 50 Academy members and letters of concern from international science academies, including the British Academies. The 2010 UNESCO Science Report presents some challenges for Turkey in terms of lower enrolment in tertiary education, underdeveloped venture capital market and an insufficient number of high-growth firms.

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research scene. In August 2011, the government passed a new decree law which sees changes to the election of members to the Turkish Academy of Sciences (TÜBA). While previously TÜBA was able to elect all its members, the new law will now allow one-third of the members to be elected by the Turkish Higher Education Council and one third by the science committee of the Turkish Scientific and Technological Research Council (TÜBİTAK). The Turkish government says this will increase the chances for a fairer election to the Academy although the change resulted in

Turkey is about to appoint science attachés to other countries, which include the UK along with the USA, Germany, Japan and Korea, inspired by the UK Science and Innovation Network (SIN) too. With the activities of UK SIN and the recent Knowledge Partnership, UK has the chance to become a preferred partner for Turkey and make the best of the synergies that will arise through collaboration in science and innovation.

References

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... industry-financed R&D has been increasing ...

ROCKET SCIENCE: UK AND RUSSIA IN SPACE



Dr Julia Knights
 First Secretary, Science & Innovation Network (SIN) – Russia

The UK-Russia Year of Space 2011-12 has already delivered significant commercial space partnerships and cutting edge joint research. Russia's ambitious plans to gain 10% of the global space market by 2030, their "Glonass" global navigation satellite system to rival the US's GPS, a new spaceport in Russia's Far East and planned Russian missions to the Moon, Mars, Venus and Jupiter offer compelling reasons why the UK

space industry & research community should take note.

From the launch of the first artificial Earth satellite "Sputnik 1" into orbit and first animal in orbit on "Sputnik 2" in 1957 to the first human manned space flight on "Vostok 1" in 1961 and first spacewalk in 1965 by Cosmonaut, Alexey Leonov, Soviet engineers and cosmonauts have made their mark in Space.

Russia is ambitious to modernise and regain its position from Soviet times as a space superpower, with its sights set on becoming one of the top three space nations through a target to increase its share of the global space market from 0.5% to 10% by 2030 – the same target as the UK's.

Russia's Federal Space Agency (Roscosmos) has set out how it will achieve this target

