

Industry in Baden-Württemberg Is Reserved in Cooperating with China

**Joint Study of KIT and HsKA on Behalf of the Ministry of Science, Research, and the Arts
Result: Much Own Initiative in China, but Few Partnerships**

Within the framework of the study “Industrial Synergies between Baden-Württemberg and Suzhou Industrial Park”, the Karlsruhe University of Applied Sciences (HsKA) and Karlsruhe Institute of Technology (KIT), on behalf of the Baden-Württemberg Ministry of Science, Research, and the Arts, analyzed the potentials and obstacles for future cooperation faced by industrial companies in both regions. The result is of mixed nature: While chances of cooperation are good in attractive growth areas, such as environmental technology, water systems, renewable energies or automation technology, where China faces big challenges, actual cooperation activities between companies from Baden-Württemberg and Chinese partners are characterized by caution.

Baden-Württemberg is one of the most innovative regions of the European Union. With 138 patent applications per 100,000 inhabitants, it is far above the German average of 59. Suzhou Industrial Park (SIP) is located in the province of Jiangsu in China, about 100 km west of Shanghai. The actors in the SIP also are highly innovation-oriented with 640 patent applications per 100,000 inhabitants. In the rest of China, this quota is 61. Against this background, the study analyzes the strengths and weaknesses of industry and research structures in both innovative regions and derives recommendations for actions for interested parties. In parallel, an online survey was carried out in both regions, in which 270 companies from Baden-Württemberg and 70 companies from Suzhou took part. To complement the data, 25 experts of both regions were interviewed and asked for their opinions. Hence, the study represents the latest and most comprehensive snapshot of industrial strategies and cooperation potentials, with Chinese and German opinions being taken into account.

As a strategy in competition, the companies of both regions strongly rely on quality and innovative products. About three quarters of the companies asked in both regions are market or product innovators. Surprisingly, hardly any differences are found between the Baden-Württemberg and the Chinese side. “This might yield good opportunities for a cooperation of strong and innovative partners on equal

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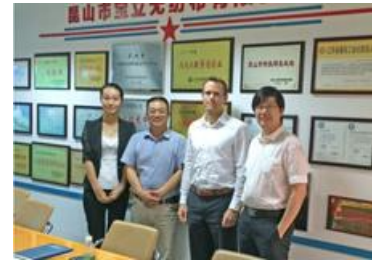
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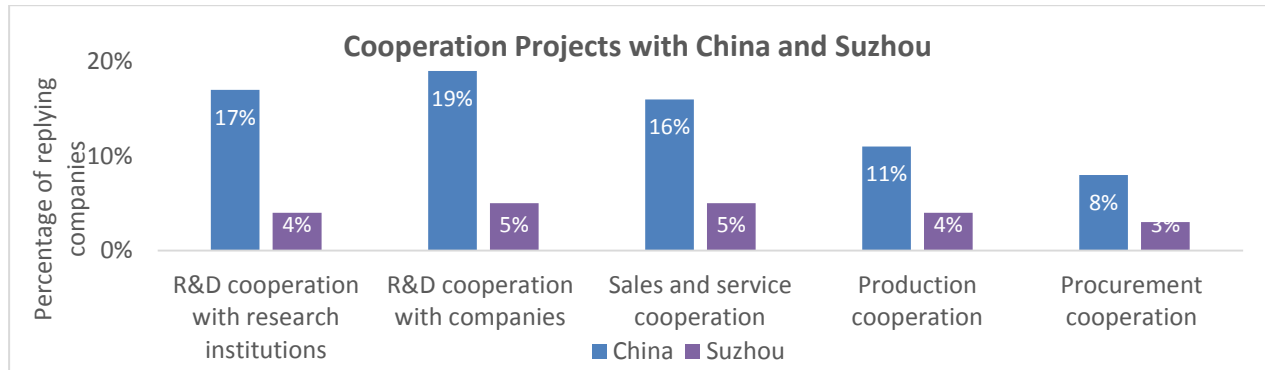
terms,” Professor Dr. Steffen Kinkel, Head of the Institute for Learning and Innovation in Networks (ILIN) of the Karlsruhe University of Applied Sciences, summarizes one of the central findings of the study. Due to increasing environmental pollution and emissions, companies in Baden-Württemberg see the biggest potentials for future cooperation with Chinese partners in the areas of environmental technologies, water systems, and renewable energies. As a result of increasing labor costs in China, they also consider automation to be necessary. Baden-Württemberg companies see strong competition in viable cross-sectional disciplines, such as advanced production technologies, new materials, or nanotechnology. In exactly these areas, companies from Suzhou see potentials for cooperation.

“So far, companies from Baden-Württemberg have not utilized the big opportunities in China consistently enough,” says Professor Dr. Gisela Lanza of the wbk Institute of Production Science of KIT. She points out that companies from Baden-Württemberg are very active in China. Nearly half of those surveyed already produce in China and one third has established research and development offices there. R&D, however, mainly takes place in Baden-Württemberg. The activity level of cooperation projects with Chinese partners is comparatively low. In research and development, about four fifths of the Baden-Württemberg companies cooperate with research institutions or other companies, but less than one fifth with partners from China. Cooperation with Chinese partners in the areas of sales, services, production, and procurement is even lower. Altogether, Baden-Württemberg’s companies seem to be rather reserved to cooperate with partners from China, in particular in establishing local procurement networks.

A major argument for shunning partnerships in China is the risk of know-how loss and product piracy. Many German – and Chinese – companies feel exposed to this risk. Hence, they try to protect themselves by patents. Nearly half of the companies interviewed from Baden-Württemberg hold one or several patents in China. For more than half of the companies, the major reason of patenting is securing the capacity to act. Nearly three quarters of the Chinese companies in Suzhou wish to block competitors by patenting. This shows that it is very important for companies operating in China to protect knowledge and rights covering innovations in the form of new or adapted products for the local market against potential competitors, as the price alone is no sufficient sales argument, especially in China.



Interview of the managing director Bangsheng Qiu (2nd from the left) of the Chinese company producing non-woven material, Bao Li Nonwoven Co., Ltd., Jan Hochdörffer (3rd from the left), research associate from wbk Institute of Production Science, Tang Jiayin (right), project engineer of the Global Advanced Manufacturing Institute (Photo: Bao Li Nonwoven Co., Ltd.)



Cooperation projects of companies from Baden-Württemberg with China und Suzhou

(Chart taken from Lanza, G., Kinkel, S., Ruhrmann, S. (Eds) (2015), *Industrial Synergies between Baden-Wuerttemberg and Suzhou Industrial Park, Study for the Ministry of Science, Research and the Arts of the State of Baden-Württemberg, KIT, Karlsruhe.*)

All results of the study can be found on the website of the wbk Institute of Production Science of Karlsruhe Institute of Technology (KIT): <http://www.wbk.kit.edu/english/2386.php>.

Karlsruhe University of Applied Sciences has about 8,500 students and is one of the biggest universities of applied sciences in Baden-Württemberg. Its education program is highly practice-oriented and of international character. Prospective students may choose from a range of technical and engineering, computer science, business management as well as media-related studies programs. At an early stage, students are encouraged to participate in research projects, gather experience, and start a scientific career on this basis.

Apart from university education and applied research, the university also focuses on knowledge and technology transfer.

Karlsruhe Institute of Technology (KIT) is a public corporation pursuing the tasks of a Baden-Wuerttemberg state university and of a national research center of the Helmholtz Association. The KIT mission combines the three core tasks of research, higher education, and innovation. With about 9,400 employees and 24,500 students, KIT is one of the big institutions of research and higher education in natural sciences and engineering in Europe.

Since 2010, the KIT has been certified as a family-friendly university.

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