

Insights and best practices of technology transfer between Europe and China: The case of globalizing R&D

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Globalizing R&D: China at its center

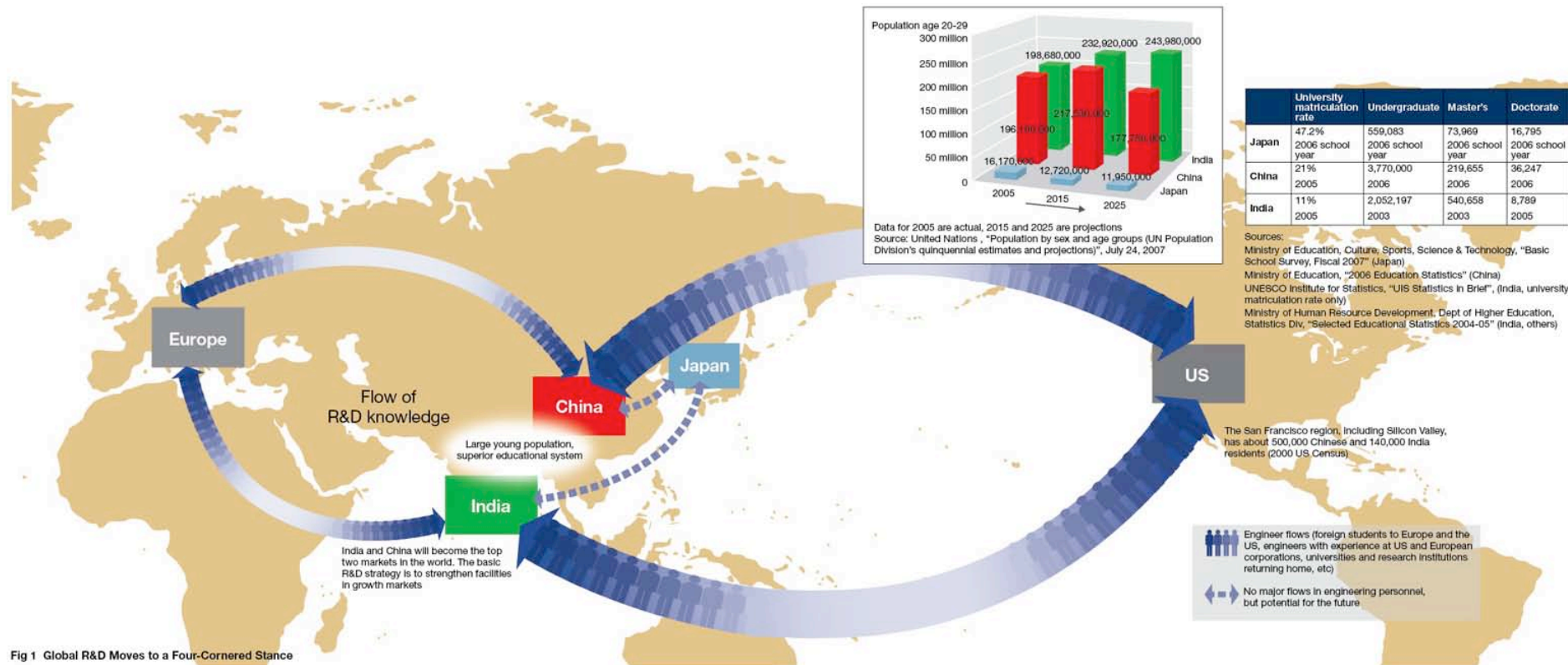


Fig 1 Global R&D Moves to a Four-Cornered Stance

By the end of 2014, MNCs have established 1,600 R&D centers in China



SONY

Panasonic



Honeywell



SHARP

Source: CEIBS R&D Center Study

**By the end of 2014, MNCs have
established 1,600 R&D centers in China**

3 decades

Cost > localization > globalization

R&D focused

Panasonic

3M

 **MOTOROLA**
智慧演绎 无处不在

 **LG**

Honeywell

 **DSM**

SHARP

Source: CEIBS R&D Center Study

Why?

Changing modes of tech transfer:

- Early phase: Joint-Ventures, as required by government
- Later: grassroots, independent R&D centers
 - Extensive collaboration with Chinese universities, limited M&A

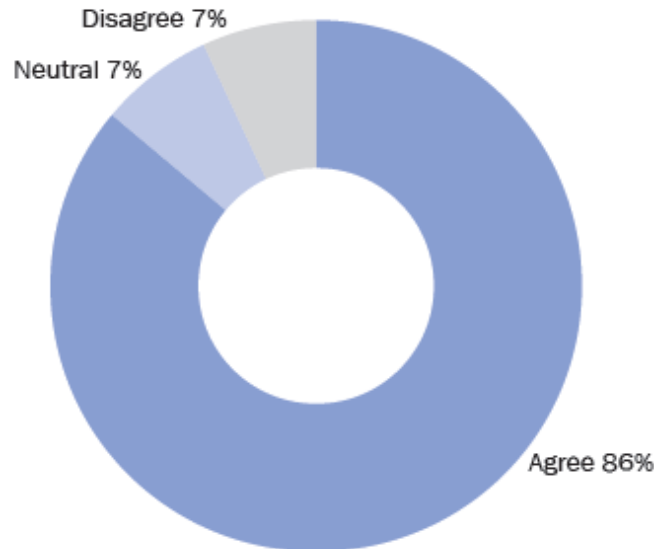
Persistent challenges:

- Hesitant core technology transfer: mostly D (of R&D)
- Intellectual Property rights protection: weak
- People: relevant skill matching difficult
- Culture: language and practices

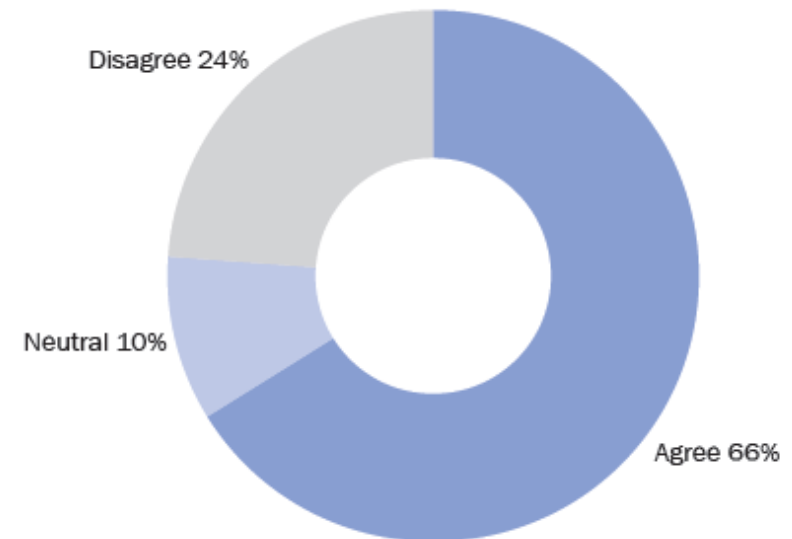
The nearby future: Chinese global R&D

Expansion plans abroad by Chinese companies

My company will extend its overall presence abroad in the next 10 years



My company will extend its R&D presence abroad in the next 10 years



Source: China Innovation Survey by Booz, BenCham, CEIBS and Wenzhou Chamber of Commerce



HIKVISION



Large domestic firms

Tencent 腾讯

ctrip
携程

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Local technology ventures



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Chinese R&D abroad: exploring the EU

- 56 Chinese companies invest significantly in R&D
- China belongs to the group with quickest increase (28.1%)
- China as percentage as total R&D investment by top 1500 companies in EU is only 2.7%
 - cf. South Korea 2.9%, Japan 21.9%, USA 34.9%
- Huawei leads the way
 - only Chinese company in top 50 investing companies (#41)
 - Belongs in top growth segment of R&D investment (48.4%)
- Wide variety of industries

Source: 2012 EU Industrial R&D Investment Scoreboard, European Commission

Case: Chinese R&D in The Netherlands

10 out of 256 Chinese companies

Case	A	B	C	D	E	F	G	H
Affiliate in the Netherlands (Unit)	Inalfa Roof Systems Group	AMCA Hydraulic Fluid Power	CIMC Burg	Orient Technologies	LWMC Europe (Landwind)	Mapscape.	XEMC Darwind	Ginaf Trucks
Entry mode	M&A		M&A	M&A	Greenfield	M&A	M&A	M&A
Main R&D activities	Automotive Roof Systems	Hydraulics	Specialized transportation	Thermal printing heads	Automotive parts	Navigation maps	Wind turbines	Heavy trucks
Year investment	Jan-11	Jan-11	2007-2011	2009	Oct-11	Apr-11	Jan-09	Dec-11
Host location	Venray	Ten Post	Pijnacker	Eersel	Helmond	Eindhoven	Hilversum	Veenendaal
Engineers employed	120	4	?	1	1-120 engineers			10
Interviewee	Chief Executive Officer	Managing Director	?	Former owner and Managing Director	Chief Executive Officer	Managing Director	Chief Technology Officer	R&D Manager
Chinese parent company (MNE)	Beijing Hainachuan Automotive Parts	Xuzhou Construction Machinery Group	China International Marine Containers Group	SOE	Wuling Motors	NavInfo	Hunan Hara XEMC Windpower	China Hi-Tech Group Corporation Europe
Industry	Automotive	Machinery & Tools	Transportation Equipment	Electronics	Automotive	Navigation	Windpower	Automotive
Year founded	2008	1989	1980	1988	1988	1998	1998	1998
HQ location	Beijing	Xuzhou	Shenzhen	Wei Hai	Nanjing	Nanjing	Changsha	Shanghai

Goals: technology seeking

Limited tech transfer back

Acknowledgments: Tom Hoorn and Adviesraad Wetenschap en Technologie

Challenges and opportunities

Chinese innovation, large and small, not to be ignored

- Increasing attractiveness of Chinese market for technology
- Increasing interest of Chinese companies for European R&D and technology development

But... Context matters: IPR, market size, culture, people

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