

# **The role of external social network ties in foreign MNE R&D subsidiaries in China: a transactive memory approach**

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Employee's social networks have been recognized as an important source of organizational innovation. However, staff members are often unaware of how other staff members are using their social networks. These circumstances lead to underutilisation of social networks. To elucidate this source of organizational innovation, this research provides insights into R&D staff's external network ties that are not included in workflows within the organization as transactive memory. Based on 75 interviews conducted during an eight-month research stay at two foreign subsidiaries in China, the findings reveal how external network ties are used, providing both explorative and exploitative opportunities in knowledge generation for international R&D activities. The paper contributes to the organizational learning and transactive memory literature by illustrating how R&D staff's personal external network ties can contribute to organizational exploration and exploitation, and can be incorporated as an additional knowledge source for collective learning. The research provides implications for management practice to consider strategical utilization of their employees' personal external network ties as an additional source for idea generation and innovation.

Keywords: Exploration vs. exploitation, external network ties, knowledge sharing, open innovation, R&D subsidiaries

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## FIGURES AND TABLES

Table 1. Case A: External social network ties

Exploration/ Exploitation	First-order concept	Contact
Exploration	<u>Science and technology insights</u> e.g. new product application methods; feasibility of product ideas	Universities and research institutes
		Customers
	<u>Synergies for collaboration</u> e.g. collaboration for current work area; discuss collaboration opportunities	Complementors
		Universities and research institutes
<u>Technical knowledge sharing</u> e.g. expert advice; technology discussion	Universities and research institutes	
Exploitation	<u>Resource access</u> e.g. renting testing facilities; machinery operation information	Universities and research institutes

Table 2. Case B: External social network ties

Exploration/ Exploitation	First-order concept	Contact
Exploration	<u>Market and industry insights</u> e.g. trends and policies; future regulations	Competitors
		Universities and research institutes
		Friends
	<u>Technical knowledge sharing</u> e.g. technological advancements; experience and technology	Competitors
Suppliers		
Exploitation	<u>Market and industry insights</u> e.g. supplier information	Competitors
	<u>Technical knowledge sharing</u> e.g. work-specific knowledge; experience and technology; component information	Suppliers

Table 3. Exchanged knowledge and services based on external contacts

<b>External Contact</b>	<b>Case A: Knowledge-intensive with competence-creating mandate</b>	<b>Case B: Knowledge-based with competence-exploiting mandate</b>
University and research institutes	Exploration/Exploitation	Exploration
Customers	Exploration	-
Complementors	Exploration	-
Competitors	-	Exploration/Exploitation
Suppliers	-	Exploration/Exploitation
Friends	-	Exploration

Table 4. Exchanged knowledge and services

	<b>Case A: Knowledge-intensive with competence-creating mandate</b>	<b>Case B: Knowledge-based with competence-exploiting mandate</b>
<b>Exploration</b>	Active search for collaboration	Inspiration for new ideas
<b>Exploitation</b>	Integration in daily business activities	Advice network

## APPENDIX

### Appendix A

<b>Company</b>	<b>Date</b>	<b>Position</b>	<b>Number of Respondents</b>	<b>Duration</b>
		Director	3	2 hours
<b>Case A</b>	January 4th – April 15th, 2016	Manager	4	4 hours
		Employee	12	11 hours
		Director	8	4.5 hours
<b>Case B</b>	April 25th – August 5 <sup>th</sup> , 2016	Manager	19	15 hours
		Employee	29	18 hours

Appendix B

<b>Company</b>	<b>Respondent</b>	<b>Position</b>	<b>Gender</b>	<b>Nationality</b>	<b>Highest Education</b>	<b>Years of Work Experience</b>
<b>Case A</b>	A2	Sr. Scientist	Male	Chinese	Ph.D.	5
	A7	Science Manager	Male	Chinese	Ph.D.	10
	A8	Scientist	Female	Chinese	Ph.D.	2
	A10	Sr. Scientist	Female	Chinese	Ph.D.	5
	A18	Sr. Scientist	Female	Chinese	Ph.D.	5
<b>Case B</b>	B22	Design Engineer	Male	Chinese	M.Sc.	1
	B24	Mechanical Engineer	Male	Chinese	B.Sc.	10
	B45	Innovation Director	Female	German	M.Sc.	10
	B49	Innovation Manager	Male	German	M.Sc.	12
	B56	Electrical Engineer	Male	Chinese	M.Sc.	8