

Codified knowledge transfer in offshoring firms

**How contextual proximity and personal interaction mechanism
matter for the transfer of the codified knowledge**

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AGENDA

INTRODUCTION

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LIMITATION

INTRODUCTION

- Managing knowledge across national boundary is an important matter for internationally engaged firms (Kogut and Zander, 1993).
- Factors facilitating or impeding knowledge transfer in MNEs have been studied in the international business literature (e.g. Szulanski, 1996, Simonin, 1999, Gupta and Govindarajan, 2000, Pedersen et al., 2003, Kotabe et al., 2007, Ambos and Ambos, 2009)

INTRODUCTION

- Knowledge transfer in offshoring firms?
 - Disaggregation of activities
 - Distance, multiple location (Mudambi, 2008)
 - Replication of competences (Roza et al., 2011)
- Importance of tacit/codified dimension of knowledge for offshoring firms
 - LEGO case
 - Offshorability (Contractor et al., 2010, Leamer and Storper, 2001)
 - Hidden costs (Dibbern et al., 2008, Larsen et al., 2013)

RESEARCH QUESTION

- How do the following factors influence the transfer of codified knowledge in offshoring firms?
 - Contextual distance (proximity)
 - Possibility to transfer tacit knowledge

OFFSHORING PATTERN IN RECENT YEARS

- Motivation (Ferdows, 1997)
 - Cost reduction (Lewin and Peeters, 2006)/ Access to skills and knowledge/
Access to markets
 - Increasing attention to knowledge seeking motivation, combination of
motivation
- Activity: Specificities of offshoring of service activities (Kenney et al., 2009)
 - Non-physical and transferred through ICT technologies
 - Mostly conducted by highly educated persons
 - Development activities are increasingly being offshored.
- Location
 - India/China
 - Nearshore destination

CODIFIED AND TACIT DIMENSION

- Proponents of codification (Cowan et al., 2000) vs. proponents of tacit knowledge (Nightingale, 2003, Dosi et al., 2000, Johnson et al., 2002)
 - The paper posits that complete codification is impossible and a certain part of knowledge will remain tacit (Balconi et al., 2007)
- Knowledge transfer mechanisms differ for the types of knowledge (Pedersen et al., 2003)
 - Written media vs. personal interaction
- The dichotomous use of the tacit/codified dimension (Pedersen et al., 2003, Holtbrügge and Berg, 2004)

HYPOTHESES(1)

The moderating effect of contextual distance

- As the geographical distance between the entities increases, the utilisation of codified knowledge transfer mechanisms will increase.
- As the non-spatial (contextual) distance increases, interactive learning becomes harder (Boschma, 2005). Contextual distance affects the effectiveness of knowledge transfer negatively (Ambos and Ambos, 2009).

H1: The relationship of geographical distance and the high level of CKTM is moderated by the contextual distance between the offshored unit and the home unit. The larger the contextual distance, the less likely the firm has a high level of CKTM with increasing geographical distance.

HYPOTHESES(2)

Complementarity of two types of knowledge transfer mechanisms

- Replication aspect of offshoring requires the transfer of as complete knowledge as possible (Winter and Szulanski, 2001), which can be done by combining codified and tacit knowledge.
- Interaction of tacit and codified knowledge in organisational knowledge creation (Nonaka and Takeuchi, 1995)

H2: The more a firm utilises tacit knowledge transfer mechanisms, the more likely that the firm has a high level of utilisation of codified knowledge transfer mechanisms.

DATA

Danish and Swedish offshoring survey data from 2011 (GONE survey)

- Detailed information on the latest offshoring implementation
- 168 offshoring firms in the sample

Sample descriptive statistics

		Count	Per cent
Size (domestic employees)	Medium 50-99	66	39.3
	Large 100+	102	60.7
	Total	168	100.0
Industry	Manufacturing	103	61.3
	Trade and Transport	29	17.3
	ICT & financial services	19	11.3
	Other industries	17	10.1
	Total	168	100.0

METHOD

Logistic regression

- Dependent variable: Intense utilisation of codified knowledge transfer mechanisms = Codified knowledge transfer index >5
- Codified knowledge transfer index is the average of the following five 7-point likert-scale items (1= Not at all, 7= To a high degree) : 1) The offshoring implementation is defined through procedure, manuals, blueprints, etc., 2) To coordinate the implementation, the company used mechanisms based on information systems, 3) To coordinate the implementation, the company used mechanisms based on formalisation, 4) Knowledge and information sent from Denmark to the offshored unit is documented, and 5) Knowledge and information sent from the offshored unit to Denmark is documented.

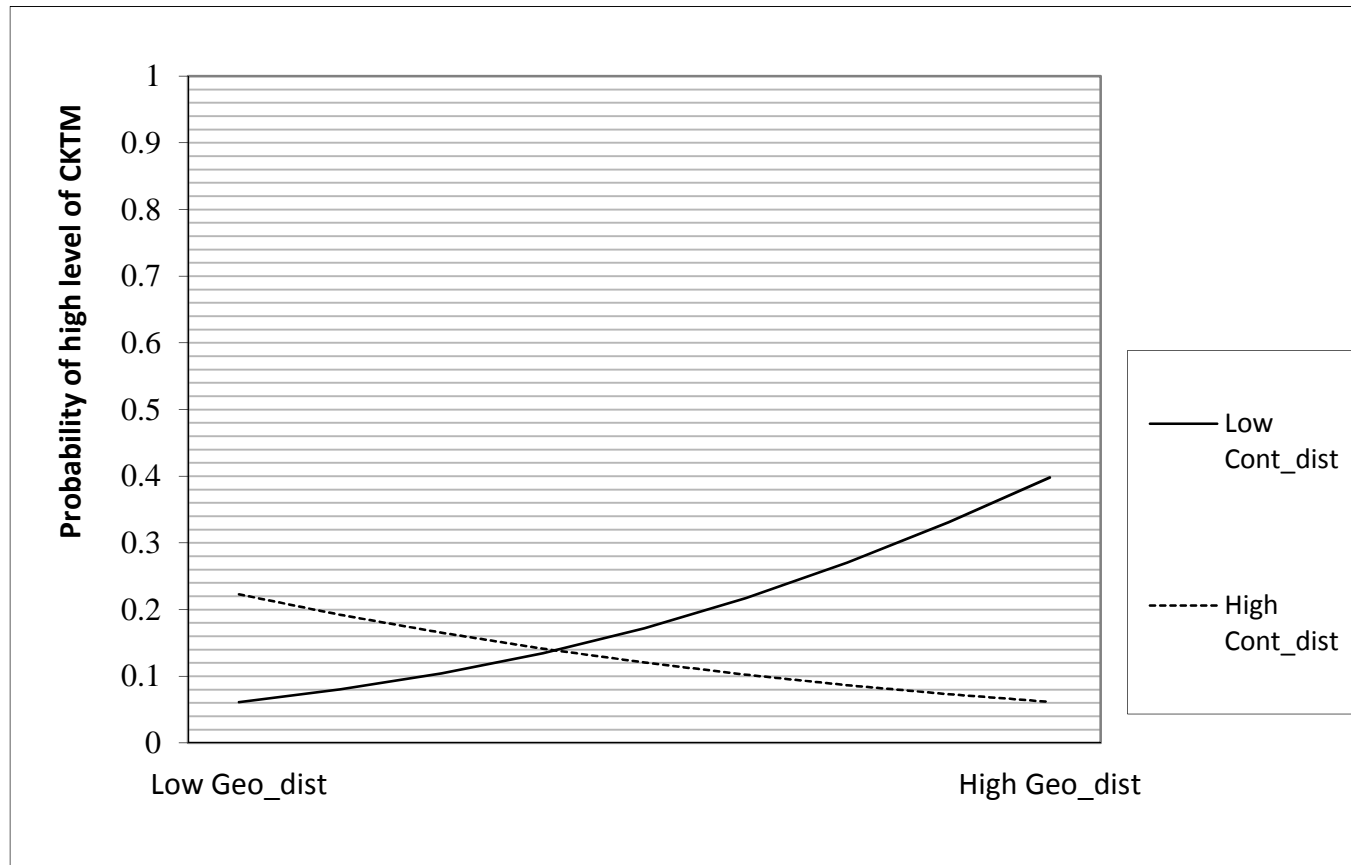
OTHER VARIABLES

Explanatory variable	Geo_dist	The log of dyadic distance between the two countries	CEPII's GeoDist database
	Cont_dist	Cultural distance measure introduced by Kogut and Singh (1988) utilising Hofstede' (2010)s cultural value scores	Hofstede (2010)
	Geo_dist* Cont_dist	Interaction term of the above two variables	
	Util_TKTM	The level of utilisation of coordination mechanism based on personal interaction	GONE survey
Control variable	Activity	Production (Prod) Service (Serv) Development (Dev)	GONE survey
	Subsidiary dummy	Subsidiary (Subs) Independent supplier/ Joint venture	GONE survey
	Multiple experience	Multiple offshoring experience (Multi) Single offshoring experience	GONE survey
	Manufacturing	Manufacturing firms Non-manufacturing firms	Firm register data

RESULTS

	Model 1			Model 2			Model 3			
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	
<i>Explanatory variables</i>										
Geo_dist*Cont_dist							-.395	.148	.673	***
Geo_dist				.233	.149	1.263	.175	.155	1.191	
Cont_dist				-.005	.179	.995	-.104	.193	.902	
Util_TKTM				.263	.121	1.301	.296	.125	1.345	**
<i>Control variables</i>										
Serv	.460	.435	1.583	.695	.460	2.003	.879	.487	2.408	*
Dev	-.336	.493	.714	-.449	.511	.639	-.379	.526	.685	
Subs	-.213	.329	.808	-.226	.340	.798	-.178	.347	.837	
Multi	.381	.349	1.463	.402	.359	1.495	.456	.367	1.578	
Manuf	-.141	.370	.869	-.166	.380	.847	-.133	.393	.875	
Constant	-.149	.449	.861	-1.625	.828	.197	-1.780	.859	.169	**
- 2 log likelihood		228.846			221.567			213.694		
Cox & Snell R square		.023			.065			.108		
*p<0.1; **p<0.05;***p<0.01										
N = 168										

RESULTS



CONCLUSIONS

- The contextual distance can make the understanding of the codified knowledge more difficult, and therefore lead to the negative relationship between the geographical distance and the propensity to have high codified knowledge transfer.
- The significant, positive relation between the level of tacit knowledge transfer and the probability of intense utilisation of CKTM implies that the use of CKTM and TKTM is complementary, and the use of one does not substitute the use of another.