Innovation, Organizational Learning Orientation and Reverse Knowledge Transfer in Multinational Companies

Daniel Jimenéz-Jimenéz, Micaela Martínez-Costa and Raquel Sanz-Valle
University of Murcia, Murcia, Spain
danieljj@um.es
mili@um.es
raquel@um.es

Abstract: Today, innovation is considered one of the main source of competitive advantage for the companies. For multinationals companies (MCNs) innovation is particularly important because they have more challenges to face than domestic organizations. MNCs have also a potential advantage for developing innovations, as they have access to new ideas and knowledge generating in the different locations they operate in. But this potential advantage can only become real if MNCs are able to transfer the knowledge they acquire in one of their locations to the others. This paper analyses the relationship between knowledge transfer and innovation in MNCs. In particular, this research focuses on knowledge transfer from the subsidiaries to the headquarters (reverse knowledge transfer). In addition, this paper studies the effect of the firm´s learning orientation as a mediator in the relation between reverse knowledge transfer and innovation. These relationships are tested using a sample of 104 Spanish MNCs. Our findings show that reverse knowledge influences indirectly on the headquarters' innovation through its effect on the firm's learning orientation. These findings have implications for both academics and practitioners.

Keywords: Innovation, Knowledge Management, Reverse knowledge transfer, Learning orientation, Multinationals Companies (MNCs)

1. Introduction

Innovation is increasingly considered to be one of the key drivers of the long-term success of a firm and knowledge is frequently cited as antecedent of innovation (Kogut and Zander, 1992, Crossan and Apaydin, 2010, Nonaka and Takeuchi, 1995). The basic assumption here is that companies which are able to renew their knowledge stand a better chance of understanding the consequences of the changes in their environments and are better suited than competitors to respond faster and better to them (Tippins and Sohi, 2003, Sinkula, 1994).

Multinational companies (MNCs) are considered to have better opportunities to acquire and exploit knowledge than domestic organizations since they are open to new experiences, markets, cultures and ideas (Bonache and Zárraga-Oberty, 2008) which can foster their innovation capability. In this line, Almeida and Phene (2004) suggest that MNCs innovate by acquiring diverse knowledge from their geographically dispersed subsidiaries and by integrating it into their own core capabilities.

For this potential advantage to become real it is necessary to transfer knowledge from one location to the others (Kotabe et al., 2007). Knowledge transfer is a process of systematically organized exchange of information and skills between entities (Wang et al., 2004). Intra-corporate knowledge transfer is a complex process in general, but within the MNCs is even more difficult due to the distance, both geographical and cultural, among their different organizational units. Among other factors, successful knowledge transfer requires that the business unit which receipts knowledge has the capacity to absorb it and use it for developing innovations (Andersson, 2003). The purpose of this paper is to analyse the relationship between innovation, learning orientation and knowledge transfer in the MNCs context.

Empirical researches focusing on knowledge transfer within the MNCs have focused mainly on the knowledge transfer that takes place from the headquarters to the subsidiaries (Bonache and Brewster, 2001, Minbaeva, 2008, Riussala and Suutari, 2004). However, recent literature highlights the importance of focusing on knowledge flows from the subsidiaries to their headquarters (Rabbiosi, 2011, Rabbiosi and Santangelo, 2013, Michailova and Mustaffa, 2012, Najati-tavani et al., 2012, McGuinness et al., 2013). Literature names this process as reverse knowledge transfer (Rabbiosi, 2011). This paper tries to contribute to fill this gap in the literature.

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To achieve its purpose, this paper is structured as follows. First, previous literature on the relationship between reverse knowledge transfer, innovation and learning orientation is reviewed. From the literature research some hypotheses are proposed. These hypothesis are, then, tested using a sample of 104 Spanish MNCs. Finally, the findings are presented along the implications of this study, its limitations and some recommendations for future research.

2. Theoretical framework

2.1 Innovation and Knowledge transfer in MNCs

Innovation has been conceptualised in a variety of ways (Wolfe, 1994) but, according to Hage (1999), most of the authors define it as the adoption of an idea or behaviour –regarding a system, policy, program, device, process, product or service- that is new to the adopting organization. Furthermore, attending to the Oslo Manual (OCDE, 2005), it can be understood as ''the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations''.

Innovation processes are considered crucial activities for the contemporary MNCs (Ciabuschi et al., 2012). As it was said before, MNCs operate in different markets and are exposed both to the local and the international competition. In this context, these companies have to look up new ways to be competitive by offering new products, making new changes in their operation processes or improving their general processes of managing the company. However, MNCs have the opportunity to acquire knowledge from different sources because they count with a great variety of subsidiaries that operate in different markets, customers, suppliers and institutions. Only companies that count with efficient international knowledge management initiatives will be in a position of generating innovation for competing overseas.

Knowledge management has been showed as a crucial process for the majority of the companies. Furthermore, for those that have to operate with different subsidiaries distributed overseas, knowledge management is required for the transmission of knowledge and the adoption of right strategies on specific contest. Knowledge transfer can be understood as the process of a systematically organized exchange of information and skills between entities (Wang et al., 2004). It implies direct collaborative relationships between two entities within the MNC, involving creation, transfer, and/or exchange of valuable knowledge (Gnyawaḷi et al., 2009). In this process, the entities from an MNC acquire knowledge from other entities in order to improve their productive capability. Traditional models of knowledge transfer focus on the conventional forward transfer of knowledge from headquarters to foreign affiliates. However, one impact of globalization is that knowledge transfer takes place across multiple dimensions (space, time, language, culture etc.) as well as in multiple directions (forward, backward and lateral). The reverse knowledge transfer (RKT) could be understood as the knowledge transfer from foreign subsidiaries to local headquarters.

RKT has important profits for local headquarters. They can benefit from their subsidiary knowledge coordinating a global strategy, so by improving processes in their own or other units in the network, or by simply providing the missing link in the quest to develop a new product (Ambos et al., 2006). Such knowledge transfer presumably contributes to the build-up of innovative capabilities of local parent firms (Li and Zhou, 2008). RKT is also useful for the development of new products, and the realization and use of innovations in different units (Hansen, 1999, Tsai and Ghoshal, 1998, Tsai, 2001)– all of which can crucially facilitate the development of competitive advantage. Some studies in international business offer valuable insights into how firms invest abroad (Ito and Wakasugi, 2007), create patents (Singh, 2008) and transfer knowledge across units (Kurokawa et al., 2007) to obtain competitive advantages (Kafouros et al., 2012).

This recent trend is in line with the broader recognition that foreign subsidiaries can serve as sources of innovations (Birkinshaw et al., 1998, Pearce and Papanastassiou, 1999) that can be transferred to and used by parent companies. What is more, some results show how local headquarters increase their innovative skills and capabilities benefit from the use of knowledge transferred from foreign subsidiaries (Rabbiosi and Santangelo, 2013). Thus, RKT provides potential opportunities for headquarters to develop new products through the combination of existing and different complementary skills (Kotabe et al., 2011). Thus, we propose that:

H_1. RKT has a positive effect on MNC´s innovation.

2.2 The mediation role of learning orientation

Reverse knowledge transfer is considered to be an important factor for developing parent innovations. Although knowledge acquisition is important for MNCs to catch up in the international environment, they need to possess organizational capabilities to deploy resources (Dierickx and Cool, 1989, Teece et al., 1997). Parent company has to develop certain capabilities to benefit from the pieces of knowledge from different subsidiaries and thus ultimately create value (Ambos et al., 2006). However, transfer of knowledge is often associated with modification of the existing knowledge to the specific context (Foss and Pedersen, 2002), thus parent companies have to adapt this knowledge to their local market. Furthermore, this new foreign knowledge may question the current knowledge and organizational practices of the parent company.

A learning orientation is "an organizational characteristic that affects a firm's propensity to value generative and double-loop learning … reflected by a set of knowledge-questioning values" (Baker and Sinkula, 1999). Furthermore, learning orientation has been described as the adoption of a basic learning process (Rhee et al., 2010) and linked to the development of new knowledge in the organization. This learning orientation is required to assimilate, adapt and exploit the transferred knowledge.

Consequently, local headquarters' benefits from RKT will be positively related to its learning orientation (Ambos et al., 2006). The knowledge transferred will foster the acquisition of new knowledge that could be used for different uses. In consequence, we consider that RKT will be a key determinant for the learning orientation of an MNC. Thus, we propose:

H_2. The RKT has a positive effect on the learning orientation of the parent.

Finally, literature often underlines the relation between learning orientation and organizational innovation (Chang and Cho, 2008, Lynn et al., 2000, Madhavan and Grover, 1998). As the firm's learning orientation and the processes that develop its innovative capabilities are difficult to imitate, companies with superior knowledge-processing practices are likely to sustain innovativeness and thus be better positioned in long-term competition (Jantunen, 2005). Learning-oriented culture has a tendency to stimulate receptivity to new ideas and innovation as part of an organization's culture (Hurley and Hult, 1998, Rhee et al., 2010). Furthermore, many scholars have emphasized the extent to which innovation firm's ability involves the integration of external knowledge with the existing organization (Powell, 1998). Thus, most studies consider that learning orientation injects new ideas into the organization, increases the capacity to understand new ideas and strengthens creativity and the ability to spot new opportunities (e.g. Chesbrough, 2003, Gray, 2006, García-Morales et al., 2008). Furthermore, learning orientation facilitates the development of a company's innovation capacity through the application of knowledge acquired from internal and external sources. Therefore, organizational innovativeness can be considered as the output of learning orientation deployment. Hence, we state that:

H_3. The learning orientation of the parent company has a positive effect on MNC´s innovation.

In consequence, we propose that learning orientation plays a mediation role on the relation between RKT and organizational innovation.

3. Methodology

3.1 Population, data collection and sample

The sample for this research includes Spanish MNCs with more than 100 employees, tenure of more than 5 years, and having at least one subsidiary in a foreign country. According to the Amadeus database, the number of MNCs fulfilling these requirements in Spain is 1.397.

The data were collected using two structured questionnaires through phone interviews (one for RKT and learning orientation and other for the innovation practices). A specialized market research company managed the process. Different steps were followed to carry out the data collection. We contacted first with the human resource executive for the first questionnaire and then to the CEO or innovation executive for obtaining the information related to organization innovation. The market research company then tracked completion of the questionnaire and helped organizations to complete it. All the processes were supervised and the quality of this activity was tested by contacting a randomly selected sample of firms that had answered the questionnaire. The authors monitored the performance of the companies that had completed the survey. No problems were found. The unit of analysis for this study was the company.

A total of 193 responses for the first questionnaire were obtained. Then, we received 104 for the second questionnaire from the companies that answered the first one. The responding companies belong to different sectors of the economy, which allows for a good representation of companies in general. The food and beverage industry, the furniture industry and metal production have the highest representation in the sample.

A routine check for industry bias indicated no significant differences in the mean responses on any construct across firms from different industries. In addition, Chi-square distribution analysis revealed no significant differences between the sample and the population, which was drawn from in terms of industry distribution, the number of employees and sales volume.

3.2 Measures

The key variables in this study were measured using 5-point Likert scales based on previous literature.

Reverse knowledge transfer was measured by asking the respondent the degree to which the knowledge they had acquired from their subsidiaries was useful in improving a list of tasks. We adapted the Rabbiosi (2011)' scale. After the scale depuration process through both exploratory and confirmatory factor analyses, the scale includes 6 items.

Organizational innovation measure includes four scales, each referring to one of the four types of innovation (OCDE, 2005): innovations in product, process, commercialization and management.

Learning orientation measure was based in the scales used on three academic papers (Egan et al., 2004, Yang et al., 2004, Marsick and Watkins, 2003), which focus on the degree in which the culture of the firm has a learning orientation. After scales depuration, a six-scale measure was used.

Control variables. Age (numbers of years since the headquarters' constitution) and size (number of headquarters' employees) were introduced from AMADEUS database. They were recoded on the same scale as the rest of the variables.

3.3 Validity and reliability check

Both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted on the multi-item measures. Thus, the data analysis is developed at three steps: First, performing an exploratory factor analysis. Second, using confirmatory factor analysis. Finally, analysing the hypotheses with structural equation models (SEM). EFA, with varimax rotation of the 14 items, yielded three factors with eigenvalues greater than one and explaining 69.6 per cent of the total variance, was performed.

To assess the single dimensionality of each construct, a confirmatory factor analysis of the five constructs was conducted employing all the items (Anderson and Gerbing, 1988a), including all independent, mediator, and dependent variables so as to analyse their dimensionality, which is the relations between latent and observed variables. The results of the confirmatory factor analysis (CFA) to test the validation of the measures ($\chi^2_{(74)}$= 103.477 CFI=.957 IFI=.958 BNNFI=.947 RMSEA=.068 SRMR=.068) indicate a good fit for the model.

Reliability of the measures was calculated with Bagozzi and Yi's (1998) Composite Reliability Index and with Fornell and Lacker's (1981) Average Variance Extracted Index. Discriminant validity is indicated first since the confidence interval (± 2 S.E.) around the correlation estimate between any two latent indicators never includes 1.0 (Anderson and Gerbing, 1988a). Secondly, discriminant validity was tested second by comparing the square root of the AVEs for a particular construct to its correlation with the other constructs (Fornell and Larcker, 1981).

Table 1 provides an overview of the means and standard deviations of the constructs. The results show that there is no multi-collinearity. In addition, the table shows basic information about each factor.

Table 1: Reliability, validity and measurement model

Constructs	**Mean**	**SD**	**Lowest t-value**	**Cronbach alpha**	**SCR[a]**	**AVE[b]**
Reverse knowledge transfer	2.8974	1.05798	7.208	.910	.915	.642
Learning orientation	3.8264	.80121	6.587	.876	.888	.615
Innovation	3.7212	.74298	5.379	.732	.761	.515
CFA Goodness of Fit: $\chi^2_{(74)}$= 103.477 CFI=.957 IFI=.958 BNNFI=.947 RMSEA=.068 SRMR=.068; [a] Scale composite reliability (qc=(Aki)2 var (n)/[(Aki)2 var (n) +Ahii]; (Bagozzi and Yi 1988); [b] Average variance extracted (qc=(Aki)2 var (n)/[(Aki)2 var (n) +Ahii]; (Fornell and Larcker 1981)						

4. Results

After satisfying the requirements discussed above, we tested the structural model, which summarizes the three proposed hypotheses. We conducted our analyses with structural equation modelling (SEM), using the statistical program EQS 6.1 for Windows (Bentler, 1995). Conventional maximum likelihood estimation techniques were used to test the model (Jöreskog and Sörbom, 1996). The fit of the model is satisfactory, thereby suggesting that the nomological network of relations fits the data. This is another indicator that supports the validity of these scales (Churchill, 1979).

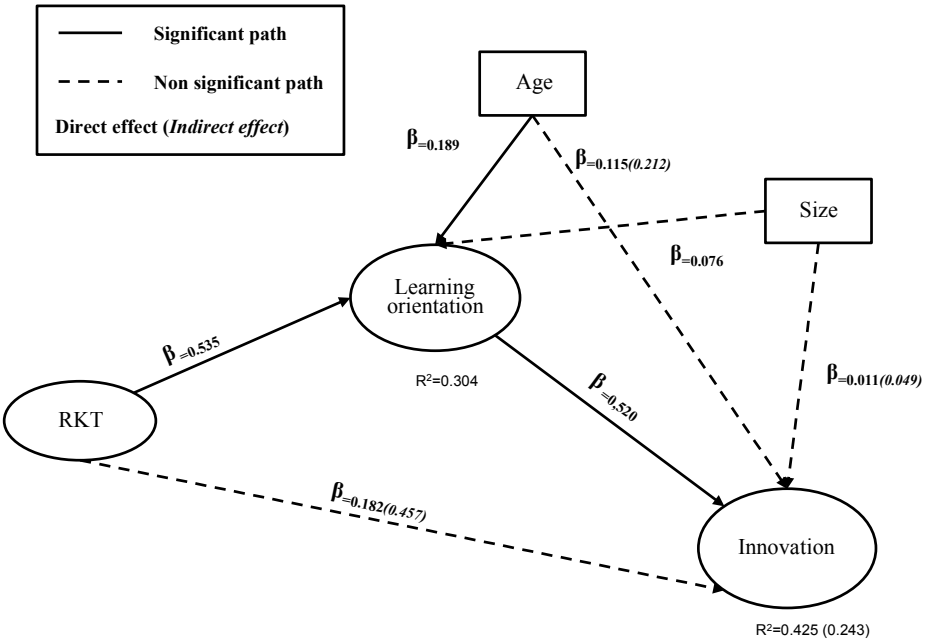

Figure 1: Structural model

r findings do not show any significant relationship between RKT and innovation (table 2). Thus, findings do not support H2, which suggests a direct relationship between these two variables.

On the contrary, the findings do support H_2 and H_3. As table 2 shows, there is both a positive relation between RKT and the learning orientation of the firm (H_2; β = .535***) and a positive relation between the latter and the generation of innovations on the headquarters (H_3; β = .520***).

Table 2: construct structural model relationships

Main relationships	**Model with mediation**		**Model without mediation**	
	Coefficient	**td**	**Coefficient**	**td**
Main paths				
RKT → Innovation	0.182	1.341	.457***	3.333
RKT → Learning orientation	0.535***	4.126		
Learning orientation → Innovation	0.520***	3.317		
Control variables				
Age → Learning orientation	0.189*	1.867		
Size → Learning orientation	0.076	0.769		
Age → Innovation	0.115	1.067	0.212*	1.853
Size → Innovation	0.011	.103	0.049	0.446
Indirect effects				
RKT → Innovation	0.278***	2.846		
	Goodness of Fit from the model with mediator variable $\chi^2_{(96)}$*= 117.322 CFI=.968 IFI=.969 BNNFI=.960 RMSEA=.051*		*Goodness of Fit from the model without mediator variable* $\chi^2_{(40)}$*= 62.550 CFI=.947 IFI=.949 BNNFI=.927 RMSEA=.079*	

Although we have not found evidence for supporting a direct relation between RKT and innovation, results show some evidence of indirect effect of RKT on organizational innovation (κ=0.278, p<0.01). In order to test that RKT has an indirect effect on innovation, we compared the propose model with an alternative model that does not include learning orientation (Anderson and Gerbing, 1988b). In this alternative model, a direct path from RKT to innovation (table 2) was specified in order to apply Baron and Kenny (1986)´s general idea about mediating variables which has been adapted to causal models. The results of the mediation link support our hypothesis. First, because the mediation model (with learning orientation) explains more variance on innovation (R^2=.425) than the direct effect model (R^2=.243). Second, because we found a positive relationship both between RKT and learning orientation, and between learning orientation and innovation. Third, because the significant relationship between RKT and innovation in the direct effect model (β =.457, p < 0.01) becomes not significant in the model with mediation (β=0.182, p> 0.1). Together these three points provide evidence that there is a discernible mediating effect of learning orientation in the relationship between RKT and innovation and that the mediation model represents a significant improvement over the direct effect model. We can conclude that the effect of RKT on innovation is completely mediated by learning orientation (Baron and Kenny, 1986).

5. Conclusions

This paper has focused on the relationships between reverse knowledge transfer, learning orientation and organizational innovation in the context of MNCs. In particular, it examines whether the transfer of knowledge from the subsidiaries to the headquarters may have a positive effect on the MNCs innovation. In addition, the papers analyze whether the learning orientation of the parent company mediates the relationship between RKT and MNC´s innovation.

A review of previous research on knowledge transfer and innovation in MNCs seems to support the relationships this paper proposed. However, literature has usually focused on the transfer of knowledge from the parent company to its subsidiaries. Only some recent studies focus on the RKT, that is to say, to the extent to which the knowledge generated into the subsidiaries is transferred to the parent company (Rabbiosi, 2011, Rabbiosi and Santangelo, 2013, McGuinness et al., 2013, Najati-tavani et al., 2012). The purpose of this paper was to fill this gap.

First, as proposed, our findings provide evidence that parent company's learning orientation is positive related to MNCs innovation. This result supports the idea that the organization-wide activity of creating and using knowledge to enhance competitive advantage has been identified as a key facilitator of firm´s innovation and it is consistent with previous literature on the relationship between learning orientation and innovation (Hult et al., 2004, Keskin, 2006, Akgün et al., 2007).

Second, according to our findings, there is a positive relationship between the parent company's learning orientation and RKT. This result shows that RKT allows the company to increase its ability to assimilate and exploit new knowledge. In addition, our finding suggest that RKT is related to MNC innovation but that this relationship is due to the fact that RKT foster the parent company´s learning orientation and that is by this effect that RKT enhances MNC innovation. In sum, these results support the idea that RKT is important in the MNCs search for competitive advantage (McGuinness et al., 2013).

Our findings contribute to the literature on the field of knowledge transfer in MNCs as it focused on the under researched topic of RKT, a topic which is considered an emerging area of increasing interest to researches (Michailova and Mustaffa, 2012).

This study has also implications for practitioners. On the one hand, like previous research, our data show that in order to achieve better performance, companies should foster their organizational learning capability. The reason is that the organizational learning capability and its output, organizational knowledge, enable companies to anticipate and understand better the customer needs and the competitive situation, to process this information faster and to develop new products, processes or systems which allow them to achieve a competitive advantage. In particular, this paper points out that MNCs which want to enhance their innovation, taking advantage of the knowledge generating in the subsidiaries they have around the world should foster parent company's learning orientation.

Despite the contributions of this paper, its results should not be interpreted without recognizing the potential limitations of this study. The more important one is its cross-sectional design, which may constrain both the

observation of multiple long-term effects of each variable and the elucidation of causal relationships between the variables. This limitation could be avoided by employing a longitudinal study design.

Other recommendations for future research on the relationship between RKT and innovation emerge from this study. For instance, it may be interesting to identify the main determinants of RKT. In this line, recent literature highlights the key role that expatriates and repatriates play in this process (Minbaeva, 2008). This could help to understand how MNCs could improve their process of knowledge transfer between their different locations.

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References

Akgün, A. E., Keskin, H., Byrne, J. C. & Aren, S. 2007. Emotional And Learning Capability And Their Impact On Product Innovativeness And Firm Performance. Technovation, 27, 501-513.

Almeida, P. & Phene, A. 2004. Subsidiaries And Knowledge Creation: The Influence Of The Mnc And Host Country On Innovation. Strategic Management Journal, 25, 847–864.

Ambos, T. C., Ambos, B. & Schlegelmilch, B. B. 2006. Learning From Foreign Subsidiaries: An Empirical Investigation Of Headquarters' Benefits From Reverse Knowledge Transfers. International Business Review, 15, 294-312.

Anderson, J. C. & Gerbing, D. W. 1988a. Structural Equation Modeling In Practice: A Review And Recommended Two-Step Approach. Psychological Bulletin, 103, 411-423.

Anderson, J. C. & Gerbing, D. W. 1988b. Structural Equation Modelling In Practice: A Review And Recommended Two-Step Approach. Psychological Bulletin, 103, 411-423.

Andersson, U. 2003. Managing The Transfer Of Capabilities Within Multinational Corporations: The Dual Role Of The Subsidiary. Scandinavian Journal Of Management, 19, 425-442.

Bagozzi, R. P. & Yi, Y. 1998. On The Evaluation Of Structural Equation Model. Journal Of The Academy Of Marketing Science, 16, 74-94.

Baker, W. E. & Sinkula, J. M. 1999. The Synergistic Effect Of Market Orientation And Learning Orientation On Organizational Performance. Journal Of Academy Of Marketing Science, 27, 411-427.

Baron, R. M. & Kenny, D. A. 1986. The Moderator-Mediator Variable Distinction In Social Psychological Research: Conceptual, Strategic And Statistical Considerations. Journal Of Personality And Social Psychology, 51, 1173-1182.

Bentler, P. M. 1995. Eqs Structural Equations Program Manual, Encino, Ca, Multivariate Software Inc.

Birkinshaw, J., Hood, N. & Jonsson, S. 1998. Building Firm-Specific Advantages In Multinational Corporations: The Role Of Subsidiary Initiative. Strategic Management Journal, 19, 221–241.

Bonache, J. & Brewster, C. 2001. Knowledge Transfer And The Management Of Expatriation. Thunderbird International Business Review, 43, 145-168.

Bonache, J. & Zárraga-Oberty, C. 2008. Determinants Of The Success Of International Assignees As Knowledge Transferors: A Theoretical Framework. International Journal Of Human Resource Management, 19, 1-18.

Ciabuschi, F., Forsgren, M. & Martín Martín, O. 2012. Headquarters Involvement And Efficiency Of Innovation Development And Transfer In Multinationals: A Matter Of Sheer Ignorance? International Business Review, 21, 130-144.

Crossan, M. M. & Apaydin, M. 2010. A Multi-Dimensional Framework Of Organizational Innovation: A Systematic Review Of The Literature. Journal Of Management Studies, 47, 1154-1191.

Chang, D. R. & Cho, H. 2008. Organizational Memory Influences New Product Success. Journal Of Business Research, 61, 13-23.

Chesbrough, H. W. 2003. The Logic Of Open Innovation: Managing Intellectual Property. California Management Review, 45, 33-58.

Churchill, J. L. C. 1979. A Paradigm For Developing Better Measures Of Marketing Construct. Journal Of Marketing Research, Xvi, 64-73.

Dierickx, I. & Cool, K. 1989. Asset Stock Accumulation And Sustainability Of Competitive Advantage. Management Science, 35, 1504-1511.

Egan, T. M., Yang, B. & Bartlett, K. R. 2004. The Effects Of Organizational Learning Culture And Job Satisfaction On Motivation To Transfer Learning And Turnover Intention. Human Resource Development Quarterly, 15, 279-301.

Fornell, C. & Larcker, D. F. 1981. Evaluating Structural Equation Models With Unobservable Variables And Measurement Error. Journal Of Marketing Research, Xxvii, 39-50.

Foss, N. J. & Pedersen, T. 2002. Transferring Knowledge In Mncs: The Role Of Sources Of Subsidiary Knowledge And Organizational Context. Journal Of International Management, 8, 49-67.

García-Morales, V. J., Lloréns-Montes, F. J. & Verdú-Jover, A. J. 2008. The Effects Of Transformational Leadership On Organizational Performance Through Knowledge And Innovation. British Journal Of Management, 19, 299-319.

Gnyawalị, D. R., Singal, M. & Mu, S. C. 2009. Knowledge Ties Among Subsidiaries In Mncs: A Multi-Level Conceptual Model. Journal Of International Management, 15, 387-400.

Gray, C. 2006. Absorptive Capacity, Knowledge Management And Innovation In Entrepreneurial Small Firms. International Journal Of Entrepreneurial Behaviour And Research, 12, 345-360.
Hage, J. 1999. Organizational Innovation And Organizational Change. Annual Review Of Sociology, 25, 597-622.
Hansen, M. T. 1999. The Search-Transfer Problem: The Role Of Weak Ties In Sharing Knowledge Across Organization Subunits. Administrative Science Quarterly, 44, 82-111.
Hult, G. T. M., Hurley, R. F. & Knight, G. A. 2004. Innovativeness: Its Antecedents And Impact On Business Performance. Industrial Marketing Management, 33, 429-438.
Hurley, R. E. & Hult, G. T. M. 1998. Innovation, Market Orientation And Organizational Learning: An Integration And Empirical Examination. Journal Of Marketing, 62, 42-54.
Ito, B. & Wakasugi, R. 2007. What Factors Determine The Mode Of Overseas R&D By Multinationals? Empirical Evidence. Research Policy, 36, 1275–1287.
Jantunen, A. 2005. Knowledge-Processing Capabilities And Innovative Performance: An Empirical Study. European Journal Of Innovation Management, 8, 336-349.
Jöreskog, K. G. & Sörbom, D. 1996. Lisrel 8 User's Reference Guide, Chicago (Il), Scientific Software International.
Kafouros, M. I., Buckley, P. J. & Clegg, J. 2012. The Effects Of Global Knowledge Reservoirs On The Productivity Of Multinational Enterprises: The Role Of International Depth And Breadth. Research Policy, 41, 848-861.
Keskin, H. 2006. Market Orientation, Learning Orientation, And Innovation Capabilities In Smes: An Extended Model. European Journal Of Innovation Management, 9, 396 - 417.
Kogut, B. & Zander, U. 1992. Knowledge Of The Firm, Combinative Capabilities And The Replication Of Technology. Organization Science, 3, 383-397.
Kotabe, M., Dunlap-Hinkler, D., Parente, R. & Mishra, H. A. 2007. Determinants Of Cross-National Knowledge Transfer And Its Effect On Firm Innovation. J Int Bus Stud, 38, 259-282.
Kotabe, M., Jiang, C. X. & Murray, J. Y. 2011. Managerial Ties, Knowledge Acquisition, Realized Absorptive Capacity And New Product Market Performance Of Emerging Multinational Companies: A Case Of China. Journal Of World Business, 46, 166-176.
Kurokawa, S., Iwata, S. & Roberts, E. B. 2007. Global R&D Activities Of Japanese Mncs In The Us: A Triangulation Approach. Research Policy, 36, 3-36.
Li, J. & Zhou, C. 2008. Dual-Edged Tools Of Trade: How International Joint Ventures Help And Hinder Capability Building Of Chinese Firms. Journal Of World Business, 43, 463-474.
Lynn, G., Reilly, R. R. & Akgün, A. E. 2000. Knowledge Management In New Products Team: Practices And Outcomes. Ieee Transactions On Engineering Management, 47.
Madhavan, R. & Grover, R. 1998. From Embedded Knowledge To Embodied Knowledge: New Product Development As Knowledge Management. Journal Of Marketing, 62, 1-12.
Marsick, V. J. & Watkins, K. E. 2003. Demonstrating The Value Of An Organization's Learning Culture: The Dimensions Of The Learning Organization Questionnaire. Advances In Developing Human Resources, 5, 123-151.
Mcguinness, M., Dermirbag, M. & Bandara, S. 2013. Towards A Multi-Perspective Model Of Reverse Knowledge Transfer In Multinational Enterprises: A Case Study Of Coats Plc. European Management Journal, 31, 179-195.
Michailova, S. & Mustaffa, Z. 2012. Subsidiary Knowledge Flows In Multinational Corporations: Research Accomplishments, Gaps, And Opportunities. Journal Of World Business, 47, 383-396.
Minbaeva, D. 2008. Hrm Practices Affecting Extrinsic And Intrinsic Motivation Of Knowledge Receivers And Their Effect On Intra-Mnc Knowledge Transfer. International Business Review, 17, 703–713.
Najati-Tavani, Z., Giroud, A. & Sinkovics, R. R. 2012. Mediating Effects In Reverse Knowledge Transfer Process. Management International Review, 52, 461-488.
Nonaka, I. & Takeuchi, H. 1995. The Knowledge-Creating Company, New York. Usa, Oxford University Press.
Ocde 2005. Oslo Manual, The Measurement Of Scientific And Technological Activities. Proposed Guidelines For Collecting And Interpreting Technological Innovation Data, European Commission. Retrieved August, 2005, From World Wide Web: Http://Www.Oecd.Org.
Pearce, R. & Papanastassiou, M. 1999. Overseas R&D And The Strategic Evolution Of Mnes: Evidence From Laboratories In The Uk. Research Policy, 28, 23-41.
Powell, W. W. 1998. Learning From Collaboration: Knowledge And Networks In The Biotechnology And Pharmaceuticals Industres. California Management Review, 40, 228-241.
Rabbiosi, L. 2011. Subsidiary Roles And Reverse Knowledge Transfer: An Investigation Of The Effects Of Coordination Mechanisms. Journal Of International Management, 17, 97-113.
Rabbiosi, L. & Santangelo, G. D. 2013. Parent Company Benefits From Reverse Knowledge Transfer: The Role Of The Liability Of Newness In Mnes. Journal Of World Business, 48, 160-170.
Rhee, J., Park, T. & Lee, D. H. 2010. Drivers Of Innovativeness And Performance For Innovative Smes In South Korea: Mediation Of Learning Orientation. Technovation, 30, 65-75.
Riussala, K. & Suutari, V. 2004. International Knowledge Transfers Through Expatriates. Thunderbird International Business Review, 46, 743-770.
Singh, J. 2008. Distributed R&D, Cross-Regional Knowledge Integration And Quality Of Innovative Output. Research Policy, 37, 77–96.
Sinkula, J. M. 1994. Market Information Processing And Organizational Learning. Journal Of Marketing, 58, 35-45.

Teece, D. J., Pisano, G. & Shuen, A. 1997. Dynamic Capabilities And Strategic Management. Strategic Management Journal, 18, 509-533.

Tippins, M. J. & Sohi, R. S. 2003. It Competency And Firm Performance: Is Organizational Learning A Missing Link. Strategic Management Journal, 24, 745-761.

Tsai, W. 2001. Knowledge Transfer In Intraorganizational Networks: Effects Of Network Position And Absorptive Capacity On Business Unit Innovation And Performance. Academy Of Management Journal, 44, 996-1004.

Tsai, W. & Ghoshal, S. 1998. Social Capital And Value Creation: The Role Of Intrafirm Networks. Academy Of Management Journal, 41, 464-476.

Wang, P., Tong, T. W. & Koh, C. P. 2004. An Integrated Model Of Knowledge Transfer From Mnc Parent To China Subsidiary. Journal Of World Business, 39, 168-182.

Wolfe, R. A. 1994. Organizational Innovation: Review, Critique And Suggested Research Directions. Journal Of Management Studies, 31, 405-431.

Yang, B., Watkins, K. E. & Marsick, V. J. 2004. The Construct Of The Learning Organization: Dimensions, Measurement, And Validation. Human Resource Development Quarterly, 15, 31-55.