Impact of Knowledge Carriers for Knowledge Sharing and Transfer Within MNCS. (A Case of Pakistan)

Muhammad Waseem Bari
muhammadwaseembari786@gmail.com
The University of Faisalabad, Pakistan

Abstract
This study examines multivariable effect on knowledge sharing in MNC. Knowledge sharing and transfer is used as dependent variable and knowledge sender characteristics, knowledge receiver characteristics, communication System, knowledge characteristics, organizational values, and knowledge articulation and codification ability used as independent variable. It is first attempt to discuss multiple knowledge carriers in a single study. For analyzing the data logistic regression used with help of SPSS 18. Finding of this study shows that knowledge receiver, knowledge characteristics, knowledge sender, original value has positive impact on knowledge sharing and transfer. Communication system, knowledge articulation and codification ability have not affected knowledge sharing and transfer. This study will be helpful for understanding the mutual relationship of knowledge carriers and better ways to knowledge share and transfer within MNCs.

Key Words: MNC (Multinational Corporation), knowledge sender characteristics, knowledge receiver characteristics, communication System, knowledge characteristics, organizational values, and knowledge articulation and codification.

Introduction:
Multinational Corporations (MNCs) have covered almost all areas where humans are living. According to UNCTAD (2009) 889,416 MNCs are working around the world in which 82,053 parent companies and 807,363 affiliates are included. By definition MNC is an enterprise operating in numerous countries, but managed and controlled from one (Home/ Head Office) country (WebFinance, 2013). A corporation that earns its 25% revenue from operations and working outside of its home country is considering as a MNC. Branches and offices of MNCs are scattered throughout the globe. In these MNCs, manufacturing, trading, and service concerns are included. MNCs have categorized into four different types. First one is “Multinational corporations”, a multinational, decentralized corporation with strong home country presence. Second, one is “Global Centralized Corporation”. These MNCs focus on centralized production and take the advantage of cost saving at macro level production. Third, one is “International Company” that develops with support of Parent Corporation’s technology and R&D. Fourth is “Transnational Enterprise” which is the combination of the previous three types (WebFinance, 2013).

Literary meaning of knowledge is information and skills captured through experience, education, theoretical or practical understanding of a subject. Webster’s Dictionary defined knowledge as "the fact or condition of knowing something with familiarity gained through experience or association". In economic point of view Knowledge is a kind of instruction or recipe that sets out how a good or service can be produced (Blakeley et. al., 2005). Knowledge sharing is a process in which knowledge, i.e. information; skills and experience are interchanged among people, friends, and organizations. Transformation of knowledge is not an easy job. Knowledge belongs to organizational members, tasks, tools, and their networks. There are thousands of employees working in MNCs throughout the globe. Wal-Mart Stores Incorporation is a United States based organization, which operates 10,928 retail units under 69 banners in 27 countries with 2.2 million employees (Wal-Mart Stores, Inc., 2013). Nestle is another corporation based in Switzerland. It has 281,000 employees and 6000 brands, a large food company in the world operating in many countries (Statistic Brain Inc., 2012). Toyota Motor Corporation is another example of MNC, which is operating all over the world with 331,876 employees in 509 subsidiaries (Toyota Motors Corporation, 2013). In this situation, it is very difficult for a MNC to share and transfer of knowledge within an organization.
Thousands of employees are working in MNC at a time at different locations and capacities in the world. Every employee has a different capacity of working, knowledge sharing, and transfer. In this case, it is very difficult for an organization to maintain uniformity in the work and quality of the products or services. As discussed above MNCs operate different localities of the world. Every locality has different culture, rituals, and values. This difference changes the capacity of knowledge sharing and receiving of every individual within the organization. To overcome this variation MNCs makes continuous efforts to develop the harmony among employees of the organization. Organizations arrange uniform trainings for all localities of the organization. Intra organization transfers and arrangements of different social meetings also used as tools to develop harmony and understanding of culture of different areas of the worlds. MNC also focuses on the contents of the knowledge. MNCs have arranged fast and effective communication channels for fast and better understanding about the work, culture, and people of the organization. The purpose of all these efforts is not only improve the uniform quality of the products/services in different localities, but also produce continuously innovative products/services by sharing and transferring intra-organization knowledge positively.

Besides, all efforts by the MNCs, it is not sure that knowledge has completely transferred from the head office to subsidiaries and subsidiary shares experience as a feedback to the head office. Multiple variables affect intra organization knowledge sharing and transfer in MNCs. Knowledge sharing and transfer in intra organization in MNCs depends on effective management of multiple variables.

The main object of this paper is to investigate the focal variables, which affect the degree of knowledge transfer and sharing within organization in MNCs. Second objective of this research, examine the nature of the variables, and check the impact of those variables. Another objective of this paper is to highlight the role of the organization and suggestions regarding motivation of those variables positively for a high degree of knowledge transfer and share intra-organization.

**Literature Review**

A multinational corporation is that kind of business organization whose operations are located in more than two countries (Lazarus, 2001). The historical signs of MNCs can be traced from Western Europe, notably England and Holland, which began in the 16th century and progressed in the following several hundred years (Greer & Singh, 2000). MNCs are among the world’s biggest economic institutions. Approximately, 300 largest MNCs own or control at least 25% of the entire world’s productive assets. British East India Trading Company is one of the initial MNCs. Göksel (2004) described that In the 19th and 20th century that is the era of industrialization and capitalization MNCs emerged with new structure and goals. As the volume of business of MNCs increased, they developed organizational structures. Stahl & Björkman (2006) elucidated that to manage such a mega structure of the organization MNC needed a large number of human resources. MNCs hired different people from different localities of the world. In MNCs, people are dissimilar with reference to their culture, language, religion, values, educational background, and motivational nature (Reiche & Harzing, 2009). Head Office or Home Office of MNC creates Knowledge (Lucas, 2006). After developing and maturing the knowledge, Head Office (HO) interested to disseminate this knowledge to its affiliates at different places throughout the globe. Utgivna & Handelshögskolan (2004) suggested that for the growth of the organization, it is necessary to share the developed knowledge from HO to subsidiaries. Knowledge sharing intra-organization in MNC is a gigantic challenge due to the different backgrounds of the human resource and different nations.

For knowledge, sharing a shared culture is necessary for the MNC. MNCs shared different cultures to hire multi-culture people (Lazarus, 2001). Some managerial actions also performed like social get-togethers and intra-organization employee transfers. Hendriks (1999) highlighted that it did not confirm that organizational level knowledge sharing also motivated at individual level knowledge sharing. Organizational knowledge has based on tacit and explicit knowledge. MNCs easily shared and transfer explicit knowledge throughout the organization. Jr. (2008) described that tacit knowledge normally kept in an individual’s mind which in not easy for the organization to articulate for all. Minbaeva (2008) argued that knowledge sharing and transfer dependent on individuals (sender & receiver) ability in organizations. Organizational knowledge sharing efforts did not enough. Employees’ capabilities for knowledge absorption and dissemination are also essential. In the knowledge sharing process, the nature of knowledge itself slow the degree of knowledge transfer due to its testiness, complexity, deficiency in specificity and non-availability (Breschi & Malerbo, 2004). Knowledge receiver should have the same domain of tacit knowledge and appetite for more knowledge, otherwise degree of knowledge transformer will be slow or ineffective. Minbaeva & Michailova (2003) elaborated that motivation related to knowledge sharing constuct according to the sender ability. According to sociological and psychological point of view willingness behavior of knowledge sharer based on feeling the obligation to share the knowledge, norms in the organization, clear reward on knowledge sharer, group identity between sender and receiver, beliefs regarding individual competencies and some personality traits (Kazi, Wohlfart, & Wolf, 2007). Noorderhaven & Harzing (2008) explained that direct and positive relation between sender and receiver has increased the degree of knowledge transfer.

Vaccaro, et al. (2010) argued that Knowledge transferability inter-organizations or intra-organization has relied on communication processes. The communication process has accomplished with an affirmative combination of components, which includes sender, receiver, medium, and the nature of knowledge transfer (Mooij, 2011). Simply, the existence of these components is not conformity of effective knowledge transfer, some characteristics has also needed in these components. Dissemination capability of the sender and absorption capacity of the receiver is obligatory for knowledge transformation. Characteristics of knowledge and nature of relationships among senders and
receivers are also important aspects of knowledge diffusion (Minbaeva, 2003). The degree of knowledge transformation significantly depends on people, context, and processes of that organization (Uriarte Jr., 2008). Highly skilled and motivated employees did not guarantee of effective knowledge transformation. Purposeful structure of the organization is necessary which supported in sending and receiving the knowledge. On the other hand People’s (Sender & Receiver) intra relationship (Head Office to Subsidiaries) motivation and capabilities are integral in knowledge transformation within the organization. Kim & Mattila (2011) elaborated that context also affect the knowledge sharing like cultural differences between different locations of the world. Characteristics of knowledge sender, receiver, and their mutual relationship affect the knowledge transfer process between HO and Subsidiaries of MNCs. There is another important component, which can effect on the knowledge transformation is Human resource management (HRM) practices (Iles, Yolles, & Altman, 2001). Within organizations, knowledge sharing from HO to Subsidiaries, it is necessary that both ends must be motivated and have capabilities of knowledge sharing and transfer. Knowledge traveled, exchanged, shared, and transferred through employees (Human Resource) and the motivation of human resource is the responsibility of the HR department (Lead@UVA, 2013).

Minbaeva (2008) explained motivational point of view that human resource can be motivated intrinsically and extrinsically. Extrinsic motivation based on performance management system, materialistic rewards, and benefits given to the employees. Intrinsic motivation means better job design, flexible working arrangements, healthy working environment, and career development. HRM practices affect the motivation of human resource intrinsically and extrinsically (Lai C., 2009). A HRM practice influence intrinsic and extrinsic motivation is complementary. 

Wright et al. (1993) highlighted that Knowledge based leading role of an organization provide it a competitive advantage. Individual level knowledge growth positively influenced organizational growth. The role of HRM department at the individual level employee motivation for knowledge sharing is important for collective organizational development (Rabbiosi & Makela, 2009).

Degree of knowledge transfer through individuals to the intra-organization dependent upon the individuals’ abilities, motivation, and opportunities to interact for knowledge acquisition and utilization. High ability to learn failed to absorb knowledge if the motivation of individuals is so low or absent (CERI., 2008). Lai (2011) clarified that the positive effect of individual intrinsic motivation, greater affected than extrinsic motivation for knowledge transfer. The frequent opportunities for interaction between sender and receiver increased the degree of knowledge sharing, learning and transfer. Use of opportunities by the individual also created the positive impact on individual’s’ ability and motivation for knowledge sharing and transfer (Wang & Noe, 2010).

Branca & Imelmann (2010) described that the effectiveness of intrinsic or extrinsic motivation has mostly depend on the governance mechanism, structure, culture and the environment of the organizations. As the characteristics of sender, receiver, and knowledge, individuals’ ability, opportunities and intrinsic and extrinsic motivation plays important role in knowledge transfer, sharing and acquisition within the organization. Gupta (2007) highlighted that organizational values are also an essential component for knowledge sharing and acquisition.

By using the organizational values managers shapes the individual behaviors in a specific way to achieve some organizational goals, such as amplified intra organizational knowledge sharing. Hauser & Huberman (2008) described that Organizational values did not effective if they show only in organizational documents like, annual reports, mission statement and strategic plans etc. For the internalization, it is necessary that values should be enacted. In case individual members did not internalize the knowledge sharing culture, then organizational and top management articulation regarding knowledge sharing could be ineffective. For effective knowledge sharing behavior of the individuals of the organization, values must be espouse, enacted, and most importantly internalized (Kinicki & Fugate, 2012).

ROOS (2005) elaborated that it is necessary for the management of the organization to provide a positive rich culture where every individual member have self-respect, job security, appreciation for knowledge sharing, respect their views, equity and justice and intrinsic motivation. Inequality in status within organization interrupted the process of knowledge sharing (Michailova & Husted, 2001). Huang, et al (2007) underlined that a manager avoid to sharing his tacit knowledge for maintaining his power and supremacy. Different locations affected the degree of knowledge transfer in inter organizations and intra organization inversely (Priestley & Samaddar, 2003). Internationally, when organizations enter into international joint ventures (IJV), the level of knowledge transfer significantly is influence by the disseminating capacity of a parent organization (Minbaeva, Park, & Vertinsky, 2013). Trust based and open knowledge sharing culture has needed to develop for effective and positive knowledge sharing between parent firm and subsidiaries at MNCs level (Li, 2005).

Theoretical Framework
Dependent Variable
Knowledge Share and Transfer: We used knowledge transfer as dependent variable. In such knowledge includes tacit knowledge (personal experience and learning) and explicit knowledge (Written technical knowledge, Written management knowledge, Procedural or technical manuals, New marketing expertise, Knowledge about foreign cultures, Managerial techniques, Demonstration of practices and the observation of working processes (Dhanaraj et al., 2004)

Independent Variables
Knowledge Sender Characteristics: Knowledge sender characteristics included ability, disseminating capacity, and willingness. Knowledge Receiver Characteristics: Knowledge receiver characteristics included ability, absorption capacity, and willingness. Communication System: Main characteristic of communication system
included technology based, trustable and openness. **Knowledge Characteristics:** Key characteristics of knowledge included testiness, complexity, non-specificity, non-availability. **Organizational Values:** Believes, culture and structure of the organization. **Knowledge Articulation and Codification Ability:** Knowledge depends on articulation and codification ability of knowledge of sender and receiver.

**Conceptual Model of Knowledge Sharing:**

![Conceptual Model of Knowledge Sharing](image-url)
Hypotheses

1. \( H_0 \): knowledge transfer within MNC does not depend on Knowledge Sender Characteristics (Ability, Disseminating Capacity, and Willingness).
   \( H_1 \): knowledge transfer within MNC does depend on Knowledge Sender Characteristics (Ability, Disseminating Capacity, and Willingness).

2. \( H_0 \): knowledge transfer within MNC does not depend on Knowledge Receiver Characteristics (Ability, Absorbtion Capacity, and Willingness).
   \( H_1 \): knowledge transfer within MNC does depend on Knowledge Receiver Characteristics (Ability, Absorbtion Capacity, and Willingness).

3. \( H_0 \): knowledge transfer within MNC does not depend on Communication System (Technology Based, Trustable, and Open).
   \( H_1 \): knowledge transfer within MNC does depend on Communication System (Technology Based, Trustable, and Open).

4. \( H_0 \): knowledge transfer within MNC does not depend on Knowledge Characteristics (Tastiness, Complexity, Non-Specificity, Non-Availability (Negatively Affected)
   \( H_1 \): knowledge transfer within MNC does depend on Knowledge Characteristics (Tastiness, Complexity, Non-Specificity, Non-Availability (Negatively Affected)

5. \( H_0 \): knowledge transfer within MNC does not depend on Organizational Values (Believes, Culture and Structure).
   \( H_1 \): knowledge transfer within MNC does depend on Organizational Values (Believes, Culture and Structure).

6. \( H_0 \): knowledge transfer within MNC does not depend on Articulation and Codification Ability (Sender and Receiver).
   \( H_1 \): knowledge transfer within MNC does depend on Articulation and Codification Ability (Sender and Receiver).

Research Methodology

It is a quantitative research. This study consists of Knowledge transfer as a dependent variable and six independent variables (knowledge sender characteristics, knowledge receiver characteristics, communication system, knowledge characteristics, organizational values, and knowledge articulation and codification ability). Close-ended question based questionnaire used for interview and data collection for this qualitative study, which was exploratory in its nature. The participants of the study based on three level of workers (Lower, Middle and Top) of different MNCs (which are operating) in Pakistan. Total 10 different MNCs participates in this research. We have personally approached to the offices of these MNCs and requested the workers to fill the questionnaire. Different levels of workers altogether 106 have respond on this questionnaire.

The respondent requested to recognize the relative importance of six knowledge carriers and their impact on transferring and sharing knowledge in MNCs. Bi optional method used in which two options used (Yes or No). Demographic information (gender, age, position in organization) also collected though this questioner. Knowledge sharing used as dependent variable and asked the participants to answer in the shape of Yes or No. Organizational culture, formal organization meetings, informal get-togethers, personal experiences, formal trainings and discussions, organizational policies, rules and regulations transfer the knowledge within organization.

The respondents have taken reasonable place and time to complete the questionnaires. As a whole, 150 male and female executives and workers of different MNCs have accessed for data collection and the return rate was 70% (106). In order to arrive at findings and conclusions, data analyzed by using statistical tools like, different averages, and binary logistics (regression). The Statistical Package for Social Sciences-Version 17 (SPSS-17) used for these statistical analysis. The demographic information of the respondents worked out through numerical values.

Results and Discussions

Table#1

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.696</td>
<td>7</td>
</tr>
</tbody>
</table>

Table #1 shows that reliability of questioner structure and its data. SPSS software used to analyze the data. A result shows that Cronbach’s Alpha value 0.696 for 7 variables (see in the reliability Statistics table). 70% value of Cronbach’s Alpha shows that data is reliable and logical for further statistical analysis.
Table 2 shows that classification table, we classified the response of dependent variable (Knowledge sharing) category wise (Yes, No). As in above table, answer of knowledge sharing and transfer is 73 in Yes and 33 in No. Table shows overall good percentage 69% and indicated that knowledge is shared and transferred within MNCs.

**Regression Equation or Model**

\[
\text{KSAT} = \text{KSC} + \text{KRC} + \text{CS} + \text{KC} + \text{OV} + \text{KAC}
\]

(KSAT) Knowledge Sharing and transfer
(KSC) Knowledge Sender Characteristics
(KRC) Knowledge Receiver Characteristics
(CS) Communication System
(KC) Knowledge Characteristics
(OV) Organization Values

(KAC) Knowledge Articulation and Codification.

Regression model based on one dependent variable (Knowledge sharing and transfer) and six independent variable. For checking the dependence of knowledge sharing and transfer on above-mentioned independent variables, we applied the binary logistic regression through SPSS-17 and calculated the following results.

Table 3 shows that model summary; there are two kinds of R Squares (Cox & Snell R Square, Nagelkerke R Square). When variables are same in nature Cox & Snell R Square will be used and in case of mixed variables, Nagelkerke R Square will be considered. Our variables that used in regression equation all are categorical in nature (based on qualitative data). Cox & Snell R Square will be considered, as our all variables are same in nature that is .625 or 62.5%. The result of R Square indicates a strong model of regression.

The scale of R² as follows,

\[
\begin{align*}
R^2 & \quad \text{(Weak)} && \quad \text{(Medium)} && \quad \text{(Strong)} \\
(0 \rightarrow 0.4) & \quad (0.4 \rightarrow 0.6) & \quad (0.6 \rightarrow 1.0)
\end{align*}
\]

Table 4 shows that Knowledge receiver, Knowledge characteristics, Knowledge sender, Organizational value have p value < 0.05 it means these variable have positive impact on knowledge sharing. It means knowledge receiver get, share, and transfer the knowledge if he receives more knowledge than he does transfer and share the more knowledge. Knowledge characteristic has positive impact on knowledge sharing and transfer. It means quality of knowledge does affect the knowledge sharing and transfer. Structure knowledge and unstructured knowledge do not have positive impact.
same impact on knowledge sharing and transfer. Structured knowledge can easily transfer as compare to the unstructured knowledge. Knowledge sender has positive significant on knowledge sharing and transfer. If knowledge sender does not send properly then knowledge, cannot share and transfer. Organizational value has also positive significant effect on knowledge sharing and transfer. If organization has not value to share the knowledge among the employees then knowledge cannot transfer and share easily.

Verification of Hypothesis
For the verification of hypothesis, value of “P” (Significance value) compared with the value of α (degree of freedom) that is 0.05. If the P value will be less than α then we will accept H₁ and reject the Ho.

Hypotheses Analysis and Discussion

1. **H₁**: knowledge transfer within MNC does not depend on Knowledge Sender Characteristics (Ability, Disseminating Capacity, and Willingness).
   
   In 1st hypothesis value of P=0.007 that is less than value of α=0.05 (P < α =0.05). It means knowledge transfer within MNC does depend on Knowledge Sender Characteristics (Ability, Disseminating Capacity, and Willingness). Therefore, we have rejected the Null hypothesis (H₀) and accepted the alternative hypothesis (H₁).

2. **H₁**: knowledge transfer within MNC does not depend on Knowledge Receiver Characteristics (Ability, Absorption Capacity, and Willingness).
   
   In 2nd hypotheses value of P=0.003 that is less than value of α=0.05 (P < α =0.05). It means knowledge transfer within MNC does depend on Knowledge Receiver Characteristics (Ability, Absorption Capacity, and Willingness). Therefore, we have rejected the Null hypothesis (H₀) and accepted the alternative hypothesis (H₁).

3. **H₁**: knowledge transfer within MNC does not depend on Communication System (Technology Based, Trustable, and Open).
   
   In third hypotheses value of P=0.132 that is greater than value of α=0.05 (P > α =0.05). It means knowledge transfer within MNC does not depend on Communication System (Technology Based, Trustable, and Open). Therefore, we fail to reject the Null hypothesis (H₀).

4. **H₁**: knowledge transfer within MNC does not depend on Knowledge Characteristics (Tastiness, Complexity, Non-Specificity, Non-Availability (Negatively Affected))
   
   In fourth hypotheses value of P=0.030 that is less than value of α=0.05 (P < α =0.05). It means knowledge transfer within MNC does depend on Communication System (Technology Based, Trustable and Open). Therefore, we have rejected the Null hypothesis (H₀) and accepted the alternative hypothesis (H₁).

5. **H₁**: knowledge transfer within MNC does not depend on Organizational Values (Believes, Culture and Structure).
   
   In fifth hypotheses value of P=0.05 that is equal to the value of α=0.05 (P = α=0.05). It means knowledge transfer within MNC does not depend on Organizational Values (Believes, Culture and Structure). Therefore, we have rejected the Null hypotheses (H₀) and accepted the alternative hypotheses (H₁).

6. **H₁**: knowledge transfer within MNC does not depend on Articulation and Codification Ability (Sender and Receiver).
   
   In 6th hypotheses value of P=0.20 that is greater than value of α=0.05 (P > α =0.05). Knowledge transfer within MNC does not depend on Articulation and Codification Ability (Sender and Receiver). Therefore, we fail to reject the Null hypothesis (H₀).

In summary, this study tested six hypotheses through SPSS. According to my research and statistical analysis I found that four hypotheses (Knowledge receiver’s characteristics, knowledge sender’s characteristics, Knowledge characteristics and Organizational values) have positive relationship and impact on knowledge sharing and transfer within MNCs but two variables (Communication system, knowledge articulation and codification (negative relationship) have no impact on knowledge sharing and transfer within MNCs.

Conclusion
This study examines multivariable effect on knowledge sharing in MNC. For this purpose, data was collected from MNC that are located in Pakistan. Knowledge sharing and transfer used as dependent variable and knowledge sender characteristics, knowledge receiver characteristics, communication System, knowledge characteristics, organizational values, and knowledge articulation and codification ability used as independent variable. This study Result shows that knowledge transfer and sharing within MNCs, knowledge characteristics, Knowledge sender
characteristics, knowledge receiver characteristics, and organizational values are important. These variables positively affect the degree of knowledge transfer and share within MNCs. However, Technology-based coordination mechanisms (TCM) or communication system has no effective role in knowledge sharing and transfer within MNCs. (Ambos & Ambos, 2014). It is cleared that articulation and codification of tacit knowledge also creates negative effect on knowledge sharing and transfer within MNCs (Minbaeva, 2004).

**Limitation**

This model in only applied on those MNCs which have their operation and offices in Pakistan.

**Implications and Future Scope**

This study will be helpful for MNCs to understand their knowledge sharing and transfer system within Organizations. A better understanding will be developed within MNCs regarding the importance of different knowledge carriers and their mutual relationships. Through this study, Organizations will recognized effective knowledge carriers and their role in the improvement of organizational knowledge sharing and transfer system.

**References**


Impact of Knowledge Carriers for Knowledge Sharing and Transfer Within MNCS. (A Case of Pakistan)

Muhammad Waseem Bari


Impact of Knowledge Carriers for Knowledge Sharing and Transfer Within MNCS: A Case of Pakistan

Muhammad Waseem Bari


WESTERN MULTINATIONALS’ SUBSIDIARY UNITS IN CHINA AND FINLAND. Helsingfors, pp. 1-58.
...

