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Citation: Aslam, Muhammad Shakeel, Ali, Imran, Qammar, Ahmad, Kiwan, Lea and Dhir, Amandeep (2022) How knowledge acquisition creates a competitive edge? A qualitative inquiry from international consultancy alliance. *International Marketing Review*, 39 (3). pp. 653-681. ISSN 0265-1335

Published by: Emerald

URL: <https://doi.org/10.1108/IMR-03-2021-0111> <<https://doi.org/10.1108/IMR-03-2021-0111>>

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How knowledge acquisition creates a competitive edge? A qualitative inquiry from international consultancy alliance

Abstract

Purpose

The current study attempts to bridge the existing gap on the role of knowledge acquisition from international alliance partners to improve competitiveness by examining the distinct processes of knowledge acquisition, the challenges confronted in this learning process, to improve local and international market performance.

Design/methodology/approach

Following case study approach based on systematic combining, the study presents a case of knowledge acquisition and learning in the context of an international consultancy alliance between leading Pakistani and Chinese engineering firms using six in-depth interviews of key engineers to explore the dynamics mechanisms for knowledge acquisition and learning from the Chinese firm. Grounded analysis drawn upon the Straussian version of grounded theory (GT) {{Strauss, 1990 #136} Strauss, 1998 #139} is used for data analysis in this research.

Findings

It was found that the processes of explicit and implicit knowledge acquisition from Chinese firm are integrated consultancy working, social and technical adaptability and seeking confirmation about the work done and knowledge/theories and models used in the work. However, these processes are quite complex posing serious challenges for NESPAK to acquire the required knowledge which can be addressed through partners' motivation to share and acquire knowledge, cultural intelligence and friendship and informal association. The study also found that the knowledge acquired from technologically advanced international organizations by the host partner in the international strategic alliance not only provides a competitive edge to the local host in its local market but also build its capacity to undertake similar projects in other parts of the world, substantially enhancing its market success.

Originality/value

Adding up to the current literature that focus on knowledge acquisition in a parent-subsidiary relationship, the current research proposes a framework for knowledge acquisition in the unique context of international strategic alliances. The research provides managerial guidelines to manage knowledge acquisition for gaining a competitive edge that would be helpful for the managers in the era of growing inter-dependance among the organizations across the borders.

Keywords: Knowledge acquisition, integrated consultancy working, partner motivation, cultural intelligence, competitive edge, market success.

1. Introduction

Knowledge has become an inevitable resource and key to success in today's business environment. The knowledge-based view encourages organizations to emphasize knowledge as an imperative resource to gain and sustain competitive advantage (Giju, Badea, Ruiz, & Peña, 2010), particularly for service industries (Scuotto, Del Giudice, Bresciani, & Meissner, 2017). Knowledge management help organizations improve their capabilities in market analysis, innovation, strategies formulation and implementation and branding development. An important domain of knowledge management, marketing knowledge management (MKM) addresses the issues related to the acquisition and management of knowledge that can potentially augment marketing capabilities and consequent market success. A large body of marketing literature suggests that effective MKM is associated with improving organizational performance, market success and sustainable growth (Perez & de Pablos, 2003; Siraphatthada, 2021). Although knowledge management is important for all forms and types of organizations (Cong & Pandya, 2003; Gunasekaran & Ngai, 2007; uit Beijerse, 2000; Zhou, He, Ma, & Mahto, 2020), the organizations operating in knowledge-sensitive industries are in greater need of managing knowledge more effectively than their competitors to outcompete them (Jeon, 2009). Success for the organizations in such knowledge-sensitive industries comes through creating, learning and using knowledge better than its competitors. Therefore, realizing the importance of knowledge as a key asset, organizations not only endeavour to create knowledge within the organization but also network with other organizations who can potentially offer them unique and valuable knowledge required to gain a competitive advantage in the market. Such knowledge would enhance organizations capability to offer innovative solutions to its clients, reduce operational cost, and resultantly deliver better value to its customers.

Despite the evidence that knowledge management literature is growing (Bamel, Pereira, Bamel, & Cappiello, 2021; Pereira, Bamel, Temouri, Budhwar, & Del Giudice, 2021) knowledge management, there has been relatively been less focus on marketing knowledge management (MKM) (Tsai & Shih, 2004) Marketing knowledge management (MKM) addresses a wide array of knowledge management issues that are linked with marketing including customer analysis, market forecasts, product and concept development, pricing strategies, distribution and

promotion strategies, and market expansion and success. The literature suggests that marketing knowledge management enable organizations to perform various marketing tasks in a unique way that is difficult for competitors to follow(Akroush & Al-Mohammad, 2010). By developing such a knowledge management system that is difficult to copy, organizations distinguish themselves from competitors. For example, knowledge gained about designing a technologically advanced product or technically advanced construction project enhance the competitiveness of the organization and differentiate it from its competitors. However, learning such unique and rare knowledge is not straightforward, rather learning knowledge is highly complex and challenging particularly when knowledge is external and is shared across cultures (Del Giudice, Arslan, Scuotto, & Caputo, 2017; McDermott & O'dell, 2001).

Effective knowledge management is pivotal not only to succeed in the local market but also in the international market. Despite, majority of current research in knowledge management explains the role of knowledge as a key driver of internationalization, competitiveness (Del Giudice & Della Peruta, 2016) and innovation (Pereira et al., 2021), there is sparse research available on how companies can use marketing knowledge management to improve their market performance. In addition, the literature paid more attention to the intra-organization knowledge management in the context of multinational companies, however the cross boarder sharing. Particularly, it is important to examine how organizations can use their internalization strategy to learn and acquire important knowledge from companies from technologically advanced countries to improve their knowledge base and later use this 'knowledge resource' to improve their marketing strategies in the local and international markets and enhance their market performance. During recent years, international alliancing is continuously increasing (Zhao & Priporas, 2017) suggesting that contemporary organizations focus their strategic orientation to improve their business success in the international marketing arena (Cadogan, 2012). Knowledge accumulation, exploitation, and enhancing organizational learning is very pertinent for success in the internalization process (Kogut & Zander, 1993; Scuotto, Garcia-Perez, Nespoli, & Petruzzelli, 2020). Even organizations of developing less advanced countries "*access, develop and absorb or commercialize new technologies*" (Coluccia, Dabić, Del Giudice, Fontana, & Solimene, 2020,

p.259) through forming alliances with the firms of technologically advanced countries to and improve their competitiveness and market success (Fu, Pietrobelli, & Soete, 2011; Pan, 2007).

The companies in technologically less-advanced countries particularly realize that knowledge is a vital resource for them to promote innovativeness and achieve organizational success in today's dynamic environment. Since organizations in technologically less advanced countries are at a relative disadvantage due to scarcity of advanced knowledge in the less developed world, they try to seek innovative ways to improve their knowledge base. To improve competitiveness, successful organizations in less developed countries not only invest in learning and acquiring state-of-the-art knowledge but also have their strategic orientation to make alliances with foreign companies offering knowledge transfer and learning opportunities and intending to enhance their profitability (Cadogan, 2012; Jafari-Sadeghi, Dutta, Ferraris, & Del Giudice, 2020; Jelenic, 2011) who are also looking for international opportunities. Although knowledge-sharing is indispensable for organizational innovativeness and competitiveness, it is much more than the mechanical distribution or shifting of information from one place to another (Del Giudice & Della Peruta, 2016; Del Giudice & Maggioni, 2014; Oliveira, Curado, Balle, & Kianto, 2020; Xu, 2007). Rather, knowledge is acquired through personal exchanges between individuals during routine collective work (Nonaka & Takeuchi, 1995; Spender, 1996). Knowledge acquisition could also be more complex when international companies are dealing across different cultures (Del Giudice, Carayannis, & Della Peruta, 2011; Del Giudice, Della Peruta, & Maggioni, 2013), it is quite challenging for host-country firms to collaborate with internationalized Chinese firms because of a range of factors, largely arising from cultural differences (Del Giudice, Scuotto, Garcia-Perez, & Petruzzelli, 2019; Ma, Huang, Wu, Dong, & Qi, 2014). Chinese culture originates from a deep-rooted Confucius philosophy which preaches the values of loyalty, righteousness, friendship, filial piety, and the importance of education (Xu, 2007). Host-countries firms learn from Chinese firms to increase their knowledge competitiveness, and to exploit this strength in local and international markets.

The inherent complexities involved in knowledge sharing across the border are well recognized in the literature (Massa & Testa, 2009; Sharkie, 2003; Storey & Kahn, 2010; Tsai & Shih, 2004), yet little is known about the process through which knowledge is learnt from a foreign partner from a

technologically advanced country, what are the processes and complexities involved in knowledge learning, how dynamic challenges of knowledge acquisition occur and how learners overcome those complexities, and how learnt knowledge becomes a source of competitive advantage by overcoming these challenges. To fill these important deficiencies in the literature, the current research uses a qualitative approach where an in-depth investigation is undertaken to address these gaps by studying an international consultancy alliance between a Chinese and a Pakistani company (host company). The current study attempts to address these deficiencies in the literature and attempts to integrate knowledge management with marketing literature to examine how knowledge recourse is used to improve marketing capabilities. Second, it examines how companies acquire knowledge from organizations with better knowledge resources from technologically advanced countries in the international strategic alliances to improve their knowledge resources. Third, how knowledge-intensive organizations can leverage the knowledge acquired through an international strategic alliance to improve their marketing knowledge management capabilities to achieve superior performance outcomes in the local and international markets. To the best of our knowledge, no study in the current literature provides such a detailed, in-depth understanding of the learning and knowledge acquisition framework between internationalized Chinese and host country firms that augment the latter to improve its marketing knowledge management capability to improve its competitiveness.

In the light of these research gaps, the following research objectives central to this study include understanding the processes and dynamic challenges of knowledge acquisition from international firms from the technologically advanced country in the international strategic alliance. and exploring how knowledge resource acquired through the international strategic alliance to improve marketing knowledge management capabilities for improving performance in the local and international markets. Although the current study is undertaken in the context of a specific strategic alliance between a Chinese and a Pakistani company, the lessons drawn from the study may be a source of guidance to deal with the complexities involved in knowledge acquisition for other cross-border strategic alliances particularly having an Asian partner.

2. Theory and conceptual development

2.1 Marketing knowledge management – A key competitive advantage

The literature has documented a variety of resources including financial, technological, marketing and human resources as a source of competitive advantage (Henard & McFadyen, 2012; McKelvie, Wiklund, & Davidsson, 2006; Wang, Lin, & Chu, 2011). Building on the resource-based view (Wernerfelt, 1995), marketing knowledge management is increasingly recognized as a vital resource for organizational success and competitive advantage and sustainable growth (Akroush & Al-Mohammad, 2010; Muddaha, Yeoh, & Sulaiman, 2018). In this dynamic and rapidly changing environment, the organizations are subject to a variety of challenging environmental contingencies. Resource-based view proffers that competitive advantage for an organization largely arises from the internal resources that enable the organization to adapt with the environmental contingencies and deal with the competitive challenges (Liu, Turel, & Bart, 2019; Wright, Dunford, & Snell, 2001). Some authors have categorized resources as tangible and intangible resources (Galbreath & Galvin, 2004; Heirman & Clarysse, 2007; Meso & Smith, 2000). Early literature on resource-based view paid more attention to tangible resources in developing firms competitiveness, the recent literature increasingly acknowledges the greater role of intangible resources for strategic success (Maiti, Krakovich, Shams, & Vukovic, 2020). As tangible

assets can either be imitated or acquired, they are not generally sustainably strategic while intangible assets being difficult to acquire or develop are more likely to be strategic (Meso & Smith, 2000). Among different intangible assets, many authors believe that knowledge is the most important asset for an organization (Andreou & Bontis, 2007; Hesami & Rad, 2020; Jennex & Durcikova, 2020). Other intangible assets like intellectual property, organizational reputation, etc are indeed a result of knowledge management in an organization. Recognizing the importance of knowledge, some authors categorized assets into property based and knowledge based asset instead of clubbing knowledge with other intangible assets (Chi, Zhang, & Deng, 2021; Hoetker & Mellewigt, 2009; Zhao & Wang, 2011).

In recent years, knowledge-based industries are observed to be amongst the fastest growing industries. In this globalized world, where the movement of physical assets, investments, and

technologies is much easier after the removal of trade barriers under World Trade Organization (WTO) arrangements, the importance of knowledge and knowledge-based capabilities is increasing. Thus, organizations are much eager to acquire knowledge and knowledge-based capabilities to improve their competitiveness and sustainability (Pan, 2007). With increasing customer's expectations, knowledge acquisition is increasingly focused on marketing knowledge acquisition and its management (Park, Whitelock, & Giroud, 2009). Although the literature has generally paid more attention to knowledge acquisition by subsidiaries from their parent companies, international joint-ventures, supplier-buyer networks, etc., (Christopher, 2017; Lei & Slocum Jr, 1991), knowledge acquisition in consultancy alliances is relatively less explored. Knowledge acquisition in tightly coupled formats like parent-subsidiary relationships, supplier-buyer networks or joint ventures is facilitated by long term association and supporting formal structures (Boussebaa, Sturdy, & Morgan, 2014; Steiner, 2005a). In the context of inter-organizational knowledge acquisition, empirical evidence over the last few decades support the idea that firms can significantly share their knowledge and innovative capabilities by leveraging knowledge resources within and across firms (Easterby-Smith, Lyles, & Tsang, 2008; Hong, Easterby-Smith, & Snell, 2006; Meier, 2011; Salk & Simonin, 2011). However, knowledge sharing is a complicated process, and the successful transfer of knowledge is quite difficult, particularly across borders (Easterby-Smith et al., 2008; Hong et al., 2006; Salk & Simonin, 2011). In a loosely coupled alliance particularly an international consultancy alliance (Steiner, 2005b), knowledge acquisition is much more complex and socially challenging owing to the diversity of objectives that alliance partners pursue (Bamel et al., 2021; Meier, 2011). Compared with subsidiaries, where a lot of information is designed by the headquarters in a well-coded format, knowledge acquisition in international consultancy alliance is largely unwritten, context-dependent and sometimes unplanned.

2.2 Processes of Knowledge Acquisition in International Consultancy Alliance

Although marketing knowledge acquisition has widely been recognized as a vital resource, yet the literature does not fully encompass knowledge acquisition dynamics and complexities in international consultancy alliances that offer a unique inter-organizational context of knowledge sharing. Compared with the cross-cultural knowledge sharing in a subsidiary and parent MNC where both organizations pursue similar strategic objectives, knowledge sharing and acquisition is

fundamentally different in an international consultancy alliance. International alliance partner and the local host both have different strategic and marketing objectives (Kale, Singh, & Perlmutter, 2000; Yoshingo & Rangan, 1995). International partner is more interested in successful fulfilment of the project and the contract and increasing the list of international clients to showcase it for marketing purposes. Thus, the inclination is to share knowledge that is necessary for the fulfilment of the contract and not enable the local host to become self-reliant for future projects. Consistent with its objectives, international partners share their well-documented processes (explicit knowledge) with the local host for the successful completion of the project. In contrast, the strategic objective of the local host is to learn knowledge not only for the successful completion of the project at hand but also to build long term capability to perform similar projects independently and to build its corporate profile for bidding on future projects (Lupton & Beamish, 2016). Therefore, the local host is eager to learn and acquire as much knowledge as possible through both explicit and tacit means.

The current study focuses on the acquisition of both types of knowledge, namely explicit and implicit or tacit knowledge as both types of knowledge are instrumental in achieving strategic and marketing objectives for the local host. Explicit knowledge can be easily learnt and acquired by sharing documents, reports, presentations, and formulas (Nonaka & Takeuchi, 1995), whereas implicit or tacit knowledge is deeply rooted in experience, skills, and gut feelings (Zhang, 2020). Implicit knowledge is difficult to articulate (Polanyi, 1962) as it is deeply rooted in experience and actions which are tied to specific contexts (Nonaka, 1994). Implicit or tacit knowledge is strategically more important because it is harder to imitate particularly across national boundaries (Barney & Hansen, 1994; Nonaka, 1994). To learn tacit knowledge, Nonaka and Takeuchi (1995) propose knowledge seekers to work as an apprentice and socialize with knowledge donor, and take on-the-job training while collectively working.

Such learning of advanced knowledge of state-of-the-art engineering methods and technology can only serve the purpose of forming the consultancy alliance with an advanced foreign firm not only to complete the current project but also to gain self-reliance by having such knowledge to undertake future projects. On the other hand, when the recipient finds that there is little or no further knowledge to be learned from the donor the basis of strategic cooperation may deteriorate (Easterby-Smith et al., 2008). Kale and Anand (2006) examined international strategic cooperation

alliances in India and found that the rationale for cooperation diminishes unless the firms are receiving knowledge from their partners in the alliance.

Owing to the unique knowledge acquisition context of international consultancy alliance and scarcity of studies addressing this unique but increasingly important context, in-depth investigation of factors influencing knowledge acquisition in international consultancy alliance is likely to address an important area currently underemphasized in the literature.

2.3 Factors influencing knowledge sharing

Knowledge sharing between people from diverse cultural backgrounds is a complex process because knowledge is developed in certain socio-cultural, organizational, historical settings (Agostini, Nosella, Sarala, Spender, & Wegner, 2020; Hong et al., 2006). Cultural differences between international partners such as language, social norms and other social attitudes can hamper knowledge sharing between local and expatriate employees (Ali, Ali, Leal-Rodríguez, & Albort-Morant, 2019; Ismail, Sobri, Zulkifly, Hamzah, & Yamato, 2016). Easterby - Smith et al. (2008) also suggest that transferring knowledge between organizations brings complexity because of differences in backgrounds and the socio-cultural processes involved. To address such barriers, employees with having higher cultural intelligence can understand, socialize, and work efficiently with expatriate employees, which can enhance the knowledge sharing process. Ang and Van Dyne (2008) define cultural intelligence as the ability to work effectively in culturally diverse work environments.

Engineers from both partners need to overcome their own ‘ethnocentrism’ (Hammond & Axelrod, 2006) and understand the cultural values, vocabulary, terminologies, norms, and ways of working of other partners which are developed in different socio-cultural and national settings. Failure to which can impede information flows during collective work. Thus, being knowledge seekers, local engineers need to be culturally aligned with foreign engineers following an integration acculturation strategy (IAS) (Berry, Kim, Power, Young, & Bujaki, 1989) for effective learning and knowledge acquisition. The two IAS strategies i.e. assimilation and integration (Berry, 1997) seem to have significant implications for knowledge sharing across cultural and national boundaries. Cultural assimilation takes place when an individual gives up his/her own cultural identity and adopts the values of the dominant culture (Barney & Hansen, 1994), while integration

takes place when an individual maintains his/her own cultural identity and at the same time adopts the values of the dominant culture as well (Barney & Hansen, 1994). In other words, local and foreign partners should adopt each other's socio-cultural processes and technological ways of working to achieve a certain level of acculturation (Berry et al., 1989) and develop common ground so that the required knowledge sharing and acquisition can be taken place (Damanpour, Devece, Chen, & Pothukuchi, 2012). For this purpose, local engineers should have sufficient understanding of the socio-cultural processes of the foreign counterpart to develop common socio-cultural and technological working processes and persuade them to share the required knowledge.

Companies from less developed countries are always excited to learn and to collect both explicit and implicit knowledge from their partners from technically advanced countries and to internalize the new knowledge in their organization and country as they consider the learnt knowledge as a source of competitive advantage and market success (Fu et al., 2011; Liu, 2008). The conventional wisdom in knowledge sharing research holds that the knowledge recipient needs to be extra motivated to learn new knowledge (Bhatti, Larimo, & Servais, 2020; Easterby-Smith et al., 2008; Hamel, 1991; Wang & Tarn, 2018) and offer something worthwhile to the donor in exchange. The knowledge recipient may offer context-related information to their foreign partner - knowledge donors from technically advanced countries to transform and customize technology to make it fit for the specific local context for successful application. By offering contextual knowledge to the international partner, the local host enters into an exchange relationship and develops a moral obligation on the international partner to reciprocate by donating knowledge to the local host. The knowledge recipient can also demand contractual safeguards (in the ToRs of the alliance) to bind the donor to share knowledge; however, it might still be difficult to collect the required knowledge as it is difficult to include all possible knowledge sharing dimensions in the ToRs. Even if the ToRs specify certain types of knowledge sharing, the donor may transfer only a minimum level of knowledge to fulfill the contractual obligation and may not be enthusiastic to share intricacies and extended technical or procedural details. In such scenarios, knowledge seekers may use different ways to convince knowledge donor to share the required knowledge. For instance, they should develop informal relationship and friendship (Bell & Zaheer, 2007; Hansen & Løvås, 2004) with the employees of foreign partners by extending support for them to live in the local context, particularly while travelling and working on the site where people are likely to be more informal.

In this way, they alleviate cultural differences to encourage employees from the donor firm to share their explicit and implicit knowledge.

The motivation of both the donor and the recipient firms is also considered a key factor for improving the speed of knowledge sharing and the quality and depth of the knowledge being shared (Steensma, Tihanyi, Lyles, & Dhanaraj, 2005). The motivation of the knowledge recipients will be high if the subject knowledge is rare, valuable, and inimitable, because these characteristics make knowledge more attractive in the eyes of knowledge seekers (Pérez-Nordtvedt, Kedia, Datta, & Rasheed, 2008), who therefore become more eager to obtain such knowledge. On the other hand, motivation for knowledge donor may be low if the knowledge is rare and valuable as the knowledge donor may fear losing the knowledge power that is exclusive to knowledge donor and their core competencies.

Many factors increase the motivation of partnering firms to donate and collect knowledge with their partners in strategic alliances. The key purpose of a strategic alliance is for each partner to exploit the knowledge and competencies of the other and thus address their own weaknesses and collectively achieve business objectives (Holmqvist, 2004; Levitt & March, 1988) which could not be achieved individually. The accomplishment of the alliance's objectives reinforces both partners' willingness to share the required knowledge in the alliance. Further, trust is also one of the key factors which can influence their motivation (Bock, Zmud, Kim, & Lee, 2005; Ford, 2004; Nygaard & Russo, 2008; Politis, 2003). These authors are of the view that knowledge sharing may be improved when partnering firms develop a certain level of trust and feel that their knowledge will not be used/exploited unethically. Still, the donor firm might be reluctant to donate key knowledge and core competencies because of potential threats to its competitive advantage (Becerra, Lunnan, & Huemer, 2008), and employees may not share core competencies outside the organization for fear of violating the ethical code of the organization. Organizations that have such fears establish gatekeepers and shields to filter the information to be shared with their partnering organizations in order to maintain their bargaining position (Dussauge, Garrette, & Mitchell, 2000; Inkpen, 2000) and privileges and ownership (Hau & Evangelista, 2007). However, the key motivation of the knowledge-seeking firm is to learn knowledge that can help improve the market success and competitiveness by being knowledgeable to undertake such projects in future.

Despite that, trust and fairness between partners can enhance the knowledge recipient's understanding of the ethical code regarding the exchange of knowledge. On the other hand, if there is a trust deficit, partners should increase their commitment to collaboration, develop trust, remove cultural barriers, decrease opportunistic behavior and minimize conflicts between allies, all of which may subsequently facilitate inter-organizational knowledge sharing in the alliance (Tsang, Nguyen, & Erramilli, 2004; Uzzi & Lancaster, 2003). Regarding the motivation level of the knowledge-seeking firm, their employees are motivated not only because they seek a potential upgrading of their personal profile, but also to improve the organizational competitiveness, effectiveness and market success (Yang, 2007). Such motivated knowledge seekers even remove the barriers for knowledge sharing (Bereznoy, Meissner, & Scuotto, 2021; Kalling, 2003) and increase their efforts to collect advanced knowledge from their international counterpart (Park & Vertinsky, 2016). On the other hand, if the recipient firm realizes that there is little gain in the form of knowledge from foreign partners, they may not be interested in working collectively and the basis for alliance may disappear.

Knowledge recipient firms should be very cautious in adapting new knowledge and processes from their international partners. On the one hand, gaining knowledge from an international partner and following it unquestioningly may be counter-productive (Van Wijk, Jansen, & Lyles, 2008) because the new knowledge and processes may be quite incompatible with the conditions on the ground. On the other hand, sticking completely to the existing working processes and methods will not result in learning of modern knowledge and upgrading the organization's profile. In such situation, partnering organizations need to adopt standardization/adaptation strategy (Ryans, Griffith, & White, 2003; Zou, Andrus, & Norvell, 1997). Knowledge-seeking firms should therefore be intelligent enough to strike a balance between the exploitation of existing (internal) knowledge and the exploration of new (external) knowledge (Van Wijk et al., 2008). Such a balance or combination of existing and new knowledge may not only be beneficial for the project but may also increase the knowledge base of the recipient firm (Katila & Ahuja, 2002). This view is endorsed by researchers who conclude that excessive exploitation may limit the firm's ability to adjust to a dynamic environment, whereas excessive exploration by continuously acquiring new knowledge and changing organizational practices accordingly may be costly and even impossible (Katila & Ahuja, 2002; Puranam, Singh, & Zollo, 2006). This balancing is in line with the

‘consistency’ and ‘adaptability’ cultural traits described by Denison and Mishra (1995), who suggest that adapting a balance between consistency and adaptability can improve both a firm’s ability to follow its founding philosophy as well as to innovate according to the changing context. So, in the current case study, it is expected that the knowledge seeking firm (i.e. NESPAK) may not apply foreign knowledge as it is in its projects, but rather exploit their existing knowledge and explore new knowledge and merge the two to make it fit and well-applicable in the current project conditions. However, such adaptability is not straightforward: both partners need to socialize extensively, share knowledge through both formal and informal processes while working together to ensure they are on the same page in terms of developing common social practices and technical working methods (Grant, 1996).

While the current literature documents certain factors influencing knowledge acquisition (Hora & Klassen, 2013; Strayer & Beitz, 2010), most of these studies are quantitative in nature and in-depth investigation into the factors influencing knowledge acquisition needs further development. A thorough insight into the factors is likely to enhance knowledge acquisition potential which may in turn help organizations to develop a competitive advantage.

2.4 Knowledge Acquisition and Competitive Edge

The modern literature on marketing largely recognizes now that marketing is far beyond designing selling strategies and advertising a product. Integrated marketing encompasses a wide array of activities including understanding markets, product/project design, market development through technological advantage, building brands and better service delivery (Kotler, Keller, & Manceau, 2016; Le Meunier-FitzHugh & Piercy, 2007). These vital aspects of marketing require building dynamic capabilities that can be used to build competitive advantage and to outcompete the competitors (Betz, 2003; Kotler, Armstrong, Harris, & He, 2019). Taking the integrated view of marketing, the knowledge management in building dynamic capabilities from the idea conception to the aftersales service, are linked with generating the competitive edge and business success. Such modern knowledge can be developed through both experimentation or learning it from an experienced partner (Pisano, 1994). However, developing the knowledge base for the organizations is costly particularly for the organizations operating in technologically less developed countries that lack access to modern knowledge and technologies. Thus, organizations

in developing and less developed countries generally find it more efficient to work with companies from advanced countries and learn knowledge from them for market success and competitiveness in the market (De Marchi, Giuliani, & Rabelotti, 2018; Wang, Arnett, & Hou, 2016). Although the literature examining the relationship between knowledge acquisition and competitive advantage is limited yet some studies did document the relationship (Alrawi & Elkhatib, 2009; Diugwu, 2011). However, there are a handful of studies that have tested this relationship and those too paid little attention to the process that leads the knowledge acquisition to the competitive edge. In addition, the international consultancy alliance's unique context requires investigation into the process that help knowledge acquisition translate into competitive advantage.

In an international consultancy alliance, the knowledge learnt not only builds the technical and marketing capacity of the organization but also promotes innovative behaviors among employees (Khan & Khan, 2019). Stonehouse and Pemberton (1999) proffer that knowledge acquisition also improves the decision making capacity of the managers that is positively linked to organizational performance and market success (Wang et al., 2016). When international alliance partners work together, the international donor shares knowledge in form of new procedures, new technologies, new efficient ways of project troubleshooting, and efficient ways to deliver services to the clients. Learning these techniques enables local host to improve its capabilities from design to service delivery (Landaeta, 2008). Since the aim of the local partner is to develop competitive advantage and improve business success by learning new knowledge from international partner, the local partner is keen to learn everything that can potentially enhance their competitiveness and self-reliance. As most of the other companies in the local market do not have opportunities to build international consultancy alliance, they rely on their local knowledge and thus unable to compete those companies who have learnt state-of-the-art knowledge from international partners belonging to the advanced countries (Minbaeva, Park, Vertinsky, & Cho, 2018; O'Donnell & Blumentritt, 1999).

In addition to building capacity, learning knowledge from international partner builds a brand reputation for the local partner (Storey & Kahn, 2010). The local partner not only learns state-of-the-art knowledge, but it also promotes its association with leading international partners that in turn build a reputation that the local partner has learnt modern knowledge from international companies of advanced countries which is superior than its local competitors. The perception of

having superior knowledge builds a brand reputation of the company and thus offers a competitive advantage and an improved market success subsequently (Sharkie, 2003). By building corporate profile and brand reputation, the local host earns the trust of its clients and thus possibility of winning future contracts increases compared with its competitors (de Chernatony, 1999) eventually offering a competitive edge and long term business success for the company.

3. Methodology

The single case-study strategy based upon systematic combining (Dubois & Gadde, 2002) is used for this research. Systematic combining is defined as “*a non-linear, path-dependent process of combining efforts with the ultimate objective of matching theory and reality*” (Dubois & Gadde, 2002, p.556). Systematic combining is informed by abduction research approach that is based on two main tenets, i.e. ‘tight’ and ‘emerging’, taken from competing research approaches i.e. induction (loose and emergent) and deduction (tight and pre-structured). The reason why this type of case research seeks to be tight is that “*tightness reflects the degree to which the researcher has articulated his preconceptions*”, and the reason why the framework should evolve as the empirical study is being carried out is that “*empirical observations inspire changes of the view of theory and vice versa*” (Dubois & Gadde, 2002, p. 558). The single case study design allows the researcher to capture better stories, not better constructs, from single but rich cases which are invaluable to generate a theory. On the other hand, with the multiple case study design, the researcher may capture the understudied phenomenon from multiple cases but the meanings of that phenomenon may be different and contradict across cases (Dyer Jr & Wilkins, 1991; Siggelkow, 2007). Further, the single case study design based upon systematic combining allows the researcher to move forth and back between theory and data, make necessary inclusion/exclusion in the theoretical framework driven by shocks, surprises and revised boundaries of the phenomenon that emerged from the field and create a match between theoretical framework and empirical findings (Dubois & Gadde, 2002). Glaser (1978) emphasizes the significance of matching between the theoretical framework and the empirical world, and contends that a researcher should not force empirical data to fit the theoretical model. Rather, the theoretical model, theories, research questions, data collection and data analysis co-evolve once a researcher interacts with the empirical world because of the complex and emergent nature of a case and its boundaries. This approach thus offers the flexibility during data collection and analysis to modify the theory and the theoretical framework

as well as the boundaries of the case and to discover new relationships and variables in the phenomena being investigated, i.e. knowledge acquisition in international strategic alliances. In other words, this approach allows back and forth movement during the different stages of the study to make necessary modification in the research questions and theories according to the emergent nature of the case.

The research is conducted on National Engineering Services, Pakistan (NESPAK), the largest engineering consultancy company in Pakistan. In collective work, NESPAK provides engineering consultancy services such as “*pre-feasibility and feasibility studies, survey and ground investigations, planning and design, tender and contract documents, construction supervision and contract management, and post-construction services*” (NESPAK, n.d.-c, p.1). Pakistan, being a developing country, is behind the developed world in terms of innovating modern engineering technologies. The companies of developing countries like Pakistan are less likely to innovate engineering methods and technologies while they are more often learning and using modern technologies innovated in the technologically advanced countries through international collaborations. Thus, NESPAK forms alliances with high-tech engineering consultancy companies of the advanced world, as and when the required knowledge does not exist locally, to fulfil the unique requirements of the project and attain self-reliance to perform similar projects in future. At present, NESPAK is currently engaged in an ongoing project of Lahore Orange Line Metro Train Project (LOLMTP). This is the first metro train project in Pakistan for which the full range of expertise required for complex engineering methods, models, and technologies are not available in Pakistan. To address this limitation, an international alliance is formed between NESPAK Pakistan and CR-Norinco China to acquire the required knowledge, provide engineering consultancy for the project and successfully complete the project (Masood, 2020).

The NESPAK engineers who have worked or are working with the Chinese partners on the project are therefore participants in this research. In total, six engineers were approached and interviewed through semi-structured interviews using purposive and snowball sampling (Easterby-Smith, Thorpe, & Jackson, 2015). These informants were qualified engineers having undergraduate and graduate engineering degrees and having long experience (ranging from 5-25 years) of working on such infrastructural projects. The informants have long experience of working in different alliances of NESPAK thus they are deeply rooted in the context i.e. working with foreign partners

on infrastructural projects to learn the required state-of-the-art knowledge for project completion and improving the corporate profile of the company. Each interview lasted from one to two hours, and the transcript of each interview is between 2,000 and 5,000 words in length, with an average word count of 3,100. Issues of research ethics were dealt with appropriately, as the study was conducted as part of a PhD project and was approved by the Lancaster University Research Ethics Committee. The lead author has thus followed Patton's 'Ethical Issue Checklist' comprising "*explain the purpose of the research, promise and reciprocity, risk assessment, confidentiality, informed consent, data access and ownership, interviewer mental health, advice, data collection boundaries and ethics vs. legal*" (Patton, 2002, p.408-09). Participants were accordingly informed about the purpose and process of the research, and confidentiality of the data and anonymity of the participants were strictly maintained.

The lead author used laddering and probes (Easterby-Smith et al., 2015) related to the processes through which the required knowledge is learnt and acquired by NESPAK's engineers. Questions about social, technical and contextual factors influencing NESPAK's knowledge acquisition from Chinese counterparts have also been asked. Further, the participants were asked about how do they learn and acquire knowledge from their Chinese counterparts, and how do they market as well as utilize such knowledge to improve NESPAK's competitive edge and enhance business/market success subsequently. In addition, because the study followed the abductive research approach (Dubois & Gadde, 2002), the participants were encouraged to discuss their conjectures about these factors and their relationship with the phenomenon under study (which were not included in the preliminary theoretical lens of this research and therefore not preconceived). As a result, some novel findings and factors such as technical and social adaptability and cultural intelligence emerged which substantially affect knowledge acquisition by NESPAK's engineers. Following this, the literature review was modified to incorporate relevant theories and literature to ensure a systematic combining – a match between theory and data, as proposed by the abductive research approach (Dubois & Gadde, 2002).

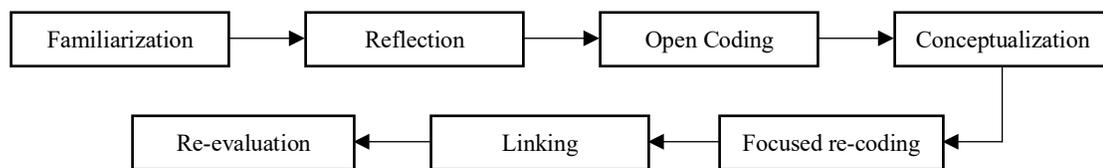
The Straussian version of grounded theory (GT) (Strauss & Corbin, 1990) was used for data analysis in this research. Easterby-Smith et al. (2015) present a comprehensive grounded analysis process that is aligned with the Straussian version and which was followed in this research to analyse the data (see Figure 1 below). Analysis protocols have been developed through computer-

aided qualitative data-analysis software (CAQDAS) NVivo11 viewing “*the computer’s capacity for recording, sorting, matching and linking*”, which “*can be harnessed by researchers to assist in answering their research questions for the data, without losing access to the source data or contexts from which the data have come*” (Bazeley & Jackson, 2013, p.2). The first step involves the *familiarization* of the researcher with all available data and began during the field work. Further, the lead author conducted and transcribed all the interviews, which helped to develop his further familiarity with the data. The interview guide was in English however the interviews were conducted in the local language i.e. Urdu. Although, a great variety of words of the English language (taken from the guide) were used because of having knowledge of both languages but the actual sense of talk could be achieved by conducting interviews in the Urdu language. The transcription was done while taking great care of the politics of language and ensured the use of the right words/sentences of the English language to translate the interviews. Further, the transcripts were read out time and again that led to a thinking process known as *reflection*. During this process, extensive evaluations of the data were made in relation to the preliminary theoretical lens and research questions. The next step was *open coding*, for which the transcripts were uploaded in NVivo11. The data were initially broken down into open codes by reading each word, line, and sentence of the transcripts. Coding methods used in this step included descriptive, in-vivo, process, evaluation and causation coding (Saldana, 2012).

At the next level, i.e. *conceptualization*, which is part of *open coding*, patterns in the codes were identified and categories were developed through grouping “*similar events, happenings, and objects under a common heading or classification*” (Strauss & Corbin, 1998, p.103). Using Saldana’s (2013) focused and pattern, categories were built around concepts grounded in the data, and their respective characteristics are their properties. In the next stage, i.e. *axial coding (focused re-coding)*, categories were linked to each other based on similarities among them and their respective properties, so similar categories were grouped and collapsed under suitable labels that carry the meanings of a maximum of the data in it. Next, *selective coding (linking)*, which is “*the process of integrating and refining the theory*” (Strauss & Corbin, 1998, p.143) was undertaken to decide on the central or core categories, which are defined as “*the main theme(s) of the research ... (they) consist() of all the products of analysis condensed into a few words that seem to explain what ‘this research is all about’*” (Strauss & Corbin, 1998, p.146). Core categories are umbrella

terms representing all the codes from initial open codes (Saldana, 2012) which move the “*analytic story to theoretical direction*” (Charmaz, 2006, p.63). Lastly, while re-evaluating the whole analysis, it is ensured that all key concepts and properties are considered and given due emphasis in data analysis (Easterby-Smith et al., 2015). These core categories are presented and analysed in the next section.

Figure 1: Grounded Analysis



4. Findings

As a result of data analysis, we have four categories related to the processes of knowledge acquisition; three categories present factors affecting knowledge acquisition; and a category of organizational competitive advantage driven by its acquisition of state-of-the-art explicit and implicit knowledge from foreign partners during the project work in international consultancy alliance. These categories carry the meanings of the whole relevant data which are condensed into their corresponding categories through open and axial coding {Strauss, 1998 #139; Strauss, 1990 #136}. The following sections present these categories with their corresponding verbatim quotes and analysis.

Knowledge Acquisition Processes

Integrated Consultancy Working

In an engineering consultancy alliance, NESPAK’s engineers learn and acquire knowledge through customization of the concept design and drawing to make it compatible with on-the-ground conditions. CR-Norinco was supposed to share experience and expertise in terms of state-of-the-art engineering methods and models related to the metro train infrastructure, while NESPAK was supposed to share input regarding on-the-ground project site conditions to which the concept design was to be customized. The alliance thus involves a great deal of input by both

partners, as the host firm is sharing knowledge about the on-the-ground conditions while the foreign firm is sharing knowledge of modern engineering methods, models and technologies through their application in the development of concept design. An engineer reports how the sharing of knowledge occurs in integrated working.

We are currently reviewing the concept design prepared by them. In the concept design, there are civil works, E&M works, drainage issues, highway issues and geotech issues. So, every department is reviewing the design of its area, and we have meetings with the Chinese engineers daily. We raise various concerns regarding the compatibility of the concept design/drawings with on-the-ground conditions. Then, in line with what we have discussed and still working closely [with the Chinese engineers], we modify the concept design according to the on-the-ground site conditions. [P1]

Implicit knowledge of complex engineering is acquired by NESPAK's engineers during the integrated working for the project. A participant describes it as below:

We sit together for a manual calculation. They make calculations in their way and we make in our way and at the end, we compare the results. Even we got their software and learnt it from them, so that, we may see how they are making software-based calculations. We collectively developed an Excel sheet equipped with macros which were very useful for us to make calculations. Without such collective working, we could not have learnt to operate their software [P6].

Technical Adaptability

Another data-driven category reflecting the process of knowledge acquisition is termed 'Technical Adaptability'. As NESPAK depends upon the knowledge shared by CR-Norinko, NESPAK's engineers tend to adhere to the ways and methods proposed by their Chinese counterparts. Knowledge of the complex engineering technology is acquired and learnt by NESPAK's engineers through following the work proposed by the Chinese, discussion and collectively working in close collaboration to develop a concept design compatible with the on-the-ground conditions and modern electro-mechanical technologies. A participant describes the process thus:

It is an electrically operated train, so we follow their [Chinese] ways of cabling, ducting, taking safety measures from water, seepage, lightning, etc. To understand this, we are having long discussion sessions with them and working in close collaboration to ensure that there should be nothing in the structure that can cause seepage to the structure and E&M wiring. While for lightning, we are connecting

earthing connection to every pile, pier and structure and taking it down into the earth so that the lightning may not affect the train structure [P2].

Another participant also describes knowledge acquisition through the adaptability of Chinese engineers' working practices as follows:

In the beginning, we were worried about the construction of the piles 55 meters deep in the soil. However, they [Chinese] proposed a self-compacting concrete method according to which the concrete becomes dense/compact by itself. This was new for us. Under their close supervision, we made required calculations using relevant formulas, run its simulations and completed the concept design for compact concreting that could not have been completed without the collaboration with and support by Chinese partner [P3]

Such *technical adaptability* resulted in the substantial learning of NESPAK's engineers and knowledge acquisition from foreign engineers. Had NESPAK's engineers stuck to their methods, this learning of modern engineering knowledge could not have taken place. The adoption of new/additional measures in the project work following Chinese partners is reported as below:

We have a casual approach. For instance, we do not verify results after calculation. Practically speaking, after concept design and in the construction phase, when we tie up the iron bar, the next phase is concreting with concrete blocks and cubes. We test the strength of blocks and cubes but after pouring and hardening, we do not test its strength to know whether it has desired strength to bear the load or not. But the Chinese check everything, so they get piling and piers tested by us after hardening too. We made this as part of our practice now [P2]

Social Adaptability

In addition to the complex engineering technologies, NESPAK's engineers also learnt international safety standards from their Chinese partner which is a huge value addition to NESPAK's strategic profile. Since, the concerns for a safe workplace is increasing all over the world, learning and adapting the international safety standards will improve the company's profile in the local and global context and help it win the projects by meeting the safety requirements of the clients. This learning of NESPAK's engineers occurred because of their '*social adaptability*' as a participant explains what happened:

We were not taking any safety measures and our labor is working in chappals (casual shoes like sandals) and without wearing shirts and helmets so there were accidents on the site almost every day. Chinese [being annoyed at this approach] asked us: “*you are working on an international project, so at least follow international standards*”. This was quite embarrassing for us as a company. They made it compulsory for every worker to wear safety helmets, jackets, and shoes in which steel spikes cannot be penetrated. We adopted these standards. Upon their instructions, we bond the contractor to fix a fence around the working area so nobody can fall in diggings [P1]

Seeking Confirmation

In this complex engineering work, being knowledge-seekers, NESPAK’s engineers face different uncertainties about the best engineering methods, models, and technologies for the specific site conditions. Since the Chinese partner is assumed to be the final authority in this project and their decision carries more weight. Thus, local engineers always need final confirmation from their foreign expert partners which is also viewed as a process of knowledge acquisition, because such confirmation gives them confidence for applicability of the engineering methods or the counterpart may point out problems and issues in the work with their solution. A participant describes:

We want to learn new things but sometimes we do not know that which is the right things to do as we have never gone through such projects ... We need final confirmation by our Chinese counterpart and corrections if there are mistakes [P5]

Factors affecting Knowledge Acquisition

Partner Motivation

In addition to the processes of knowledge acquisition, various factors improve knowledge acquisition by NESPAK’s engineers while working in an international alliance. The data reflects that NESPAK’s engineers worked hard to understand the concept design supplied by the Chinese, and its compatibility with local on-the-ground conditions. Similarly, Chinese engineers also listen, understand, and address the concerns raised by NESPAK’s engineers, even undertaking further study and analysis of the work to address those concerns. However, NESPAK’s employees do not completely rely on Chinese partner’s calculations, rather they learn the tools themselves and perform calculations on their own to gain complete expertise and learn the phenomenon in detail. Their intent may be attributed to the NESPAK’s philosophy to gain self-reliance for future projects

to improve its competitiveness (NESPAK 2021a). An engineer holds a similar view and emphasized exploring the concept designs themselves in addition to learning from the alliance partner. He gives the following account:

We are also research-oriented and constantly learn new engineering methods and technologies, so we explore and discuss a concept design in very detail. When the Chinese came here, we raised many concerns and questions about the compatibility of their proposed design with the project on-ground conditions. Chinese engineers initially had no answer to many of our questions ... [However], they addressed our questions after further analysis of the design and consultation with the vendors involved in the project. As the construction is going on, this question/answer process continues as we keep sharing site issues and problems with them and seek solutions [P4]

Friendship and Personal Association / Camaraderie

Despite Chinese engineers sharing the required knowledge because they were equally motivated to complete the project, there were occasions when Chinese engineers did not completely share the required knowledge such as logic and reason of choosing a certain engineering method, and alike. In such a situation, NESPAK's engineers use different ways such as forming a friendly and informal relationship to overcome such barriers. Chinese engineers, being informed by their socio-cultural background, value the friendships and informal association initiatives by local engineers became cooperative and started sharing the required information/knowledge with them. A participant reported:

If you develop a personal association with them, you can get things done by them even that is not part of the ToRs. In return, we support them too as when they are about to leave for China, they are in hurry and get busy in packing, shopping etc. They then postpone the work that is to be done during their stay in Pakistan and ask us to send them work once they reach China. So, we facilitate them and do not surface such delays at the strategic level [P4]

Cultural Intelligence

This reflects the '*Cultural Intelligence*' of NESPAK's engineers who offer support to Chinese engineers even on a personal level to develop a relationship with them and acquire maximum knowledge for the project. NESPAK has been working on local and foreign projects in

collaboration with foreign partners since its inception in 1973. So, extensive working with foreign partners made NESPAK's engineers enough culturally intelligent to understand the socio-cultural values of the foreign partners. Such understanding helps them greatly to develop cordial relationships with foreign partners and acquire maximum knowledge from them. Participant 2 states that:

Our understanding of the cultures of other countries enabled us to better coordinate with foreign engineers. Over time, we have learnt why foreign engineers/companies share or protect their knowledge; how can they share maximum knowledge; and how can we develop cordial relationships with them to learn maximum during collective project work. For instance, we can sense when they need personal help and whether our initiative can make them reciprocate in terms of knowledge sharing or not. We also make them realize that the local site-related knowledge which we share is also of great value that is not only a prerequisite of successful project completion but to enhance their knowledge base as well. This convinces them to share the knowledge they are reluctant to share [P2].

Competitive Advantage

NESPAK improves its market success by using such knowledge as a key source to enhance its competitiveness, market success and sustainable growth. It has been the key philosophy of NESPAK since its inception to constantly learn ever-evolving engineering methods and technologies and develop a diverse pool of engineering specialities to replace foreign consultants (NESPAK, n.d.-b). On the other hand, the clients also expect consultancy companies to design and develop cost-efficient projects. Such expectations can only be fulfilled by being equipped with state-of-the-art engineering knowledge. Following this, NESPAK's engineers are also highly eager to learn as they always look for modern and cost-efficient engineering methods and technologies to enhance the company's market success and develop their individual profile. A participant mentions how they use such knowledge in enhancing their market success:

It [knowledge acquisition] helps us in project execution as we successfully learn the required engineering knowledge and apply it in the project, it results in the project accomplishment and improve the corporate profile of the company. In every project, we are assumed to learn something new and constantly improve the company's knowledge base. So, we are in a constant process of learning. Equipped with such knowledge, we better compete in the industry and are in a better position to win further projects in future both in Pakistan and other countries [P1].

NESPAK's founders envisioned an organization that can operate free from the role of foreign consultants (NESPAK, n.d.-e) by developing a diverse pool of engineering specialities and attaining self-reliance (NESPAK, n.d.-b). In one project, NESPAK learns advanced knowledge, that does not exist locally, from their foreign counterparts in collective working. Whilst, in the future projects, NESPAK becomes self-reliant to undertake project work requiring such knowledge independently and form consultancy alliances with a foreign consultant for the lesser part of the project. Indeed, there is the knowledge that foreign partners do not share to maintain their supremacy and secure their future business however, a substantial amount of knowledge is being shared with NESPAK's engineers since both local and foreign engineers work collectively on a project. With newly learnt knowledge, NESPAK advances to a better position to win further projects, undertake more parts of the projects and replace foreign partners. As a result, their market share, business success and competitiveness increase. Participant 4 mentions how they learn new knowledge from foreign partners in one project which they can use as a strategic tool to improve their market success:

As we are being developed through working on this project, we are learning so many new things such as cut and cover¹ based tunnel track, elevated track and elevated railway stations, U-tub girder, earthing arrangements in the tunnel, new technology to address seepage in underground track, Chinese construction codes, self-compacting concreting, new ways of testing the strength of concretes underlying the piles and many more. Once we complete the project, we will be having complete knowledge of these engineering methods and can perform these tasks independently in future projects without the involvement of any other partners. Based on this knowledge, we can also be in a better position to win such projects in future. Having such knowledge will give NESPAK a strategic edge considering the increasing involvement of Chinese companies' in Pakistani projects under CPEC [P4].

¹ “cut and cover construction involves using excavation equipment to dig a large trench or rectangular hole in the ground which is then covered by a concrete deck” (Metro Tunnel, 2018, available at: <https://metrotunnel.vic.gov.au/construction/building-the-tunnels-and-stations/cut-and-cover>. Retrieved 24 June 2018)

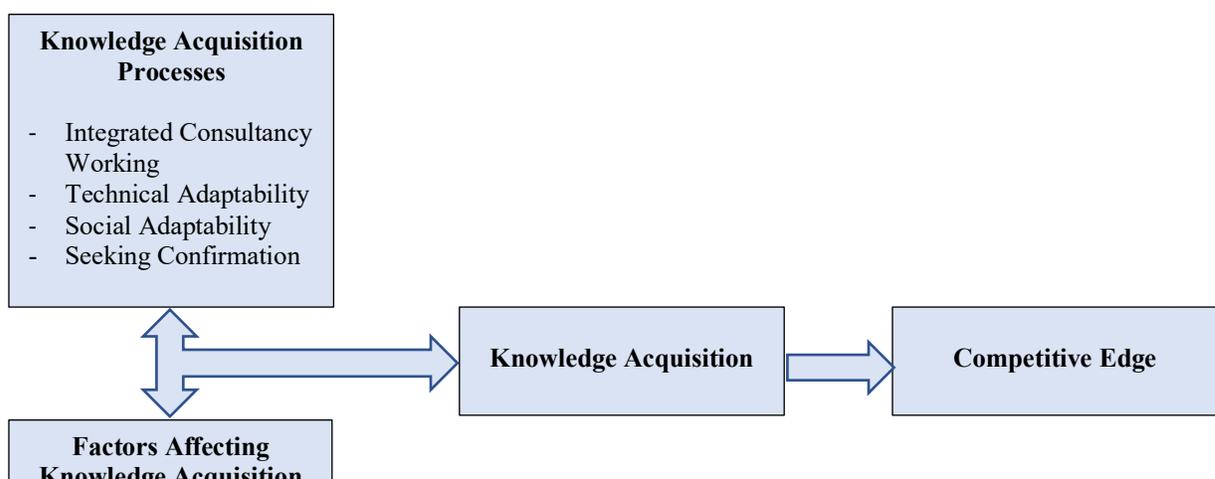
A specific knowledge that improved NESPAK's strategic profile and market success is learning Chinese construction codes. NESPAK was following American and British construction codes since its inception however, CR-Norinco required NESPAK to follow Chinese construction codes for the development of concept design for the project. Thus, NESPAK is the first Pakistan-based engineering consultancy company that learn Chinese construction codes in this project and successfully apply them in the project. This caused a significant improvement in NESPAK's market potential and helped the firm gain a sustainable competitive edge over the local competitors. As mentioned above, this will also help to win further projects as it is more likely use these codes in future projects particularly infrastructural projects that are part of CPEC. Participants described this phenomenon as below:

Learning of Chinese construction codes is a huge addition to our personal and organizational profile and gives us a competitive edge, considering there is so much involvement of Chinese companies in Pakistan-based projects. We know that if we know Chinese construction codes, the client will prefer NESPAK over our competitors while awarding the contract. Other local companies will also depend on NESPAK. As NESPAK purchased Chinese construction codes and we successfully learnt and applied these, we understand that we are having a competitive edge over our rival companies [P1].

NESPAK markets such knowledge of state-of-the-art engineering (acquired through collective working with technologically advanced foreign consultants) to attain competitive advantage and subsequently improve its market success. With its philosophy of constant learning, NESPAK has completed large scale infrastructural projects in the sectors of irrigation (dam construction, dam raising, barrages, mega canals, and water downstream), power generation (hydro, thermal, RLNG and coal-based), architecture and construction (airports, industrial parks, factories and manufacturing and processing plants), seaports and harbours, oil and gas pipelines, mass-transit (metro bus and train), road network (motorways, highways, ring roads, flyovers, bypasses, interchanges, and tunnels), terminals for oil, gas and petrochemical, water treatment plants, in Pakistan as well as in almost 38 other countries of the world (NESPAK, n.d.-b, n.d.-d). The worth of 347 currently ongoing and 3117 completed local projects is US\$ 261 billion while the worth of 27 currently ongoing and 534 completed overseas projects is US\$ 48 billion (NESPAK, n.d.-b). Thus, NESPAK is enjoying its market position based on its constantly improving knowledge base. Due to learning various engineering technologies such as designing the tunnel track, Chinese

construction codes, other aforementioned engineering methods as well as social learning of working with Chinese counterparts, NESPAK’s involvement is increasing in CPEC’s projects. Recently, The Chairman CPEC got a briefing from the Managing Director of NESPAK and showed keen interest in NESPAK’s diverse specialities (NESPAK, n.d.-a) indicating the NESPAK’s involvement in further CPEC’s project. At present, the company also undertakes large scale local and overseas infrastructural projects in all aforementioned sectors. To name a few, these are 878-km HVDC transmission line from Matiari to Lahore; 400-km Sukkur-Gawadar Motorway; Upgradation of 1872-km Pakistan Railway Main Line 1 (ML1) from Karachi to Peshawar; 120-km Havelian-Thakot motorway; 500-kv Double Circuit Neelum-Jhelum Interconnection Transmission Line, Mohmand Dam, Dasu Dam, Diamer Basha Dam, Mangla Dam Refurbishment and Upgradation project; Al-Meera Five Malls Qatar; and Dual Carriageway Road for NR32 Phase-I Duqm Oman (NESPAK, 2020). Every project is hugely complex and requires the application/utilization of advanced engineering methods and technologies. For instance, the Havelian-Thakot motorway project involves “*seven tunnels, 102 bridges, 11 flyovers and over 500 culverts/underpasses*” and passes through the dangerous mountains of the Himalaya region indicating huge complexities and the requirement of most advanced expertise to design the project (NESPAK, 2020). NESPAK’s engineers are likely to independently design a substantial portion of this project through using the knowledge learnt while working with CR-Norinco and enhance its market success and consultancy fee as compared to the previous projects. Such a substantial business success and market position is arguably led by the company’s philosophy of constant learning of modern engineering technologies particularly through international consultancy alliances.

Figure 2: Knowledge acquisition and competitive edge in International Consultancy Alliance



5. Discussion and conclusion

5.1 Discussion

Creating a competitive edge through knowledge acquisition particularly in knowledge-sensitive industries like high-tech engineering consultancy is imperative yet challenging. The knowledge that can serve as competitive edge is rare and difficult to develop for companies operating in developing or underdeveloped countries. In order to improve competitiveness, the companies in developing countries form strategic alliances with companies from technically advanced countries, yet acquiring such knowledge is not straight forward particularly in loosely coupled strategic alliances

We built on the prior work on marketing knowledge management literature that suggest that marketing knowledge management and marketing capabilities can significantly enhance product development, promotion and pricing capabilities that help the organization to perform better than its rivals (Massa & Testa, 2009; Tsai & Shih, 2004). Although the literature provided empirical evidence from different sectors on relationship between marketing knowledge management and business success, the process through which such knowledge is gained and is used for gaining competitive edge was understudied. This current research addresses this important deficiency by examining the little explored phenomenon of knowledge acquisition and learning by a loosely

coupled strategic alliance partner (NESPAK, Pakistani in this case) from its Chinese alliance partner (CR-Norinco), in an engineering consultancy alliance. The research also explores the ways NESPAK capitalize on such newly learnt knowledge and expertise to improve its corporate profile and gain a sustainable competitive edge in the industry. By presenting a data-driven conceptual model that describes acquisition of explicit and tacit knowledge by NESPAK from its Chinese partner, is invaluable for the local host yet there are a number of complexities involved in knowledge acquisition process. Employees of local host use innovative ways to tap knowledge from the foreign partner through cultural intelligence, social and technical adaptability, and collaborative working. They are highly motivated to elicit knowledge as they believe it would enhance the competitiveness of their company and will place their company in an advantaged position compared with their competitors. The findings are consistent with the knowledge management literature that suggest building trust and social ties is vital in knowledge acquisition particularly in cross cultural knowledge transfer (Meier, 2011).

The findings of the study are aligned with the models related to the types of knowledge and their respective ways of acquisitions. In other words, the process of knowledge acquisition by NESPAK's engineers from their Chinese counterpart differs according to the nature of the knowledge being acquired. Nonaka and Takeuchi's (1995) classification of explicit and implicit/tacit knowledge and their respective acquisition/sharing mechanisms is empirically substantiated in this study. For instance, the findings indicate that explicit knowledge is shared through verbal and written communication and the exchange of documents such as project reports, concept designs, drawings, calculation methods and formulas. However, most of the engineering knowledge found in this research is applied and tacit in nature such as concept design and drawing development, operating software, making calculations, running simulation, site supervision, etc. Such tacit knowledge has been learnt and acquired by NESPAK's engineers externalization and collective working, apprenticeship, and socialization by Nonaka and Takeuchi (1995). Thus, the aforementioned processes of learning and acquisition of explicit and tacit knowledge are coined as 'integrated consultancy working' which are emerged from empirical data of this research. NESPAK's engineers also adapt various new social (adapting safety measures) and technical practices (learning and adapting testing of piles' strength after hardening of concreting) – indicating the cross-border sharing of working practices (Hong et al., 2006). It does not seem

practical the foreign practices can be shared in their original form to apply them in a novel context instead there is a customization and modification in those practices to make it well applicable in the context at hand. This is similar to the notion of sustained adjustment (Orlikowski, 1996) i.e. the practices remained attached with their primary focus but make adjustments according to the changing context. Finally, seeking confirmation is found as another process of knowledge acquisition because, while confirming an engineering method at hand, knowledge the donor gives confidence to the knowledge seeker about his/her knowledgeability. In case of any flaw in the subject engineering method, knowledge donor normally shares a new method, its processes and its pros and cons with respect to its application and above all a justification for preferring the new method over the existing one. Thus, seeking confirmation is both a source as well as a process of learning and acquisition/sharing of knowledge from knowledge donor.

Besides, it was also found that the sharing of explicit and implicit knowledge is dependent upon both parties (Roberts, 2000), as both knowledge seeker and donor need to have sufficient skills, knowledge and to understand and utilize the explicit and tacit knowledge in the project work. Further, having only one element of such knowledge would be of no use to the knowledge recipient. To ensure that there is complete understanding of engineering technologies or models, both types of knowledge is being shared either in a sequence or in parallel because the explicit codified knowledge is applied in the practical work to learn the tacit knowledge. For instance, a calculation formula (explicit knowledge) is applied in applied/practical engineering work of developing drawing which for learning of tacit knowledge as (Cook & Brown, 1999) argue that there is a generative dance between epistemology of possession and epistemology of knowing and one type of knowledge is used as a tool to create and learn other type of knowledge. NESPAK's engineers learn and acquire both types of knowledge in connection with each other, in close work settings, and put explicit knowledge into practice by operating software, running simulations and developing concept designs and drawings, etc. and learn tacit knowledge subsequently. Thus, the current study presents integrated collective working, social and technical adaptability and seeking confirmation as a significant source of learning and knowledge acquisition from foreign partner not only to successfully the current project but also to undertake more projects in future.

However, in addition to what was found about the knowledge sharing process, various complexities emerged which reflect the problems and issues involved in it. For instance, the study

found various factors which substantially moderate this sharing process. First, it was revealed that both the knowledge donor and the recipients have sufficient motivation to share and learn knowledge respectively. Their motivation arises from the accomplishment of the alliance goals i.e. successful project completion (Mowery, Oxley, & Silverman, 1996; Simonin, 2004). To achieve this goal, they eagerly acquire/share the knowledge required to develop a suitable concept design which meets the specific requirements of the client. Otherwise, they could not have completed the project, earned their consultancy fees, and avoided the sort of failure which can cause significant damage to the reputation and corporate profile of both companies. NESPAK's engineers are also found to be sufficiently motivated to learn and acquire modern knowledge from advanced foreign partners in order to create a self-reliance to undertake such projects in future and replace foreign consultants because it has been NESPAK's philosophy since its inception (NESPAK, n.d.-b). NESPAK subsequently markets such knowledge in winning more projects in future and improving market success and competitive edge (Cadogan, 2012; Tsai & Shih, 2004).

This research also found that the friendship and personal relationships between local and foreign engineers has also been developed by supporting each other at a personal level which also helps acquisition of the required knowledge. Because of long experience of working with international partners, NESPAK engineers have a sound cultural understanding and intelligence to work with culturally diverse workforces. Such experience allowed them to develop friendship and information personal relationships with foreign engineers at personal level and encourage them to share the required knowledge and expertise particularly when foreign partners were initially reluctant to share the required knowledge (Hansen & Løvås, 2004; Ingram & Roberts, 2000; Krackhardt & Kilduff, 1990). Such cultural intelligence thus pays back considerably. Further, it was found that NESPAK's engineers also use integration and assimilation acculturation strategies (Berry et al., 1989) as they completely adopted new cabling and ducting methods, ducting, Chinese construction codes, self-compact concreting, new testing, safety measures for water, seepage and lightning in electromechanical design and safety measures for the workforce. However, in some cases, they followed an integration strategy as they made calculations in their own way, compared the results, and developed a macro-equipped Excel spreadsheet for further calculations. Engineers of both countries understand the dynamics of cultural differences and they also use

standardization/adaptation strategy to modify their working methods according to the given context (Ryans et al., 2003; Vrontis, Thrassou, & Lamprinou, 2009).

The findings also suggested that acquiring valuable knowledge from the foreign partner serves as a source of competitive advantage and subsequent market success. Consistent with marketing knowledge management literature, the local partner enhances its knowledge asset and capabilities in concept design (product design), concept implementation (product design), consultancy fee (pricing) and building corporate profile (promotion). Since the local partner acquires rare and invaluable knowledge from the technologically advanced partner, it is able to outcompete its competitors in the local markets who do not have access to such knowledge by marketing its knowledge-based capabilities built through knowledge acquisition. The knowledge and experience gained by the local host would also enable it to win more projects not only in the local market but also in other developing and underdeveloped countries that would be helpful in market expansion beyond its local region.

5.2 Contribution to the theory

Although there is plenty of research available in the literature that examines knowledge sharing from the companies of developed countries to those of developing countries, there is a scarcity of studies exploring local host's knowledge acquisition from Chinese partner in the context of international consultancy alliance. Acquisition and learning of such knowledge requires context as well as knowledge specific processes. Knowledge acquisition in international alliances has largely been studied in tightly coupled strategic alliances such as foreign subsidiaries, international joint-ventures, supplier-buyer networks, etc., (Boussebaa et al., 2014; Steiner, 2005b), while the phenomenon is relatively less explored in loosely-coupled international consultancy alliances . Thus, knowledge acquisition by local partner from its foreign partner in an international consultancy alliance and subsequent marketing of such knowledge to enhance the company's competitive edge, business volume and market share is a novel avenue explored by this research which made an invaluable contribution to the existing body of literature. Addition to that, most of the studies in this domain are quantitative in nature. However, being a rigorous and in-depth qualitative abductive approach with a single case study based on systematic combining (Dubois & Gadde, 2002), the current study dig-down the understudy phenomenon through in-depth

interviewing/exploration and detailed analysis of the available data. The study therefore offers in-depth insights gained from a rigorous, in-depth exploration of the phenomenon under study and explores unique processes followed by the host-country engineers in knowledge elicitation. This brings to the fore the complex mechanisms involved in host firm's knowledge acquisition from its international partner, showing how knowledge is acquired and learnt; how different factors play a moderating role to make knowledge acquisition happen; and how NESPAK markets itself as having state-of-the-art diverse specialties and knowledge to enhance its competitive edge and market share and success through winning new projects. Such in-depth insights add substantial value to the existing body of literature.

5.3 Implications for practice

Engineering knowledge involves both explicit and tacit knowledge. Project leaders can get insights from this research and promote their respective ways to acquire and learn knowledge from foreign partners in integrated project working. Similarly, they can understand the interaction of explicit and tacit knowledge in performing consultancy practice and subsequently facilitate engineers to learn such knowledge. Engineers can also understand their ways of learning different kinds of knowledge in performing consultancy work. Although the current study offers few factors moderating learning and knowledge acquisition processes, managers should explore such factors in the given context to understand their influence and make them conducive for knowledge acquisition. Finally, Although NESPAK is already involved in major development projects of CPEC, there are still a large number of projects such being announced by CPEC. NESPAK should establish a marketing strategy to market its state-of-the-art knowledge as a strategic tool to win those projects. Marketing such knowledge and specialties, NESPAK's MD already proposed a broader and wider role in CPEC's projects in rail network and other areas in addition to power and road (NESPAK, n.d.-a). Such an initiative should also be taken to target other projects not only in Pakistan but abroad as well.

5.4 Limitation and future research directions

Although this research provides an interesting understanding of knowledge acquisition by NESPAK from its counterpart. Findings are embedded in the context of this case study and may not be generalizable to a different context although the findings are in line with other studies

conducted in different countries in related streams of literature. The study adopted a qualitative approach using a limited number of in-depth interviews; the model emerged in this study may be validated by using a quantitative research approach. The study examines the knowledge inflow from internationalized Chinese to Pakistan-based host firms but does not focus the knowledge outflow from the host firms to Chinese firms. During the interviews, we noticed that the engineers from NESPAK asked some very intelligent questions, and Chinese engineers working in Pakistan were unable to answer them without referring to their senior engineers for a response. Surprisingly, those questions were also quite new and challenging for the senior engineers from China, and they appreciated the new perspectives identified by the Pakistani engineers. This shows that although the outflow of knowledge from the Pakistani firm was low in comparison to the inflow from Chinese firm, the Chinese firm was still learning some new technical perspectives in terms of application and installation of engineering methods, models, technologies and their adaptation to make them compatible with the unique project site conditions. Thus, future studies may focus on knowledge acquisition by technologically advanced partner from technologically less advanced partner.

We also propose that future studies should use a longitudinal approach to examine the role of culture, socialization processes, technical differences, and ethical considerations in more detail. It is important to examine the role of these factors in different time spans to provide more concrete evidence relating to the knowledge sharing between internationalized Chinese firms and their host-countries partners. Future studies can also consider the moderating and mediating roles of some other variables, such as the role of partnering firms' absorptive capacity to improve learning and knowledge sharing process in international alliances.

5.5 Conclusion

The paper makes an important contribution to the domain of marketing knowledge management by studying the process involved in building a competitive edge through knowledge acquisition in international consultancy alliance. The process of knowledge acquisitions, complexities and nuances are studied that are likely to enrich both literature and the practice.

Despite its limitations, this study provides useful guidelines for researchers to understand the processes of knowledge acquisition in international alliances and marketing of newly acquired for

competitive edge. The study offers important suggestions to the managers to augment benefits derived from a strategic alliance.

6. References

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