Relationship of External Knowledge Management and Performance of Chinese Manufacturing Firms: The Mediating Role of Talent Management

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Abstract

For the competitive market, both talent management and knowledge management of employees are key primary resources in organizations. While it is well known that in today's emerging economy, intangible resources like knowledge and human capital seem as the soul of survival; few studies have examined the effect of external knowledge management and talent management strategies in Chinese manufacturing firms. This study tries to bridge this gap by examining the importance of external knowledge management and talent management, Moreover, how this consequence can affect in particular industry for the economic growth of China? Total 249 responses were collected through structured questionnaire from manufacturing organizations located in Shanghai and Suzhou, China. PLS-SEM techniques via Smart-PLS (3.2.4) software has been used to test and validate proposed model and the relationships among the hypothesized constructs. The findings of this study show that external knowledge management (E-KM) and talent management both contributes positively to the performance of manufacturing firms. Moreover, talent management as mechanism demonstrated strong mediation effects between E-KM and performance. In researchers' point of view and results revealed the evidence by linking E-KM with TM-OP and TM as a mechanism between E-KM and OP. Such insights may helpful for managers to target sustainable current and future growth of the organizations and also, to overcome the shortage of talented and qualified worker's issues in fast-growing emerging economies.

Keywords: external knowledge, talent management, emerging economy, manufacturing industry, China

1. Introduction

The economic deployment in Asian continent has been increasingly becoming persuasive and underlined a dramatic change from western developed countries to the Asian continent. The foreign direct investment (FDI) in that continent flows accounted US$ 383 billion in 2014 with 31.9 percent contribution in the global economy; higher than Europe and North America that accounts 23.3 percent and 28.8 percent respectively; and has contributed 38 percent of the world GDP (UNCTAD, 2015). In the whole scenario, manufacturing industry (hereafter 'MI') attained rapid growth in Asia pacific countries due to (FDI) and has contributed 32.6 percent of the world manufacturing value. In that case, particularly China is so for running ahead, accounting $ 2.05 trillion manufacturing output even higher than developed countries like USA (Lu et al., 2015). It has achieved milestones in 'MI' and become a leading manufacturing nation in the world with title engine of growth in Asian as well as global economy.

However, equally, create more demands for skilled and talented labor in the industry and facing deficiency in innovation, because of competition among local and international enterprises to maintain and retain talented and skilled labor (SL). According to China's National Bureau of Statistics (2006-2010), FDI share in 'MI' fell from 61 percent to 56 percent because of concomitant labor market effects. Rising demand for more skilled and talented labor in the 'MI', China's vocational education and training system (VETS) also receives criticism for not supplying sufficient workers with appropriate skills (Blecher, 2013). In that scenario, Chinese 'MI' has been forced to compete and upgrade its competitiveness by inimitable resources (i.e. SL) among emerging economies and need long-term planning to overcome these issues for the sustain future growth and development. Moreover,

turnover ratio becoming prevalent in '*MI*' (Sheldon & Li, 2013), and the organizations are spending a huge amount to maintain and retain skilled labor. The dominance and rapid demand of talented and skilled employees in the Chinese economy raise important concern for both researchers and practitioners to address this issue with a possible solution.

Chinese MI facing talent as a scarce resource, because of not supplying sufficient workers with appropriate knowledge and skills that are the critical situation for industries' further development. Close scrutiny is required by practitioners and researchers to address these issues in order to provide a strategic weapon for long-term survival and development, nevertheless, not only for China but even for the development of the world (Lu et al., 2015). Moreover, the previous study revealed talent management (hereafter '*TM*') and knowledge management (hereafter '*KM*') in US base multinationals and privately-owned enterprises (Collings, Scullion, and Vaiman, 2011). However, it is, questionable either this current notions and postulations in literature related to US context help to understand and explain '*TM*' and '*KM*' in another context especially in emerging economies like China (Thunnissen, 2013). As it is claimed that the shortage of talented and knowledgeable employees are greatest barriers to current and future growth of China (Ma &Trigo, 2008).

2. Theoretical perspectives and Hypothesis

2.1 Talent Management (TM)

Acquiring talented people has become an all the time challenge for those who are responsible for turning the wheel towards success. As organization is known by the people it keeps and in today's business world, '*TM*' has become one of the most significant buzzwords and omnipresent phenomenon in organizations. The commencement of the concept is recognized in the 1990s when the proclamation war for talent presented by Mckinsey to address the shortage of talented people in the future business market. The key to success for any organization is the ability to ensure inflow and retention of talented people by creating an environment in which people have freedom to think what they want, share their ideas among each other and are empowered to work what they want to deliver that organization desire.

From last few years, in contemporary workplaces especially in emerging economies, practitioners and academia related people have evolved considerably with '*TM*' literature (Meyers & Woerkom, 2014; Minbaeva & Collings, 2013; Nijs et al., 2014; Schiemann, 2014; Vaiman & Collings, 2013). A different perspective has been canvassed with different emphases to conceptualize and contextualize '*TM*' (Iles, 2013), and huge controversy has been found between researchers with the debate of '*TM*'. Recent literature is seen '*TM*' as bridge field drawing upon the concept of capacity theory, HRM, marketing, operations, the resource-based view and HRM, focusing human capital thinking with assumptions to add value by the talented employees and would help to generate superior outputs (Sparrow & Makram, 2015).

For the purpose of this study, we adopt the definition proposed by (Collings & Millahi, 2009). As, '*TM*' is the processes that involve the systematic identification of key positions which differentially contribute to the organization's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization. These '*pivotal positions*' contribute to the organizational performance because these positions differentiated capability among the top and low performer employees that contribute more in organizational competitive performance (Heinen & O'Neill, 2004), therefore, such positions need to be acknowledged and filled with top performers (Mellahi & Collings, 2010). Consequently, the strategic role of HR practitioners is to ensure the availability of sustainable talent pool, and these pivotal positions adhere adequately with required talented employees in the organization.

Asia is considered as a densely-inhabited region in the world, but facing an acute challenge with talent shortage (Horwitz, 2012). Previous studies focused in Asia pacific region (For example, Hartmann, Feisel, & Schober, 2010; Skuza, Scullion, & Mcdonnell, 2013). However, despite these numerous research, there remain a need to examine further the contextual nature of '*TM*' and the prevalence of diverse '*TM*' practices within organizations (Dries, 2013; Festing, Schafer, & Scullion, 2013; Sidani & Al-Ariss, 2014), and '*TM*' practices in emerging market economies especially in '*MI*' like China (Chadee & Raman, 2012; Cooke, Saini, & Wang, 2014). The talent shortage is predicted one of the greatest challenges for organizational sustainability (Hartmann et al., 2010), and also organizations do not only have to compete for the best talent in the market but also struggle with high turnover rates (Lui, 2006). International-level skilled/knowledge and talented employees are limited in china especially in the managerial sector, and estimates forecast that China would need over 75,000 qualified managers in the next ten to fifteen years (Farrell & Grant, 2005). Moreover, MNCs facing a shortage of managerial talent to run their

business and rising employee turnover issues (Zheng, Soosay, & Hyland, 2008). There are several reasons for the deficiency of managerial talent in China. For example, historical and demographic reasons, nation-wide famine policy (1959-1961), interruption of cultural revolution (1965-1975), one child policy (1979-2015), brain-drain, lack of cultivated managerial talent in education system, poorly address the need of managerial talent after the accession of FDI and WTO, an oversupply of young workers lacking the experience or education for managerial roles, and complex relationship networks 'Guanxi' (Zhang & Bright, 2012). Therefore, ' 'TM' and KM' are the major concern for both MNCs and domestic organizations, also need to develop effective strategies for long-term survival in a competitive environment (Ma & Trigo, 2008). Based on above-mentioned discussion, we proposed following hypotheses;

Hypothesis 1: Talent management contributes positively to the organization performance.

2.2 External-Knowledge Management (E-KM)

In today's knowledge-based emerging economy, knowledge plays a strategic role in organizational success; as it signifies intangible competitive resource, operational routines and creative processes that are hard to imitate (Carlsson, 2003). It can be defined as information combined with experience, context, interpretation and reflection (Davenport & Volpel, 2001). Acquisition of knowledge is an integral part of 'KM' process and usually acquire from two sources. For example, internally (i.e. intra-departmental communication channel, intelligence teams, R & D department, and knowledge system) and externally (i.e. competitors, academic institutions, consulting firms, and industry associations), and the integration of both sources plays vital role for organizational effectiveness (Choi, Poon, & Davis, 2008). Moreover, organizations that constantly owns, acquire and manage updated knowledge through proper 'KM' strategy may sustain a superior position among competitors (Sanchez et al., 2015). Previous studies have confirmed that 'KM' has a positive association with organizational performance, innovation and competitiveness (for example, Chadee & Raman, 2012; Hsiao, Chen, & Chang 2011). In line with reasoning, we proposed following hypothesis;

  Hypothesis 2: External knowledge has a positive effect on organization performance.

In the previous study, mostly the internal 'KM' system and processes have been demonstrated, however, neglect the role of external sources of knowledge especially in emerging economies, where formal institutions and infrastructure similar to those in Western industrialized countries either do not exist or are underdeveloped. To date, most studies observed either implicitly or explicitly on internal sources of knowledge, while the role of external sources both explicit and tacit has been overlooked in the 'MI' of emerging economies like China. The core emphasis of this study is to analyze the mediating role of 'TM' between the external- 'KM' and organizational performance. However, specific to the effect of external sources of knowledge in 'MI' seems underdeveloped in emerging economies (Chadee & Raman, 2012) like china. As, both tacit and explicit knowledge if managed through proper strategy, may become a key resource of competitive advantage (Sanchez, Marin, & Morales, 2015). Moreover, knowledge related to profitability and competitiveness inside and outside the organization is of being imperfectly known (Zhao et al., 2012). This study fills the research gap by focusing on the external source of explicit and tacit knowledge. Those organizations which acquire and exploit external sources of knowledge (explicit and tacit) are probable to be more effective, innovative and perform better by being able to operate outside of their knowledge frontier. In support, Chadee & Raman (2012) argued that both external knowledge and talent management has a positive association with organizational and that the latter has strong mediating effects on the relationship between external knowledge and firm performance. From the above literature, we proposed the following hypotheses:

Hypothesis 3: External knowledge has a positive relationship with talent management.

Hypothesis 4: Talent management mediates the relationship between external knowledge management and organization performance.

3. Methodology

3.1 Target Population, Sample and Data Collection

Data were collected with the help of guanxi network, from 117 Chinese manufacturing firms located in Shanghai and Suzhou, well-known with leading MI representing financial industry centers and industrial park respectively. Both cities are considered as Chinese's economic hub varying degrees of the market economy. Managerial staff having more than 10-year experience were targeted to complete the survey, each firm were given five questionnaires, and in response 265 filled questionnaires were received from 53 firms (response rate about 45.29%), out of a total 219 were useable enough to analyze the data, representing a response rate of 37.43%. Following previous studies (Liao & Chuang, 2004; Sun, Aryee, & Law, 2007; Liao et al., 2009), we controlled

respondent's education level (69.41 % hold master degree, 23.59 % hold below master degree); gender (female 73.51%, male 26.49%); and age (0% between 0-20 years of age, 71% between 21-40 years of age, and 29% between 41-60 years of age). We strategically selected companies that are more than five years of incorporation and employed between 24 up to 250 employees. Chinese version survey was conducted through email and telephone with the help of guanxi network and Chinese research mates, because of the language barrier. For the accuracy of the survey, we followed an iterative translation procedure by (Liao et al., 2009). Some survey items were reworded accordingly and before collecting the data, a questionnaire was discussed with HR and managerial related employees, supervisor and academics experts. To analyze the data, partial least square-structure equation modeling (PLS-SEM) technique is applied, as a number of recent studies of PLS-SEM have supported its advantages over covariance-based modeling. Moreover, due to sample size limitations of the current study, this technique is useful to analyze for small samples size data (Sosik, Kahai, & Piovoso, 2009).

3.2 Variables and Measures

3.2.1 External Knowledge Management (Independent Variable-IV)

KM was measured with six items scale with two-dimensional strategy, first, three represents knowledge codification and remaining three are personalization, developed by (Lee & Choi, 2003). In order to identify and evaluate that company utilize an external source of KM strategy based on five-point Likert scales, respondents were asked to rate their company and the higher the rating given by the respondent to each item, the more the company involved in external KM strategy. These scales have been also used and validated in other studies, e.g., (Lopez-Nicolas & Merono-Cerdan, 2011).

3.2.2 Talent Management (Mediator-MV)

'TM' was measured with six items scale adopted from (Chadee & Raman, 2012). Researchers in previous studies also formulated a number of several *'TM'* measures to capture various *'TM'* practices according to organizational context, e.g., (Hatch & Dyer, 2004). As Chinese MI compete with each other for talented employees because of the limited talent pool with a focus on performance, respondents were asked to rate *'TM'* practices relating to the identification of recruitment, retention, rewarding of talented employees, selection, and training talent gaps, concerning organizational criteria on a 5-point Likert-type scale.

3.2.3 Organization Performance (Dependent Variable-DV)

Organization performance was measured using financial performance indicator i.e. total revenue growth (TRG) and operational performance draw from previous studies (Flynn, Huo, & Zhao, 2010; Chadee & Raman, 2012) respectively. Both performance indicators have been widely used in the literature (Cho, Ozment, & Sink, 2008; Coltman, Devinney, & Midgley, 2011; Feng et al., 2013). Respondents were asked to rate OP comparatively using a five-point Likert scale.

3.3 PLS Path Model Estimation

To assess the path coefficient in the structural model, first, indicator reliability (IR), internal consistency reliability (ICR), convergent validity (CV) and discriminant validity (DV) of the measurement model were examined (Wong, 2013).

3.3.1 Indicator Reliability (IR)

As reliability is a condition for validity, first we checked IR to ensure the associated indicators have much in common that is captured by the latent construct. Table 1. Showed the outer loadings for all latent variables, all are above than 0.4 threshold level (Hair et al., 2013). Meanwhile, one indicator (TM-2) is found to have loading 0.682 and to retain that indicator in the model, a loading relevance test is performed. After removing that indicator from PLS mode, the value of average variance extracted (AVE) and composite reliability (CR) didn't increase (over the 0.5 thresholds), so it is not eliminated from the model.

3.3.2 Internal Consistency Reliability (ICR)

CR is used to evaluate the measurement model's ICR. To validate a satisfactory CR, the threshold level of 0.60 or higher is required in exploratory research but not exceeding the 0.95 level (Bagozzi & Yi, 1998; Hair et al., 2013). In our case, the CR for the construct *'TM'*, E-KM and OP are indicating high levels of the ICR. Results are shown in table 1.

3.3.3 Convergent Validity (CV)

CV is used to explain the indicator's variance in the model. The AVE of the latent constructs (*'TM'*, E-KM, and OP) can be used with 0.5 threshold level as evidence of CV (Fornell & Larcker, 1981; Bagozzi & Yi, 1998). Table 1. Showed all constructs confirmed the minimum level of CV.

Table 1. Outer loadings

Constructs (Latent Variables)	Outer Loadings (OL)	CR	AVE
Talent Management ('TM')			
TM-1	0.779	0.885	0.561
TM-2	0.682		
TM-2	0.735		
TM-4	0.788		
TM-5	0.775		
TM-6	0.731		
Eternal Knowledge Management (E-KM)			
KC-1	0.813	0.928	0.684
KC-2	0.794		
KC-3	0.835		
KP-1	0.942		
KP-2	0.834		
KP-3	0.842		
Organization Performance (OP)			
TRG-1	0.834	0.910	0.591
TRG-2	0.786		
OP-1	0.709		
OP-2	0.718		
OP-3	0.744		
OP-4	0.829		
OP-5	0.760		

3.3.4 Discriminant Validity (DV)

In previous research, Fornell-Larcker Criterion (Fornell & Larcker, 1981) and cross loading examination is dominant approaches, used to assess the DV. However, recently another study criticized that approach and preferred the Heterotrait-Monotrait Ratio (HTMT) approach to assess the DV.

To establish DV in our study and cross verification, both approaches are adopted. Table 2 shows that the square root of AVE for E-KM, OP, and TM, are much higher than the corresponding latent variable correlations. We followed HTMT.85 approach, as it is the most conservative criterion and achieves the lowest specificity rates of all the simulation conditions. Results in table 2, confirmed that there is no discriminant validity problem and all values meet mini threshold levels.

Table 2. Fornell-Larcker Criterion & Heterotrait-Monotrait Ratio (HTMT)

Latent Variable Correlations (LVC)				Discriminant Validity met? (Square root of AVE>LVC?)	Discriminant Validity Established (HTMT) (0.85- criterion)		
	E-KM	OP	TM		(E-KM)	(OP)	
E-KM	**0.827**			Yes			
OP	0.628	**0.769**		Yes	(0.670)	Yes	
TM	0.642	0.664	**0.749**	Yes	(0.697)	(0.675)	Yes

Note: The Square root of AVE values is shown on the diagonal and printed in italic bold; non-diagonal elements are latent variable correlations (LVC).

3.4 Evaluation of the Structural Model in PLS-SEM

To evaluate the structure model in PLS-SEM, we followed collinearity assessment and coefficient of determination tools. To check collinearity issue, variance inflation factor value (VIF*) is obtained. As VIF value of 5 or above typically indicates such problems (Hair et al., 2011). In our model *'TM'* and OP act as dependent variables because they have arrows (path) pointing towards them. Therefore, we need to run two different sets of linear regressions. The Collinearity assessment results are summarized in Table 3. All values of VIF are lower

than 5, suggesting no indicative of collinearity between each set of predictor variables. Another evaluation tool, the coefficient of determination (R^2) is used in the model, shown in table 5. The threshold value of 0.25, 0.5 and 0.7 are referred as the weak, moderate and strong coefficient of determination (Hair et al., 2013). In our research model, it suggests that construct E-KM and *'TM'* can jointly explain 51% of the variance of the endogenous construct OP, also it reveals the R^2 for other latent construct E-KM explain 41.3% of *'TM'*s variances. OP and *'TM'* are the main constructs of interest.

Table 3. Collinearity Assessment

Dependent Variable: OP			Dependent Variable: TM		
Constructs (1st Set)	VIF	Collinearity Problem? (VIF>5?)	(2nd Set)	VIF	Collinearity Problem? (VIF>5?)
E-KM	1.703	NO	E-KM	1.000	NO
TM	1.706	NO			

Note: *Smart-PLS doesn't generate VIF, so IBM-SPSS is used to obtain VIF values.

3.4.1 Path Coefficient

To test the hypothesis, path coefficient and related t statistics via bootstrapping can use to determine the relationship between the constructs. Table 4 summarized significance testing results of the structure model path coefficient. The PLS structure model results enable us to conclude that, E-KM has the strongest effect on *'TM'* (0.642), followed by *'TM'* (0.443) on OP, and confirming our various hypotheses about the construct relationships.

Table 4. Significance Testing Results of the structural Model Path Coefficients

Hypothesis	Path:	Path Coefficient	t-Values	P-Values	Hypothesis
H_1	E-KM → OP	0.344	04.281	0.000	Accepted
H_2	E-KM → TM	0.642	13.294	0.000	Accepted
H_3	TM → OP	0.443	05.806	0.000	Accepted

3.4.2 Predictive Relevance (Q2)

To propose either model has predictive relevance for all the endogenous variables, Stone-Geisser's predictive relevance (Q2) is important because it checks if the data points of indicators predict in the reflective measurement model of endogenous construct accurately. Table 5 summarize the results and confirmed that our model demonstrates good predictive relevance, as Q2 is larger than zero (Chin, 1998).

Table 5. Results of Coefficient of Determination (R2) and Predictive Relevance (Q2)

Endogenous Latent Variable	R^2 Value	Q^2 Value
OP	0.510	0.321
TM	0.413	0.234

Note: Q^2 is the 1-SSE/SSO value as shown in the Construct Cross-validated Redundancy section in blindfolding.

3.4.3 The f2 and q2 Effect Sizes

To complete the structure model evaluation process, the final step is to assess the effect of specific exogenous construct on the endogenous construct. In order to do so, f2 and q2 effect sizes are achieved to assess the effect sizes through R2 and Q2 respectively. In our model, we followed Cohen's (1988) guideline that is 0.02, 0.15 and 0.35 are referred as small, medium and large effect sizes, respectively. Table 6 summarize the results of f2 and q2 effect sizes.

Table 6. Results of f^2 and q^2 effect sizes

(OP)	Path coefficient	f2 Effect Size	q2 effect size
E-KM	0.344	0.049	0.043
TM	0.443	0.218	0.084

3.4.4 Mediation Test

For mediation analysis, we followed Preacher & Hayes (2008) two-step procedure of bootstrapping instead of Sobel (1982) test, because it does not have strict distribution assumptions (Hair et al., 2013). Mediation analysis results are presented in table 7, explained 40.7% of E-KM's effect on OP can be explained via the 'TM' mediator which demonstrate partial strong mediation with threshold level 0.2 (Hair et al., 2013). These findings lead us to accept our hypothesis H4.

Table 7. Mediation Analysis

Hypothesis	Procedure	Path	Path Coef.	Indirect Effect	S.D.	Total Effect	VAF	t-Values	Sig. Level	P-Values	Hypothesis
H₄	Step 1: Direct effect (without mediator)	E-KM→ OP	0.635			n/a		14.274	***	0.000	Accepted
	Step 2: Indirect effect (with mediator)	E-KM→ OP	0.443	0.305	0.048	0.748	0.407	6.35	***		
		E-KM→ TM	0.642								
		TM→OP	0.443								

4. Conclusion

In recent years, *'TM'* has been addressed worldwide by both researchers and practitioners. In this study, our main objective was to investigate the role of *'TM'* and KM in the manufacturing sector, where knowledge and human capital both are core resources, and act as main drivers for its survival. Though the effects of knowledge and human capital are well researched in previous studies, we highlighted some gaps in knowledge intensive organizations. First, the role of external sources of knowledge (both explicit and tacit) and strategic *'TM'* (managerial perspective) has been overlooked in Chinese MI. Second, the interplay between these drivers and OP (Financial and Operational) are under-researched. Third, EK (both explicit and tacit) through codification and personalization strategy and *'TM'* as mediator is analyzed. Although China is most populous and emerging country in the world but demand and supply of talented employees are unbalanced (Chadee & Raman, 2012), which may impede their current and future growth especially in MI. Also, due to brain drain and knowledge diaspora both domestic and MNCs in China facing a shortage of talented employees that may hinder their development to contend their competitors (Tung, 2008). To overcome these issues, both *'TM'* and KM of employees are significance strategies for the organizations (Uen et al., 2012). The findings of this study confirm that both *'TM'* and E-KM contribute positively to the performance of manufacturing firms. The PLS structure model results enable us to conclude that E-KM has the strongest effect on *'TM'* followed by *'TM'* on OP, consequently leads us to accept our hypothesis 1, 2 and 3. Mediation analysis results also reveal that *'TM'* demonstrates partial strong mediation effects between E-KM and performance, which leads us to accept hypothesis 4.

5. Discussion

Thus, the main concern of *'TM'* is to recognize and fill strategic (pivotal) positions based on well-established systems and processes of recruitment, retention, remuneration, reward and development of employees. In response, organizations have adequately competent workforce, low absenteeism, and attrition ratio (Bethke-Langenegger, Mahler, & Staffelbach, 2011), otherwise, performance may adversely affect due to lack of talent pipeline, and also, the deficiency would occur between talent and business strategies (Guthridge, Komm, & Lawson, 2008). Moreover, it advocates certain key positions that contribute more to the organization's sustainable competitive strategy, and that management can be proactive in developing a talent pool to fill these positions (Boudreau & Ramstad, 2007; Cappelli, 2014).

The previous literature demonstrates that organizations having employees with knowledge, skills, and abilities are a major source of their competitive advantages (Collings & Mellahi, 2009; Lewis & Heckmann, 2006). Regardless of this awareness still organizations are facing a shortage of skilled and talented employees (Burke & Ng, 2006). In general, the availability of skilled and talented employees always a critical element of organization, especially due to migration of highly skilled workers to abroad and the supply is continuously decreasing (Oltra & Vivas-Lopez, 2013). Also, when aging people leaves the organization, a pool of knowledge also leaves with them and it becomes a great challenge for the organization to sustain its competency in the market. This war for talent was prompted by the realization that talent shortages were increasingly becoming one of the biggest HR concerns for multinational corporations (Makela, Bjorkman, & Ehrnrooth, 2010). However, those organizations that have developed their *'TM'* process on the strategic ground hold clear visibility on future realities. To this end, a fusion of *'TM'* and KM holds significant competitive implications for advanced technological organizations; also, certified that its human resources are employs to the fullest extent (Vance & Vaiman, 2008; Lengnick-Hall & Andrade, 2008).

6. Managerial Relevance and Limitations

Our study also has some practical implications. First, Chinese MI facing one of the greatest challenges is to recruit and retain talented and qualified employees. Also, Chinese employees preferred to join MNCs domestic

organizations. It, therefore, needs to develop effective *'TM'* strategies that can balance the supply and demand of qualified and talented employees in the organizations. In that particular scenario, the organization should adhere training and development programs which may improve, retain and develop a talented pool of current and next-generation employees. Also, partnering with educational institutes, trade bodies, consulting firms may helpful to alleviate the shortage of qualified workers. The managers of targeted sectors may use this study to overcome *'TM'* and required qualified worker's issues. Moreover, due to a global shortage of qualified and talent employees, it is suggested to the managers of the organizations to invest in their own training and development programs to grow their own talent, as well as ensuring the overall welfare of their employees in order to improve their retention rates. This study contributes to the growing literature on *'TM'* and KM in Chinese MI. Nevertheless, it has several limitations like all research. First, the sample size is an inherent limitation of the study. Because of response rate and language barrier. Second, the specific targeted area was chosen for data collection, which should be addressed in future research. Third, only EK (with tacit and explicit) concept is analyzed in the framework, however, future research mat explores detail analysis on both external as well as internal KM strategies. It would be valuable for researchers to explore more on targeted sample like managerial as well as technical staff of the organizations in other developing and developed countries to gain further insights.

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