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Revti Raman Sharma Doren Chadee Banjo Roxas

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Effects of knowledge management on client-vendor relationship quality: the mediating role of global mindset

Revti Raman Sharma, Doren Chadee and Banjo Roxas

Revti Raman Sharma is based at the School of Marketing and International Business, Victoria University of Wellington, Wellington, New Zealand.
Doren Chadee and Banjo Roxas are both based at the Department of Management, Deakin University, Melbourne, Australia.

Abstract

Purpose – This study argues that knowledge management (KM) by itself has only limited effects on client–vendor relationship (CVR) of global providers of highly customised services. Rather, it is the ability of top management to properly evaluate and utilise a vast array of complex knowledge which allows global firms to develop and maintain superior CVR. The paper tests the proposition that global mindset (GM) of top management mediates the effects of KM on CVR quality.

Design/methodology/approach – The paper uses survey data from a sample of 68 international service providers (ISPs) in the information technology sector in India and partial least squares approach to structural equation modelling to test the hypotheses.

Findings – The results show that both KM and GM have positive and statistically significant effects on the quality of CVRs. The results also confirm that the GM of top management has significant and substantive mediation effects on the relationship between KM and CVR quality.

Research limitations/implications – The small size of the sample and the focus on ISPs in a single country constitute the main limitations of the study. Future research should ideally draw from a larger sample of ISPs from multiple countries and sectors in order to allow for greater generalisation of the findings.

Practical implications – ISPs will benefit from developing the GM of their top management teams to enhance their CVRs.

Originality/value – The paper provides new insights into how, in an international context, firms can transform their KM into superior CVR quality through the development of GM.

Keywords India, Relationship management, Knowledge management, Global mindset, International outsourcing

Paper type Research paper

Introduction

The role of client–vendor relationships has been identified as a critical factor in influencing the performance of firms in general and for service providers in particular. This is because effective relationships allow business partners to leverage each other's resources and learn from each other (Chadee *et al.*, 2016; Kale *et al.*, 2000; Mathews, 2006). The development and maintenance of effective relationships is more critical in the services sector because of the intangibility, inseparability, heterogeneity and perishability of services (Zeithaml *et al.*, 1985). The very nature of the tasks involved in services means that service providers and their clients work closely with each other and share sensitive information about their businesses. Inevitably, service providers often become integral parts of the value chain of their clients, where the success of a client and its service provider are intertwined because the latter's failure is likely to affect the client adversely. Good quality relationships between service providers and their clients greatly reduce the risks of failure in the delivery of high-quality customised services to clients (Kedia and Lahiri, 2007; Leal-Millan *et al.*, 2016; Raman *et al.*, 2013). Thus, a critical element of success for service providers is their ability to manage knowledge from their clients effectively by developing and maintaining high-quality relationships with them.

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Knowledge management (KM) for the development and maintenance of effective client–vendor relationships (CVR) is particularly challenging for international service providers (ISPs). This is because ISPs often operate in multiple locations with different cultures, languages and institutions simultaneously. Managing knowledge in such a complex environment is even more challenging for ISPs from developing and emerging economies because of the inherent disadvantages they face by virtue of their country of origin (Denk et al., 2012; Ramachandran and Pant 2010). ISPs have been found to overcome their capability and capacity constraints (Ramachandran and Pant, 2010) by developing high-quality relationships which allow them gain access to valuable knowledge and resources of their clients (Chadee et al., 2016; Mathews, 2006). Thus, for ISPs, the capability of top management to successfully navigate through diverse cultural and institutional environments and manage a vast array of knowledge about markets, products and services is critical in developing and maintaining effective CVRs. This capability which is broadly referred to as the global mindset (GM) relates to the superior cognitive capability of senior managers to relate to diverse cultural and institutional environments (Javidan and Bowen, 2013; Levy et al., 2007) in identifying and exploiting business opportunities in an increasingly globalised world.

The main contention of this research is that while KM is important for maintaining effective relationships between ISPs and their clients, by itself it has limited influence on relationship quality for ISPs. The paper argues that the GM of top management is a critical mediating factor which transforms the effects of KM into quality relationships between ISPs and their clients. We draw from the dynamic capabilities theory (Teece, 2014) to argue that in globally oriented firms, GM serves as the mechanism which enhances the effects of KM on CVR.

This paper makes two key contributions. First, the study provides empirical support for the critical role of GM in enhancing the effects of KM on CVR. This is an important contribution because the interplay between KM and GM has not been fully explored to date. Second, by drawing from the experience of a sample of ISPs in India, the study enhances our understanding of KM practices of ISPs from developing and emerging economies which are relatively less understood.

Literature review and conceptual model

The three constructs of interest in this study, namely, KM, GM and CVRs are dynamic capabilities of ISPs. These capabilities can be developed, integrated, reconfigured and redeployed to meet the changing and diverse business environments in which ISPs operate (Teece, 2014). ISPs that have successfully developed and leveraged these dynamic capabilities are more competitive in responding to changes in their global business environments. In this study, we offer more nuanced explanations on how KM enhances CVR through the mediating role of GM.

Client–vendor relationship quality

ISPs are people-based knowledge-intensive firms where relationships are critical in servicing clients from different countries. Good CVRs allow ISPs to provide high-quality services by leveraging advantages related to relational capital, co-specialisation and mutual learning (Kale et al., 2000; Lahiri and Kedia, 2009). Doing business across national

boundaries involves additional complexities related to different institutions, cultures and languages (Klafke *et al.*, 2016). Developing strong relational capital often helps overcome such barriers (Peng *et al.*, 2009), particularly in the provision of highly customised technical services, which require service providers to have a deep understanding of their clients' businesses. ISPs often work on their clients' premises for an extended period of time and have access to sensitive information. In such an environment, good CVR based on a high level of trust on both sides helps improve the quality and speed of service delivery.

CVR have been found to allow alliance partners to lower transaction costs and extract economic efficiency through the synergistic combination of assets, knowledge and capabilities (Dyer and Singh, 1998). High-quality relationships with business partners are a good source of local learning and networking and lead to positive organisational outcomes (Yu and Sharma, 2016). Recent evidence confirms that such relationships also enhance the performance of ISPs (Lahiri and Kedia, 2009; Raman *et al.*, 2013). Good quality relationships have been found to increase the value of mutual ventures by at least 15 per cent through enhanced innovations (Enlow and Ertel, 2006), client satisfaction and service delivery and through synergistic utilisation of mutual resources (Ata and Toker, 2012; Enlow and Ertel, 2006).

Knowledge management

Knowledge is a strategic organisational resource which can be a source of sustainable competitive advantage. The knowledge-based view of the firm suggests that knowledge, especially those that are tacit in nature, is a sustainable basis for competitive advantage because these are likely to be rare, inimitable and non-substitutable (Barney *et al.*, 2001; Grant, 1996; Kogut and Zander, 1992). Tacit knowledge resides with individuals from both within and outside the organisation, has no explicit form, is unique to the firm and is embedded in complex processes and routines within the firm. The implicit, unarticulated and ambiguous nature of tacit knowledge prohibits immediate replication or duplication by competitors and, as such, can constitute a powerful source of competitive advantage (Kogut and Zander, 1992; Wang and Han, 2011). A main tenet of KM is that firms need to develop their capability to search, acquire, create, organise, share and transform knowledge towards the identification and exploitation of competitive advantage.

Although KM has been found to generally enhance organisational outcomes (Lin, 2015; Zack *et al.*, 2009), research specific to the effects of KM on CVR remains underdeveloped and scant. Tseng (2014) finds that supplier relationship management partially mediates the association between KM capability and the performance of large Taiwanese corporations. They found that KM enhances CVR because information and knowledge sharing improves mutual trust and collaborative efforts in meeting operational challenges. Similarly, Holzweber *et al.* (2012) argue that in knowledge intensive firms, such as ISPs, clients and vendors co-create products and services which can only be successfully achieved in the presence of strong relationships based on trust. Along similar lines, effective KM has been found to improve overall client satisfaction (Ku and Fan, 2009), which in turn results in stronger CVRs.

KM, particularly the capability of ISPs to acquire, absorb and exploit knowledge also plays a key role in the development of the GM of top management teams (TMTs). KM enhances

"**These firms can potentially learn from the experience of Indian international service providers in enhancing their client-vendor relationships by developing global mindset of their top management teams.**"

> **"Professional development programs which are designed to improve the overall global mindset of top management teams should lead to better quality client-vendor relationships."**

learning in organisations and assists TMTs in improving their capacity to relate effectively to the global business environment. An organisation's superior capability for identifying and seeking relevant knowledge about industry trends, competition, socio-economic and cultural factors that characterise its foreign markets is often related to a globally orientated mental predisposition of its TMTs. Thus, the GM of TMTs forms part of the dynamic capability which ISP's can leverage to adapt more effectively to the external business environments and respond proactively to the unique and diverse needs of clients globally (Ku and Fan, 2009; Tseng 2014). The discussion above leads to the following hypotheses:

H1. KM contributes positively to the overall quality of CVR in ISPs.

H2. KM contributes positively to the GM of top management of ISPs.

Global mindset

Substantive research in conceptualising and defining GM can be narrowed down to the works of Levy *et al.* (2007), Story and Barbuto (2011) and Javidan and Bowen (2013). Levy *et al.* (2007) define GM as *a highly complex cognitive structure* (p. 244) which enables managers to have an open mind about cultural, institutional and strategic complexities of an increasingly globalised world and their ability to harness such diversity effectively. Building on this conceptualisation, Javidan and Bowen (2013) describe GM as "the capability to influence others *unlike* oneself and is critical to global leader effectiveness" (p. 147). Accordingly, GM comprises three dimensions, namely, the cognitive dimension – global intellectual capital (GIC), the affective dimension – global psychological capital and the behavioural dimension – global social capital (GSC) (Javidan and Bowen, 2013; Javidan and Walker, 2012).

Story and Barbuto (2011) argue that most of the extant literature on GM revolves primarily around cultural intelligence and global business orientation. They posit that managers with GM have high global business orientation and high cultural intelligence. Though many times studies have also used GM and cultural intelligence interchangeably, the two are distinctively different concepts with GM being a broader concept which includes cultural intelligence (Story *et al.*, 2014). Managers with well-developed GM are necessarily culturally intelligent, whereas culturally intelligent managers do not necessarily have a well-developed GM.

For the purposes of this paper, GM refers to the degree of top managers' familiarity with broad global, cultural and economic environments (Chadee *et al.*, 2011). This conceptualisation incorporates elements of GM from Levy *et al.* (2007), Story and Barbuto (2011) and Javidan and Bowen (2013) in the sense that it takes into consideration both the cultural and strategic business orientations of GM. Cross-cultural familiarity enables managers to understand situations using their multiple cultural lenses in making appropriate decisions in those situations (Nardon and Steers, 2008). Conversely, a lack of cultural awareness and appreciation has been found to have a negative influence on the success of international outsourcing projects (Winkler *et al.*, 2008). ISPs usually provide services to clients in multiple countries and cultures. Thus, an appreciation of other cultures is crucial in developing and maintaining good relationships with clients.

TMTs with well-developed GM are also more effective in performing roles such as managing ambiguity and uncertainty, leading culturally diverse teams and coordinating people and processes across cultures and countries (Story and Barbuto, 2011). Managers with well-developed GM have the ability to collaborate and work well with people from other cultures, integrate diverse perspectives and develop trusted relationships (Javidan and Bowen, 2013; Story and Barbuto, 2011). Managers who have high levels of awareness, sensitivity and appreciation of global issues and cultural differences are more likely to gain a better understanding of the external business environment and their client's needs. Such understanding and appreciation are likely to lead to better CVR. Hence the following hypothesis:

H3. The GM of top management contributes positively to the quality of CVR in ISPs.

Mediation effects of global mindset

Mediation exists when "the effects of stimuli on behaviour are mediated by various transformation processes internal to the organism" (Baron and Kenny, 1986, p. 1176). The research posits that in the case of ISPs the effects of KM on CVR is mediated by GM. In other words, GM serves as the mechanism through which KM enhances its effects on CVRs.

Following the upper echelon theory (Hambrick, 2007), this research argues that top management is ultimately responsible for the overall orientation of an organisation. TMTs have access to resources and capabilities, which they allocate to optimise the outcomes for the organisation. In international ventures, we argue that the ultimate responsibility to properly allocate resources in managing knowledge and developing cultural and relational capital across different cultures and national boundaries rests with TMTs. In this respect, the extent of GM of top management greatly influences the overall international orientation of the organisation. Firms which carry activities in diverse cultural, political and institutional environments are usually supported by TMTs with well-developed GM (Levy *et al.*, 2007; Nielsen and Nielsen, 2011).

TMTs have access to a vast array of knowledge from both internal and external sources such as universities, consulting firms and industry associations and client (Chadee and Raman, 2012; Segelod and Jordan, 2004). This research argues that managing such knowledge by itself only has limited effects on CVR. Rather, it is the ability of managers to properly evaluate and utilise the available stock of the firm's complex knowledge which leads to higher quality CVR. Managers with well-developed GMs are better equipped to strategically evaluate the relevance of all available knowledge and their potential benefits to the organisation. TMTs with well-developed GMs also tend to have intercultural empathy, interpersonal impact and diplomacy (Javidan and Bowen, 2013), which contribute to the development and maintenance of high-quality CVRs because of their capabilities to properly assess and interpret knowledge about markets and clients, manage ambiguity and uncertainty and work effectively across cultures and countries. This leads to the following hypothesis:

H4. The GM of TMTs mediates the relationship between KM and the quality of CVR.

The hypothesised relationships in Figure 1 show the direct effect of KM on CVR (*H1*), as well as the indirect effect through GM (*H2* + *H3*). Figure 1 postulates that KM not only enhances the quality of CVR directly (*H1*) but also suggests that this effect is mediated by GM. In testing the hypotheses, the model also controls for the effects of business experience and firm size. Older ISPs are likely to be more experienced and have more developed KM infrastructures in place which can enhance CVR. Similarly, firm size can influence CVR on the ground that larger firms have more resources to manage knowledge and develop the GM of their TMTs, which together results in better CVR.

Figure 1 Conceptual model
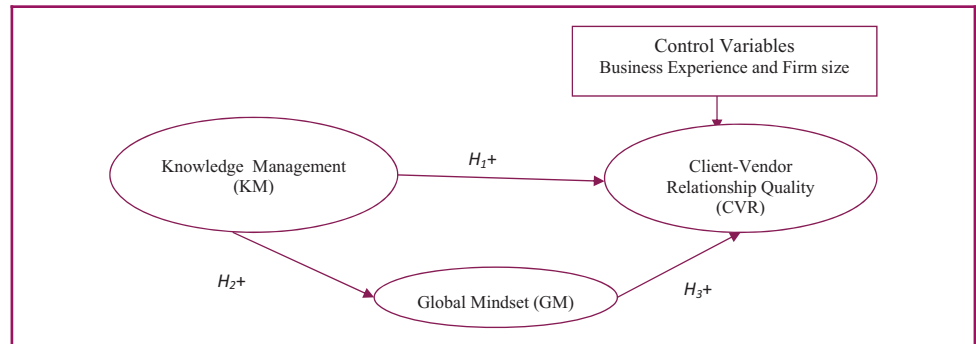
Methodology

Sample and data collection

The research is based on a quantitative research design to test hypotheses *H1* to *H4* by using data from a survey of ISPs in India and the partial least squares (PLS) model estimation techniques. PLS has been used extensively in KM research (for a recent application see: Leal-Millan *et al.*, 2016). The survey of ISPs was conducted with the collaboration of the National Association of Software and Services Companies (Nasscom), the peak industry trade body of ISPs in India. Nasscom members account for more than 95 per cent of the services outsourcing sector's revenue of approximately $146bn in 2015, with about two-thirds being from global clients (Nasscom, 2013, 2015). The ISPs in the sample are knowledge-intensive, technology-based organisations which provide a range of customised information technology (IT) supported services such as software development, payroll services, business process solutions and so on to clients worldwide.

An online questionnaire was developed and pre-tested before being endorsed by Nasscom and mailed out to all members (*N* = 842). The questionnaire was addressed to a member of the executive or TMT in each company, i.e. top managers involved in strategic decision-making. Following two reminders, a total of 68 (8 per cent) responses, which were deemed complete and useable, were retained for the purposes of analysis in this research. The relatively low response rate for online industry surveys is not unusual in an Asian country context, where response rates of as low as less than 1 per cent for surveys has been reported (Roy and Berger, 2005). India is also known to be a particularly challenging environment for researchers to collect data because of a general reluctance from businesses to disclose information (Raman *et al.*, 2013). Despite its small size, the sample is fairly representative of the population in terms of age but is somewhat over represented by larger firms in terms of number of size. About 60 per cent of respondent are 10 years or younger and 67 per cent has more than 200 employees.

Measurement

The main variables of interest are GM, KM and CVR. GM is measured based on five items related to top managers' familiarity with global economic and cultural environments (Chadee *et al.*, 2011; Levy *et al.*, 2007; Story and Barbuto 2011). KM comprises six items relating to TMT's capability in acquiring, assessing and utilising complex knowledge from varied sources for the benefit of the organisation (Chadee and Raman, 2012; Kianto *et al.*, 2016). CVR quality consists of four items describing the level of trust, commitment, business understanding and conflict management between vendors and their clients (Lee, 2001). All the variable items are presented in Table I. The study also uses two control variables which are common in this type of research, business experience and firm size (Lahiri and Kedia, 2011). For this study, experience is measured as number of years in business and size is measured by number of employees.

Table I The measurement model: constructs and standardised factor loadings	
Constructs	*Standardised factor loadings*
Global mindset (GM) (AVE = 0.68; Full Collin. VIF = 1.620)	$\alpha = 0.88$, CRC = 0.91
Foreign customs and traditions	0.86
Foreign cultures	0.73
Global competition in the industry	0.81
International trade practices	0.85
Globalisation issues	0.86
Knowledge management (KM) (AVE = 0.60; Full Collin. VIF = 1.487)	$\alpha = 0.86$, CRC = 0.90,
Gather new knowledge through clients	0.71
Acquire market intelligence	0.71
Collaborate with universities for knowledge acquisition	0.76
Ability to protect knowledge from expropriation	0.81
Assess strategic relevance of knowledge	0.81
Ensure effective processes for knowledge evaluation	0.84
Client–vendor relationship quality (CVR) (AVE = 0.70; Full Collin. VIF = 1.747)	$\alpha = 0.86$, CRC = 0.90,
Make mutually beneficially decisions	0.83
Execute promises and agreements very well	0.87
Understand each other's businesses	0.86
Dispute resolution processes	0.80

Notes: Legend: AVE = average variance extracted; α = Cronbach's alpha; CRC = composite reliability coefficients; full Collin = full collinearity; VIF = variance inflation factor

Common method variance

The threat of common method variance (CMV) exists when perceptual data on both the dependent and independent variables are collected from the same person at a point in time (Chang *et al.*, 2010). To address the potential threat of CMV, we use both procedural and statistical remedies suggested by Podsakoff *et al.* (2003) and Chang *et al.* (2010). For example, we used different scale formats and endpoints. Moreover, the survey was anonymous to allow respondents to participate without any fear of social desirability. The study also used Harman's single factor test to assess the threat of CMV. Harman's single factor test indicates a lack of such threat if no single factor explains the majority of the variance. All items measuring the constructs were factor analysed using maximum likelihood technique with Varimax rotation. The results show that no single factor emerged and no factor accounted for more than 50 per cent of the variance. Moreover, the complex mediation model which is hard to visualise by respondents also reduces response bias. Accordingly, it can be safely assumed that CMV is not a threat to the study findings.

Results and discussion

This study tests hypotheses *H1* to *H4* using the PLS approach to structural equation modelling (SEM). PLS-based SEM is suitable when the sample size and the numbers of indicators and latent variables are not large enough for covariance-based modelling. The current study has met the guidelines in using PLS recommended by Marcoulides and Saunders (2006) in terms of PLS estimation after taking into account the main objective of the study (i.e. estimating relationships rather than predictive modelling), the sample size of 68 firms, 15 indicators, 3 latent variables, factor loadings (minimum of 0.70) and factor inter-correlations (minimum of 0.42) to develop and test a PLS-based structural model with acceptable statistical power.

Before undertaking the path analysis, a confirmatory factor analysis (CFA) was performed on all of the constructs to examine the homogeneity and consistency of items comprising

each construct and construct validity. Details of the CFA (Table I) show that all of the items measuring each of the three constructs loaded highly on the pre-determined factors.

The measurement model fits the data well, as shown by the statistically significant loadings of items in their corresponding constructs at $p < 0.05$, which indicates the convergent validity of the constructs. The cross-loadings of items in other constructs are much lower than the pre-determined loadings. The values of Cronbach's α and composite reliability coefficients were all above the minimum threshold of 0.70, which indicates item homogeneity, consistency, scale reliability and construct validity (Bagozzi et al., 1991; Kock, 2012). The full collinearity variance inflation factors are lower than the maximum tolerable value of five (Hair et al., 2010), which suggest that multicollinearity is not an issue in the measurement model.

Table II shows the means, standard deviation and correlations of the five variables used in the succeeding analysis of the structural model-data fit. The bold figures are the square root values of the AVEs of each construct, which are higher than the correlation coefficient values of each construct relative to other constructs, which indicates the constructs' discriminant validity (Bagozzi et al., 1991). Overall, the results of the test of the measurement model-data fit suggested that the constructs used in this study have satisfactory levels of construct validity, internal consistency (i.e. reliability) and convergent, as well as discriminant validity.

After undertaking CFA, the structural models are developed and tested to test hypotheses H1-H4. Two nested structural models were developed and tested on mediation analysis. Testing of these models is necessary to determine whether GM mediates the effects of KM on CVR and, if it does, whether there is partial or full mediation (Anderson and Gerbing, 1988; James and Brett, 1984).

The various path coefficients are summarised in Table III and Figure 2. The first model (Model A) shows a fully mediated model, whereby GM fully mediates the effects of KM on CVR. The second model (Model B) is a partially mediated model, whereby GM partially mediates the relationships between KM and CVR. This model suggests that there are other direct effects of KM on CVR which cannot be accounted for by GM.

A comparison of the fully mediated and partially mediated models shows that Model B has higher average R^2 value relative to Model A, which suggests that the former has accounted for exogenous variables with higher predictive power in terms of explaining the variations in the endogenous variables (Kock, 2012). Model B also has higher

Table II Pearson cross correlation coefficients ($n = 68$)

| Variables	Mean	SD	GM	CVR	KM	EXP	SIZE
GM	4.16	0.66	**0.82**				
CVR	4.34	0.56	0.58**	**0.84**			
KM	3.99	0.63	0.45**	0.52**	**0.77**		
EXP	12.43	9.67	0.11	0.04	0.19	1	
SIZE	4,860.89	11,196.18	0.25*	0.17	0.26*	0.60**	1

Notes: **Significant at $p < 0.01$; *significant at $p < 0.05$; bold numbers on the diagonal indicate square roots of the variance extracted for each construct

Table III Testing for direct and indirect effects

Effects of independent variables on dependent variables	Direct effects		Indirect effects		Total effects	
	β	Effect size[a]	β	Effect size[a]	β	Effect size[a]
Model B						
KM → GM	0.44**	0.19*	none	none	0.44**	0.19*
KM → GM → CVR	0.29**	0.16*	0.20**	0.11*	0.49*	0.26*

Notes: β indicates path (beta) coefficient; [a]Cohen's f^2 (Cohen, 1992); *significance at $p < 0.05$; **significant at $p < 0.01$

Figure 2 The structural models of KM, GM and CVR
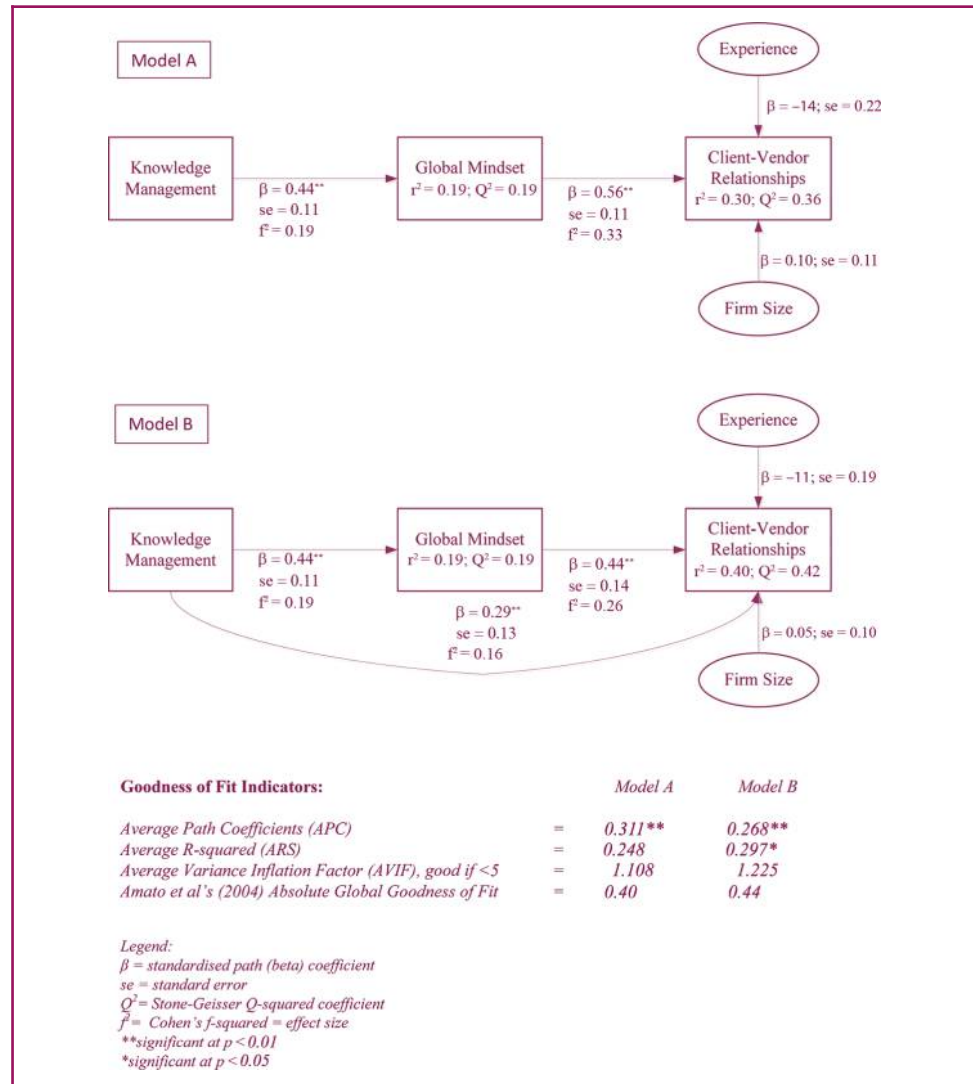
goodness-of-fit global index (Amato *et al.*, 2004), which represents the overall quality of the model. These results suggest that the partial mediation model (i.e. Model B) has a better predictive quality relative to the full mediation model (i.e. Model A). A test of the significance of the indirect effects in Model B based on the recommendation of Preacher and Hayes (2008) was also undertaken. The results show that the direct effects (i.e. KM → CVR), the indirect (i.e. KM → GM → CVR) and total effects (i.e. $\sum$ direct and indirect effects) are significant. The indirect effect has an effect size of 0.11 (Cohen, 1992), which suggests that the indirect effects are substantially relevant in explaining the partial mediating role of GM in the KM–CVR linkages. Based on the foregoing results, Model B has a better predictive quality than Model A.

The results show that KM has a positive and statistically significant effects on CVR, thereby supporting *H1*. The direct effects of KM on GM are also positive and significant with large effect size which supports *H2*. The relationship between GM and CVR is also positive and statistically significant with large effect size, hence supporting *H3*. The results also suggest that GM partially and substantively mediates the relationship between KM and CVR (*H4*). In Model B, KM was statistically significant in explaining 19 per cent of the variations (i.e. R^2) in the firms' level of GM. On the other hand, GM along with KM, experience and firm

age, explained 40 per cent of the variations in the firms' CVR. The Stone–Geisser Q^2 is a measure of the predictive quality of the proposed model (Geisser, 1975; Stone, 1974). A Q^2 value greater than zero suggests the model has acceptable predictive validity. In Model B, the Q^2 is 0.42 for CVR and 0.19 for GM, which further supports the hypotheses of the study. Both control variables, firm size and business experience, have insignificant effects on CVR.

The overall results provide empirical support towards the original contention that while KM contributes positively towards CVR quality, for ISPs GM constitutes a critical factor in enhancing CVR quality. The results show clearly that GM plays an important mediating role of the effects of KM on CVR quality. In other words, GM explains the relationship between KM and CVR quality.

The international client base of ISPs means that the capability to deal effectively with employees and clients from diverse cultural and ethnic backgrounds and the ability to communicate in different languages can be an asset in transforming tacit knowledge from clients into better CVR quality. CVR quality also depends on trust, respect and commitment, which could be enhanced through superior understanding of clients' values, language and cultures.

Well-developed GMs provide TMTs with superior knowledge of the broader business environments of their clients, beyond simply the legal, political and economic environments. This finding is significant for ISPs in general because GM has the potential to act as a dynamic capability (Teece, 2014), which ISPs can develop and deploy to optimise their CVR quality. The results are also significant for client firms given that their performances are intertwined with those of their clients.

Conclusion

Research on CVR management in the context of ISPs remains underdeveloped. This is despite the fact that the past decade has experienced rapid growth in ISPs, particularly from emerging economies such as Brazil, Russia, India and China (Klafke *et al.*, 2016). Furthermore, ISPs operate in diverse and complex environments and often have to deal with multiple languages, cultures and general business environments at any given time. ISPs enter projects with knowledge and people only to become integral parts of their clients' businesses such that their failures and successes are intertwined. ISPs work closely with their clients in the design and delivery of highly specialised and customised services on a global scale. The nature of the services rendered by ISPs means that they rely on their clients to gain deep knowledge of their business, resources and future needs. Clients possess valuable tacit knowledge of their businesses, the sharing of which with ISPs become critical for the successful delivery of customised services which meet clients' needs. In this respect, the capability of ISPs in managing knowledge is critical in ensuring their success. Thus, an interesting question arises as to how ISPs, particularly those from emerging economies which operate in diverse global business environments, can manage knowledge effectively in order to enhance their CVR?

The research draws from the experience of a sample of ISPs from India to show that in an increasingly globalised world, GM serves as the mechanism which allows top managers to transform various forms of knowledge into better quality partnerships. While both KM and GM have been found to separately influence relationship quality (Lee, 2001; Raman *et al.*, 2013), this study finds that by itself KM only has limited effects on developing CVR. The results show that GM of top managers plays an important role in enhancing the effects of effective KM on the quality of CVRs. The significant mediation effect of GM on the association between KM and CVR also highlights the importance of both GIC and GSC (Javidan and Bowen, 2013) as integral elements of GM. Managers with GIC have the cognitive skills to evaluate vast amounts of complex information for informed decision-making in a global context. Those with GSC have

the psychological skills to develop trusted relationships and are comfortable in working with people across functions, cultures and countries.

The findings from this research have three main implications. First, the positive effects of both KM and GM on CVR suggest that by strengthening KM and GM, ISPs can enhance the quality of CVR relative to their competitors. The interplay between KM and GM further highlights that GM is critically important in enhancing CVR. This finding is particularly relevant in an environment, where ISPs are becoming increasingly global in their business orientations. Globally oriented top managers are likely to be more effective in assessing global risks and sensing global business environmental changes (Javidan and Bowen, 2013; Story and Barbuto, 2011). Thus, professional development programs which are designed to improve the overall global mindset of top management teams should lead to better quality client–vendor relationships.

Second, the findings provide valuable guidance to ISPs from developing countries that GM constitute a valuable tool in enhancing CVR. Firms from a number of emerging economies in Asia, such as China, the Philippines, Malaysia and Indonesia, are also gradually entering the global IT services sector and aspiring to become significant players in this sector. These firms can potentially learn from the experience of Indian ISPs in enhancing their client–vendor relationships by developing the GM of their TMTs.

Lastly, the findings provide further evidence for emerging economy ISPs that employees with well-developed GMs constitute valuable and rare resources capable of conferring competitive advantage to the organisation. The challenge for ISPs, particularly those from emerging and developing countries, is how to retain such employees in an increasingly competitive labour market where a global shortage of skilled IT professionals has unleashed "the war for talent" (Ray *et al.*, 2012)

As with most research, this study has several limitations and, as such, the findings need to be interpreted with caution. The first limitation is the relatively small sample size largely because of the challenges of collecting primary data in India. The small sample size limits the generalisability of the results and also constrained the modelling exercise of this research. A second limitation relates to the fact that the data used for hypothesis testing is from a single industry and single country. This further limits generalisation because the institutional environment differs significantly in different countries, particularly in developing countries. A third limitation of the study relates to the measurement of CVR quality. CVR is measured from one side (vendor side only) of the dyadic relationships between ISPs and their clients.

To enhance generalisability of the findings, future research could address some of the limitations above in a number of ways. Future research could improve the generalizability of the results by using a larger sample size, ideally drawn from different countries. The use of data from different countries would also allow analysis of how institutional differences impact on CVR. Another avenue for future research is in the conceptualisation and measurement of relationship quality at dyadic level. Developing and maintaining CVRs involve the development of mutual trust and commitment from both parties. The present research investigates the importance of GM in the development of CVR from the perspective of the service provider only. Future research could extend our understanding of CVR by extending the enquiry to the clients.

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About the authors

Revti Raman Sharma is a Senior Lecturer in International Business in the School of Marketing and International Business at Victoria University of Wellington, New Zealand. His major teaching and research interests are in the areas of international business and international management with specific interests in outsourcing, strategy, firm performance, cross border knowledge management and emerging economy firms. Revti Raman Sharma is the corresponding author and can be contacted at: revti.raman@vuw.ac.nz

Doren Chadee is currently a Professor of Management and Chair of the International Business and Strategic Management discipline at Deakin University, Melbourne. Professor Chadee has teaching and research interests in the areas of international business and international management with a particular focus on Asian and emerging economies.

Banjo Roxas is a Senior Lecturer in the Department of Management at Deakin University, Australia. His main teaching and research interests are in the broad areas of sustainable strategic management and international business with particular focus on firms from emerging economies in Asia.