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CAPABILITIES IN MANAGING OFFSHORE IT OUTSOURCING CHALLENGES AND THE INFLUENCE ON OUTSOURCING SUCCESS FROM THE IT VENDOR PERSPECTIVE

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ABSTRACT

An IT vendor requires excellent capabilities to achieve success in offshore IT (information technology) outsourcing. This study aims to contribute to IT outsourcing research by identifying IT vendor capabilities from the perspective of offshore IT outsourcing challenges. A model is proposed that explains the relationship between capabilities in managing offshore IT outsourcing challenges (i.e., interaction capability, management capability, and capability to managing the distance involved) and the impact of these capabilities on outsourcing success. The proposed model is empirically tested by Partial Least Squares – Structural Equation Modelling (PLS-SEM) for validation, with 64 samples obtained from a survey of Indonesian IT vendors with experience in conducting offshore IT outsourcing projects. The results indicate that interaction capability consisting of communication and coordination has a positive impact on outsourcing success, and that this capability is in turn influenced by management capability. This includes management support, talent management and the ability to manage distances, in addition to cultural understanding and managing the temporal distance.

Keywords: Capability to manage distance; Interaction capability; IT vendor capabilities; Management capability; Outsourcing success

1. INTRODUCTION

Outsourcing is a process of transferring one or more company functions to other companies, by which the vendor company undertakes the client's functions. One of the most outsourced functions is that of information technology (IT), such as application development, application management, data center operations, systems development and maintenance, web design, and e-commerce development (Peslak, 2011; Nuwangi et al., 2014). Companies that outsource their IT function are motivated by cost reduction, a focus on core competencies, performance improvement, and access to the latest technology (Lacity et al., 2009). Outsourcing practice can involve a client and a vendor from different countries, which is called offshore outsourcing or offshoring. In the context of offshore IT outsourcing, India and China are nowadays the most popular IT outsourcing destinations in the world, as it is easy to find a highly capable IT vendor in these countries (Stettler et al., 2014). In the case of Indonesia, the volume of its IT service exports is low compared to India and China due to a lack of capabilities (Stettler et al., 2014). Therefore, it is important to study the capabilities of IT vendors in this country.

The capability of the IT vendor is a critical factor for IT outsourcing success

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(Lacity et al.,2010). The client considers this capability in its IT vendor selection to ensure that the selected vendor has the ability to conduct its outsourced IT function. Previous studies have investigated the IT vendor capabilities required in conducting IT outsourcing. Some have identified these from the technical perspective, such as the study conducted by Krishnan and Kellner (1999), which showed the importance of software development process capabilities in influencing IT project performance. Other studies, such as that of Jarvenpaa and Mao (2008), adopted the operational perspective to identify the IT vendor capabilities that are needed to provide a service or product. From this perspective, IT vendors should have process, client-specific, and human resource capabilities.

Although the IT vendor capabilities identified in earlier studies have an impact on IT outsourcing success, this study will identify those required from the perspective of offshore IT outsourcing challenges. The IT vendor should develop not only technical and operational capabilities, but also ones related to the ability to deal with the challenges encountered in IT outsourcing. These challenges can hinder the IT vendor from achieving outsourcing success if they are not addressed. Therefore, this study will focus on identifying offshore IT outsourcing challenges and the related capabilities required. A model will also be developed that describes the relationship between IT vendor capabilities and outsourcing success.

This paper is organized as follows. In section 2, we present the methods used to analyze the challenges in offshore outsourcing and the related capabilities; the proposed model; the questionnaire development, and the data collection. In section 3, we present the results and discuss the research findings. The paper is summarized in the final section.

2. METHODS

The method used consists of the following four steps: identification of IT vendor capabilities; model development; questionnaire development; and data collection. These steps are explained below.

1) Identification of IT vendor capabilities. In this step we identify the capabilities needed to deal with the challenges in offshore IT outsourcing. We review previous studies to identify the challenges and implications faced by IT vendors when they deal with IT outsourcing project from overseas clients. Based on these challenges, we identify the capabilities that an IT vendor should possess. This step is detailed in section 2.1.
2) Model development. We hypothesize the relationship between the capabilities identified in the previous step and outsourcing success. The hypotheses are shown in the research model. Model development is explained in section 2.2.
3) Questionnaire development. Questionnaires are developed to measure IT vendor capabilities and outsourcing success. This development is presented in section 2.3.
4) Data collection. After developing the questionnaires, they were used to collect data through their distribution to eligible respondents. Explanation of the data collection is given in section 2.4.

2.1. Identification of IT Vendor Capabilities

IT vendors need to possess certain capabilities when dealing with IT outsourcing. In this study, we define these as a vendor's ability to address the challenges of offshore IT outsourcing. The challenges are identified based on three components: IT-related challenges; outsourcing-related challenges; and offshore-related challenges.

2.1.1. IT-related challenges and associated capabilities

IT development projects are knowledge-intensive. The knowledge includes that of client requirements, the functional domain, technical knowledge, and project knowledge. The vendor and client have different, but complementary, knowledge. The vendor possesses technical and project knowledge, while the client possesses requirement and business domain knowledge (Xu & Yao, 2013). The difference in knowledge ownership between vendor and client requires both sides to exchange what they know. Agerfalk et al. (2005) identified communication as an essential activity in distributed software development; this enables the vendor and client to build mutual understanding (Swar et al., 2012).

IT development is beset by uncertainty due to the uniqueness of products, the volatility of functional specifications, or incomplete specifications (Govindaraju et al., 2015). This uncertainty includes requirement uncertainty and technological uncertainty. To deal with this, it is necessary for the vendor as the developer, and the client as the customer or user, to establish coordination when undertaking an IT project. This coordination plays an important role in distributed software development (Agerfalk et al., 2005). Leischnig et al. (2014) suggest that coordination can build consensus about task requirements.

Based on the description above, we identify that IT-related challenges include the dispersion of knowledge ownership and the uncertainty of requirements. To address these challenges, interaction between a vendor and a client during IT project execution is necessary, which we call interaction capability. This consists of the ability to communicate and coordinate with the client in the project.

2.1.2. Outsourcing-related challenges and associated capabilities

Outsourcing represents an inter-organizational relationship that involves a vendor company as a server, and a client company as a recipient. The relationship between vendor and client can be classified into two groups, namely a transactional relationship based on a formal contract, and a partnership based on trust (Morgan & Hunt, 1994). The business relationship between a vendor and a client is increasingly that of a partnership rather than one of a transactional relationship (Grover et al., 1996). Thus the challenge in inter-organizational business relationships is related to building a partnership characterized by a close and long-term inter-organizational relationship.

This relationship depends on trust and commitment (Morgan & Hunt, 1994). Trust is a critical factor in building a long-term relationship and plays a role in maintaining the stability of the inter-organizational relationship. The study by Doney and Cannon (1997) showed that trained vendor staff can build customer trust. Customers feel more confident with vendors when their staffs are skillful and able to deliver their promises. Building client trust and commitment to the relationship needs top management involvement. Lee and Kim (1999) show that top management support influences partnership outsourcing success and that the ability of top management to support partnership outsourcing contributes to trust building. In the context of IT outsourcing, the availability of trained staff determines the success of IT development. Trained staff who possess superior application knowledge, communication skills, high motivation, and are dependable are an essential input for IT projects. The study by Raman et al. (2013) shows that talented management influence the quality of partnership building.

Based on the description above, we identify that outsourcing-related challenges include the building of a long-term relationship with partners. Building a close and long-term relationship with the client requires the vendor to establish the client's trust and show commitment to the relationship. To address outsourcing-related challenges, a vendor company should possess the ability to manage talented staff and support the relationship. We call these abilities management capability.

2.1.3. Offshore-related challenges and associated capabilities

The offshore context presents challenges regarding the distance between a vendor and a client. This is a central issue in global software development and can lead to interaction problems (Carmel & Agarwal, 2001). One type of distance is cultural distance. The provider should understand the client's culture to prevent communication problems. Cultural understanding enables the provider and client to align their values, ethics, business practices and communication styles. This alignment facilitates effective interaction. The offshore project involves a vendor and a client who come from different countries; this distance can lead to time zone differences, which mean the work time overlap between the provider and client is reduced, and that direct interaction decreases. Herbsleb et al. (2001) show that team members dispersed in many locations needed longer to complete a project than those in the same location.

An offshore IT vendor needs to develop the capabilities to reduce the effect of distance between the company and its foreign client. Previous studies have discussed companies' efforts to alleviate cultural or temporal distance. A company can manage its project team members by assigning staff who have foreign language skills and good cultural understanding of clients to the project team. Carmel and Agarwal (2001) believe that outsourcing project team members who possess understanding of the client's culture can contribute to an improved adaptation process. Holmstrom et al. (2006) conducted a study to identify IT vendor practices in overcoming offshore outsourcing challenges. These embraced onshore personnel placement, flexible work time management, and work time adjustment. The effort to alleviate cultural distance has also been addressed in previous studies. Mao et al. (2008) suggest that IT providers should make an effort to blend cultures by creating shared values, norms and beliefs. Cultural blending increases the degree of control of the client and can facilitate desirable client behaviour, while discouraging opportunism. Ang and Inkpen (2008) emphasize the importance of cultural intelligence; i.e., an individual's capability to function and manage in different cultural settings in the context of offshoring ventures.

Based on the offshore challenges discussed, an IT vendor should have understanding of the client's culture and the capability to manage the temporal distance. We call this capability that of managing distance.

A summary of the offshore IT outsourcing challenges and related capabilities is given in Table 1.

2.2. Model Development

We develop a model that depicts the relationship between IT vendor capabilities and outsourcing success. In general, outsourcing success is considered as the extent of the benefit achieved from outsourcing (Grover et al., 1996). We define outsourcing success more specifically by adopting Homburg et al.'s (2003) definition. From the perspective of the vendor, it is the extent to which they achieve the effectiveness of the project and satisfy the client.

The interaction between a vendor and a client can determine the success of an outsourcing project. According to Gunasekaran et al. (2015), outsourcing success depends on vendor and client interaction, such as knowledge and resource exchange, collaboration and cooperation. Previous studies have shown that there is a strong positive correlation between this interaction and achievement of outsourcing success (Grover et al., 1996). The study by Swar et al. (2012) confirms the important role of communication in achieving IT outsourcing success, while Han et al. (2013) conclude that relationship management also determines such success. The study by Leischnig et al. (2014) shows that interaction has a positive impact on inter-organizational relationship success. Therefore, we hypothesize that:

H1: Interaction capability has a positive impact on outsourcing success.

Table 1 IT vendor capabilities

Component	Challenge	Implication	Capability	Sources
Information Technology	Knowledge dispersion	Communication	Interaction capability	Agerfalk et al. (2005); Swar et al. (2012); Xu and Yao (2013); Leischnig et al. (2014); Govindaraju et al. (2015)
	Requirement and technological uncertainties	Coordination		
Outsourcing	Long-term relationship building	Management support	Management capability	Morgan and Hunt (1994); Grover et al. (1996); Doney and Cannon (1997); Lee and Kim (1999); Raman et al. (2013)
		Talent management		
Offshore	Cultural distance	Cultural understanding	Capability to manage distance	Carmel and Agarwal (2001); Herbsleb et al. (2001); Holmstrom et al. (2006); Mao et al. (2008); Ang and Inkpen (2008)
	Temporal distance	Managing the temporal difference		

Each organization involved in the inter-organizational relationship will bring its resources into the interaction; these resources have no impact on success if they are not used. In the context of IT outsourcing, the use of resources is realized when IT is being developed, and at that stage interaction occurs. The study by Ai et al. (2012) shows that interaction such as knowledge exchange and coordination makes an essential contribution to transforming internal capabilities, such as those of skilled staff, helping to achieve IT global sourcing success. Gunasekaran et al. (2015) assert that a managerial factor such as the commitment to outsourcing could influence the interaction between a vendor and a client, while the study by Lee and Kim (1999) confirms that top management support has an impact on partnerships. The capability of a company in providing, placing, and maintaining competent personnel in the outsourcing project can influence the partnership (Raman et al., 2013). Based on this, we hypothesize that:

H2: Management capability has a positive impact on interaction capability.

In the context of offshore outsourcing, the distance between a vendor and a client can lead to interaction problems. Previous studies have shown the impact of distance on interaction. The study by Herbsleb and Moitra (2001) found that cultural and temporal distance brought about coordination and communication problems. Cultural, temporal and geographical distances influence communication, coordination and control (Holmstrom et al., 2006). Gunasekaran et al. (2015) assert that a contextual factor such as environmental heterogeneity can influence vendor and client interaction. The ability to deal with such distance could alleviate this negative effect on interaction. Therefore, we hypothesize that:

H3: Capability to manage distance has a positive impact on interaction capability.

Figure 1 shows the proposed model, depicting three hypothesized structural relationships and the dimensions of IT vendor capabilities. In the model, we consider management capability, capability to manage distance, and interaction capability as the second-order constructs (double line rectangle). The oval represents the first-order construct.

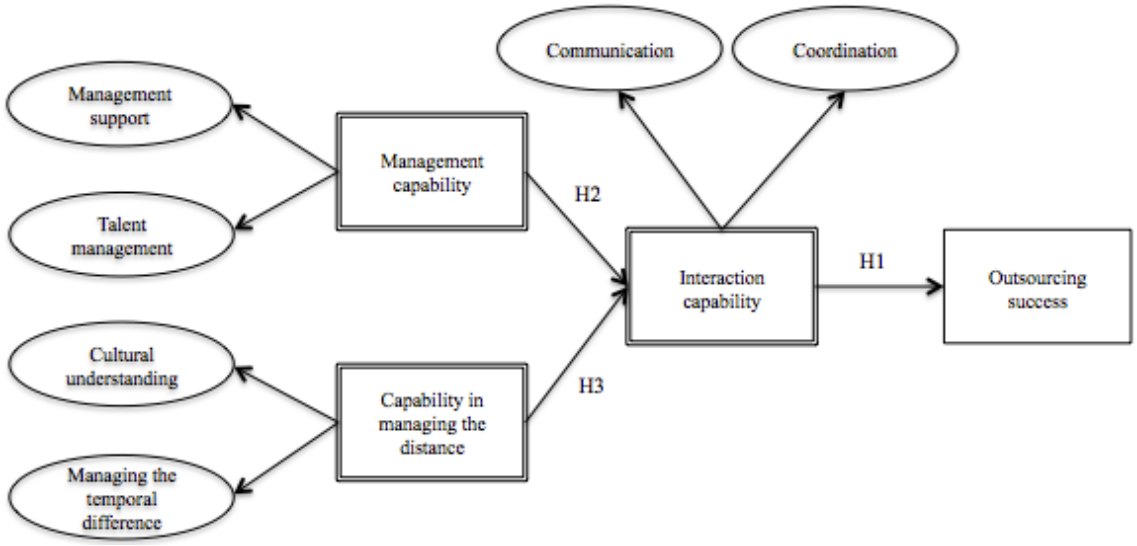

Figure 1 Proposed model

2.3. Questionnaire Development

Because of the abstract nature of the variables involved in the model, we defined them operationally before the development of the questionnaires. Based on the operational definition of the variable, we developed the survey instruments or questionnaires. The questionnaires were designed to measure management support, talent management, cultural understanding, managing temporal distance, communication, coordination, and outsourcing success. The capabilities of interaction, managing distance and management were not measured directly because they are second-order variables.

We referred to previous studies when designing the questionnaires. Table 2 shows the operational definition and the number of indicators of each variable.

2.4. Data Collection

We adopted the survey method to examine the research model. Yin (2003) suggests that this method can be used as a research strategy when a study is characterized by the "how much" form of question, the control of behavioural event is not required, and the focus is on contemporary events. Because the study is intended to examine the extent of the relationship between the capabilities of the IT vendor and outsourcing success, the survey method is appropriate for this study. We consider an offshore IT outsourcing project as the unit of analysis.

We collected data by distributing questionnaires online and offline to 103 Indonesian IT companies from the middle of June 2017 until the middle of October 2017. Eligible respondents were those working in Indonesian IT companies and who were involved in undetaking IT projects for overseas clients. To ensure the eligibility of respondents, the questionnaire included a question about the offshore IT outsourcing project that the respondent was involved in and their position in the project. Because our unit of analysis is the offshore IT outsourcing project, and each company may be involved in more than one such project, a company may provide more than one response. We obtained 64 completed questionnaires from 36 companies. The demographic profiles of the samples are displayed in Table 3.

Table 2 Operational definition of the variables

Variable	Operational definition	Number of indicators	Sources
Outsourcing success	The extent to which the IT vendor achieves the effectiveness of the project. and satisfies the client	3	Homburg et al. (2003)
Communication	Sharing of valuable information between the vendor and client.	4	Swar et al. (2012)
Coordination	Managing the interdependency between the vendor and the client in completing the determined tasks.	3	Leischnig et al. (2014)
Management support	The degree of effort from top management in supporting the inter-organizational relationship.	3	Lee & Kim (1999)
Talent management	The ability of the IT vendor in providing, placing, and maintaining competent personnel in the project.	4	Raman et al. (2013)
Cultural understanding	The ability of the IT vendor to understand and adapt to the client's culture.	4	Ang & Inkpen (2008)
Managing the temporal distance	The ability of the IT vendor to deal with the time zone difference.	3	Holmstrom et al. (2006)

3. RESULTS AND DISCUSSION

In this section, we present the results of the PLS-SEM analysis and discuss the study findings. The section consists of measurement and structural model examination, together with discussion.

Table 3 Demographic sample profiles

No.		Profile	Frequency	Percentage
1.	Client's country of origin	Asia (Hong Kong, India, Japan, Malaysia, Qatar, Singapore)	32	50.00
		Australia	5	7.81
		Europe (Belgium, Croatia, England, Germany, Netherlands, Spain, Sweden)	14	21.88
		North America (US, Mexico)	13	20.31
2.	Project duration	< 3 months	18	28.13
		3 - < 6 months	20	31.25
		6 – 12 months	14	21.88
		> 12 months	12	18.75
3.	Project value	< Rp. 250 m.	28	43.75
		Rp. 250 m. - < Rp. 500 m.	10	15.63
		Rp. 500 m. – Rp. 1000 m.	15	23.44
		> Rp. 1000 m.	11	17.19
4.	Project team size	3 – 5 people	40	62.50
		6 – 8 people	18	28.13
		> 8 people	6	9.38
5.	Position of the respondent	CEO / managing director	10	15.63
		Project manager	30	46.88
		Team member	24	37.50

3.1. Model Measurement Examination

We use the Partial Least Squares – Structural Equation Modelling (PLS-SEM) technique to examine the model because of the small sample size. Hair et al. (2014) state that PLS-SEM can be used for such a small sample and for non-normal distribution. Determination of the sample size depends on a minimum number of arrows that point to a latent variable in the model. Rule

of thumb suggests that the minimum number of samples should be ten times the maximum number of arrowheads pointing at a latent variable (Hair et al., 2014). The minimum number of arrows that point to a latent variable in our model is two. This means we need at least 20 samples; we have 64, so the sample size is adequate.

Our model involves a higher-order model, in which the second order construct is the interaction capability, with its first-order constructs including communication and coordination; management capability, with its first-order constructs including management support and talent management; and the capability to manage distance, with its first-order constructs including cultural understanding and managing temporal differences. Each first-order construct has manifest variables or indicators. The model is a reflective-reflective type model. Because the model has the same orientation, a repeated indicators approach can be implemented by assigning all the indicators from the lower order constructs to the higher order constructs (Hair et al., 2014).

Examination of the model involves two stages. The first is the examination of the measurement model. The results indicate that each scale of the constructs has composite reliability scores and average variance extracted (AVE) greater than 0.70 and 0.50 respectively. Hence, the test of convergent validity is acceptable. Table 4 shows the composite reliability scores and the AVE of the constructs.

Table 4 Composite reliability scores and AVE of the constructs

Construct	Composite Reliability	Average Variance Extracted (AVE)
Outsourcing success (OS)	0.884	0.717
Interaction capability (CI)	0.923	0.633
Capability to manage distance (CMD)	0.919	0.625
Management capability (MC)	0.912	0.602
Communication (Com)	0.915	0.730
Coordination (Coor)	0.938	0.835
Cultural understanding (CU)	0.913	0.727
Management support (MS)	0.864	0.681
Managing temporal distance (MTD)	0.892	0.736
Talent management (TM)	0.923	0.751

The results also indicate that the measurement model has discriminant validity. Table 5 shows the discriminant validity results using the Fornell-Larcker criterion. The diagonal elements represent the square root of each construct's AVE, and the non-diagonal elements represent the correlations between the latent variables. The bold value represents the highest value that a construct has by comparing all the values in its row and column. A measurement model meets this criterion if the values of the square root of AVE of each construct are higher than the correlations between constructs, except between the higher-order construct (HOC) and the lower-order constructs (LOC), as well as between the LOCs themselves (Hair et al., 2014). We find that the measurement model has met the Fornell-Larcker criterion; thus we have a discriminant-validated measurement.

3.2. Structural Model Examination

The structural model portrays the theorized relationship between constructs. Our model posits three structural relationships, namely interaction capability and outsourcing success; management capability and interaction capability; and capability to manage distance and interaction capability. The posited relationships were tested with PLS-SEM and the results of the analysis are shown in Table 6.

Table 5 Fornell-Larcker criterion

	CI	CMD	Com	Coor	CU	MC	MS	MTD	OS	TM
CI	0.796									
CMD	0.740	0.790								
Com	**0.914**	0.676	0.855							
Coor	0.898	0.662	0.641	**0.914**						
CU	0.737	**0.948**	0.623	0.712	0.853					
MC	0.793	0.773	0.677	0.761	0.779	0.776				
MS	0.771	0.722	0.648	0.753	0.704	**0.874**	0.825			
MTD	0.613	**0.897**	0.630	0.476	0.711	0.629	0.619	0.858		
OS	0.701	0.574	0.558	0.719	0.630	0.740	0.642	0.396	**0.847**	
TM	0.690	0.695	0.595	0.653	0.718	**0.941**	0.657	0.542	0.698	0.866

The results indicate a positive and significant relationship between the interaction capabilities and outsourcing success, with a path coefficient of 0.701 at the significance level of 0.01; thus H1 is supported by the empirical data. Management capability and capability to manage distance have a positive impact on interaction capability, with path coefficients of 0.550 and 0.315 at significance levels of 0.01 and 0.05 respectively. Hence H2 and H3 are also supported by the empirical data. The tested model has a moderate degree of accuracy for outsourcing success and interaction capability, with an adjusted R^2 values of 0.492 and 0.669 respectively.

Table 6 Significance of the structural relationships

	Hypothesis	Path Coefficient	T Statistic	P Value	Conclusion
H1	Interaction capability → Outsourcing success	0.701	9.641	0.000	Supported***
H2	Management capability → Interaction capability	0.550	4.121	0.000	Supported***
H3	Capability to manage distance → Interaction capability	0.315	1.994	0.047	Supported**

***significance level of 0.01; **significance level of 0.05

The results also show that each second-order construct (interaction capability, management capability, and capability to manage distance) has a factor loading above 0.7 at the significance level of 0.01. These results indicate that communication and coordination are dimensions of interaction capability; management support and talent management are dimensions of management capability; and cultural understanding and managing temporal distance are dimensions of the capability to manage distance. Table 7 shows the significance level of the first-order constructs and their second-order construct relationship.

Table 7 Significance of first-order constructs and their second-order construct relationship

First-order constructs and their second-order construct relationship	Factor loading	T Statistic	P Value
Interaction capability → Communication	0.914	34.912	0.000
Interaction capability → Coordination	0.898	32.486	0.000
Management capability → Management support	0.874	22.719	0.000
Management capability → Talent management	0.941	43.193	0.000
Capability to manage distance → Cultural understanding	0.948	64.709	0.000
Capability to manage distance → Managing the temporal distance	0.897	28.787	0.000

Based on the results of the statistical analysis, we conclude that all the structural relationships and dimensions of each second-order construct are significant and supported by the empirical data. Therefore, the final model that embraces all the significant relationships is the same as the proposed model.

3.3. Discussion

The purpose of this study is to identify IT vendors' capabilities from the perspective of offshore outsourcing challenges and to examine the contribution of these capabilities to outsourcing success. The results show that IT vendors should possess and develop interaction and distance-related management capabilities. These have a positive impact on achieving outsourcing success. The interaction capability has a direct impact on outsourcing success, and that of managing distance has a significant indirect impact on outsourcing success, at levels of 0.386 and 0.221 respectively.

The significant effect of interaction capability on outsourcing success shown in this research is consistent with previous studies. The results of the study conducted by Grover et al. (1996) showed that outsourcing success was determined by interaction between the provider and client, with a correlation degree of 0.63. Relationship management capability has been shown to increase information system quality, with a correlation coefficient of 0.733 (Goles, 2003). In addition, the study of Leischnig et al. (2014) showed that interaction had a positive impact on inter-organizational relationship success, with a correlation degree of 0.77.

The significant relationship between management capability and interaction capability is also consistent with the previous studies. The findings of the study conducted by Raman et al. (2013) showed that a firm's capabilities in managing critical employees had a positive impact on partnership quality, with a correlation coefficient of 0.40. The significance of the relationship between management support and relationship quality was also displayed by Gupta and Sushil's (2014) study.

The findings on the significant contribution of the capability to manage distance to interaction capability is also consistent with previous studies. The results of the study by Johnson et al. (1996) showed that cultural sensitivity could increase the effectiveness of communication in international alliances, with a correlation coefficient of 0.447. The study by Holmstrom et al. (2006) found that cultural, temporal and geographical distance influenced communication, coordination and control.

From this study, we also have a portrait of the Indonesian IT companies dealing with the challenges of offshore IT outsourcing. The companies involved in the study have achieved success in conducting offshore IT outsourcing projects. From the responses of respondents on the questionnaires, we can obtain the score of each variable in the model. The score for outsourcing success is 6.167, out of a maximum score of 7. The success in dealing with offshore IT outsourcing projects is supported by the high capabilities of management, the capabilities to manage distance, and interaction capabilities. The scores for those capabilities respectively are 5.98, 5.90 and 5.82 out of a maximum of 7.

The high level of their capabilities does not entirely indicate that they have good capabilities to deal with all offshore IT outsourcing projects. The bias in these findings is influenced by the tendency of the respondents to respond in the questionnaires based on their successful offshore IT outsourcing projects. To complement the survey results, we conducted interviews with two IT companies. We interviewed the VP of a leading IT vendor in Indonesia, who explained that although overall the company had good results in dealing with projects for overseas clients, it also had unsuccessful results. The failure to complete projects successfully was caused by a lack of ability to interact with clients. When the company carried out this project, it could not communicate well with the client. This situation made it difficult for them to understand their

requirements. The poor interaction was influenced by the lack of management support in preparing the team for this. The team did not have enough knowledge of the client's business, which caused inhibitions when communicating with them.

The second interview with another IT vendor enhanced our understanding of the failure to accomplish offshore IT outsourcing projects. The failure experienced by this company was influenced by cultural differences. The client came from an end-user company which had different behavior to the IT company. They were accustomed to working in detail, whereas the client worked in the opposite way. Because the company project team could not adapt to the behavior of the client, it could not establish good coordination with the client, which is important for smooth interaction.

From the survey of 64 projects, the empirical data confirm that high management capability, interaction capability, and the capability to manage temporal distance are the success factors of IT outsourcing. We can also learn from the two companies which had unsuccessful projects, which show the negative impact of the lack of management support in preparing the project team and the lack of cultural adaptation in interaction, and eventually outsourcing success. Therefore, these findings confirm the proposed model, that management capability and the capability to manage distance have an impact on interaction capability and eventually influence outsourcing success.

4. CONCLUSION

This study makes two crucial contributions. First, it contributes to the outsourcing literature by identifying IT vendor capabilities in the offshore outsourcing context, from the perspective of offshore outsourcing challenges. Second, it proposes a research model that shows the relationship between IT vendor capabilities and their influence on outsourcing success. Based on the results obtained from the study, we conclude that to achieve offshore outsourcing success, the IT vendor should build interaction capability, and enhance the capability to manage distance as well as management capability.

The study recommends that IT vendors involved in offshore outsourcing ensure that there is support from top management by providing adequate resources and preparing highly qualified staff for offshore IT projects. It also encourages practitioners to learn and adapt to their client's culture for smooth interaction between them.

There are some limitations to this study. First, we involve only the vendor side to evaluate outsourcing success, which may cause bias. We also use client satisfaction as one of the outsourcing success indicators. The ideal is that we should involve the client side in the study, but it is difficult to involve both sides. Second, the study does not consider all the interaction aspects that should be developed by the IT vendor. This limitation may lead to moderate predictive accuracy of interaction capability in outsourcing success, with R^2 at 0.492. Third, we identified IT vendor capabilities from the perspective of challenges in offshore IT outsourcing, which mean that other important capabilities were not considered in the research. To increase the predictive accuracy, future studies should consider other capabilities, such as that to design specific business process, because the development of IT should be aligned with the business process.

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