Toward A Comprehensive Model of International Joint Venture Learning

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Abstract

Based on alliance learning, absorptive capacity, and trust literature, this study proposed a comprehensive model linking International Joint Venture (IJV) learning and its determinants. The model takes into account the multi-dimensionality of absorptive capacity and trust which were often omitted in previous studies. It is then tested in the context of Vietnam on the basis of data collected from 154 IJVs. The result confirms the comprehensiveness of the model as it explains more than 63% of the variance in learning. Specifically, learning intent, three out of four dimensions of absorptive capacity, and foreign parents’ willingness to share knowledge were found to be positively associated with IJV learning. Trust dimensions were also related to learning but these relationships were alleviated in the presence of the other determinants. The research contributes to the growing literature on IJV learning and provides important implications for managers working in IJVs.

Keywords: International joint venture; learning; absorptive capacity; trust.
1. Introduction

International Joint Ventures’ (IJV’s) learning from their foreign parents, a particular form of IJV learning, has always been a topic of interest for international business and learning researchers. This is because there is a common belief that the primary advantage that a firm brings to foreign markets is its possession of superior knowledge (Kogut and Zander, 2003). Joint ventures are considered to be an effective mean to transfer knowledge and facilitate learning (Kogut, 1988; Tiemessen, Lane, Crossan and Inkpen, 1997; Kandemir and Hult, 2005). However, knowledge transfer from foreign parents to joint ventures is not always effective: the cross-border knowledge spirals can be much more time consuming than either partners can ever anticipate (Simon, 1991). Thus, researchers really need answers for the question of what determines an IJV’s effective learning from its foreign parent(s). Understanding factors determining the IJV’s learning would allow managers to design programs that can effectively enhance successful learning, which in turn, can improve IJV stability (Fang and Zou, 2010), competitiveness (Chrysostome, Nigam and Jarilowski, 2013), and performance (Farrell, Oczkowski and Kharabsheh, 2008; Phan Thi Thuc Anh and Baughn, 2011).

In seeking an answer for this question, many researchers (e.g. Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001; Simonin, 2004; Phan Thi Thuc Anh, Baughn, Ngo Thi Minh Hang and Neupet, 2006) look at the phenomenon from the cognitive perspective. In this perspective, the IJV is considered as an ‘information processing’ unit. How much knowledge it acquires is dependent upon the complexity of the knowledge being acquired and the IJV’s cognitive capabilities. The IJV’s cognitive capabilities are linked closely to the absorptive capacity concept proposed by Cohen and Levinthal (1990). Other researchers (e.g. Dhanaraj, Lyles, Steensma and Tihanyi, 2004; Inkpen and Currall, 2004) look at the phenomenon from the social perspective with a particular emphasis on the relationship/trust between the two sides. As noted by Kogut (in Grandori and Kogut, 2002), knowledge transfer is embedded not only in the capabilities but also the social relationships between both sides of transactions. Studies that have attempted to integrate both perspectives such as those of Lyles and Barden (2000), Phan Thi Thuc Anh and Baughn (2011) failed to capture the multi-dimensionality of absorptive capacity and/or trust, therefore, a full picture of IJV learning in light of possible effects of all independent variables cannot be seen. This research, therefore, makes a contribution to the extant literature by proposing a comprehensive model of IJV learning that integrates both perspectives as well as the multi-dimensionality of the dependent and independent variables.

2. Theoretical background and hypotheses

Learning can be defined as the process by which new information is processed by an entity, changing the range of its potential behaviors and possibly leading to better outcomes (Huber, 1991). Learning takes place in an IJV when the IJV gets new information from its foreign parent(s), processes it and, changes or modifies its behavior in order to have better products, services or other outcomes. Through learning, the IJV can develop new abilities to face the changes in the environment and to improve the
organization’s efficiency (Chrysostome et al., 2013). IJV learning from foreign parent(s) requires effort from both sides: the IJV or “learner side” should have the will to learn and its foreign parent(s) or “teacher side” should have the will to teach. In fact, in the alliance learning literature, the importance of the joint venture’s intent to learn and the foreign parents’ willingness to share knowledge has been emphasized repeatedly as pre-conditions for learning (Hamel, 1991; Simonin, 1999; Inkpen, 2000; Steensma and Lyles, 2000; Phan Thi Thuc Anh et al., 2006).

Having the “intention” and “will” are not enough for effective learning. Other factors, including the IJV’s absorptive capacity and the trust between IJV parents are also important for the IJV’s learning success. Absorptive capacity has long been proved as one of the most influential determinants of learning. Absorptive capacity refers to ‘the ability to recognize the value of new, external information, assimilate it and apply it to commercial ends’ (Cohen and Levinthal, 1990, p.128). Organizational absorptive capacity includes members’ absorptive capacities and organizational factors such as the structure of communication between the external environment and the organization, communication among the subunits of the organization, and the character and distribution of expertise within the organization itself (Cohen and Levinthal, 1990). Organizational ab-
sorptive capacity is a multi-dimensional construct. In this research, absorptive capacity is conceptualized to include 4 dimensions: relatedness between the IJV and its foreign parent’s business, the IJV’s investment in training, its employees’ ability to learn, and the joint participation between the IJV and its foreign parent’s personnel. This conceptualization is based on Phan Thi Thuc Anh et al.’s study (2006), in which, the above-mentioned components were found to be associated with IJV learning from foreign parent(s).

Similarly, trust between IJV parents is also referred to as an important antecedent for IJV learning to take place. Like absorptive capacity, trust has been captured as a multi-dimensional construct. In this study, the trust variable is conceptualized to include three dimensions: calculus-based, knowledge-based, and emotional-based. This conceptualization is based on Lewicki and Bunker (1995) and has been used by subsequent studies such as those of Nguyen Van Thang (2005), Phan Thi Thuc Anh (2013), and Luu Trong Tuan and Rowley (2016).

Taken together, a comprehensive theoretical model of IJV learning is proposed as illustrated in Figure 1.

In this model, an IJV’s learning from its foreign parent is determined by a number of independent variables: the IJV’s learning intent, its absorptive capacity, the foreign parent’s willingness to share knowledge, and the trust between the IJV’s parents.

2.1. Learning intent

Nonaka and Takeuchi (1995) contended that learning intent is a condition for knowledge creation. Intent refers to ‘a firm’s initial propensity to view collaboration as an opportunity to learn’ (Hamel, 1991, p. 89-90). It captures the desire to internalize a partner’s skills and competencies. Without intention, it would be impossible to judge the value of the information or knowledge perceived or created (Nonaka, 1994). Thus:

**H1:** An IJV’s learning intent is positively associated with its level of learning from the foreign parent.

2.2. Absorptive capacity

2.2.1. Absorptive capacity dimension 1: Relatedness

As relatedness between an IJV and its foreign parent business gives the IJV some prior knowledge of the industry, products, and customers; it helps the IJV learn more from its foreign parent(s). Business relatedness has been addressed in the literature (Lane and Lubatkin, 1998; Merchant and Schendel, 2000; Lane et al., 2001; Hanvanich, Richards, Miller and Cavusgil, 2005) as having the potential to affect an IJV’s learning from its foreign parent. Therefore:

**H2a:** Relatedness between an IJV and its foreign parent business is positively associated with the IJV’s level of learning from the foreign parent.

2.2.2. Absorptive capacity dimension 2: Investment in training

It is important to recognize that merely having related knowledge is insufficient and the intensity of efforts for learning is critical for recognizing the value of new external information (Cohen and Levinthal, 1990; Kim, 2001). A direct measure of this effort would be investment in training. Committing financial and other resources to support the acquisition and
sharing of information can build a learning capacity which may help to overcome barriers to knowledge transfer (Simonin, 1999). Thus,

\[ H2b: \text{An IJV's investment in training is positively associated with its level of learning from the foreign parent.} \]

2.2.3. Absorptive capacity dimension 3: Employees’ ability to learn

Zahra and George (2002) asserted that measures of a firm’s absorptive capacity must capture its members’ capabilities. In the IJV context, it means that an IJV’s absorptive capacity must reside in its employees’ ability to learn. Such ability will influence the IJV’s level of knowledge acquired from the foreign parent (Phan Thi Thuc Anh et al., 2006). Thus,

\[ H2c: \text{An IJV’s employees’ ability to learn is positively associated with the IJV’s level of learning from its foreign parent.} \]

2.2.4. Absorptive capacity dimension 4: Joint participation

Joint participation indicates the extent to which personnel of both parties share decision-making and jointly work with each other. This should provide local personnel with a window into the knowledge and understandings held by the foreign parent organization. The choice of the joint venture form rather than a more arms-length, market-based alliance form may reflect a need to develop a more integrated relationship conducive to learning (Mowery, Oxley and Silverman, 1996). Thus,

\[ H2d: \text{Joint participation of local personnel with expatriates in shared activities of an IJV is positively associated with the IJV’s level of learning from its foreign parent.} \]

2.3. Foreign parent’s willingness to share knowledge

Knowledge exchange is subject to the willingness to share from the ‘teacher’ side (Simonin, 1999; Steensma and Lyles, 2000). In reality, the foreign parent may intentionally limit the knowledge flow to the IJV because cooperation through IJVs can be a low cost way for the local parents to gain competencies that later help the local parents compete against the foreign parent firms (Hamel, Doz and Prahalad, 1989; Simonin, 1999; Steensma and Lyles, 2000; Simonin, 2004). At the same time, the foreign parent may also be under the pressure of transferring knowledge to the IJV because the IJV’s success can confirm the rightness of its internationalization strategy and strengthen its position in the local market. Thus,

\[ H3: \text{The foreign parent’s willingness to share knowledge with the IJV is positively associated with the IJV’s level of learning from its foreign parent.} \]

2.4. Trust

Trust encourages knowledge sharing by increasing the knowledge source’s disclosure of knowledge and by reducing the knowledge recipient’s screening of received knowledge (McEvily, Perrone and Zaheer, 2003). A high trust environment enables free exchange of information and increases learning opportunities (Inkpen and Currall, 2004).

While scholars agree that a high level of trust leads to a high level of learning, they disagree about what trust consists of. In studies on IJV learning, many scholars (e.g. Lyles and Barden, 2000; Lane et al., 2001) conceptualized trust as single-dimensional and they admitted that this was a major flaw of their studies. In this
research, trust is conceptualized as comprising calculation-based, knowledge-based, and identification-based types. This is because these three types of trust cover most elements of trust discussed in previous literature (e.g. Zucker, 1986; Shapiro, 1987; Shapiro, Sheppard and Cheraskin, 1992). Moreover, Phan Thi Thuc Anh (2013) has found that these three types of trust are present in the IJV context in Vietnam. This is important because context is critical to understanding trust (Rousseau, Sitkin, Burt and Camerer, 1998). As noted by Zaheer and Zaheer (2006), there is a systematic difference in the levels, nature and objects of trust across countries.

2.4.1. Dimension 1: Calculation-based trust

Calculation-based trust between two parents emerges when each side perceives that the other has positive intentions based on calculations of costs and benefits. In knowledge exchange, this happens when their calculation shows that it is more beneficial for the foreign parent to transfer knowledge and for the local parent not to act opportunistically based on the knowledge acquired, hence, they will act accordingly. When both sides have positive intentions, the learning process will be facilitated. Therefore:

\[ H4a: \text{Calculation-based trust between two parents is positively associated with the IJV's level of learning from its foreign parent.} \]

2.4.2. Dimension 2: Knowledge-based trust

Knowledge-based trust captures the trustee’s qualities and intentions. Qualities and intentions can include the trustee’s ability, benevolence, integrity, reliability etc. A high level of knowledge-based trust between parents means that each side knows that the other side is of good quality and has good intentions in any, including knowledge-related, transactions. The corresponding hypothesis is:

\[ H4b: \text{Knowledge-based trust between two parents is positively associated with the IJV's level of learning from its foreign parent.} \]

2.4.3. Dimension 3: Identification-based trust

The identification-based trust between two parents can be found when both sides share the same needs and values. They think and feel in the same way and can act on behalf of each other. If two parents are identified, the likelihood of having misunderstandings among the parents and between the IJV and its foreign parents would be low, communication is much easier, and cooperation is much more facilitated. Thus,

\[ H4c: \text{Identification-based trust between two parents is positively associated with the IJV's level of learning from its foreign parent.} \]

3. Research methodology

3.1. Data collection and sample

The survey population was defined as all manufacturing IJVs operating in Vietnam. According to the list provided by the Ministry of Planning and Investment, there were 630 manufacturing IJVs in the whole country.

The questionnaire was sent to 550 IJVs with complete addresses that allowed mailing. The questionnaire was directed toward the IJVs’ Board of Management and asked a representative from the Board to fill it in on behalf of his/her venture. The mail was sent by secured means, which meant that if it could not reach the targeted company, it would be returned to the sender. In total, more than 80 questionnaires came back. Thus, nearly 470 of 550 IJVs
received the questionnaire. Whenever possible, direct meetings were arranged to encourage responses. These applied in Hanoi and HCMC only. In total, 154 usable questionnaires went were returned, with a response rate of about 33% (154/470).

Of the 154 responding IJVs, 56 firms were located in the North, 91 firms were located in the South, and the rest was either in the Central region or had a factory in more than one place. The surveyed IJVs had been in operation from 1 to 17 years, with an average of 9.2 years. In most IJVs, foreign partners held a substantially larger share of equity than the Vietnamese counterparts did.

3.2. Variables and measures

Observed variables included in the model were measured by facts and latent variables were measured by an indirect means through verbal expressions. Except foreign parent’s willingness to share knowledge, all other latent variables were measured by multiple items using a Likert-type (1 = strongly disagree to 5 = strongly agree) format.

The measure of IJV learning was taken from Phan Thi Thuc Anh et al. (2006) which is based on the measure utilized by Lyles and Salk’s and Lane et al.’s studies of IJVs in Hungary (1996). It consists of six items, which address six specific aspects of learning including (1) new technological expertise, (2) manufacturing processes, (3) product development expertise, (4) new marketing expertise, (5) knowledge about foreign culture and tastes, (6) managerial techniques, and (7) an item asking for the overall level of learning.

The measure of learning intent was adapted from Hamel (1991) and Simonin (2004). It included two items that address an IJV’s intention to study from its foreign parent.

Measures of 4 absorptive capacity components were also adapted from previous literature (Cao, 2000; Lyles and Barden, 2000; Phan Thi Thuc Anh et al., 2006):

- The measure of relatedness includes four items addressing the relatedness of the IJV’s technology, products, industry, and customers to that of its foreign parent.
- The measure of investment in training includes three items assessing the level of investment in training employees to master (1) technology, (2) marketing techniques, (3) managerial techniques brought by the foreign parent and two items assessing the level of resources committed to training employees in cross-cultural skills and to training in general.
- Employees’ ability to learn measure includes eight items assessing the IJV’s employees’ ability to assimilate and ability to apply foreign parent’s knowledge in the following areas: (1) new technology, (2) new marketing techniques, (3) new managerial techniques, and (4) overall.
- The measure of joint participation between local personnel with expatriates includes five items assessing the extent to which local personnel (1) are informed, (2) contribute ideas, (3) contribute activities of equal importance, (4) have equal opportunities in decision making, and (5) are involved in shared activities overall.

Foreign parent’s willingness to share knowledge was measured by a single item indicating the extent to which the foreign parent is willing to share its knowledge with the IJV.

Measures for all three types of trust, calcula-
tion, knowledge, and identification-based trust were adapted from Nguyen’s (2005) study on inter firm trust dynamics in Vietnam. Nguyen’s measurement was developed based on studies by Nooteboom et al. (1997) and Cummings and Bromiley (1996).

- The calculation-based trust’s measure includes five items assessing the extent to which a partner perceived that the other partner was attached to them because of either the legal system enforcement or the benefits that the other partner saw from having the relationship.

- The measure for knowledge-based trust comprises seven items assessing the extent to which a partner knew about and understood the other partner’s reliability, integrity, and benevolence.

- The identification-based trust’s measure consists of four items describing the extent to which the people of one partner shared with the contact person(s) of the other partners (1) personal information, (2) ideas, feelings, hopes, or problems, and (3) values/beliefs, and the extent to which contact person(s) of the other partners care about their problems, feelings, and concerns.

Control variables include (1) IJV age, (2) Equity split (local), (3) IJV size, (4) Technology intensity, and (5) Vietnamese parent’s ownership. These variables were found in the previous literature (e.g. Shenkar and Li, 1999; Lane et al., 2001; Simonin, 2004; Phan Thi Thuc Anh et al., 2006) as having significant relationships with learning.

IJV age was calculated as the number of years in operation up to the time the respondents filled in the questionnaire.

Equity split (local) was the proportion of equity in the venture held by the Vietnamese parent. IJV size was measured by the IJV’s number of employees.

Technology intensity was measured as a dummy variable with 1 = high technology intensity and 0 = low technology intensity based on the OECD (2005) classification of manufacturing industries.

Vietnamese parent’s ownership was also measured as a dummy variable with 1 = state-owned and 0 = non-state-owned.

3.3. Data processing

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) computer software package.

First, reliability analysis and factor analysis were run to evaluate the measures’ reliability and validity (Aaker, Kurmar and Day, 1998). Then, multiple regressions were used to test the proposed hypotheses.

4. Research findings

Confirmatory factor analysis and reliability analysis were used to assess the measures that use multiple items. Results show that all items were loaded onto their corresponding theoretical factors, showing construct validity (Neuman, 2000). With the exception of the measure of calculation-based trust, Cronbach’s alphas for all other measures were 0.766 or above, indicating a high level of reliability. The measure for calculation-based trust is 0.623. This is acceptable, given the fact that this is the first time trust was measured by this way in the context of IJVs. As noted by Hair et al. (1998), for explorative research, a Cronbach’s alpha of less than 0.7 can be acceptable. Thus, together, factor analysis and reliability analysis has proved
that the designed measures of constructs are satisfactory.

For hypothesis testing, an overall index for each factor, calculated by the mean of loaded items was used.

Table 1 presents the regression results for learning. The first 5 models examine the impacts of different sets of independent variables on learning. Model 6 examines the impacts of all independent variables on learning.

Model 1 includes only control variables as the independents. This model is not significant and no independent variable is significantly associated with learning, except the VN parent ownership type. This variable has a weak significant association with learning ($p < 0.1$).

Model 2 examines the predictability of just learning intent on learning, controlling for the effects of IJV age, Equity Split (local), Size (log), Technology Intensity, and VN_Parent ownership. This model is highly significant with adjusted $R^2$ of 0.217 ($p < 0.001$). Learning intent is highly significantly associated with learning ($\beta = 0.473$, $p < 0.001$).

Model 3 examines the predictability of four absorptive capacity factors. It appears that relatedness, investment in training, and ability to learn have strong significant positive asso-
ciations with learning (β = 0.284, p < 0.001; β = 0.244, p < 0.01; and β = 0.417, p < 0.001 respectively). Joint participation, however, has an insignificant relationship with learning. This model is highly significant with adjusted R² = 0.558 (p < 0.001).

Model 4 includes just the foreign parent’s willingness to share knowledge with the IJV. This model is also significant with adjusted R² of 0.341 (p < 0.001). FP’s willingness to share is highly significantly positively associated with learning (β = 0.596, p < 0.001).

Model 5 examines the predictive powers of three types of trust. The model is significant with adjusted R² = 0.318 (p < 0.001). There is a tendency toward a negative significant association between calculation-based trust and the level of knowledge acquired (β = -0.135, p < 0.1). Knowledge-based trust has a strong positive significant relationship with learning at p < 0.001 and β = 0.491 and identification-based trust is also positively associated with learning (β = 0.216, p < 0.01).

In model 6, all control and independent variables were entered into the regression equation. Four of the independent variables appeared to contribute significantly to the variance in learning, which include learning intent, relatedness, ability to learn, and FP’s willingness to share knowledge. Investment in training also has a weak association with learning in this model (p < 0.1). Compared to the individual independent variable models (model 2, 3, 4, and 5), relatedness and ability to learn maintained the same level of significance (p < 0.001) while the significance level of learning intent dropped from p < 0.001 to p < 0.01, of joint participation declined from p < 0.001 to p < 0.05, and of investment in training fell down from p < 0.01 to p < 0.1. Knowledge-based trust and identification-based trust both lost their significance in this model. There is a much improvement in the predictive power of this model. It explains 63.4% of the total variance in learning (adjusted R² = 0.634, p < 0.001) as compared to the 21.7%, 55.8%, 34.1%, and 31.8% of model 2, 3, 4, and 5. To check whether the improvement was significant, the adjusted R² change test was performed and the result showed that when all possible independent variables were included in the model (model 6), the adjusted R² changed significantly compared to any other models.

H1 posits that learning intent is positively associated with learning. Results from model 2 and model 6 support this hypothesis. It was hypothesized in H2a, H2b, H2c, and H2d that relatedness, investment in training, ability to learn, and joint participation is positively related to learning. The results in model 3 and model 6 show that H2a, H2b, and H2c are supported. Meanwhile there is no evidence to support H2d. Join participation has non-significant relationships with learning in either model 3 or model 6. H3 puts forward a positive significant relationship between FP’s willingness to share and learning. As can be seen in model 4 and model 6, this hypothesis is supported. H4a, H4b, and H4c hypothesize a positive significant association between each type of trust (calculation-based trust, knowledge-based trust, and identification-based trust respectively) and learning. Model 5 and model 6 show that hypotheses H4b and H4c were partially supported. Knowledge-based trust and identification-based trust are significantly associated with learning in model 5 but not in model 6. The results not only do not support H4a, but also provide reverse evidence, expressed in the negative sign of the regression coefficient for
calculation-based trust. Although the association between this type of trust and learning is weak, it is opposite to what was expected according to theory. This provides some interesting implications for practice.

5. Discussion and conclusion

Consistent with previous research (Cohen and Levinthal, 1990; Hamel, 1991; Nonaka and Takeuchi, 1995; Lyles and Salk, 1996; Lane et al., 2001; Simonin, 2004; Phan Thi Thuc Anh et al., 2006; Phan Thi Thuc Anh and Baughn, 2011), this study reaffirms the important role of learning intent, absorptive capacity, and foreign parent’s willingness to share knowledge in the inter-organizational learning context.

Trust between the parents was also found important for IJV learning but its role was alleviated when absorptive capacity, learning intent, and foreign parent’s willingness to share were present. This means that as long as the IJV has a high level of learning intent, a good absorptive capacity together with the foreign parent’s willingness to share knowledge, trust between parents is no longer important for learning. The result is half way between theory and empirical evidence. While theories establish that trust should have an influence on learning (e.g. Lane et al., 2001; Inkpen and Currall, 2004), previous empirical research failed to provide evidence (e.g. Lyles and Barden, 2000; Lane et al., 2001). This relationship should be further tested in future research.

Two out of four antecedents, absorptive capacity and trust, were conceptualized as multi-dimensional constructs. Results of the study support this multi-dimensionality conceptualization. While some previous empirical researches have included absorptive capacity and/or trust in their theoretical models, none of these researches includes both of them at the same time with their multi-dimensionality. This research represents the first attempt to do so. A replication in a different context could provide an interesting comparison.

Taken together, all four proposed determinants explained 63.4% of the variance in learning. The result has an important implication for managers of IJVs as well as managers of the IJVs’ parents: knowledge does not automatically flow from the foreign parent to the IJV. The establishment of an IJV often entails several conditions for learning but does not guarantee that learning will take place. This only happens under certain circumstances. Managers should pay attention to establishing a careful learning agenda, enhancing the IJV’s absorptive capacity, and building trust between the two parties. As far as the last point is concerned, it is worthy to note that while knowledge-based trust and identification-based trust were positively associated with learning as expected, calculation-based trust was negatively associated with learning. It means that the higher the level of calculation-based trust, the lower the level of learning. Thus, trust should be based on knowledge and identification rather than a calculation of costs and benefits. To the extent that parents have confidence in each other, such confidence should not rely on calculations.

In conclusion, drawing on alliance learning, absorptive capacity, and trust literature, this study proposed a new theoretical model linking IJV learning and a comprehensive list of its possible determinants, and then tested it in the context of Vietnam. The result contributes to the growing literature on IJV learning and provides important implications for managers working in IJVs.
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