

The Implications of Motive Divergence on International Joint Venture Management Control Systems and Performance

James Wakefield^a, Dr. Francesco Giacobbe

School of Accounting, University of Technology, Sydney

Abstract

International Joint Ventures (IJVs) are increasingly regarded as an important means of international expansion. A large body of literature has investigated the key characteristics of IJVs, however most of the research has been exploratory rather than confirmatory. This paper has developed a model to investigate (i) the effect of parent partner motive divergence and parent partner resource contributions to IJVs on parent partner management control systems (MCS) choices, (ii) the impact of parent partner resource contributions to IJVs on parent partner motive divergence and (iii) the impact of parent partner motive divergence and parent partner management control system choices on IJV performance. The data for this paper was gathered from a cross sectional survey questionnaire which collected data from Australian based parent partners of IJVs operating abroad. The results provide confirmatory evidence that motive divergence has a significant impact on performance and some impact on parent partner management control system choices. Resource contributions made by parent partners to IJVs was also found to have a significant impact on parent partner MCS choices and motive divergence. These findings provide confirmatory evidence of exploratory results and sound suggestions to the world of practice.

Key words: International Joint Ventures (IJVs); Performance; Control; Motives; Resource contribution; Management Control Systems (MCS)

^a *Corresponding Author*

James Wakefield
School of Accounting
University of Technology, Sydney
PO Box 123 Broadway 2007 Australia
Email: James.Wakefield@uts.edu.au

Introduction

International Joint Ventures (IJVs) are frequently used as a key strategic mechanism for companies to expand globally. The increase in the use of IJVs can be attributed to companies seeking to capitalise on growth in global markets (Pothukuchi, Damanpour, Choi, Chen and Park, 2002), particularly those situated in developing economies such as China and India (Calantone and Zhao, 2000). In addition the growing use of IJVs as a method of international expansion is frequently the result of companies wishing to share risk in highly uncertain environments and gather the significant resources needed when entering new markets (Bamford, Ernst and Fubini, 2004).

Parent partners entering into IJVs have a wide range of motives or objectives they wish to achieve. The objectives of one parent partner may be similar or complementary to those of other parent partner(s) resulting in a clear consensus among the partners as to the central objectives to be achieved by the IJV or may be different and divergent. Divergent motives between parent partners are often mentioned in the extant literature. Luo, Shenkar & Nyaw (2001) refer to the term as goal incongruity, Kamminga & Meer-Kooistra (2006) investigated joint ventures where partner have different interests and Mohr (2006) found that multiple partners of a IJV judge the success and performance differently, according to their individual interests. In this paper we investigate the effect of motive divergence on parent partner MCS choices and IJV performance, and the effect of parent partner resource contributions on motive divergence and MCS choices.

Research Questions and Motivation

The presence of motive divergence could have significant consequences for IJV performance (Ding, 1997; Luo and Park, 2003) and further understanding of the implications of motive divergence between parent partners could provide key evidence as to the reason behind it (Nielsen, 2007). It is also critical IJV parents understand whether MCS can be utilised to reduce the negative effects of motive divergence and yield higher performance. The exercise of MCS by a parent partner over an IJV is frequently argued to be essential to improving performance. In the context of IJVs, MCS can be classified according to the dimensions of focus, extent, and mechanisms of control (Geringer and Herbert, 1989). Investigation of the impact

of MCS choices by parent partners will provide guidance as to the best course of action to reduce to the negative impact motive divergence may have on performance.

Contribution of critical resources to the IJV by one parent partner has the potential to lead to opportunistic behaviour by another partner who may exploit resource contributed for their own benefit. This raises the possibility that critical resource contribution by one partner could lead to higher levels of motive divergence stemming from opportunistically based motives of the other parent partner(s). This raises the question of whether MCS can be used to limit possible opportunistic behaviour where high levels of critical resources are contributed to the IJV entity. This is particularly important in regions such as China, where contracts over resource contributions are an ineffective mechanism to guard against opportunistic learning behaviour by a parent partner (Calantone & Zhao, 2000).

The objectives of this paper are to investigate (i) the relationship between motive divergence and IJV performance, (ii) whether the critical resource contribution impacts on the level of motive divergence, (iii) whether parent partner motive divergence and parent partner critical resource contributions affect the choice of MCS exercised by IJV partners and (iv) the effect of parent partner MCS choices on performance. These factors will be investigated from the perspective of foreign IJV partners originating from advanced industrialised economies. This is of relevance given that IJVs are increasingly being regarded as a means of international expansion, particularly to developing economies. In addition limited research on these issues is available in extant literature. The extant research is largely exploratory and based on case studies. Si and Bruton (2005) and Luo and Park (2003) provide confirmatory evidence on the negative performance consequences of divergent motives, however these findings are focused on Chinese based IJVs.

Parent partners' use of MCS is frequently regarded as a key means of yielding higher IJV performance. There are two sets of different MCS used to the control IJVs; those exercised internally by IJV management and those exercised by parent partners to control the IJV. The MCS used by parent partners to control their IJVs is of particular interest, given that these choices could provide an invaluable tool to align venture operations with their individual motives. Frequently extant literature analyses the effectiveness of MCS in isolation (Killing, 1982; Beamish, 1984) without considering contingent variables such as motive divergence. Differences in

contingent variables clearly vary from one case to another and therefore conflicting findings are frequently found in many studies.

Contributions

This paper will make a number of important contributions to the understanding control and performance of IJVs. Firstly this paper contributes through providing some understanding of factors predictive of successful IJVs. Geringer and Herbert (1991) suggest that factors predictive of successful IJVs are unclear, thus the somewhat conflicting findings in extant literature. However the extant literature fails to consider the effect of motive divergence and associated MCS choices on performance in an integrated framework. This paper seeks to address this limitation by providing a comprehensive understanding of relevant factors through an integrative framework and as a result mitigate the possibility of producing spurious findings (Chenhall, 2003).

Despite the effect of parent partner motive divergence being evident in case studies such as Yan and Gray (1994), this variable is rarely incorporated as an explanatory factor of IJV performance in confirmatory research. While Si and Bruton (2005) considered the effect of motive divergence on performance in a confirmatory study, the investigation is limited however to Chinese IJVs. The contribution of this paper is therefore primarily focused on how the contingent variable of motive divergence and associated MCS choices affect IJV performance. This paper will also investigate the impact of motive divergence and related critical resource contribution on MCS dimension choices. In this regard the paper aims to contribute to theory development by considering the implications of motive divergence on performance and whether the associated MCS mitigate the possible negative performance consequences of motive divergence. The research framework this paper is shown in Figure 1.

The research framework in Figure 1 shows this paper will investigate both the effects of motive divergence and the relative critical resource contributions (RCRC) made by parent partners on MCS choices, in addition to the relationship between these factors. Subsequently the research framework shows this paper will investigate the effect of motive divergence and MCS choices on IJV performance.

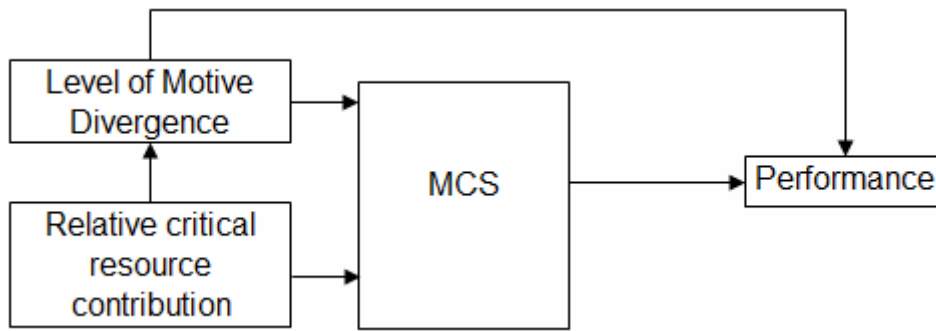


Figure 1 – Relationships Investigated in Paper

Literature Review and Proposition Development

Given the focus of this paper on IJV performance it is important to choose an appropriate method to assess IJV performance. The instability of IJVs is frequently argued to be an indicator of failure. Studies including Harrigan (1986) and Bamford et al. (2004) have found that eventually half of joint ventures originally established eventually break up. This is similar in magnitude to the reported rate of perceived unsatisfactory performance by parent partners (Geringer and Herbert, 1991). However instability of IJVs can stem from factors which may be positive or negative indicators of performance (Reuter, 2000) and therefore is not a clear indicator of IJV performance.

A common method of measuring IJV performance is the use of an overall satisfaction measure based on a parent parent’s degree of satisfaction with the achievement of objectives concerning their IJV. While the overall satisfaction performance measure is subjectively based and therefore exposed to bias, it has been demonstrated by Geringer and Herbert (1991) that the measure closely reflects objectively based performance measures. This approach however still has limitations including the fact that parent partners may place too much emphasis on the positive aspects of the IJVs and fail to adequately acknowledge negative performance (Geringer and Herbert, 1991).

A comprehensive method of measuring IJV performance based on parent partner objectives is to use the Input-Output continuum of joint venture performance proposed by Anderson (1990). Input measures relate to the achievement of productivity and learning objectives while output measures relate to the achievement of financial objectives including profitability and positive cash flow. It is suggested

that the achievement of these input based objectives in the short run is necessary to achieve positive results for output based objectives in the long run. Difficulties arise when attempting to appropriately weight individual performance measures at a given time, particularly where partners have multiple objectives for entering an IJV. A possible method of mitigating this issue is to measure performance for individual objectives only where they are relevant. This paper will assess IJV performance from the perspective of IJV foreign parent partners based on relevant Input-Output continuum objectives.

The presence of complementary and particularly divergent motives between IJV partners is highlighted in extant literature. At one end continuum complementary motives can be defined as those that interlock and guide the operation of joint ventures towards the mutual interest of both partners. The presence of complementary motives is indicated by Makhija and Ganesh (1997) where each partners' key motive is to learn from each other. At the other end are divergent motives, where partners pursue dissimilar interests through the joint venture entity, resulting in possible conflicting objectives to be achieved by joint venture management (Hennart, Kim and Zeng, 1998).

The extant literature suggests that high levels of motive divergence between parent partners leads to lower IJV performance. This suggestion primarily stems from case study findings (Groot and Merchant, 2000; Yan and Gray, 1994; Druckman, Singer and Cott, 1997) which provide evidence that relatively complementary motives lead to higher performance. The limitation of case study research is acknowledged by Groot and Merchant (2000), who suggest that findings from such research may be considered for initial theory development only.

The use of quantitative data gathered through cross sectional surveys has provided further validation of the relationship beyond that of case study based research. However such findings are based solely on IJVs located in China. In the context of Chinese based IJVs, Si and Bruton (2005) indicate that higher levels of motive divergence lead to lower performance. In addition a further limitation of this finding is performance is measured from the perspective of the IJV management, rather than that of parent partners. Therefore the extant literature does not provide conclusive evidence concerning the relationship between motive divergence and performance.

Based on the suggestions of the extant literature on the relationship between motive divergence and performance, the following proposition will be tested:

***P1:** IJVs where parent partners have complementary motives are expected to achieve higher levels of perceived performance compared with IJVs where parent partners have divergent motives.*

The extant literature indicates that the level of motive divergence is positively related to the relative critical resource contribution made by parent partners to IJVs. According to Peng (2000), the institutional environment in developing economies compared to advanced industrialised economies is significantly different, and therefore strategic differences of firms located in these respective economies is expected to be high. The presence of these differences between developing and advanced industrialised economy based partners is argued to be a key driver of different partner motives (Si and Bruton, 2005). These differences are the result of different factor endowments of partner firms, often stemming from knowledge based resources, critical to both the competitiveness of the IJV and the partner contributing such resources. Often partners are motivated to enter IJVs to learn from a firm possessing superior knowledge in a particular area (Demir and Söderman, 2007). These partners often view the IJV as a race to learn, with the goal of eventually utilising such knowledge to outperform the other partner(s). Therefore extant literature suggests that if one partner contributes significantly more critical resources to an IJV entity than the other partner, the level of motive divergence could be higher. Currently findings in extant literature are focused on Chinese based IJVs (Demir and Söderman, 2007; Ding, 1997). Given that IJVs are a key method of international expansion into many countries around the world, this research focus limits the validity of the findings to a specific geographical area. Therefore the following proposition will be tested:

***P2:** Higher relative critical resource contribution to the IJV entity by one parent partner will be related to higher levels of motive divergence between parent partners.*

There is considerable debate in extant literature as to the most appropriate method of conceptualising the MCS exercised over IJVs by parent partners. Equity share is regarded increasingly as a poor proxy for control, due to the inability of the measure to capture the multifaceted nature of MCS (Mjoen and Tallman, 1997; Chalos and O'Connor, 2004).

Geringer and Herbert (1989) suggest that control of IJVs is made up of three dimensions; focus, extent, mechanisms of control. This suggestion appears to provide a far more comprehensive method of conceptualising control. The control dimensions are regarded as more comprehensive since they capture the key facets of control rather than relying on provide proxies such as equity share. These control dimensions have been referred to widely in extant IJV literature and used in relevant research (Giacobbe, 2007; Groot and Merchant, 2000; Yan and Gray, 1994; Kamminga and Meer-Kooistra, 2006 & 2007).

These control dimensions are defined as follows:

- *Focus of control:* This dimension refers to the scope of activities and decision making areas controlled by a parent of an IJV (Geringer, 1986). Parent partners will have a broad focus of control if they exercise control over a significant number of operational areas. In contrast parent partners will have a narrow focus of control if they only concentrate on a few key operational areas of the IJV, perceived to be critical.
- *Extent of control:* This control dimension is defined as the dominance of a partner over decision making processes in joint venture operational areas (Geringer and Herbert, 1989). High extent of control refers to a partner having a relatively final and conclusive say in decision making, shared extent of control refers to all partners having an active role in decision making with neither partner having final decision making power and finally low extent of control refers to a parent partner not having a final or conclusive say in decision making.
- There are a number of tools which can be used to exercise control and these can be classified as *Formal* or *Social control mechanisms* as follows:
 - *Formal control mechanisms* refer to fixed rules and regulations guiding the operation of an IJV and reflect inflexible autocratic management (Child, 1973). These controls are reflective of content-

orientated mechanisms, referring to the direct intervention of a parent partner in the operation of an IJV entity (Bartlett, 1986). Examples of formal mechanisms include planning, budgeting and performance evaluation procedures, standardised rules and formal authority.

- *Social control mechanisms* refer to IJV staff decision making autonomy and reporting relationships guiding the operation of an IJV, demonstrating more flexible democratic management (Schann, 1983). These mechanisms are reflective context-oriented mechanisms, referring to those that are culturally and informally based. Examples of such mechanisms include teamwork, socialisation processes and regular meetings.

Extant literature suggests that the control dimensions can be considered in an integrated set (Geringer and Herbert, 1989), providing a far more comprehensive way of considering control. Such an integrated set of dimensions for the purpose of this paper will be defined on a continuum ranging from 'Limited' to 'Comprehensive'. The conceptualisation of an integrated control dimension set will be defined in the following paragraph with reference to extant literature.

According to Geringer and Herbert (1989) and Choi and Beamish (2004) exercising effective control entails selective control over areas that a parent perceives as critical. This is based on the notion that there will be critical areas that a parent perceives as necessary to the success of the joint venture. Choosing a relatively broad focus will therefore mean that the parent partner is focusing on a large number of areas which are perceived as fundamentally important. The choice of narrow focus by one parent partner (i.e. control over a limited set of operational areas) will allow the other parent partner(s) significant leeway to control a large number of operational areas. Broad focus by a partner over an IJV is regarded as contributing to comprehensive control. In addition the use of higher extent of control by a given partner would contribute to more comprehensive control, due to the dominance over joint venture decision making in areas which a parent partner is focusing on (Choi and Beamish, 2004).

In regards to mechanisms of control, formal control mechanisms are used to stop or prevent a joint venture entity from engaging in certain actions, and are basically formal rules to guide the joint venture operations. These controls are

inflexible and bureaucratic in nature (Child, 1973), leading to comprehensive parental control. In contrast social controls are more democratic in nature and exercised through informal mechanisms such as participation in the planning process and reporting relationships between staff Schann (1983). Social control mechanisms can be used in the presence and formal controls. The extensive use of social control mechanisms and formal control mechanisms can also be regarded as contributing to comprehensive parental control.

Broad focus, high extent and high level use of formal and social control mechanisms by a given partner, can be defined as contributing to comprehensive control. Narrow focus, lower extent and lower use of social and formal control mechanisms by a given partner, can be defined as contributing to relatively limited control over an IJV, and could reflect the joint control by all partners or dominant control by another partner(s). Therefore a parent partner can exercise the combination of individual control dimensions in a continuum ranging from limited to comprehensive as shown in Figure 2 below.

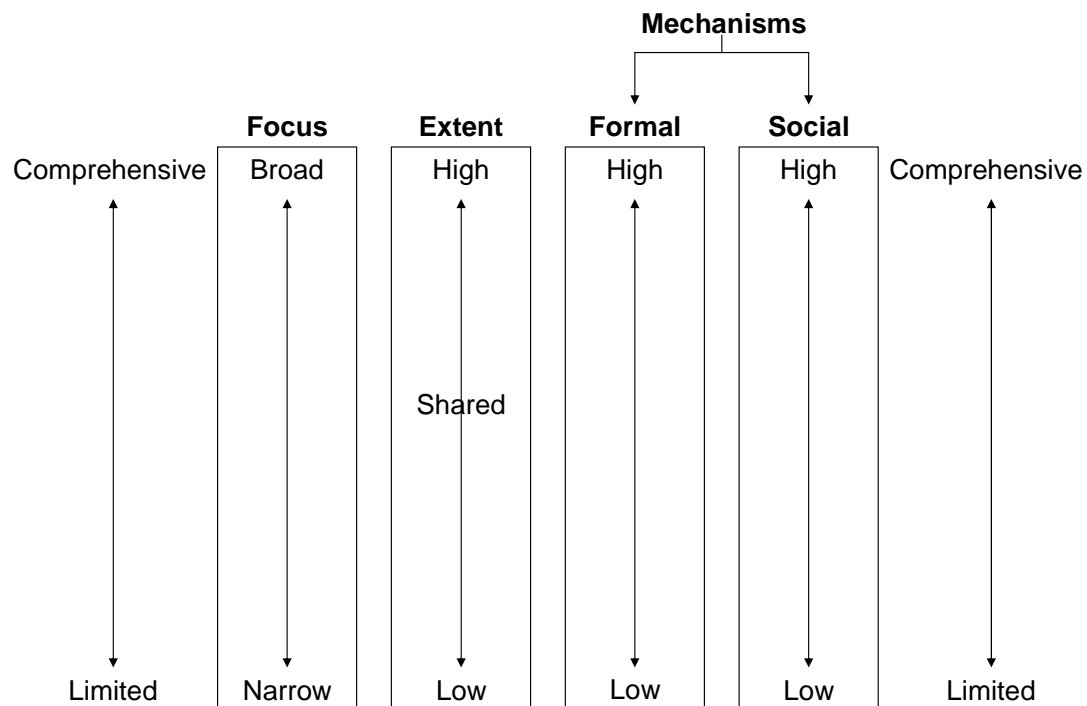


Figure 2 – Integrated Control Set ranging from Limited to Comprehensive

Extant literature provides limited evidence on the influence of motive divergence on MCS choices of IJV parent partners. Luo et al. (2001) for example indicate that greater exposure to local environmental business contingencies in China will result in foreign partners seeking to exercise higher levels of control. It has been indicated by Geringer and Herbert (1991) that each partner understands the motives of the other partner(s) engaged in an IJV and therefore could be aware of motive divergence. Based on Luo et al. (2001) findings, partners exposed to the effects of such a contingency could seek higher levels of control. This suggests the use of comprehensive control choices by a parent partner to mitigate negative effects of motive divergence. Therefore the following propositions will be tested:

***P3A:** A parent partner engaged in an IJV with a high level of motive divergence with the other parent partner(s) will seek a broader focus of control.*

***P3B:** A parent partner engaged in an IJV with a high level of motive divergence with the other parent partner(s) will seek high extent of control.*

***P3C:** A parent partner engaged in an IJV with a high level of motive divergence with the other parent partner(s) will seek high use of formal mechanisms of control.*

***P3D:** A parent partner engaged in an IJV with a high level of motive divergence with the other parent partner(s) will seek high use of social mechanisms of control.*

The extant literature suggests that relative critical resource contributions and motive divergence are positively correlated (Demir and Söderman, 2007). Evidence found by Yan and Gray (2001) suggests the higher critical resource contribution will lead to the exercise of higher extent of control, in order to guard against opportunistic behaviour. In addition findings by Giacobbe (2007) suggest that higher resource contributions are associated with more comprehensive control choices. The greater bargaining power of a partner which contributes higher levels of critical resources

(Giacobbe, 2007; Nakamura, 2004) reinforces the notion that this partner will exercise desired control to guard against opportunistic behaviour. Therefore it appears that partners would exercise comprehensive control over IJV entities to avoid opportunistic behaviour by other parent partners. Therefore the following propositions will be tested:

***P4A:** A parent partner contributing more critical resources to an IJV than the other parent partner(s) will seek a broader focus of control.*

***P4B:** A parent partner contributing more critical resources to an IJV than the other parent partner(s) will seek high extent of control.*

***P4C:** A parent partner contributing more critical resources to an IJV than the other parent partner(s) will seek high use of formal mechanisms of control.*

***P4D:** A parent partner contributing more critical resources to an IJV than the other parent partner(s) will seek high use of social mechanisms of control.*

Extant literature does not provide conclusive evidence on whether more comprehensive MCS choices lead to higher levels of performance. While Killing (1982) provides evidence that dominant control leads to higher performance, Calantone and Zhao (2000) indicate that use of comprehensive control choices do not lead to higher performance. Further Beamish (1984) shows that comprehensive control choices lead to lower performance. In addition Giacobbe (2007) finds that formal control mechanism use is positively related to performance, while focus of control is negative related to performance. There could be a number of reasons for these conflicting findings. Firstly performance is often measured from different perspectives, including the management of the IJV itself, or foreign and local partners' perception of performance. Secondly different control measures or proxies are used in extant literature. While Killing (1982) and Beamish (1984) use the degree to which the IJV is managed like a fully owned subsidiary from one partner's

perspective, Calantone and Zhao (2000) use the extent of control and partner equity share to proxy for control.

In addition many studies do not consider effect of contingent factors such as motive divergence and relative critical resource contributions on the relationship between control and performance. It may be the case that studies including Calantone and Zhao (2000) found comprehensive control had no significant association with performance because partner motives were relatively complementary. In contrast where performance was found to be higher using comprehensive controls from the foreign partner's perspective, the motives of the partner could have been relatively divergent.

To reconcile findings in extant literature regarding the relationship between control and performance and considering the integrated MCS set, this paper will test the following propositions:

P5A: *Broader focus of control by a parent partner will impact on perceived performance of their IJV.*

P5B: *Higher extent of control by a parent partner will impact on perceived performance of their IJV.*

P5C: *The utilisation of formal mechanisms of control by a parent partner will impact on perceived performance of their IJV.*

P5D: *The utilisation of social mechanisms of control by a parent partner will impact on perceived performance of their IJV.*

By reviewing extant literature this section has considered and developed propositions to extend the understanding of whether critical resource contributions and motive divergence are related, whether these factors impact on parent partner MCS choices and the effect of motive divergence and MCS choices on performance. In this regard the propositions developed seek to significantly progress the understanding of the cause and effects of motive divergence between IJV parent partners.

The propositions are placed on the relevant parts of a conceptual theoretical model in Figure 3 below. The model shows that this paper will investigate the effect of motive divergence and relative critical resource contributions on the control dimensions as indicated by the arrows connecting these variables in accordance to proposition set 3 and 4. The arrow leading from relative critical resource contribution to level of motive divergence illustrates that testing of proposition 2 will investigate the relationship between these two factors. Finally the arrows leading from motive divergence and control dimensions to performance, demonstrate the testing of proposition 1 and proposition set 5 respectively will investigate the relationship between these factors.

Research Method

Structural Equation Modelling (SEM) is used to model the multiple relationships between variables shown in Figure 3. SEM has the ability to model multiple relationships between variables and therefore has a distinct advantage over multivariate statistical analysis techniques which only analyse one relationship at a time (Goldberger, 1973). There has been an increasing trend towards to use of SEM in IJV research due to the move towards explanatory based research (Giacobbe, 2007; Yan and Gray, 2001; Calantone and Zhao, 2000). Given that this paper seeks to yield confirmatory based of exploratory based research in extant literature, the use of SEM is suitable.

There are two main approaches to SEM, consisting of covariance and variance based techniques including the Partial Least Squares (PLS) technique (Giacobbe, 2007). The use of the variance based approach such as the PLS technique is appropriate and will be used in this paper given that initial theory is conflicting and therefore not particularly strong. An advantage of using the PLS technique is it can be applied to relatively small samples compared with covariance based SEM which require a sample size of a least 100 (Haenlein and Kaplan, 2004). Further, an advantage of using SEM approaches in general is the reduction in the impact of statistical noise in complex strategic models, an underlying reason why IJV studies including Mjoen and Tallman (1997) and Fornell, Lorange and Roos (1990) have used the method. The PLS technique will be carried using PLS-Graph, a statistical software program developed by Wynne W. Chin of the University of Houston.

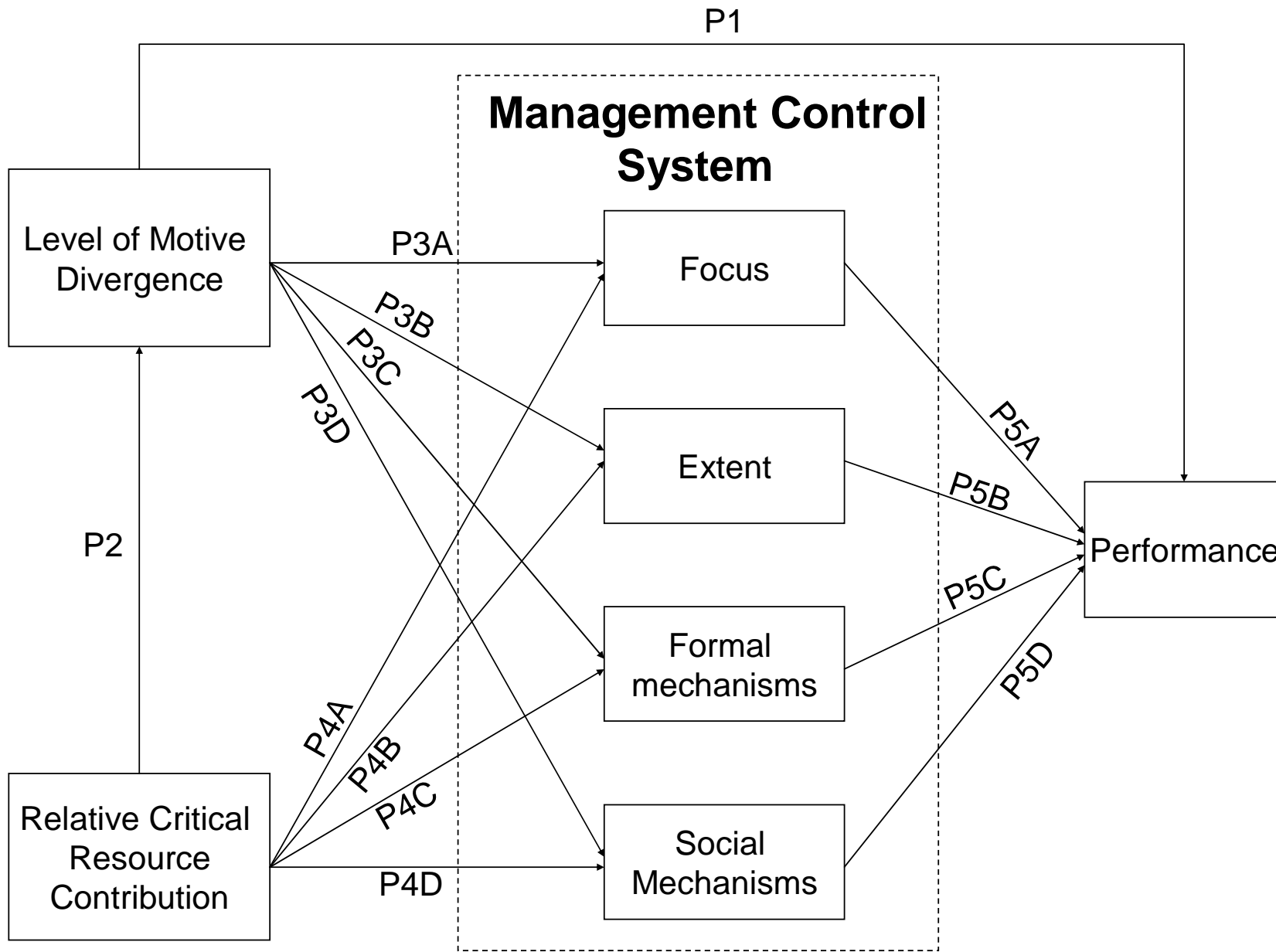


Figure 3 – Conceptual Theoretical Model and Propositions

The variables in the conceptual theoretical model are measured by creating constructs based on indicators stemming from a cross sectional survey instrument. In PLS a construct is measured by using indicators which can be reflectively or formatively based. Indicators are defined as reflective where the direction causality runs from the construct to the indicators and therefore all indicators are expected to be correlated to each other (Jarvis, Mackenzie and Podsakoff, 2003). On the other hand where the direction of causality runs from the indicators to the construct and therefore indicators are not expected to be correlated they are defined as formative (Jarvis et al., 2003).

Measurement of motive divergence between parent partners is of major importance given that this paper concentrates on investigating the cause and effects of this variable. Survey participants were asked to scale eleven individual objectives for entering into the IJV for both their company (the foreign partner) and their partner separately (local partner). Research by Geringer and Herbert (1991) indicates that each partner understands the motives of the other partner(s) when entering into an IJV even when partners are culturally dissimilar. Therefore it is possible to survey one joint venture partner and simultaneously gather accurate data on both partners' motives for entering into the joint venture. A five-point Likert scale extended from whether partners strongly agree to strongly disagree on the following objectives:

1. Profit
2. Growth
3. Expansion to related products
4. Expansion through diversification
5. Expansion to new market
6. Cost reduction
7. Risk sharing
8. Access resources/raw materials
9. Knowledge exchange/learning
10. Co-opting or block competition
11. Overcoming government barriers

In order to calculate the level of motive divergence the following steps were undertaken in turn:

1. Each objective for both local and foreign partners is assigned a motive importance value of 1 to 5 based on whether the foreign partner strongly disagree to strongly agree respectively that this is an objective.
2. The absolute difference in partner importance for each of the 11 objectives is calculated.
3. Where a survey participant has indicated corresponding disagreement and/or strong disagreement of a particular objective for both partners, these values will be excluded from the average calculation carried out in step 5. This is because such objectives are irrelevant to both partners and therefore should not be included in the average of the absolute differences. Including these would only result in the level of motive divergence being underestimated.
4. The average value of the remaining absolute differences is calculated and a value of 1 is added. This is the final *Motive Divergence Score* ranging from 1 to 5. A value of 1 indicates motive alignment or complementary motives. In contrast a motive divergence score of 5 indicates motive divergence. Since the *Motive Divergence Score* only entails one measure, this will be the sole reflective indicator of the *Motive Divergence* construct. Treating this indicator as reflective is consistent with the assumption underlying PLS analysis.

As indicated in the literature review of this paper the most appropriate method to measure IJV performance is through the use of the individual performance indicators which survey participants indicate are relevant. Survey participants (foreign based IJV parent partners) were asked to indicate how satisfied they were with IJV performance according to individual objective achievement on a Likert scale from 1 to 5, where 5 refers to very high satisfaction performance and 1 refers to low satisfaction performance. The individual performance indicators were grouped so to create three performance constructs; learning, product and financial performance. The indicators for each performance construct were regarded as reflective indicators. A second order performance constructs was then estimated to measure the degree of satisfaction with the overall performance of the IJV.

The construct focus of control was estimated by requesting survey participants to indicate how many managers they provided to predefined functional areas of the IJV in the last five years on a scale of 1 to 5, with high values indicating the contribution of more managers to the predefined areas. Each functional area was used

as an indicator of focus of control. The indicators are reflective given that a parent partner's choice of managers provided in each functional area is consistent with their choice of narrow or broad focus of control.

The construct extent of control was estimated by requesting survey participants indicate the relative decision making power of their company over the same functional areas of the IJV as for focus of control on a Likert scale of 1 to 5. High values indicate greater decision making power over IJV functional areas. The relative decision power over each functional area was used as the indicators for the construct of extent. These indicators are regarded as reflective since it is expected that a parent partner's choice of control over the majority of functional areas will be consistent with the choice of low to high extent of control.

The constructs formal mechanisms and social mechanisms of control were estimated through requesting survey participants to indicate the use of the following mechanisms in controlling the operations of their IJV:

- a. Contracts
- b. Structural Grouping and Departmentalisation
- c. Formal authority and relationship
- d. Standardised Procedures and Rules
- e. Planning and Budgeting
- f. Supervision
- g. Performance evaluation
- h. Teams & task forces
- i. Meetings & organised personal contact
- j. Transfer of managers/lateral movements
- k. Rituals, traditions and ceremonies
- l. Networking and other socialisation processes

The first half of these mechanisms (a-g) are regarded as indicators of the formal mechanisms construct, and the second half (h-l) are regarded as indicators of the social mechanisms construct. Survey participants were asked to indicate the use of these mechanisms on a Likert scale of 1 to 5. High values indicate greater use of control mechanisms. The indicators of formal mechanisms and social mechanisms constructs are regarded as reflective.

The construct relative critical resources contributions (RCRC) was estimated by requesting the survey participant indicate the level of relative resource

contributions they make to a set of predefined areas of the IJV on a Likert scale of 1 to 5. High values indicate high relative resource contributions. The indicators of the *RCRC* construct are formative. This is because partners may have differing resource contributions and expertise, and as a result the contribution to one area of the IJV will not necessarily be reflective of the contribution to another.

The data for this paper was collected by using a cross sectional survey questionnaire responses. The survey was mailed out in August 2005 to Australian companies involved in equity based IJVs located or operating outside Australia. The sample of survey participants was selected using information from Austrade, Connect4 (annual report database) and Dunn & Bradstreet (business data reporting company). A number of sources were necessary as no database of Australian companies involved in IJVs was available. The name of managers in charge of the IJV for the Australian partners was obtained in most cases and the survey mail out was addressed to this person. To provide assurance that survey participants interpreted the survey questions as intended and therefore ensuring the validity of responses, pilot tests of the survey were conducted.

Results

To ensure the validity of the PLS model a number of validity tests were performed for both the reflective and formative indicator sets. Convergent and discriminant validity testes were performed for reflective indicators. The majority of rotated factor loading values for each indicator were sufficiently high. Indicators where the rotated factors loading fell below acceptable levels were subsequently not used to measure the constructs (Hulland, 1999). Then Cronbach alphas were calculated for constructs estimated by the remaining reflective indicators. All Cronbach alpha values for each construct were higher than 0.7 indicating acceptable composite reliability (Nunnally, 1978). Given the acceptable rotated factor loadings and composite reliability of the reflective indicators and constructs, this indicates acceptable convergent validity. The discriminant validity of constructs was tested by calculating the square root of the Average Variance Extracted (AVE). The square roots of all the AVE values are higher than the correlations between the constructs as shown in Table 1 below, therefore indicating the constructs have acceptable discriminant validity. These results indicate that it can be concluded that the reflectively determined constructs in the PLS model can be reliably used.

Table 1 - Correlation between Constructs (Square Root of AVE shown in bold)

	Motive Divergence	Focus	Extent	Formal Mechanisms	Social Mechanisms	Performance
Motive Divergence	1.000					
Focus	0.080	0.820				
Extent	-0.035	0.702	0.769			
Formal Mechanisms	-0.012	0.525	0.460	0.749		
Social Mechanisms	-0.107	0.382	0.419	0.562	0.831	
Performance	-0.234	0.006	0.114	0.085	-0.051	0.828

Since formative indicators are not expected to be correlated (Jarvis et al., 2003), the use of validity and reliability testing methods for reflective constructs is not appropriate (Chin, 1998). The validity of a formative construct can be measured by the strength of the relationship between formative indicators and the construct (Bollen, 1989). The strength of the relationship between formative indicators and the relative critical resource contribution construct was determined by calculating the coefficients and t-values using the PLS-Graph bootstrap resampling procedure. The results indicate that all formative indicators are highly and significantly related to the RCRC construct, confirming the validity of these indicators and construct.

The PLS results of the model are shown in Table 2 and Figure 4 below. The path coefficient values in Table 2 indicate the estimated effect on the constructs shown in bold by the relevant causation constructs. The R-square values indicate that a higher variability in a number of constructs explained by the model, with values ranging from 3.5% to 60.5%. The significance of the relationship between the relevant constructs is indicated by the asterisks contained in the final column of Table 2, which is estimated by comparing the observed t-values with the 2-tailed significance test values.

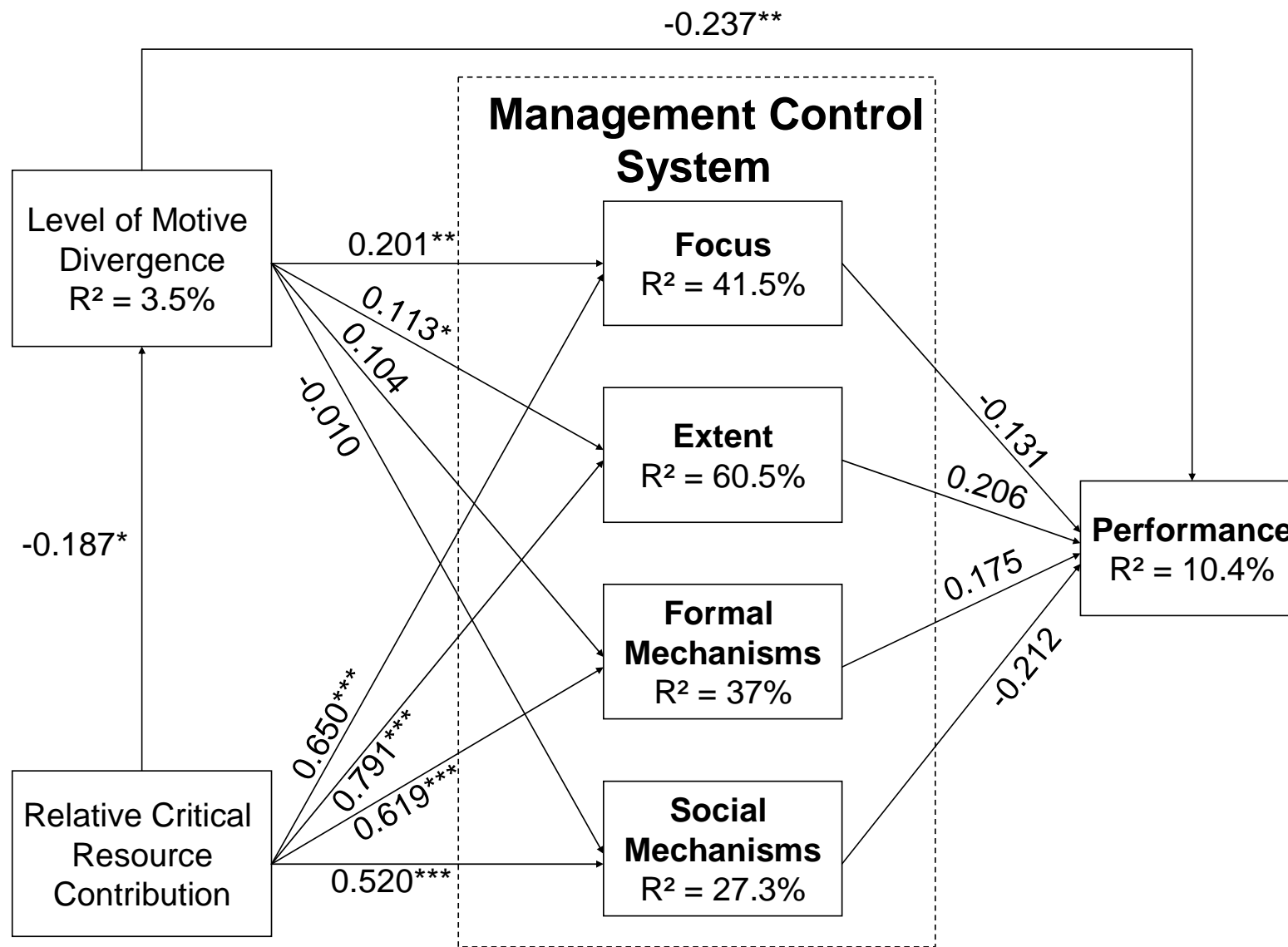
Table 2 – PLS Model Results

Effects	R²	Path coefficient	Observed t-value	Significance level
Effects on Motive Divergence	3.5%			
RCRC		-0.187	1.773	*
Effects on Extent of Control	60.5%			
Motive Divergence		0.113	1.789	*
RCRC		0.791	19.113	***
Effects on Focus of Control	41.5%			
Motive Divergence		0.201	2.420	**
RCRC		0.650	8.533	***
Effects on Formal Controls	37%			
Motive Divergence		0.104	0.901	ns
RCRC		0.619	7.948	***
Effects on Social Controls	27.3%			
Motive Divergence		-0.010	0.102	ns
RCRC		0.520	5.633	***
Effects on Performance	10.4%			
Motive Divergence		-0.237	2.048	**
Focus of Control		-0.131	0.639	ns
Extent of Control		0.206	0.888	ns
Formal Controls		0.175	1.008	ns
Social Controls		-0.212	1.473	ns

Significance level 2-tailed: *90%; **95%; ***99%

2-tailed critical t-values for confidence level: 99%=2.576; 95%=1.960; 90% =1.645

These results reported in Table 2 are summarised in Figure 4 below. The estimated effects and significance of the relationship between the constructs in the model are indicated by the coefficient values on the relevant paths. The variation of each of the constructs explained by relevant causation constructs is indicated by the R-square values.



Significance level 2-tailed: *90%; **95%; ***99%

2-tailed critical t-values for confidence level: 99%=2.576; 95%=1.960; 90% =1.645

Figure 4 – PLS Estimates of the Theoretical Framework Model

To investigate the individual effect size of each construct a marginal analysis was performed. The marginal effect size of each construct on the R-square value is estimated by the F-square value (Cohen, 1988). The F-square values are shown in Table 3 and 4 below. The effect size of an exogenous construct on an endogenous construct can be interpreted as small if the effect size is 0.02, medium if 0.15 and large if 0.35 (Cohen, 1988).

Table 3 – Effect size (F² values)

Endogenous Constructs	Exogenous Constructs Excluded				
	Original R ²	Motive Divergence		RCRC	
		R ²	F ²	R ²	F ²
Focus	0.415	0.377	0.065	0.031	0.656
Extent	0.605	0.596	0.023	0.009	1.509
Formal Controls	0.370	0.361	0.014	0.084	0.454
Social Controls	0.273	0.273	0.000	0.0011	0.360
Performance	0.104	0.058	0.051	-	-

Table 4 – Effect size (F² values)

Endogenous Constructs: Performance	
Exogenous Constructs Excluded	
Original R ²	0.104
Focus	
R ²	0.102
F ²	0.002
Extent	
R ²	0.099
F ²	0.006
Formal Mechanisms	
R ²	0.083
F ²	0.023
Social Mechanisms	
R ²	0.075
F ²	0.032

As shown in Table 2, the path coefficient between Relative Critical Resource Contribution on Motive Divergence is -0.187 and is statistically significant at 90% level, the R-square value is only 3.5%. This result indicates that the relationship between the two constructs is opposite to the direction suggested in proposition 2. Therefore no support is found for proposition 2.

The path coefficient between Motive Divergence and Focus of control is 0.201 and is statistically significant at the 95% level. This provides support for proposition 3A, which suggests that higher Motive Divergence is expected to lead to broader Focus. The F-square value indicates that the variability of Focus explained by Motive Divergence is small to medium. The results suggest that Relative Critical Resource Contribution is highly related to Focus. A coefficient of 0.650 is generated between these constructs which is statistically significant at the 99% level. In addition the F-square value indicates that the R-square value of 41.5% for Focus is explained primarily by RCRC. Therefore these results provide support for proposition 4A, which suggests that higher RCRC leads to broader Focus.

The path coefficient between Motive Divergence and Extent is 0.113 and is statistically significant at the 90% level. This provides support for proposition 3B, which suggests that higher Motive Divergence leads to higher Extent. However the variability of Extent explained by Motive Divergence is small as indicated by the F-square value. The results suggest that Relative Critical Resource Contribution is highly related to Extent. The coefficient of 0.791 between the constructs is statistically significant at the 99% level. In addition the F-square value indicates that the R-square value of 60.5% for Extent is explained primarily by RCRC. Therefore these results provide support for proposition 4B, which suggests that higher RCRC leads to higher Extent.

The path coefficient between Motive Divergence and Formal Mechanisms is 0.104. Although the coefficient is positive as expected, it is statically insignificant at conventional levels. Therefore this finding provides no support for proposition 3C. The results suggest that Relative Critical Resource Contribution is highly related to Formal Mechanisms. The coefficient of 0.619 between the constructs is statistically significant at the 99% level. In addition the F-square value shows that the R-square value of 37% for Formal Mechanisms is primarily explained by RCRC. Therefore these results provide support for proposition 4C, which suggests that higher RCRC leads to higher use of Formal Mechanisms.

The path coefficient between Motive Divergence and Social Mechanisms of control is not statistically significant. Therefore no support for proposition 3D is found. Relative Critical Resource Contribution, instead, is highly related to Social Mechanisms. The results show the coefficient of 0.520 between the constructs is statistically significant at the 99% level. In addition the F-square value shows that the R-square value of 27.3% for Social Mechanisms use is explained primarily by RCRC. Therefore these results provide support for proposition 4D, which suggests that higher RCRC leads to more extensive use of Social Mechanisms of control.

The coefficient between Motive Divergence and Performance is -0.237 and statistically significant at the 95% level. This result supports proposition 1, which suggests that higher Motive Divergence leads to lower Performance. The variability explained by Motive Divergence appears to be small to medium, as indicated by the F-square value. The effect of Focus, Extent, Formal Mechanisms and Social Mechanisms on Performance is statistically insignificant at all conventional levels. Therefore no support is found for proposition 5A, 5B, 5C and 5D.

Results Discussion

The literature review indicates that both motive divergence and relative critical resource contributions would have a significant effect on parent partner MCS choices, given the presence of opportunistic behaviour stemming from relative critical resource contributions. The results suggest that motive divergence has a significant positive relationship with the control dimensions of focus and extent with the magnitude of impact being moderate as indicated by the F-square values. In contrast the results for relative critical resource contribution suggest a highly significant and large positive effect on all control dimension choices. This could be explained by the suggestion that the level of relative critical resource contribution significantly contributes to the bargaining power of a parent partner (Giacobbe, 2007; Nakamura, 2004). Given this suggestion, a parent partner contributing high levels of critical resources to an IJV may be in a more powerful position to exercise their desired MCS choices in order to mitigate the opportunistic behaviour of another parent partner. In contrast while a parent partner may acknowledge that the presence of high levels of motive divergence with another parent partner will have negative implications on the perceived performance of the IJV, motive divergence is not defined as a contributor to bargaining

power (Giacobbe, 2007; Nakamura, 2004). Therefore a parent partner may not be in a position to seek and implement their desired MCS choices where high levels of motive divergence are present.

This paper conceptualised an integrated approach to considering MCS choices on a continuum ranging from 'Limited' to 'Comprehensive'. The results suggest that parent partners do exercise control in an integrated set according to this continuum, particularly regarding the effect of relative critical resource contribution on MCS choices. This is suggested by the highly significant and large positive effects that relative critical resource contribution has on control dimension choices. In addition the findings regarding the positive and significant effect of motive divergence on focus and extent of control, further suggest that considering MCS choices in an integrative manner is applicable. Therefore these findings appear to support the suggestions of Geringer and Herbert (1989) regarding the applicability of considering MCS choices in an integrated set as suggested by the comprehensive to limited continuum conceptualised in this paper.

The relationship between relative critical resource contribution and motive divergence was negative and significant, opposite to what proposition 2 suggests. This finding is in contrast to extant literature that suggests the difference between developing and advanced industrialised economy based partners including resource endowments is a key driver of motive divergence (Si and Bruton, 2005). A possible explanation of the negative relationship between these two variables is that partners contributing high levels of resources to IJVs may also have the power to seek partners less likely to be opportunistically motivated. If a partner contributing high levels of critical resources is aware that motive divergence will lead to lower levels of performance, this partner could take advantage of their higher bargaining power stemming from resource contributions (Giacobbe, 2007; Nakamura, 2004) to enter an IJV with partners less likely to opportunistically take advantage of resource contributed. Further investigation is therefore warranted to investigate this relationship.

Central to this paper was the investigation of the effect of motive divergence on performance. The results suggest that motive divergence has a significant negative relationship with performance. This finding is consistent with the case study based research of Groot and Merchant (2000) and Yan and Gray (1994). Given that motive divergence has a negative effect on IJV performance this paper investigated whether this was limited by parent partner's MCS choices. The results however indicate that all

control dimensions are not significantly related to performance. This finding is not a surprise given the relatively small effect that motive divergence has on these MCS choices.

Conclusion

The purpose of this paper was to investigate the cause and effects of motive divergence on MCS choices and performance. This investigation was focused on providing confirmatory evidence of suggestions of the exploratory based research findings in extant literature by using a PLS statistical analysis. The results indicate that motive divergence is significantly negatively related to performance, however it appears that motive divergence has a relatively small impact on the variation in control dimension choices. Contrary to expectations it was found that the contribution of higher levels of relative critical resources leads to lower levels of motives divergence suggesting that further research is needed to clarify this relationship, extending the analysis to other factors of bargaining power (Giacobbe, 2007). The relative critical resource contributions made to an IJV entity by a parent partner were highly significantly positively associated with all control dimensions choices. This suggests that the high bargaining possessed by partners contributing high levels of critical resources allows them to better exercise desired control. The results presented in this paper make an important contribution to reconciling much of the exploratory based extant literature. In particular by using PLS based structural equation modelling this paper has contributed significantly to understanding the cause and subsequent effects of motive divergence between IJV parent partners.

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