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RESEARCH ARTICLE

The canonical correlation analysis between national , organizational culture distances and International Joint-Venture (IJV) Performance

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Abstract

International joint ventures, subject of our research, are critical tools to serve the consumer in a global environment where geographical boundaries are no longer relevant, where the competition is fierce, where risks are greater and where innovation becomes a matter of survival.

This research has helped to review the indicators currently used by parent companies to measure the performance of their joint ventures, to highlight gaps in the literature and practice on the determinants of the performance of joint ventures, and so highlight the use of objective and subjective measures and the impact of cultural differences on the IJV performance . Furthermore, we showed that the distances in national and organizational culture have a significant effect on the IJV performance in Tunisia.

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Introduction

Liberalization of international trade led to the emergence of new organizational forms such as IJV. It involves interaction with partners of different nationalities, belonging to diverse organizations with different professions.

This study assumes the notion of cultural distance to explain how the IJV performance is influenced by the distance on given cultural dimensions the national and the organizational levels of culture (Pires , 2011). It departs from past studies in two ways. First, IJV research has focused primarily on the influence of national culture distance and has not adequately examined the role of organizational culture distance. Second, this study consists of viewing culture as a multi-level construct. The objective of this article is reviving discussion on the problem of distance culture and IJV performance.

A question can be asked what's the relative effect of national and organisational distance culture on the IJV performance ?

Materials and Methods

Lane and Beamish (1990) argue that problems often result from IJV is the discreet influence of national culture on behavior and management systems that often create conflicts unresolved.

So some researchers have suggested an additional interest on organizational culture, as well as national, reported inclusive and comprehensive system that influences the IJV performance (Park and Ungson, 1997).

Support for this view can be found in a study by Harrington (1988), who found that organizational culture is much more important than national culture in the JV.

This research tests the effect of cultural distances (national, organizational) on the IJV performance . We would suggest a canonical correlation analysis to explain the effect of national and organizational culture distances on IJV performance.

Canonical correlation analysis is a method of multivariate descriptive statistics which has similarities with both the principal component analysis (PCA) and linear regression. Its aim is to explore the links that may exist between two groups of quantitative variables belonging to the same group of individuals.

The canonical analysis extends the regression in case there are several variables to explain, and can be considered the most general methods based on the linear model. (Evrard et a, 2009).

Our Conceptual Model is:

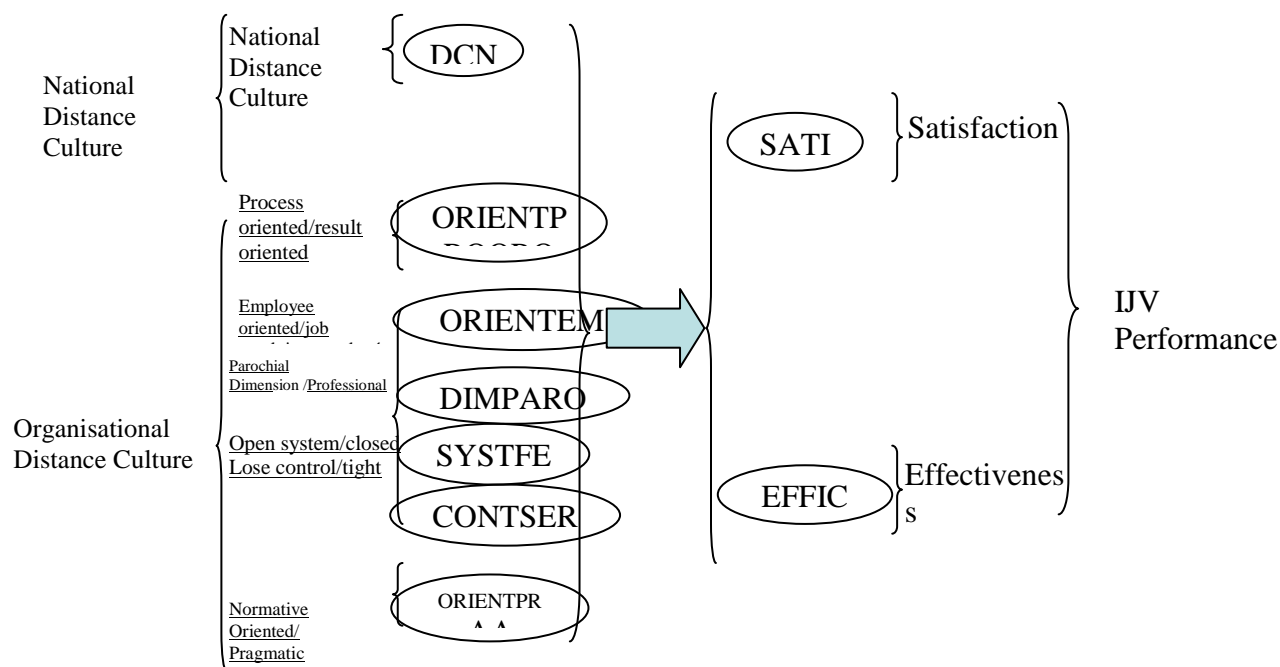


Fig 1. Conceptual Model

Data were collected from executives of IJV between Tunisian partners and partners from other countries by structured interviews. The questionnaire was pretested in ten organizations, and was modified to accommodate relevant comments. A total of 450 executives have participated. Several items were used to measure dependant and independent variable.

Dependent variable: IJV Performance is measured by partner satisfaction, effectiveness (GERINGER. J.M & HÉBERT.L,(1991); Parkhe (1989); Arino (2003)) .

Independent variable

- **National culture distance:** have developed four dimensions to measure national culture dimension: individualism/collectivism, power distance, uncertainty avoidance, masculinity/femininity (Hofstede, 1980 ; ; 1983 ;1997 ; Kogut et Singh, 1988)).
- **Organizational culture distance** the six dimensions describing practice of organisational culture are defined by as follows: Process oriented/result oriented, employee oriented/job oriented, Parochial/Professional, open system/closed system, lose control/tight control, Normative/Pragmatic (Hofstede, 1990)).

The hypothetical deductive method permits posing the following hypothesis :

H1: National culture distance between partners negatively influences the IJV performance (Salk et Brannen (2000); Lane et Beamish (1990); Cullen et al (1995); Chen et al (1998); BOURAOU (2012)) :

H1 -a: The distance in the national culture has negative influences IJV satisfaction .
H1- b : The distance in the national culture has negative influences on the effectiveness of the IJV.

H2: Organizational culture distance between partners affects the performance of IJV (Hofstede, (1990); (Park et Ungson, 1997);BOURAOU (2012)).

H2 -a1 : The orientation process versus outcome has a positive impact on international joint ventures satisfaction .

H2- a2 : The orientation process versus outcome has a positive impact on the effectiveness of international joint ventures.

H2- b1 The employment dimension orientation versus employee has a negative effect on international joint ventures satisfaction .

H2- b2 The orientation dimension versus employee employment has a negative effect on the effectiveness of international joint ventures.

H2 -c1 The parochial versus professional dimension positively affects international joint ventures satisfaction .

H2 -c2 The parish versus professional dimension positively affects the effectiveness of international joint ventures.

The H2 -d1 closed versus open system dimension negatively influences in international joint ventures satisfaction.

H2 -d2 closed versus open system Dimension negatively impact the effectiveness of international joint ventures.

The H2- e1 dimension tight control versus losing control has a negative impact on international joint ventures satisfaction .

H2- e2 The dimension tight control versus losing control has a negative impact on the effectiveness of international joint ventures.

The H2 -f1 dimension pragmatic versus normative orientation negatively influences international joint ventures satisfaction.

The H2 -f2 dimension pragmatic orientation versus normative influence negatively the effectiveness of international joint ventures.

Results

Our analysis identifies two canonical relations. The first will be retained because it is the most important, and considers that 93.03% of the variation in the performance of joint ventures is accounted for by the distances in the national and organizational culture.

The "significant of F" gave a value of 0.000 which is below the threshold of 5% confidence, which means that the percentage of explanation, which is of the order of 93.03%, is very significant. This leads us to suggest that for joint ventures, the distances at the national and organizational culture determine the IJV performance up to 93.03%.

In this section, we propose to test the impact of the independent canonical variable that includes all the factors of the two variables (distance of national culture and organizational culture) on the dependent canonical variable that includes all two factors of the variable IJV performance (satisfaction and effectiveness) . More specifically , it is to test the effects of the factor variable distance in the national culture (DCN) and those of the distance variable in the organizational culture (ORIENTPRO , ORIENTEM, DIMENPAR , SYSTFER , CONTSER , ORIENTPRA) factors variable performance of IJV (SATIS and EFFIC) .

To simplify the analysis , we will consider separately the effects of factors related to the distance in the national culture and the organizational culture . Indeed , we focus primarily on the impact factor of satisfaction (SATIS) , secondly the effects on the efficiency factor (EFFIC) . However, it is hard to say that the tests that we propose to do will test the statistical significance of the effect of each factor from "significant of t' , and the relative importance of these effects values "Beta".

Independent variables	Facteurs	B	t-Value	Significant of t
National Distance culture	DCN	-0,4740723341	-6,93809	0,000
Organisational Distance culture	ORIENTPRO	0,2688734621	2,36198	0,022
	ORIENTEM	-0,2260204212	-2,03171	0,047
	DIMENPAR	0,0475298224	0,45061	0,654
	SYSTFER	-0,0114052908	-0,31526	0,754
	CONTSER	-0,0285720123	-0,79360	0,431
	ORIENTPRA	-0,0470244867	-1,28361	0,204

Table 1: Values of significance tests for the satisfaction dimension

It is clear from this table that the factors related to distances in the national culture (DCN) process versus outcome orientation (ORIENTPRO) and employment versus employee orientation (orientem) are factors of two independent explanatory variables factor encoded satisfaction dimension (SATIS). These factors are significant at a confidence level of 5%, since their "signifiers t" are respectively 0, 00, 0.022 and 0.047, is less than 05% which is the allowable error margin percentages. By cons, all other factors are not explanatory factor of satisfaction they have "significants" above the ceiling of 05% error margin.

We can see that the distance in the national culture negatively influences satisfaction the IJV and therefore, the IJV performance

As for the distance in the organizational culture that influence satisfaction in the IJV, knowing that the process versus outcome orientation factor (ORIENTPRO) has a positive effect on satisfaction and, consequently, the IJV performance. While the job versus employee orientation factor (orientem) has a negative effect on satisfaction in the IJV.

We recall that for the efficiency dimension, factor analysis has allowed us to retain a single encoded factor (EFFIC). Thus, the effects of all factors of distance in the national culture and the organizational culture on EFFIC factor are summarized in the following table (2):

Independent variables	Facteurs	B	t-Value	Significant of t
National culture Distance	DCN	-0,5591925625	-6,09664	0,000
Organisational culture Distance	ORIENTPRO	0,1477165521	0,96670	0,338
	ORIENTEM	-0,0523007832	-0,35023	0,727
	DIMPAR	0,2287733540	1,61575	0,112
	SYSTFER	-0,0825738637	-1,70035	0,094
	CONTSERR	-0,0292090067	-0,60438	0,548
	ORIENTPRA	-0,0768369477	-1,56248	0,124

Table 2 :Significance test for the effectiveness dimension

These results are significant : the relative distance factor encoded in the national culture (DCN) is the only factor of the independent variables that determines the factor of efficiency dimension. It presents a " significant of t " 0.000, which is below the threshold of confidence of 05%. Therefore, we can conclude that the distance in the national culture has a negative influence on the efficiency and, at the same, the performance of IJV. Thus our results show that there is a strong systematic relationship between cultural distance and the IJV performance.

In contrast, a number of researchers have suggested a contradictory impact and insignificant between cultural distance and the IJV performance.

In literature there is a negative association between cultural distance and IJV performance . While our results led to conclusions that show that this relationship is statistically significant .

It must be noted that only the hypotheses H1-a,-b H1, H2 and H2-a1-b2 are checked. The distance in the national culture has negative influences on the effectiveness of the IJV, the distance in the national culture has negative influences on satisfaction partner within the IJV, the orientation process versus outcome has a positive impact on satisfaction in international joint ventures and employment orientation dimension versus employee has a negative effect on satisfaction in international joint ventures.

Now, we discuss the type of relationship between selected variables that have an influence on the IJV performance (measured by the satisfaction of the parties and the effectiveness of joint ventures).

Discussion of results

According to H1-a1, on the relationship between the distance in the national culture and satisfaction is checked (we see in Table 1 that the value of t is -6.93809 with a significance of t equal to 0.000).

We deduce that the distance in the national culture negatively influences the satisfaction of the parties in joint ventures. And therefore, it can be a source of conflict that can take down the future of the joint venture.

The H1-a2 hypothesis, which deals with the relationship between the distance in the national culture and the effectiveness has been verified (Table 2 shows that the value of t is -6.09664 with a significance of t equal 0, 000).

Differences in values and behaviors between distant partners should influence the interpretations and responses to strategic and management requirements, which may lead to disagreements and potential conflicts between the partners which negatively affects the IJV performance (Harrigan, 1988, Mohr and Spekman, 1994; Park and Ungson, 1997). However, despite the theoretical relevance of management processes and behaviors, the majority of empirical studies minimize the role of these phenomena to influence the process of JVI which, in turn, influence the state measures of performance. Also, it is desirable that future research should open the "black box" IJV process management to assess the extent to which national cultural distances (and organizational) impact on performance.

Thus, given the relatively large differences in culture and irreducible at the organizational level, the joint venture partners can focus on activities where the partner behavior is relatively easy to follow and where the results are fairly predictable.

Similarly, depending on the nature of the research question, the attributes of the national cultural distance, such as the legal, may moderate the relationship between the distance at the cultural organization and IJV performance (Globerman and Nielsen, 2007).

It is clear then that our results confirm those of the literature show that the distance in the national culture negatively influences the effectiveness of international joint ventures.

In most studies, it was shown that the cultural distance between the partners will contribute to a decrease in IJV performance (Das and Teng, 2003; Luo, 2001).

It should be noted that several studies available in the empirical literature have discussed the issue of relationship between cultural distance and the IJV performance (Beamish and Lupton, 2009; Nippa, Beechler and Klossek, 2006 ; Ren, Gray and Kim, 2009; Reus and Röttig, 2009 ;Robson, and Katsikeas Leonidou, 2002; Shah and Swaminathan, 2008), among them, only those Reus Röttig (2009) provide qualitative assessments of the studies reviewed and provide no quantitative analysis to determine whether and how the structure of the underlying models of cultural distance and performance could affect the statistical relationship between the two variables. Beamish and Lupton (2009) examined some 86 articles published between 1982 and 2006.

Although they do not specifically focus on the relationship between cultural distance and the performance of joint ventures, the authors concluded that research on the impact of cultural differences on IJV performance has yielded mixed results. They suggest that the inconclusive results may reflect the fact that different cultural traits are moderate to varying degrees by the actions taken by one or both partners.

Reus and Röttig (2009) conducted an analysis of the determinants of IJV performance using a sample drawn from 66 studies published in various academic journals, book chapters and papers. Model, where the cultural distance increases conflicts leading to a negative performance is advanced and tested.

The study focused specifically on the role of cultural distance, hierarchical control, conflict and commitment of partners in determining the IJV performance . These results indicate that the cultural distance between the joint venture partners tends to increase the likelihood of a conflict which, in turn, negatively affects performance.

The H2-a1 hypothesis, which emphasizes the positive relationship between the size of the organizational cultural distance and more precisely the orientation process versus outcome and satisfaction of partners in joint ventures, is checked as per the table 1, the value of t is 2.36198, with a significance of t equal to 0.022. This suggests that in a joint venture, is one important action taken by the members of different cultures to achieve a goal statement. All other difficulties may be diluted when the result is there.

The H2-b1 hypothesis, which emphasizes the negative relationship between the size of the organizational culture that is oriented job versus employee is verified. Since, according to Table 1, the value of t is -2.03171 with a significance of t equal to 0.047. First, we can say that the distance of the organizational culture is a better predictor of satisfaction measurement. However, the different dimensions of organizational culture influence differently the IJV performance .

The joint venture combines two or more organizations that are incorporated into (at least) two different national contexts, the organizational culture of partner companies fits into the national culture (Pothukuchi, Damanpour, Choi, Chen, and Park, 2002).

The literature assumes that an international organization, there may be interactions between colleagues (Smith, 1996). Thus, an American director working for years in Japan ends up having the behavior of Japanese colleague and think like him. Cultural difference is not a big problem when he was appointed as an executive director in American-Japanese Joint-ventures. Note, however, that only a few studies have examined the impact of organizational culture on the IJV performance , let alone those who have studied the combined effects of national and organizational cultural distance.

Generally, some studies report a positive relationship, while others report a negative relationship. For example, some suggest that the performance is better when the cultural distance of the JVI is smaller, while others are exactly the opposite relationship.

Robson, Leonidou and Katsilkeas (2002) identified 91 articles from a variety of different sources. Although the authors were concerned with a variety of potential factors and performance of the JVI not only cultural distance, they summarize the empirical findings are particularly relevant with regard to the influence of socio-cultural distance.

Conclusion

The aim of this paper was to investigate how differences culture distances affects the IJV performance . Results indicate differences national and organisational culture distances influences the IJV performance .

National culture distances between partners caused problem communication, cooperation and commitment. Value and behaviour differences caused interaction problem between partners which influence negatively IJV . Values and behavioural differences between culturally distant partners affected interpretation and responses to strategic and managerial issues, compounding transactional difficulties in IJV . However, national culture distance creates significant barriers to effective cooperation .Commitment generating mechanisms are also affected by different cultures because it disrupt generate commitment between partners in IJV . Priorities and expectations of parent firms may be different; managers of IJV are prone to role conflict .

Organizational culture distances affect management practices partners, which have a significant role for functioning of their organizations. Differences in practices led to conflict expectations and incompatible organizational practices. Partners with dissimilar organizational cultures expended more time and effort to establish managerial practices and routines to facilitate interaction and integration of employees . Similarity in partners' organizational cultures and practices increase the IJV performance of IJV .Researches on organizational climate similarity and performance have found that firms having a partner that has a similar organizational culture will have superior performance .

Our main conclusion in this article is that the use of multiple indicators is needed: quantitative and qualitative indicators, aggregate and individual-specific and not occupation specific and targeted on strategic objectives,

indicators must also be linked all aspects of performance of joint ventures and key concepts prevailing in the success of joint ventures.

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