HOW DO COUNTRY RISK AND NATIONAL CULTURAL DIFFERENCES BETWEEN PARTNERS AFFECT THE SURVIVAL OF INTERNATIONAL ALLIANCES IN EMERGING COUNTRIES? LONGITUDINAL ANALYSIS OF 165 INTERNATIONAL JOINT VENTURES IN BRAZIL FROM 1974 TO 2005[1]

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ABSTRACT

This article aims at identifying the individual and joint impact of two « *country-level variables* », namely national distance and country risk, on the survival of international joint ventures in emerging countries. Research hypotheses predicting the negative impact of national distance and country risk on survival are formulated in this article. These research hypotheses are tested in a sample of 165 international joint ventures that were formed in Brazil between 1974 and 2003. These joint ventures were subjected to an event history analysis over a period of time ranging from 1974 to 2005. The empirical results show that the intercultural dynamics increases the instability of international joint ventures whereas the survival of these alliances does not seem to be affected by the economic and political uncertainty of Brazil. Furthermore, the national distance between local and foreign partners has effects on survival that are variable according to the life cycle of international joint ventures.

Keywords: Joint Venture; Emerging Country and Brazil; Event History Analysis; Survival; Country Risk and Cultural Distance.

1 INTRODUCTION

During the early years of the Soviet Union, in November 1922, at the end of the civil war and in a context of major economic crisis, Lenin approved the formation of mixed capital firms (combining State/private and foreign/Soviet capital). They were the first ever international joint ventures (IJVs), which are organizational entities created and managed jointly by foreign and local firms. Thanks to this new form of collaborative organization, some US oil firms – namely, Chevron Oil, Socony and Standard Oil of New Jersey, which resulted from the dismantling of the Standard Oil Trust – were able to exploit oilfields in the region of Baku and the Caspian Sea in association with Soviet State companies.

Later, in other parts of the world, IJVs were to prove their usefulness as a mode of entry for foreign firms. IJVs multiplied and contributed to the internationalization of many US, European and Japanese firms. This central role of the IJV in the internationalization strategy of firms, particularly multinationals, was identified and stressed by Franko (1971) in his book, *Joint Venture Survival in Multinational Corporations*. However, since 1971, the purposes of IJVs have widened considerably, to the point where their initial main objective has become secondary in relation to objective such as economies of scale and size effect (HENNART, 1988, KOGUT, 1988, GARRETTE; DUSSAUGE, 1995), competence learning and transfer (HAMEL et al., 1989, HAMEL, 1991), or business refocusing and restructuring (NANDA; WILLIAMSON, 1995). At the same time, the opening up of new geographic markets accelerated, the WTO was set up, and the favorable regulations for foreign direct investment were introduced widely in different countries. These developments motivated the multinationals to replace the IJV by other entry modes, such as wholly-owned subsidiaries and acquisitions, which ensured them

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total, not shared, control of international operations and resources. These two combined movements led to a slow but inevitable decline of IJV as a mode of entry.

In the late 1990s, however, IJVs developed on a large scale again. The spectacular growth of the BRIC countries (Brazil, Russia, India and China) and emerging countries in general gave new momentum to IJVs. It is the political and economic uncertainty and the cultural specificity of these countries that made IJVs so popular among foreign firms. US, European and Japanese firms tend to privilege IJV as a mode of entry whenever the country risk and the national cultural distance – known as "*country-level variables*" (KOGUT; SINGH, 1988) – are high and difficult to manage.

By collaborating through an IJV with a local partner in the emerging country, the foreign firm protects itself against the negative impact of these variables. It is the IJJV's very structure, and more particularly the nature and complementarity of each partner's contributions, that make it so attractive. The foreign partner provides the IJV with upstream resources such as brands, finance and production technology (CONNOLLY, 1984, PAN, 1996). The local partner provides downstream resources such as awareness of local markets, access to distribution channels, personnel (INKPEN; BEAMISH, 1997, KALE; ANAND, 2001), knowledge of local regulations and preferential access to the State authorities (KALE; ANAND, 2001). Thanks to its IJV with a local firm, the foreign firm does not deal directly with the emerging country's market, distribution networks, regulations and political stakeholders. It is the local partner who deals with them. Thus, the IJV allows the foreign partner to reduce its "*liability of foreignness*" (HYMER, 1976, ZAHEER; MOSAKOWSKI, 1997, RODRIGUEZ et al., 2005). The IJV is also a source of learning for the foreign partner, who takes advantage of the period of collaboration to observe the local partner's *modus operandi* and to transfer its downstream resources and market knowledge. Apart from the learning outcomes, a foreign firm involved in an IJV benefits from a legitimation process on the part of the local consumers and political stakeholders (SCOTT, 1995, ZAHEER; MOSAKOWSKI, 1997) and gradually acquires the status of a "quasi-local player."

While the IJV is a favorite mode of entry into emerging countries, its concrete outcomes do not live up to its promise and its potential advantages. Empirical studies of IJV survival in emerging countries show that between 30 and 50% are sold off, bought out or dissolved by the partners in the first five years (LEE; BEAMISH, 1995, PAN, 1996, LEUNG, 1997, YAN, 1998; KALE; ANAND, 2001, MESCHI, 2005). Some studies have linked this high instability to the specific nature of country-level variables of emerging countries, namely, high country risk and strong national cultural differences: "*for IJVs formed in developing or transforming economies, the turbulent political and economic environments together with the intercultural and interorganizational dynamics have made managing international joint ventures particularly challenging*" (YAN, 1998:773). Therefore there is a paradox inherent to IJVs formed in emerging countries: the two country-level variables – country risk and national distance – which lead to the formation of IJVs in emerging countries are also those that cause their dissolution.

However, empirical studies of the impact of country risk and national cultural differences on IJV survival have produced inconclusive results. Furthermore, the impact of these variables on survival has been only examined individually, and not jointly. The aim of this article is to perform an in-depth study of the relationship between these country-level variables, taken individually and in interaction, and the survival of IJVs. More precisely, this article aims to answer the following questions: what is the impact of country risk and national cultural differences between local and foreign partners on the survival of IJVs? Is country risk a moderating variable, or does it amplify the impact of national cultural differences on the survival of IJVs? Does the longevity of IJVs affect the impact of national cultural differences on survival?

This article is organized in four parts as follows: in the first part, we will define and combine the concepts of cultural distance, country risk and IJV survival. Building on the theoretical frameworks of the culturalist approach (for analyzing the impact of national cultural differences) and environmental selection (for analyzing the impact of country risk) we will formulate research hypotheses. In the second part, we will detail the data collection, the variables, and the sample of 165 IJVs formed in Brazil between 1974 and 2003. These IJVs were subjected to an event history analysis over a period of time ranging from 1974 to 2005. In the third part, we will test the research hypotheses and discuss the results. In the conclusion, we will sum up the main findings and present the limitations and the future directions of this research.

2 CULTURAL DIFFERENCES BETWEEN PARTNERS, COUNTRY RISK AND SURVIVAL OF INTERNATIONAL JOINT VENTURES IN EMERGING COUNTRIES: THEORETICAL APPROACHES AND RESEARCH HYPOTHESES

Conceived as a distinct organization in it own right, but managed jointly by the local and foreign partners, the IJV is by its very nature full of tensions. These tensions are omnipresent in the IJV. They are caused by the partners' behavior and its changes over time. There are tensions because the partners wave between convergence and divergence of objectives, between the will to share and the will to dominate IJV management, between circulation and retention of information and knowledge, and between loyalty and opportunism. These tensions are inherent to a jointly managed organization, but they can degenerate into conflicts and lead to dissolution of the IJV. As noted

by Schaan (1988), management of an IJV is a "*subtle balance*." It incurs high governance and transaction costs that can become unbearable for the partners if these tensions exacerbate.

Research literature on IJVs highlighted different variables that may increase or moderate these tensions. Among these variables, there are three main groups: specific variables to the industry (growth rate of demand, degree of concentration, intensity of competition, entry barriers etc.), specific variables to the partners' assets and resources (experience, size, degree of internationalization, reputation etc.), and country-level variables (national distance, country risk, corruption etc.). In the particular case of country-level variables, empirical studies that examined the relationship between these variables and IJV survival obtained inconclusive results. As regards national cultural differences between partners, some empirical studies observed a negative impact on survival (LI; GUISINGER, 1991, BARKEMA; VERMEULEN, 1997, HENNART; ZENG, 2002), others a positive impact (PARK; UNGSON, 1997, POTHUKUCHI et al., 2002), and others found no significant impact (FEY; BEAMISH, 2001). As regards country risk, empirical studies are more scarce, but the conclusions are still mixed: Barkema and Vermeulen (1997) observed no significant relation between country risk and IJV survival, whereas Meschi (2005) showed that, in emerging countries with high economic and political uncertainty, there was a significant increase in the probability of termination of IJVs over time.

What of the tensions inherent to the IJV when it operates in a country with high economic and political uncertainty and where there are marked cultural specificities? This link must be re-examined in the setting of emerging countries where country-level variables have very special importance. It must be studied in greater depth by examining not only the individual impact of national distance and country risk, but also the joint impact of these variables on IJV survival.

In forming an IJV, the partners will transfer to it the financial, technological and commercial resources and assets that are required for its operation. Apart from these tangible contributions, the partners bring to the IJV the national habits, beliefs and values that characterize their respective home countries. These national habits, beliefs and values correspond to a national culture that constitutes a "*software of the mind*" (HOFSTEDE, 1980 and 1997) and "*the invisible force behind the tangibles and observable in any organization*" (KILMANN et al., 1985:2). The IJV's employees, whether they are expatriates or locals, bring with them this national culture that shapes their behavior at work. Thus, any IJV is characterized by national cultural differences whose intensity depends on the degree of congruence or divergence between the partners' national cultures. If the national cultures involved are distinct and do not fit well, then the national cultural differences will be strong and may create a cultural collision that is detrimental to the IJV. In other words, the performance and, more generally, the survival of IJVs are determined by the intensity of national cultural differences between the local and foreign partners. This reasoning is consistent with the culturalist approach that relates the (good or bad) functioning of organizations to cultural and cross-cultural factors (HOFSTEDE, 1980 and 1997, CAMERON; FREEMAN, 1988, SCHNEIDER, 1989). This theoretical approach has been greatly developed in the setting of international acquisitions (NAHAVANDI; MALEKZADEH, 1988, BUONO; BOWDITCH, 1989) and IJVs (LI; GUISINGER, 1991, PARK; UNGSON, 1997, BARKEMA; VERMEULEN, 1997, MESCHI, 1997, FEY; BEAMISH, 2001, HENNART; ZENG, 2002, POTHUKUCHI et al., 2002). Building on this theoretical approach, we can formulate a first research hypothesis:

> Hypothesis 1: The greater the national cultural differences between local and foreign partners, the lower the probability of survival of IJVs in emerging countries, and conversely.

Like any organization, an IJV is faced with the "*liability of newness*" during its first few years of existence. This concept is derived from the theory of population ecology of organizations (HANNAN; FREEMAN, 1977, CAROLL; DELACROIX, 1982, FREEMAN et al., 1983). It translates into a mortality rate of organizations that is high immediately after their creation and then decreases gradually over time. Many reasons are put forward to explain this phenomenon, most notably the young organization's low degree of institutionalization (both internal and external). When they are first created, and during their early years, young organizations lack internal institutionalization, namely, standardized managerial procedures and routines that are shared and well accepted by all the personnel. And they also lack external institutionalization, namely, external recognition and ties with the environment's key stakeholders.

Liability of newness combined with strong national cultural differences between partners makes young IJVs particularly unstable. The initial lack of managerial procedures and routines is critical for an IJV that faces cultural tensions. During its early years, the IJV does not have any ready-made procedures and routines for resolving conflicts and it does not have enough experience of cross-cultural management. When the IJV gets older, it develops specific procedures and routines for cross-cultural management and it is sufficiently experienced to handle and absorb cultural conflicts. As shown by some empirical studies (BEAMISH, 1988, MESCHI, 1997, HENNART; ZENG, 2002), the IJV stability depends on its age or longevity. This leads us to propose a second research hypothesis:

> Hypothesis 2: In emerging countries, the longevity of IJVs moderates the negative impact of national cultural differences on the probability of survival of these organizational entities.

Just like national distance, country risk is a factor of IJV destabilization. If the country risk deteriorates, the IJV must face increasing environmental uncertainty that can

alter the subtle, often precarious balance of the relations and tensions between partners. In the end, it is the IJV's very survival that may be affected. The notion that environmental uncertainty is a critical factor to organization survival has been put forward by the theoretical approach of *environmental selection*. Initially developed from theories of *population ecology of organizations* (HANNAN; FREEMAN, 1977, CAROLL; DELACROIX, 1982) and *industrial organization* (BAIN, 1956, SCHERER, 1980, PORTER, 1980), this approach considers the environment as a "force" that dominates the firm and determines its performance or even its survival.

From an economic point of view, an increase in environmental uncertainty is caused by government default on payments, a devaluation of the local currency and/or an increase in interest rates. These are macroeconomic factors that have a negative impact on demand and consumption in the emerging country. Therefore economic uncertainty is detrimental to the sales and financial results of local firms and IJVs that operate in the emerging country. From a political point of view, an increase in environmental uncertainty can be related to the enforcement of restrictive regulations to hinder foreign direct investment (expropriation, nationalization, restrictions on repatriation of profits, discriminatory taxes etc.) and/or government instability (weakening of the State, instability of political institutions, State corruption, *coup d'état*, unrest, riots, strikes etc.). In all cases, an increase in economic and political uncertainty leads to a change in financial results, objectives and bargaining power of local and foreign partners.

The deterioration of country risk nullifies the initial agreement between the partners (on their contributions and profit sharing), which has to be completely renegotiated. However, it is often difficult to renegotiate the agreement because the partners do not agree to modify their position and role within the IJV. Renegotiation is all the more difficult if there are strong national cultural differences between partners who do not manage to understand each other and communicate effectively. As a consequence the IJV cannot adjust to the new environmental conditions, and its survival is at stake. The following hypotheses may be formulated on the basis of the previous developments and the theoretical approach of *environmental selection*:

Hypothesis 3: The higher the country risk, the lower the probability of survival of IJVs in emerging countries, and conversely.

Hypothesis 4: Country risk amplifies the negative impact of national cultural differences on the probability of survival of IJVs in emerging countries.

3 RESEARCH METHODOLOGY: SAMPLE, EVENT HISTORY ANALYSIS AND VARIABLES

This article is based on a sample of 165 international joint ventures that were formed in Brazil between 1974 and 2003. This sample was collected from *LexisNexis* and *Factiva* databases and data provided by the Brazilian *Ministry of Development, Industry and Commerce (Ministério do Desenvolvimento, Indústria e Comércio)*. It only includes large IJVs (namely, those for which the contract amount exceeded $US50 million) that involved at least two partners, a Brazilian one and foreign one. The IJVs of the sample only include foreign partners from developed countries (see Table 1 ◘).

In this article, the unit of analysis is the IJV. Every IJV in the sample was examined through a longitudinal analysis between 1974 and 2005. Thus the status – termination or survival – of the 165 IJVs was followed-up from their date of creation to the end of the period at risk in 2005. Drawing on the event history analysis, we identified the joint ventures that were still active at the end of the period at risk – namely, the censored IJVs – and those that were dissolved, sold off or bought out before the end of the period at risk – namely, the non-censored IJVs –. This longitudinal analysis was performed by a research team at the *Faculdade de Economia, Administração e Contabilidade* (FEA) of the *Universidade de São Paulo* (USP), which contacted each IJV by telephone. If the IJV had been terminated or could not be contacted, then the team contacted some representatives of the IJV's Brazilian partner.

A total of 83 IJVs were dissolved, sold off or bought out before the end of the period at risk (50.3% of the sample). Tables 2 ◘ and 3 ◘ respectively present the forms and the reasons for termination of these 83 IJVs.

Figure 1 ◘ presents the survival curve of IJVs formed in Brazil between 1974 and 2003. More precisely, Figure 1 details, year by year for the entire period at risk, the rate of survival of the IJVs in the sample.

A measurement of IJV survival was used as a dependent variable. This survival variable was measured by binary coding (0, 1): the value 0 was given to IJVs that were still active at the end of the period at risk (in 2005), and the value 1 was given to IJVs that were terminated before 2005. A simple survival model (without specifying its parametric form) was used to successively estimate a hazard rate of the different IJVs in the sample (KALBFLEISCH; PRENTICE, 1980, ALLISON, 1984).

$$h(t) \text{ or hazard function} = \lambda_t$$

$$\text{where } t = 1, 2, , \ldots, T \text{ and } 0 < \lambda_t < 1$$

λ_t is the hazard rate corresponding to the time interval t within the period at risk. The hazard rate is the converse of the survival rate. The hazard rate is defined as "*the probability that an individual would experience an event in an interval from time t to t+s, given that the individual is at risk from time* t" (ALLISON, 1984: 23). Therefore the sequence

Table 1 Breakdown of joint ventures by country of origin of foreign partners

Country of origin [a]	*Joint Ventures*	*%*
USA	75	45.5
Japan	13	7.9
Italy	12	7.3
Germany	12	7.3
Great-Britain	11	6.7
France	9	5.5
The Netherlands	7	4.2
Spain	5	3.0
Norway	5	3.0
Canada	5	3.0
Belgium	3	1.8
Switzerland	3	1.8
Sweden	2	1.2
Finland	2	1.2
Austria	1	0.6
Total	165	100.0

[a] When more than one foreign partner is present in the joint venture, we only reported in this table the country of origin of the foreign partner with the largest equity stake.

Table 2 Descriptive statistics of the forms of joint venture termination

Forms	*Joint Ventures*	*%*
Dissolution	20	24.1
Acquisition by the foreign partner	30	36.1
Sell-off to the local partner	15	18.1
Sell-off to a third party	18	21.7
Total	83	100.0

Table 3 Descriptive statistics of the reasons for joint venture termination

Reasons	*Joint Ventures*	*%*
Failure [a]	25	30.1
Expansion of one of the partner	23	27.7
Refocusing of one of the partner	19	22.9
Debt reduction of one of the partner	6	7.2
Miscelleanous	10	12.1
Total	83	100.0

[a] Joint ventures are classified as failure when they are terminated following conflicts between partners, financial losses and/or low operating and financial performance.

from λ_1 to λ_t corresponds to the annual variation in the probability of termination for a given IJV.

The impact of the independent variables and control variables on hazard rate was tested with a Cox proportional hazards model (1972).

$$h(t) \text{ or hazard function} = exp(\beta X_t)\lambda_t$$

X_t is the vector of the independent variables and control variables at the time interval t within the period at risk and â is the vector of the regression coefficients.

Two independent variables – national cultural differences between partners and country risk – were introduced into this regression model to test the four research hypotheses. As regards national cultural differences between Brazil and the home country of the foreign partners, we used the index of cultural distance defined by Kogut and Singh (1988). This is a composite index based on the deviation along each of the Hofstede's four cultural dimensions (power distance, uncertainty avoidance, masculinity/femininity, and individualism). The following formula was used to calculate the index of cultural distance (KOGUT; SINGH, 1988: 422):

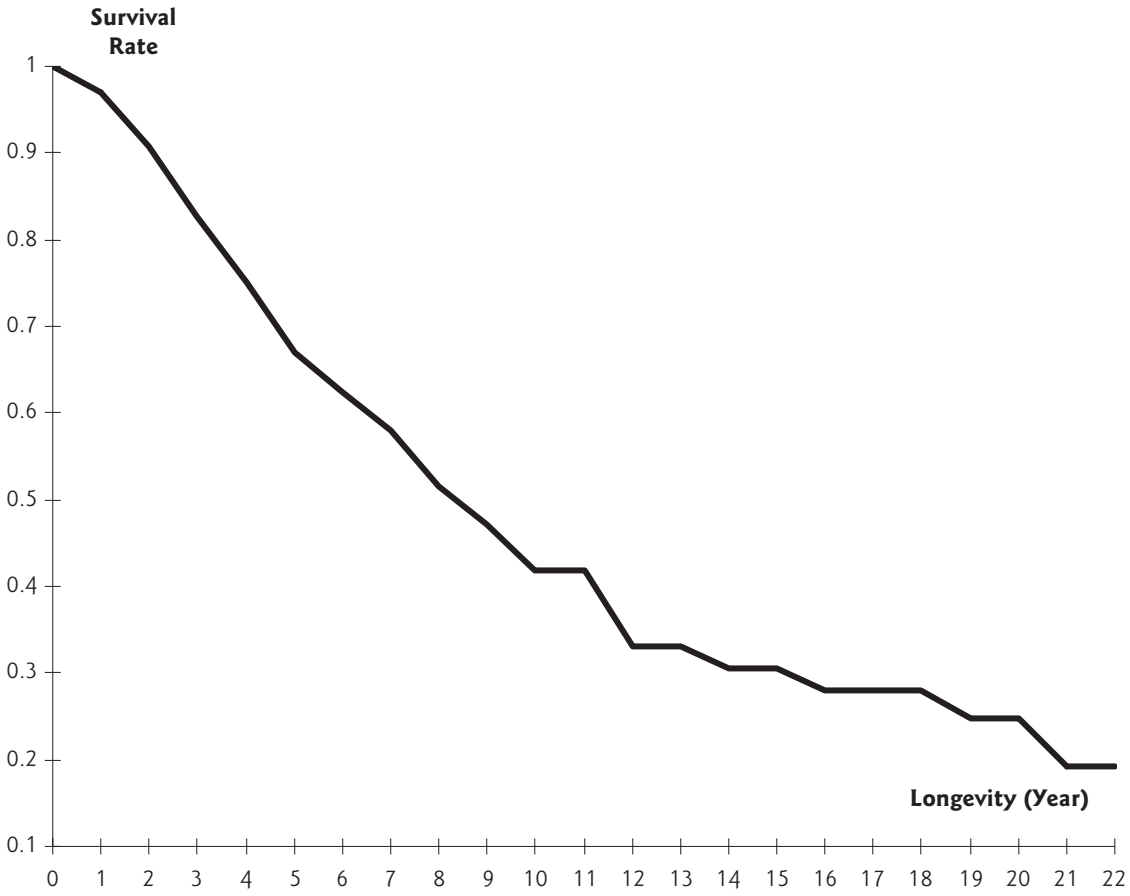


Figure 1 Survival curve of international joint ventures in Brazil

$$CD_j = \sum_{i=1}^{4} \{(I_{ij} - I_{ib})^2 / V_i\}/4$$

I_{ij} is the distance index for the i[th] cultural dimension and j[th] country, V_i is the variance of the index of i[th] cultural dimension, b stands for Brazil, and CD_j corresponds to the cultural distance between the j[th] country and Brazil. Table 4 presents the descriptive statistics of the index of cultural distance within the sample.

As regards country risk, two scores were calculated: one for economic risk and one for political risk. Each score is positioned on a scale ranging from 0 (no risk) to 1 (maximum risk). The scores for economic risk and political risk are taken from the *IRIS* database. Each of these scores corresponds to a weighted average of several indicators. In the case of economic risk, the main indicators are the risk of government default on payments, the level of debt, inflation and the GNP figures per capita. In the case of political risk, the main indicators are government and institutional stability, the socio-economic situation, the level of corruption and the government's attitude towards foreign direct investment. In order to accurately determine time-related variations of country risk and the impact of these variations on IJV survival, each score was introduced into the regression model in the form of a time-varying construct. The regression model used is known as Cox model with time-varying constructs. Thus the scores for economic risk and political risk were estimated for every year of the period at risk (from 1974 to 2005).

Some control variables were introduced into the regression model. They were selected because they are considered as determinants of IJV survival in the research literature. These are "longevity" (measuring the number of years between the date of creation and the end of the period at risk), the "number of partners", the "contract amount" (measured in $US million) of IJVs, the two most frequent business activities – namely, "automotive" and "chemicals" – (measured by a dummy variable, 0-yes, 1-

Table 4 Descriptive statistics of the cultural distance between Brazilian and foreign partners

Index of cultural distance	Mean = 1.74	Min. = 0.22
	Std dev. = 0.62	Max. = 3.56

Table 5 Descriptive statistics of control variables

Number of partners	**Mean = 2.1** **Std dev. = 0.3**	**Min. = 2** **Max. = 4**
Contract amount ($US million)	**Mean = 165.5** **Std dev. = 227.5**	**Min. = 50** **Max. = 1,200**
Business activity	***Joint Ventures***	***%***
Automotive		
Yes	28	17.0
No	157	83.0
Chemicals		
Yes	22	13.3
No	143	86.7
Total	165	100.0
Equity distribution	***Joint Ventures***	***%***
Unequal distribution	90	54.5
50/50	75	45.5
Total	165	100.0

no) observed in the sample, and the "equity distribution" between local and foreign partners (measured by a binary variable, 0-unequal ownership, 1-50/50 ownership). Table 5 presents the descriptive statistics of the control variables.

4 TEST OF HYPOTHESES: HOW DO COUNTRY RISK AND NATIONAL CULTURAL DIFFERENCES BETWEEN PARTNERS AFFECT THE SURVIVAL OF INTERNATIONAL JOINT VENTURES IN BRAZIL?

Table 6 presents a correlation matrix. Excluding the strong correlations involving some independent variables (namely, "longevity", "chemicals", "cultural distance" and "economic risk") and the survival variable, Table 5 shows that the highest correlation is between the IJV's longevity and economic risk ($r = 0.36$ at $p < 0.01$). Apart from this observation, the correlation matrix does not raise any particular problems of colinearity between independent variables and control variables. The VIF (Variance Inflation Factor) tests performed for each independent variable and control variable do not exceed 2, and they confirm this absence of colinearity.

Table 7a presents three Cox proportional hazards models associating a series of independent variables and control variables with the hazard rate of IJVs. The first model (model 1) is reduced to only control variables. The second model (model 2) tests the impact of control variables and cultural distance on hazard rate. The third model (model 3) tests the impact of control variables and the effect of cultural distance and longevity interaction on hazard rate.

Table 6 Correlation matrix

Variables	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***
1. Survival	-								
2. Longevity	-0.31***	-							
3. Number of partners	-0.06	0.22***	-						
4. Contract amount	-0.01	0.11	0.12	-					
5. Automotive	0.13*	-0.05	0.07	0.02	-				
6. Chemicals	0.18**	0.09	0.01	0.04	-0.18**	-			
7. Equity distribution	-0.03	-0.27***	-0.25***	-0.02	-0.15*	-0.1	-		
8. Cultural distance	0.16**	-0.04	-0.08	-0.05	0.08	-0.01	-0.06	-	
9. Economic risk [a]	0.4***	0.36***	0.04	-0.01	0.01	-0.03	-0.2**	0.12	-
10. Political risk [a]	0.04	0.07	0.03	0.01	-0.01	0.03	-0.03	-0.13*	0.35***

[a] This variable corresponds to an average score of country risk over the entire period at risk.

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ (two-tailed tests)

Table 7a Cox proportional hazards model, cultural distance and survival of joint ventures [a, b]

Variables	*Model 1*	*Model 2*	*Model 3*
Cultural distance		0.28 (0.19)*	
Cultural distance x longevity			-0.13 (0.02)***
Number of partners	-0.43 (0.39)	-0.4 (0.4)	-0.36 (0.37)
Contract amount	-0.34 (0.31)	-0.34 (0.31)	-0.26 (0.34)
Automotive	0.81 (0.35)**	0.72 (0.35)**	0.95 (0.35)***
Chemicals	0.99 (0.43)**	0.99 (0.43)**	0.89 (0.43)**
Equity distribution	0.44 (0.23)*	0.44 (0.23)*	0.25 (0.24)
2xLog-likelihood	-716.03	-713.69	-653.29
Model chi-square	16.7***	19.28***	57.24***
N (terminated joint ventures)	165 (83)	165 (83)	165 (83)

[a] Positive coefficients indicate that increase in independent variable and control variable values increase the hazard rate of joint ventures, and conversely.

[b] Cell entries are coefficient estimates. Numbers in parentheses are standard errors.

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ (two-tailed tests)

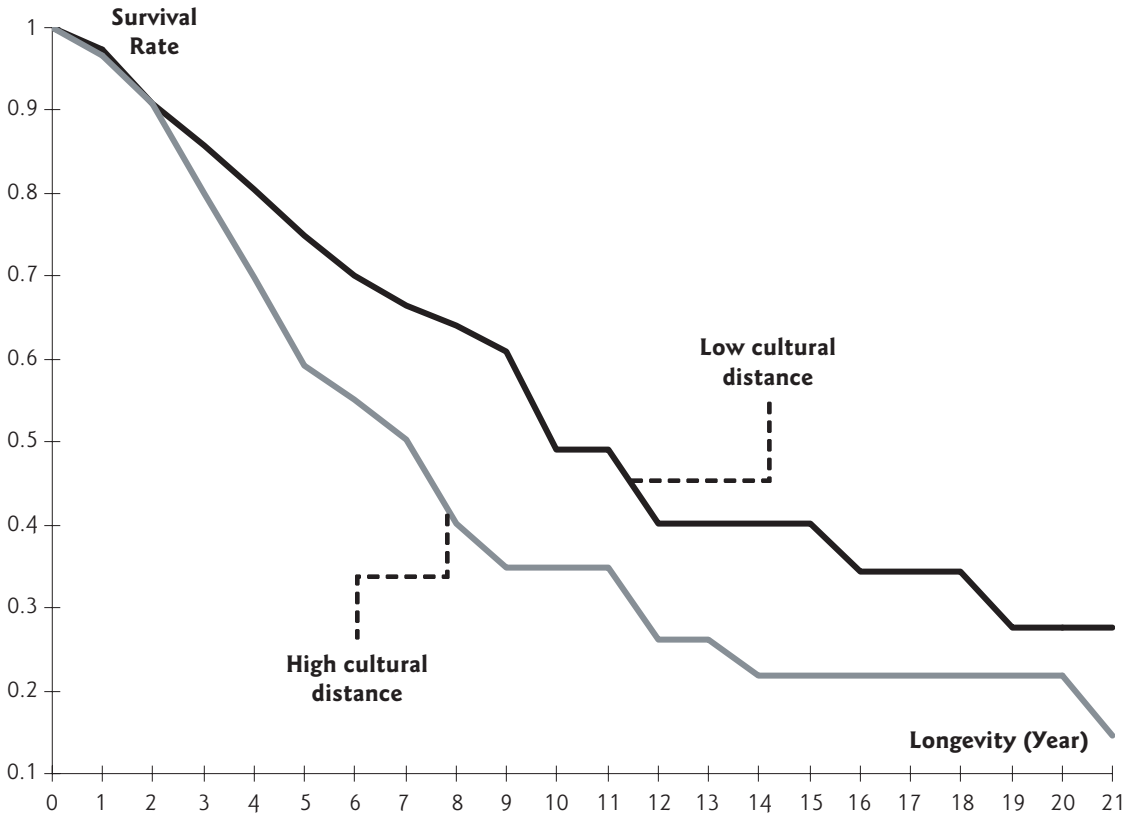
The three models in Table 7a show a good fit (at $p < 0.01$). The analysis of coefficients of model 1 highlights three control variables that have a statistically significant effect: the "automotive" and "chemicals" business activities and "equity distribution." More precisely, it is found that the probability of survival of IJVs increases significantly if they are in the automotive or chemicals business activities in Brazil. The significant positive effect of equity distribution on hazard rate provides additional empirical validation to numerous studies, which showed that 50/50 equity ownership is a destabilizing factor for joint ventures (KILLING, 1983, GOMES-CASSERES, 1987, GERINGER; HEBERT, 1989, ZEIRA; SHENKAR, 1990). These studies associate 50/50 equity ownership with high joint venture instability: 50/50 equity ownership leads to conflicts and risks of paralysis in decision-making that are related to continuous negotiation between partners.

Model 2 identifies a significant positive impact of cultural distance on hazard rate (at $p < 0.1$). In other words, the probability of survival of IJVs that have strong cultural distance between partners is lower than for those that have little or no national cultural differences. Therefore Hypothesis 1 is validated.

In model 3, the cultural distance and longevity interaction is significant (at $p < 0.01$) and negative. This highlights the moderating role of the age of IJVs and supports Hypothesis 2: the more IJVs grow older and increase in maturity, the less they are likely to be affected and destabilized by national cultural differences. Conversely, young IJVs, which are already subject to the liability of newness, are made particularly unstable by strong cultural distance. Nevertheless, this last finding must be qualified in the light of Figure 2, which shows a difference in the survival curves according to the level of cultural distance. According to Figure 2, it seems that the negative effect of cultural distance on young IJVs is not immediate. On the contrary, it is found that this effect is delayed and only arises from the fourth year. Table 7b confirms this in analyzing the impact of cultural distance on the probability of IJV survival during a period at risk limited to the first three years of existence: within this reduced period at risk, cultural distance has no significant effect on hazard rate. Taken together, results in Tables 7a and 7b show that, while there is indeed an interaction effect of cultural distance and longevity of IJVs on hazard rate, this effect only starts during the fourth year and affect "young" joint ventures that have already some maturity.

Table 8 presents four Cox proportional hazards models associating country risk variables and control variables with the hazard rate of IJVs. Country risk variables are analyzed in the four models as time-varying constructs. Models 1 and 3 test respectively the impact of economic risk and political risk on IJV survival. Models 2 and 4 test the interaction effect of the two country risk variables with cultural distance.

The four models in Table 8 show a good fit (at $p < 0.01$). Nevertheless, coefficients of economic risk and political risk (in models 1 and 3) are non-significant. In other words, positive or negative variations of country risk do not affect the probability of survival of IJVs in Brazil. Therefore Hypothesis 3 is not validated. Models 2 and 4 highlight the existence of a single significant interaction effect (at $p < 0.1$), which is that associating political risk and cultural distance: deterioration in political risk increases the instability of IJVs that are already subject to national cultural differences. Conversely, improvement of political risk moderates the destabilizing effect of the cultural distance on IJV survival. These results partially support Hypothesis 4.



[a] The mean index of cultural distance ($mean_{CD}$ = 1.74) has been used to identify two levels of cultural distance in the sample of international joint ventures: "low cultural distance" and "high cultural distance."

Figure 2 Survival curves of international joint ventures in Brazil according to the level of cultural distance [a]

Table 7b Cox proportional hazards model, cultural distance and survival of joint ventures during the first three years of the period at risk [a, b]

Variables	*Model 1*	*Model 2*
Cultural distance		0.27 (0.25)
Number of partners	-1.06 (0.96)	-1.01 (0.96)
Contract amount	-0.49 (0.47)	-0.47 (0.47)
Automotive	0.66 (0.49)	0.61 (0.49)
Chemicals	0.81 (0.6)	0.79 (0.6)
Equity distribution	0.37 (0.32)	0.38 (0.32)
2xLog-likelihood	-387.64	-386.44
Model chi-square	7.71	8.98
N (terminated joint ventures)	165 (40)	165 (40)

[a] Positive coefficients indicate that increase in independent variable and control variable values increase the hazard rate of joint ventures, and conversely.

[b] Cell entries are coefficient estimates. Numbers in parentheses are standard errors.

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ (two-tailed tests)

Table 8 Cox proportional hazards model with time-varying constructs, cultural distance, country risk and survival of joint ventures [a, b]

Variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*
Economic risk	-0.99 (1.1)			
Political risk			2.48 (3.71)	
Economic risk x cultural distance		0.32 (0.35)		
Political risk x cultural distance				0.82 (0.52)*
Number of partners	-0.43 (0.39)	-0.43 (0.39)	-0.44 (0.39)	-0.41 (0.4)
Contract amount	-0.35 (0.31)	-0.33 (0.3)	-0.34 (0.31)	-0.34 (0.31)
Automotive	0.79 (0.34)**	0.77 (0.35)**	0.8 (0.34)**	0.72 (0.35)**
Chemicals	1.01 (0.43)**	0.99 (0.43)**	0.98 (0.43)**	0.99 (0.43)**
Equity distribution	0.41 (0.24)*	0.45 (0.23)*	0.44 (0.23)*	0.43 (0.23)*
2xLog-likelihood	-715.2	-715.2	-715.59	-713.47
Model chi-square	17.3***	17.84***	17.18***	19.55***
N (terminated joint ventures)	165 (83)	165 (83)	165 (83)	165 (83)

[a] Positive coefficients indicate that increase in independent variable and control variable values increase the hazard rate of joint ventures, and conversely.

[b] Cell entries are coefficient estimates. Numbers in parentheses are standard errors.

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ (two-tailed tests)

5 DISCUSSION AND CONCLUSION

The aim of this article was to identify the individual and joint impact of two "*country-level variables*" (KOGUT; SINGH, 1988) – national cultural differences and country risk – on the survival of IJVs formed in an emerging country, Brazil. Some important findings can be drawn from the different Cox proportional hazards models that have been performed in this article.

Firstly, taken individually, country-level variables in an emerging economy do not have a similar impact on IJVs survival: the "*intercultural dynamics*" makes it unstable, although its survival does not seem to be related to the emerging country's "*economic and political uncertainty*" (YAN, 1998). Therefore national cultural differences and country risk are critical variables for IJVs, but they do not act in the same way or at the same time. Economic and political uncertainty is critical only at the time when the IJV is formed, because it is one of the main factors that influence the strategic choice of whether to enter an emerging country through acquisition, wholly-owned subsidiary or IJV. On the contrary to country risk variables, national cultural differences are found to be a determinant of IJV termination. These different results provide additional empirical validation of the culturalist approach and are consistent with prior studies that have reported a negative impact of cultural distance on IJV survival (LI; GUISINGER, 1991, BARKEMA; VERMEULEN, 1997, HENNART; ZENG, 2002).

Then, although it is supported by our empirical results, the culturalist approach to IJV survival must be qualified because the intercultural dynamics has variable effects according to the life cycle of IJVs, and it varies over time. Thus, during the very first years, an IJV formed in an emerging country does not seem to be affected by the degree of cultural distance that may exist between the local and foreign partners. During this first stage in the life cycle of IJVs, the intercultural dynamics created by two distinct national cultures is real and observable, but it does not appear to produce cultural tensions or major conflicts. IJVs are subject to what Park and Russo (1996) and Hennart et al. (1998) called the "*honeymoon effect*", which opposes and counters the negative effect of national cultural differences and of liability of newness. However, this honeymoon effect is temporary, and it only delays the destabilizing effect of the cultural distance between partners. During a second stage in the life cycle, cultural distance produces its negative effect by causing cultural conflicts and ineffective communication between partners that often result in the dissolution of IJVs. During a third stage in the life cycle, "mature" IJVs with strong internal and external institutionalization have become capable of absorbing cultural conflicts and, more generally, managing the intercultural dynamics. At this stage, the age of IJVs has its full effect, and it smoothes out national cultural differences.

Lastly, apart from the age of IJVs, another variable, country risk, moderates or amplifies the impact of cultural distance on survival. The political dimension of country risk contributes to increasing the negative effect of cultural distance. When political risk deteriorates, resulting in the introduction of measures to hinder foreign direct investment and/or an increase in government instability, this constitutes "*unanticipated events render the initial joint venture agreement quickly obsolete and require it to be renegotiated*" (HENNART; ZENG, 2002: 701). In an organizational setting with a strong cultural distance, this renegotiation of the position and role of local and foreign partners in the IJV is difficult to achieve between firms who communicate ineffectively and do not understand each other. In the end,

this often causes stalemate in negotiations and termination of the alliance.

This article has some limitations. A first limitation is in the choice of Brazil as the context for analyzing IJVs formed in emerging countries. Every emerging country is specific and, even within a set of countries such as the BRIC countries (Brazil, Russia, India and China), it is difficult to consider the economic, political and cultural situations in these countries as equivalent. The degree of "emergence" or transition varies greatly from one country to another. This must be borne in mind if one aims to generalize the above results and findings to international joint ventures operating in emerging countries other than Brazil. In order to overcome this limitation, it would be necessary to extend this research to other emerging countries in Latin America, and also in Asia and Eastern Europe. A second limitation is linked to the use of measurements of cultural distance and country risk that may fail to capture all the dimensions of these two multi-facetted concepts. Particularly regarding country risk, more significant results might be obtained by using finer measurements. Thus, empirical studies focusing on a precise facet of political risk – in this case, the changes in local regulations towards IJVs formed with foreign firms – have stressed the importance of this variable in analyzing the determinants of the survival of international alliances in emerging countries (KALE; ANAND, 2001, PREVOT; MESCHI, 2006).

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