

**Paper proposed to be presented at the 28th EIBA Annual Conference
in Athens, Greece, December 8-10, 2002.**

**International Joint Venture Performance: Key Determinants and How Much Do the Results
Depend on the Measurement of Performance?**

*Jorma Larimo
University of Vaasa
Department of Marketing
P.O.Box 700, FIN-65101 Vaasa
Finland
Fax: +358-6-3248171
e-mail: jorma.larimo@uwasa.fi*

Abstract

The passed three decades have witnessed a growing theoretical and managerial interests in international joint ventures (IJVs). There are various reasons for the increasing use and importance of IJVs in world business. Several studies have, however, indicated that many IJVs have not met the goals set for them and that the failure/dissolution rates have been high. Based on about 80 empirical studies focusing on the analysis of IJV performance 13 variables were selected for the more detailed analysis in the study and based on them 13 hypotheses related to the relationships of reviewed variables and IJV performance were developed. In a central role was also the question how much do the results depend on the measurement of performance? As the measures of performance was selected two commonly used measures in previous IJV studies: 1. survival and 2. stability. The empirical part of the paper is based on 657 IJVs established by Finnish companies in over 60 foreign countries during 1970 and 1999. The results indicated clear differences based on the measure of performance. The first measure indicated that 42 % and the second measure that 64 % of the reviewed IJVs were some kind of failures (in the latter case instable). Independent of the measure of performance size of the Finnish partner, relatedness of the IJV, difference in uncertainty avoidance, and age of the unit had significantly influenced the performance. In addition some other variables were significant, but they were dependent of the measure of performance. Finally, in some cases a non-significant relationship with IJV performance was expected and also found independent of the measure of performance.

Keywords: international joint ventures, performance, partner characteristics, venture characteristics, environmental characteristics, Finland

International Joint Venture Performance: Key Determinants and How Much Do the Results Depend on the Measurement of Performance?

Abstract

The past three decades have witnessed a growing theoretical and managerial interests in international joint ventures (IJVs). There are various reasons for the increasing use and importance of IJVs in world business. Several studies have, however, indicated that many IJVs have not met the goals set for them and that the failure/dissolution rates have been high. Based on about 80 empirical studies focusing on the analysis of IJV performance 13 variables were selected for the more detailed analysis in the study and based on them 13 hypotheses related to the relationships of reviewed variables and IJV performance were developed. In a central role was also the question how much do the results depend on the measurement of performance? As the measures of performance was selected two commonly used measures in previous IJV studies: 1. survival and 2. stability. The empirical part of the paper is based on the statistical data on 657 IJVs established by Finnish companies in over 60 foreign countries during 1970 and 1999. The results indicated clear differences based on the measure of performance. The first measure indicated that 42 % and the second measure that 64 % of the reviewed IJVs were some kind of failures (in the latter case instable). Independent of the measure of performance size of the Finnish partner, relatedness of the IJV, difference in uncertainty avoidance, and age of the unit had significantly influenced the performance. In addition some other variables were significant, but they were dependent of the measure of performance. Finally, in some cases a non-significant relationship with IJV performance was expected and also found independent of the measure of performance.

1. Introduction

The past three decades have been characterised by a multiplication of studies focusing on the subject of international joint ventures (IJVs) and alliances. It has been estimated that there has been over 3000 books and articles discussing JVs in late 1980s (Andersson 1990). Because of the great interest in domestic and foreign JVs and alliances in the 1990s, the amount is apparently over 4000 or even higher at this moment (mid-2002). Behind the great interest towards IJVs and other forms of co-operation arrangements by academicians and managers are : 1) the increasing use of collaborative arrangements by companies and various public organizations, and 2) the relatively high failure rate of various types of collaborative arrangements.

A joint venture may be defined as units, which involve two or more legally distinct organizations (the parents), each of which shares in the decision making activities of the jointly owned entity (Geringer 1988). The joint venture is considered to be an IJV if at least one parent is headquartered outside the venture's country of operation or if the JV has a significant level of operation in more than one country (Geringer and Heber 1989). In this study we will focus on IJVs where at least one of the partners is a foreign company, the level of foreign operation of the JV is not a critical issue.

What are the reasons for the increasing use of various types of cooperation arrangements including IJVs? Contractor and Lorange (1988) present seven more or less overlapping objectives for the formation of IJVs: 1) risk reduction, 2) economies of scale and/or rationalization, 3) technology exchanges, 4) co-opting or blocking competition, 5) overcoming government mandated trade or investment barriers, 6) facilitating initial international expansion of

inexperienced firms, and 7) vertical quasi-integration advantages of linking the complementary contributions of the partners in a “value chain”. It is evident that the reasons for forming IJVs are manifold and reach into all areas of business strategy. Although there may be very diverse motivations, the motivations can probably be distilled into three broad categories: a) resource-driven IJVs, 2) market driven IJVs, and risk-driven IJVs (see Parkhe 1996 and Wille 1988). The three categories are often interrelated, and several of the IJVs established in late 1980s and in the 1990s are distinguishable from the earlier counterparts by their straddling of multiple objectives. An additional, often referred division of motives for IJV formation is the one presented by Harrigan (1985). She has divided the motives into three groups: internal, external, and strategic. Internal motives deal with sharing risks and expenses, exposure to innovation, and increasing access to resources. External motives include easing political tensions and combating global competition. Strategic motives underlying IJVs involve the possibility of diversification and future business.

Failure rates of collaborative arrangements in several studies have been high, even if all the results do not support the view that the failure rate of JVs is higher than that of wholly-owned subsidiaries (Chowdhury 1992). How high the failure rates in IJVs have been has depended on the measure used; e.g. reaching of the goals set for the IJV, instability of ownership, dissolution etc. However, as high failure rates as over two-thirds have been reported in empirical studies (Geringer & Hebert 1991, and Chowdhury 1992).

The paper aims to give additional evidence of relationships between selected partner firm, target country, and IJV related variables and IJV performance. An additional goal is to analyze whether there is variation in the results depending on the measure of performance. As the measures of performance will be selected survival and stability. The empirical part of the paper will be based on a sample of 657 IJVs established by 130 Finnish companies in over 60 foreign countries during period 1970 and 1999.

In this study with an IJV is meant an unit where there are at least two partners from which one is having its headquarter outside the target country of the unit. The unit may have been established as a greenfield investment or the IJV may be a partial acquisition of a local unit. The share of the foreign partner in the IJV must be between 10 and 94 % (commonly used limits for an IJV). Finally, the focus in the paper is on IJVs having manufacturing operations. Thus, IJVs in service sector and IJVs between firms in manufacturing sector which concentrate e.g. only on sales or R&D operations are excluded. The focus in the paper is the viewpoint of the foreign partner in the IJV.

The structure of the paper is as follows. In the second section an overview of performance measures is made. In the third section the relationships between various variables and IJV performance are discussed. The third section includes also

development of hypotheses for the empirical part of the paper. In section four the sample selection, operationalization of variables used and key methodological issues in the study are discussed. Section five includes the presentation and analysis of the results. Section six includes a summary and conclusions based on the study made.

2. Measurement of IJV performance

A major difficulty in evaluating the success of IJVs is due to the definition and the measures of performance. Academicians have used numerous measures of IJV performance, many of which are conceptually ill-founded and have prima facie caused inconsistency in empirical findings (Geringer & Hebert 1991, Olk 1997, and Robson & Katsikeas 1998). In several studies only one criteria for IJV performance has been used, but there has been great variation which performance has been evaluated and which criteria has been used. Thus the evaluation can be directed a) towards either the performance of the operation itself (JVPERF) or towards the performance of the partners (PARTPERF) (i.e. how the IJV characteristics influence the partner(s) performance), and b) the evaluation can be realized using subjective or objective measures or a combination of both types of performance measures (see Blanchot & Mayerhofer 1997).

A review of empirical IJV studies (see Larimo 2001) indicates that an overwhelming majority of proxies identified in the literature correspond to JVPERF. Only a few studies assess PARTPERF. Objective measures of JVPERF have included longevity, survival, stability, combination of longevity/survival and stability, and various types of business indicators (e.g. profitability, market share etc.). As subjective measures have been used various items assessed by partner firm(s), various items assessed by IJV general manager, or a combination of them. Furthermore, also different kind of combinations of objective and subjective measures have been used. All the measures have their own strengths and weaknesses. In this study the evaluation will be directed towards the JVPERF and we will focus on two measures - survival and stability – which have rather commonly been used as the measures of performance.

Survival has usually been accepted as a good indicator of performance. A divestment is usually regarded as an indicator that the unit has not reached the goals set for it or that the unit has clearly been a failure. This is not necessarily the case. However, results in several studies (e.g. Beamish 1985) reveal that most of the ventures that have ceased operations did so because they failed. Stability increases internal harmony and trust between partners. Only if it is clearly evident that the inputs of partners do not equal the realized inputs of the partners' and they agree about this, a rapid change in the ownership distribution could be argued. Another exception are cases where the change was planned already at the time

of the establishment of the IJV. In this study instability includes both divestments and greater changes in the ownership distribution. Survival or stability or both of them have been used in over 15 of the reviewed c. 80 studies focusing on IJV performance (see Larimo 2001).

3. Relationships between various variables and IJV performance

Although the study included the analysis of results in c. 80 empirical studies rather few of the reviewed variables were included in five or more studies. In total over 100 variables were found, but several of the reviewed variables were included in only some few studies. The results related to those 14 variables included in at least six studies are presented in Table 2. The results indicate that commitment to the IJV, relatedness of the IJV operation with parents' operation, and age of the IJV seem to have positively influenced the IJV performance. Also existence of R&D operations has always had either positive influence or been insignificant but has never had a negative influence on IJV performance. Interpartner conflicts seem to have influenced in a clear majority of studies negatively on the performance. High cultural distance between partner companies also seems to have influenced more often negatively than positively. Parents size asymmetry seems, perhaps surprisingly, not to have significantly influenced the performance. What concerns the influence of other variables: size of the foreign partner, foreign parent and dominant parent control, size of the IJV, and relatedness of the partners industries the results are rather mixed and clearly more research is needed before any more detailed conclusions can be made. For this study information related only to five of the 14 variables were in use: size of the foreign partner, relatedness of partners industries, cultural distance, dominant parent ownership, and age of the unit. In addition to those five variables eight other variables will be added to the analysis: international and target country specific experience of the foreign partner, number of partners, form of establishment, and the four dimensions of culture by Hofstede (1980).

Table 1. Summary of results in earlier IJV performance studies

Related to the effect of the **size of the foreign partner firm** one could expect that because larger firms usually have more financial, management etc. resources and their international experience is greater than that of smaller companies, their need for a local partner is smaller. If they need a partner then based on above referred arguments their ability to

negotiate and bargaining power is greater than that of smaller firms. Therefore it could also be expected that they would have better performance with their IJVs. The empirical results are, however, very mixed. From the eight studies where the relationship between size of the foreign partner and IJV performance have been analyzed, three indicate support for a positive (Tomlinson 1970, Makino & Delios 1996, and Soonkyo 2000) and three for a negative relationship (Koh and Venkatraman 1991, Hennart et al. 1998, and Garcia-Canal et al. 1999). In two studies no statistically significant relationship could be found (Chen, Hu & Shieh 1991 and Merchant 1997). One possible explanation for the negative relationship is that larger firms have made relatively more unrelated types of FDIs and in this kind of FDIs/IJVs the performance has often been poorer than in related types of FDIs/IJVs. Another explanation is that larger firms may have greater pressure to integrate various foreign units more tightly to their global networks than SMEs and therefore they more often buy the share(s) of the other partner(s) causing greater instability than in IJVs by SMEs. Based on above it seems that there does not exist any direct relationship between size of the foreign partner and IJV performance.

H 1 : There is no direct relationship between the size of the foreign partner and IJV performance.

International experience and target country specific experience. Experience can improve performance/longevity of a FDI in several ways. First, experienced firms are probably better market and partner “scanners” than novices in the international arena. More accurate evaluations of potential sites and IJV partners for a FDI should increase probability of better performance and reduce risk of subsequent divestment. Second, as experience is accumulated it becomes easier to avoid many of the problems involved in running foreign subsidiaries, and to find workable solutions if problems should arise after all. Finally, international operations take place in environments that are often subject to seemingly dramatic changes, for example sudden changes in exchange rates and prices, competition etc. The interpretation of such events and how to respond to them can vary greatly, depending on how experienced the decision-makers are. An event that from the viewpoint of an unexperienced firm is regarded as quite extraordinary, may be interpreted by an experienced firm as simply being normal fluctuations. What could lead to a withdrawal from an operation in the first case, may well barely raise any concern in the latter. In sum, higher levels of experience should lead to lower dissolution rates and therefore to better performance. However, based on the greater international experience and usually greater need for integrating the operation of various units to the international network of the foreign partner than in cases of less experienced foreign parents, the stability of the units could be expected to be lower in the former than in the latter cases. Empirical

support for a positive relationship between international experience and IJV performance give results by Barkema and Vermeulen (1997) whereas Chen et al. (1991) and Sim and Ali (2000) did not find any relationship and Hu et al. (1992) found a negative relationship. Related to the performance in FDIs in general results by Mariotti and Piscitello (1997), and Larimo (1998 & 2000) indicated that international experience decreased probability of divestment, i.e. increased probability of survival.

Another aspect of experience is the **target country specific experience**. Target country specific experience should reduce uncertainty related to the operation environment and in this way increase the possibilities for better performance. However, target country specific experience may also reduce the need for a local partner after the starting period of the operation. Thus as in the case of international experience it could be expected that based on survival the relationship would be positive but based on stability it would be negative. The relationship has been reviewed in five studies from which three indicate support for a positive (Artisien & Buckley 1985, Makino 1995, and Barkema & Vermeulen 1997) and one for a negative relationship Makino and Delios (1996). In one study no statistically significant relationship could be found (Chen et al. 1991). Lasserre (1999) reviewed in his study the influence of earlier IJV experience in other Asian countries on IJV performance, but no statistically significant relationship was found. Although the empirical results related to international and target country specific experience are somewhat mixed, we expect that:

H 2a: International experience has a positive impact on IJV performance if the performance is measured by survival.

H 2b: International experience has a negative impact on IJV performance if the performance is measured by stability.

H 3a: Target country specific experience has a positive impact on IJV performance if the performance is measured by survival.

H 3b: Target country specific experience has a negative impact on IJV performance if the performance is measured by stability.

An issue of greater interest related to partner selection has been the presence of an **overlap between business operations of the foreign partner and the IJV and those of the foreign partner and of the local partner**. Business field related experience reduces the amount of uncertainty and should therefore improve the possibilities for better performance. Unrelatedness of the operation to the foreign partner increases uncertainty and especially if the foreign partner does not have any target country specific experience the risks related to the IJV are very high. Relatedness between the IJV's business and the parents' business should facilitate the transfer of tacit knowledge due to similarity in organizational processes (Saxton, 1997). Transfer of tacit knowledge is likely to be a key source of synergies in several inter-firm

relationships (Hedlund, 1994, Teece, 1977). Furthermore, due to similarity with the parent, related IJVs are more likely to be tightly integrated with their parents which should increase possibilities for better performance e.g. in low-cost supply units (either for one of the parents or both of them). Finally, e.g. in some Asian countries like in China, the host governments view related types of units more favorably than unrelated types of units and grant them preferential treatments.

In IJV context the influence of the overlap of the fields of industries between the foreign partner and IJV performance have been analyzed in eleven studies and the respective related to the partners fields of businesses in nine studies. Related to the overlap of business fields of the foreign partner and IJV seven of the studies indicated support for a positive relationship (Duncan 1982, Koh & Venkatraman 1991, Luo 1997, Luo & Chen 1997, Hennart et al. 1998, Soonkyo 2000, and Luo 2002), three for a negative relationship (Awadzi 1987, and Park & Kim 1997), and in one study no relationship was found (Pangarkar & Lee 2001). What concerns the influence of the overlap between partners' industries the results are more surprising. In five of the nine studies a negative relationship (Tomlinson 1970, Park & Russo 1996, Park & Ungson 1997, Zeira et al. 1997, and Yeheskel et al. 2001), in two studies a positive relationship (Duncan 1982, and Koh & Venkatraman 1991), and in two studies no relationship was found. (Awadzi 1987, and Olk 1997). One explanation for the negative findings in several studies is that the performance has been measured often using stability as the measure. If both partners are operating in the same field this means that they are more or less competitors and in order to increase market power and better integrate all foreign units to their global networks they easily tend to increase their ownership in the IJV or buy the other partner totally out of the venture increasing therefore instability. If the operations of the local partner are partly or totally different to those of the foreign partner, the foreign partner apparently needs more the contribution of the local partner which may increase the stability in the ownership of the IJV. However, in general the results in several studies also confirm that the performance has been better/probability of divestment lower in related than in unrelated types of FDI's (see e.g. Li 1995, Yamawaki 1995, and Hennart et al. 1998). Thus, in summary the results related to the relatedness of the operation are somewhat mix. However, because of better possibilities to reach synergy effects, lower uncertainty, and partly also based on greater empirical support, we expect that:

H 4: There is a positive relationship between relatedness of the IJV and performance of the unit.

Cultural distance between partners and its impact on IJV performance has so far been the most commonly reviewed variable. The distance has usually been expressed multi-dimensionally (based on Hofstede's 1980 four cultural

dimensions and index developed by Kogut and Singh, 1988). Cultural similarity decreases problems caused by cultural issues – e.g. different norms of behavior and productivity, measurement and goals related to performance - and should facilitate trust and cooperation between partners. Therefore a negative relationship between cultural distance and IJV performance could be expected. Twelve of the 27 studies including cultural distance also give support to the expectation of a negative relationship between this distance and IJV performance (Franko 1971, Simiar 1983, Kogut 1988, Beamish & Inkpen 1995, Lee & Beamish 1995, Hu & Chen 1996, Barkema & Vermeulen 1997, Mjoen & Tallman 1998, Lasserre 1999, Liu et al. 1999, Sim & Ali 2000, and Soonkyo 2000). In six studies no relationship was found between cultural distance and IJV performance (Beamish 1984, Millington & Bayliss 1997, Voris 1998, Glaister & Buckley 1999, Luo 2002, and Pothukuchi et al. 2002 based on satisfaction) while in as many as ten studies support for a positive relationship between cultural distance and IJV performance was found (Osland & Cavusgil 1996, Olk 1997, Park & Ungson 1997, Zeira et al. 1997, Fey & Beamish 1999, Luo et al. 2001, Pangarkar & Lee 2001, Yeheskel et al. 2001, and Pothukuchi et al. 2002 based on efficiency and competitiveness). As explanations for the positive relationship influence have been offered that partners from culturally distant countries might have more to learn from each other and that the potential opportunities to realize synergies may be quite great because of different kind of strengths e.g. between Western and Asian companies (see Pangarkar & Lee, 2001).

Barkema and Vermeulen (1997) tried to analyse in more detail the impact of culture on IJV performance. Using the five different cultural dimensions by Hofstede - power distance, uncertainty avoidance, individualism, masculinity, and long term orientation – the authors expected that there exists differences in the impact of various dimensions. Differences in uncertainty avoidance are difficult to cope with because they imply differences in how people perceive opportunities and threats in their environment and how they act upon them (Schneider & De Meyer 1991). In high uncertainty avoidance countries organizations tend to respond to uncertainty by building up a system of high formalization and hierarchy. In low uncertainty avoidance countries people are more attracted to flexible, ad hoc structures that leave more room for improvisation and negotiation. Differences in uncertainty avoidance lead to differences in how partners perceive and respond to events in the environment of the IJV, which will likely breed disagreement and disputes between the partners, and have a detrimental impact on the IJV's performance. Power distance and individualism directly bear on issues of internal integration and influence relationships with personnel, such as the organisation's choice of control forms, reward systems, and so on (see e.g. Hofstede 1980). Management of personnel is usually one of the first activities to be left to the local partner. There is also evidence that MNCs do not transfer cultural values related to power distance and individualism

to their foreign subsidiaries (Soeters & Schreuder 1988). Thus tensions between the partners with differences along these dimensions may be avoided. Hofstede (1983) and Shenkar and Zeira (1992) suggest that having partners from both “feminine” and “masculine” cultures may even benefit the IJV. The aggressive attitude of one partner and the relationship orientation of the other may complement each other rather than collide. and the relationship orientation of the other may complement each other rather than collide. The above discussion suggest that differences in uncertainty avoidance would be more important than the other three dimensions. The empirical results by Barkema and Vermeulen (1997) supported the expectations: uncertainty avoidance and long-term orientation had greater differential negative impact on IJV survival than masculinity, while the two other dimensions (individualism and power distance) had no impact. For the empirical part of the study we expect that:

H 5: There is a negative relationship between cultural distance of the home country of the foreign partner and target country of the unit and IJV performance.

H 6: There is a negative relationship between uncertainty avoidance and masculinity dimensions of culture and IJV performance.

H 7: There is a non-significant relationship between power distance and individualism dimensions of culture and IJV performance.

Form of establishment. A foreign FDI including IJVs can be made either in the form of an acquisition or a greenfield investment. The main differences between these two forms are that 1. an acquisition (in IJVs a partial acquisition) means buying a going concern, a bundle of assets (management, production etc.) whereas in greenfield investments everything is build from the scratch, 2. building an unit from the scratch takes much more time than buying a part from a going concern , and 3. a greenfield investment increases total supply while a partial acquisition does not expand total supply. The analysis of the impact of the form of establishment is excluded from most IJV studies mainly because they include only IJVs established in the form of a greenfield investment. The definition of a IJV in this study includes, however, also partial acquisitions. Soonkyo (2000) did not found any relationship between form of establishment and IJV survival in his study of Japanese IJVs in the USA. However, what concerns the impact of form of investment in general on FDIs, there is strong opposite evidence. Davidson and McFedridge (1984), Delacroix (1993), Li (1995), Yamawaki (1995), Benito and Larimo (1995), Barkema et al. (1997), Hennart et al. (1997), and Mariotti and Piscitello (1997) have found that an

acquisition form of investment significantly increased probability of divestment, i.e. had a negative impact on performance. The key reasons for the higher divestment rates have been the unrealistic levels of synergy goals and problems in the integration of the foreign unit. Furthermore, there is evidence that staged-acquisitions seem to be rather common (see e.g. Larimo 1993). Therefore we expect that:

H 8: There exists a negative relationship between acquisition form of IJV entry and IJV performance.

Number of partners could also be expected to have an influence on IJV performance. The number of partners may be expected to affect coordination costs and managerial complexity of the unit. Thus, one would expect that the greater the number of partners in a IJV, the greater the chance for poorer performance/instability of the unit. Interestingly, the results indicate a negative relationship in one study (Garcia-Canal et al. 1999) whereas in three studies no relationship between number of partners and IJV performance was found (Hu and Chen 1996, Park & Russo 1996, and Parker & Zeira 1996). It may be that in cases of three or more IJV partners the benefits of extra partners in the form of financial support or good relationships with important governmental institutions or distribution outlets have been overriding the drawbacks of additional partners in the IJV. Thus we expect that:

H 9: The number of partners does not significantly influence the IJV performance.

One of the most commonly reviewed variables so far has been the influence of the **distribution of ownership** in the IJV. According to Killing (1983) the dominance of one partner will increase stability, because effective control will enable the parent to manage the IJV as a wholly owned subsidiary, avoiding the managerial costs inherent in a IJV. Thus it reduces transaction costs and stabilize the IJV. However, Beamish (1985) and Blodgett (1992) argue that roughly equal equity shares will result in greater stability because the partners are equally committed to the JV and both partners possess roughly equal bargaining power. **Dominant partner ownership** has been included in 16 studies from which nine report nonsignificant relationship with IJV performance (Awadzi 1987, Kogut 1988, Lee & Beamish 1995, Luo 1995, Hu & Chen 1996, Park & Russo 1996, Merchant 1997, Millington & Bayliss 1997, and Yeheskel et al. 2001). However, in five studies a positive relationship has been found (Lecraw 1984, Blodgett 1992, Park & Ungson 1997, Luo 2002, and Meschi & Cheng 2002) and in two studies a negative relationship (Beamish 1984, and Park & Kim 1997).

Killing (1983) has argued that dominant-parent ventures would be expected to be more successful than shared-management ventures because coordination between partners entails significant costs making many ventures transitional rather than stable arrangements. Dominant-parent IJVs might reduce the risks associated with coordination and thus minimize the transaction costs and stabilize the IJV. The negative relationships have been explained by the view that dominance by one parent might frustrate the other parent and lead to lost opportunities to realize synergies (see Blodgett, 1992, and Beamish, 1985 and 1988). The results can be combined with the findings in three additional studies where it was found that there had not existed any statistically significant relationship between 50-50 –ownership and IJV performance (Erden 1997, Kachra & Hebert 1999, Soonkyo 2000). Thus, other issues than ownership distribution seem to have been more influential and/or the influence of ownership shares on IJV performance depends on other decisions made. Thus we expect that:

H 10: The ownership distribution of the IJV does not significantly influence the IJV performance.

The **age of the unit** may also influence the IJV performance. Young units may have problems because of “liability of newness”. According to the population ecologists the organization mortality rates tend to decrease with age (Hannah & Freeman 1984). This is because the external and internal legitimacy of the unit increases and the unit succeed to develop needed networks for the operation. On the other hand, “old” units are more likely than newly established units to produce and market products that are in the mature and declining stages of the product life cycle. This provides a rationale for divesting “old” units that may override even significant age-dependent barriers to exit (Harrigan 1985). During years the probability that there exists changes in the strategies of the partner companies increases, causing increasing probability to change the original ownership structure of the IJV. The relationship has been reviewed in 17 studies so far. In nine of them a positive relationship has been found (Namakura 1991, Luo 1995, Makino 1995, Hu & Chen 1996, Lyles & Salk 1996, Makino & Delios 1996, Luo & Chen 1997, Zeira et al. 1997, Pothukuchi et al. 2002 based on competitiveness) and in the rest no relationship between the age and IJV performance was found (Beamish 1984, Erden 1997, Lasserre 1999, Lyles et al. 1999, Soonkyo 2000, and Pothukuchi et al. 2002 based on satisfaction and efficiency). The findings in some studies suggest that the impact of age, or timing of the IJV, on performance is a little bit more complicated than a straight linear relationship. E.g. Kogut (1988) observes a dip in performance in years five and six. Results in any of the earlier studies do not give support for a negative relationship between age of the unit and IJV performance. Because the measures of

performance in this study are survival and stability we expect that according to results in the majority of earlier studies the companies have survived the “liability of newness” stage but that the instability of the ownership would increase during years because of various internal and external . Thus we changes related to the partner companies and the environment of the IJV.

H 11a: There is a positive relationship between the age of the IJV and performance of the unit when the performance is measured by survival.

H 11b: There is a negative relationship between the age of the IJV and performance of the unit when the performance is measured by stability.

4 Methodology, sample and operationalization of variables

Because of the nature of the dependent variable, a logit model is used in the analysis. In the model the probability that a certain type of situation – performance - is found is explained by the reviewed variables. In this study of interest is in the first model the probability that the unit has survived and in the second model whether the ownership distribution has been stable or not, i.e. stability. The regression coefficients estimate the impact of independent variables on the probability that the IJV has survived or the ownership distribution has been stable. A positive sign means that the variable has increased probability of survival (stability) and negative means that the variable has decreased the probability of survival (stability).

Based on various data sources (business journals, company reports, earlier surveys made by the author) 728 IJVs established by Finnish companies around the world during 1970-1999 were identified. This represents about 40 per cent of all manufacturing FDIs made by Finnish companies in the same period. Of the identified units 71 could not be included to the sample because of missing pieces of needed information. Thus the final sample is based on 657 IJVs. The IJVs were in 63 countries, c. two-thirds in OECD-countries, and by 130 Finnish firms.

The operationalizations of the variables used in the analysis are presented in Table 2. In the operationalization of various variables operationalizations used in earlier studies were followed. The performance of the unit was evaluated in this data set in two different ways: 1) survival: the IJV was still in Finnish ownership vs the unit was divested and 2) stability: the IJV was still in the Finnish ownership and no greater changes in the ownership share vs greater. In the second alternative greater changes in ownership refer to changes of at least 20 % in the ownership or smaller changes where the minority changed to 50-50 ownership or to majority ownership or vice versa.

Table 2. Operationalisation of variables

Appendix 1 includes descriptive statistics of the sample. Majority of the IJVs were established by companies which already had extensive international experience and in several cases already one manufacturing in the target country. The field of business of the IJV was in a clear majority closely related to the field of the Finnish partner. A majority of the IJVs were partial acquisitions. As referred above, c. two-thirds of the units were located in various OECD-countries and mean cultural distance between Finland and the target countries was 1.67 using Hofstede's four dimensions and the formula developed by Kogut and Singh (1988). Along various dimensions of culture the difference related to PDI and MAS variables was c. 18 in both cases whereas related to IDV and UAI variables the mean difference was c. minus four. The Finnish partner had majority (dominant) ownership in c. 40 per cent of cases. On average there was 2.2 partners in the IJVs. As may be expected, the highest correlations were between cultural distance and various dimensions of cultural distance. Otherwise the correlations were rather low indicating now severe problems with multicollinearity (see Appendix 1).

5. Results of the empirical part

As discussed above, the first sample was based on 657 IJVs established in 1970-1999 by Finnish companies in various foreign countries. The first analysis was made based on the survival of the unit. Of the 657 IJVs 275 (41.9 %) were later divested and thus 382 IJVs (58.1 %) were still in existence in 2002. Thus, the results indicate a very high divestment rate.

The results of the first regression model are presented in Table 3 (The Nagelkerke R square of the model is satisfactory 22.5%). The estimated coefficients represent the utility whether the IJV was existing or not : a positive coefficient means that the unit was existing and a negative coefficient that the unit was divested. The results of the first regression model indicate that five of the reviewed 13 variables had significantly influenced the IJV performance. As expected, UNITRELATEDNESS had positively the performance. Thus an overlap between the operation of the IJV and Finnish partner of the unit increased possibilities to reach synergy effects and lowered uncertainty related to the operation. CULTDIS has also the expected negative sign. The results give support that greater cultural distance distance between Finland and target country of the IJV had caused more problems with management and/or integration of the unit than have been the possible synergies based on the differences in culture. In three other cases the results did not support our

expectations. For PSIZE no sign was expected because it was supposed that the relationship between PSIZE and IJV performance is more complicated than a linear relationship. The results, however, indicated that larger firms had clearly more often divested their IJVs than smaller companies. Perhaps the integration problems had been greater and/or barriers to exit lower in larger than in smaller companies. Furthermore, there has been great restructuring operations in several large Finnish companies leading to the divestment of whole business sectors, which were not their core business areas. This may partly explain the finding. For UAI a negative sign was expected but the results indicated the opposite. This is in contrast with the findings by Barkema and Vermeulen (1997) who found that difference in the uncertainty avoidance dimension had the most detrimental influence on IJV performance. The very small mean difference along UAI dimension in this study may at least partly explain the difference in the results. The negative sign for AGE indicates that during years there seems to be increasing amount of detrimental factors inside the IJV, partner companies, and outside the IJV causing increasing probability of divestment and overriding therefore the problems of “liability of newness” during the first years of the operation.

For NUMPART, FPDO, PDI, and IDV non-significance was expected and also found. Thus, the number of partners and foreign partner dominance in the IJV are not closely influencing the performance, but other issues related to the IJV are more important. Also the difference related power distance and individualism dimensions of culture seem not to be so important. The latter findings are in line with the findings by Barkema and Vermeulen (1997).

In addition four other variables – INTEXP, TCEXP, MAS, and ACQFORM - were against expectations non-significant. The two first results indicate that the surprisingly the experience factor would not had been so important for IJV performance. The non-significance of MAS variable is opposite to the results by Barkema and Vermeulen (1997). The non-significance of ACQFORM is opposite to the findings in several studies focusing on the probability of divestments in FDIs in general, but in line with the finding by Soonkyo (2000).

Table 3. Results of the binomial regression analysis: 1. survival and 2. stability

Of the 657 IJVs 238 (36.2%) had been stable (no greater changes) and a change had existed in 419 cases. Thus the instability rate had been very high (63.8%). Because 275 instable cases where divestments, a change in the ownership had existed in additional 142 cases (also in about 100 of those cases which were divested). The instability rate is much higher than e.g. in a rather recent study by Sim and Ali (2001) where an instability rate of 34% was found.

The results in the second regression model are also presented in Table 3. The estimated coefficients represent the utility whether the IJV was stable (unit not divested and no greater changes in the ownership distribution) vs. instable (unit divested or greater change in the ownership distribution). The second model is somewhat better than the first one (Nagelkerke R square 26.2%).

Five of the reviewed 13 variables were statistically significant also in the second model. Related to four of those five – PSIZE, UNITRELATEDNESS, UAI, and AGE – the results were very similar. All of them had the same signs as in the first model and only in the case of UNITRELATEDNESS the level of significance had decreased more compared to the results in the first model. Thus those four variables seem to be significant determinants of IJV performance whether the performance was measured based on survival or stability. Noteworthy is that in the second model the expected sign for AGE was negative. Thus using stability as the measure of performance the results supported expectations. CULTDIST was statistically significant in the first model. However, this was not anymore the situation in the second model. Instead one other variable – ACQFORM – was now statistically significant. The negative influence of acquisition form of IJV establishment on IJV stability was according to the expectations. Thus now the results support findings in most earlier studies. Partial acquisitions include often staged increase of the ownership of the foreign partner and failures in acquisitions seem to be more common than in greenfield investments causing therefore more instability in the former than in the latter cases.

As in the first model, for NUMPART, FPDO, PDI and IDV - non-significance was expected and found also in the second model. Thus, these four variables seem not to have at least any direct relationship with IJV performance. In addition to the above discussed variables three additional variables were insignificant in the second model: INTEXP, TCEXP, and MAS. Thus, in total seven of the variables were non-significant independent of the measure of performance. Also the results in the second model give thus support to the view that surprisingly experience variables seem not to have been so important, at least not in the IJV operations by Finnish firms.

6. Summary and conclusions

The role of IJVs in international business operations has been significant and there are no signs that their role would, at least significantly decrease, in future. The situation may be in fact the opposite. Although the use of IJVs is very common, the failure rate of those ventures is high. The great importance and high failure rates of IJVs raises the questions how to evaluate the IJV performance and how to secure the success in IJV operations? Furthermore, it seems that there is

variation in the results depending on the measure of performance. The goal of this paper was to analyze the relationships between 13 variables and IJV performance. An additional goal was to analyze how much variation there possibly will exist depending on the measure of IJV performance. As the measures of performance was selected survival and stability. The empirical part of the paper was based on 657 manufacturing IJVs established by 130 Finnish companies in over 60 countries during 1970-1999.

A summary of the hypotheses developed and results received is presented in Table 4. In both models five of the reviewed 13 variables were significant and four of them were the same in both models. Those four variables which had significantly influenced the performance independent of the measure of performance were: PSIZE, UNITRELATEDNESS, UAI and AGE. A large size of the Finnish partner, and a longer age of the unit had negatively influenced the performance whereas an overlap between the operation of the IJV and Finnish partner and a difference in uncertainty avoidance had positively influenced the performance. In the case of UNITRELATEDNESS the results supported expectations. This was also the case with AGE when the performance was measured based on stability. Instead the other results were against expectations. Additional significant variables were dependent on the measure of performance. Based on survival CULTDIST had negatively influenced performance whereas based on stability ACQFORM had a negative impact on performance.

Furthermore, for four variables – NUMPART, DFPO, PDI, and IDV - a non-significant relationship with IJV performance was expected and also found independent of the measure of performance. In addition three of the reviewed variables were against expectations non-significant in both models: INTEXP, TCEXP, and MAS. Thus experience in FDIs and IJVs, number of partners, dominance of the foreign partner and other dimensions of culture than uncertainty avoidance seem not to have had any significant influence on the IJV performance in IJVs established by Finnish companies. Some of those variables have been analysed very limitedly in earlier studies and related to the influence of some variables there has been mixed findings. In summary noteworthy in the results is that based on both measures of performance significant and non-significant variables included foreign partner, target country, and partner specific variables.

Table 4. Summary of the hypothesis and results

There are several avenues for future research. First, it would be interesting to analyze whether the influence of the reviewed variables has been the same independent of the ownership structure of the IJV, i.e. in majority-, co-, and in minority-owned IJVs. Furthermore, the study included cultural distance between home and host countries of IJVs and the four dimensions of culture. However, e.g. the level of economic development was not included. Thus it would be interesting to analyze the IJV performance and performance influencing variables in IJVs established in OECD-countries vs. in non-OECD countries or between IJVs located in various continents. This study included 13 variables. In future it would be interesting to include additional variables like earlier collaboration between partners, commitment to the unit, trust between partners, and size of the IJV to the analysis. An interesting alternative would also to compare the behavior and influencing factors having samples from other countries. Especially comparisons with the similarities and differences in the performance and variables influencing the performance in IJVs established by other Nordic firms because of the similarity of these countries in several respects would be of interest. Finally, comparisons with the results of this study and based on other measures of performance, e.g. based on management evaluation related to total, sales, and financial performance IJVs would be of great interest.

Acknowledgements

The author wants to thank for Jukka Harju, Juhani Leppänen, and Sami Rumpunen for their help in various stages of the research project. Furthermore, the financial support provided by Wihuri Foundation for the project is gratefully acknowledged.

References

- Anderson, E. (1990). Two firms, one frontier: On assessing joint venture performance. *Sloan Management Review* 31:2, 19–30.
- Artisien, P. & P. Buckley (1985). Joint ventures in Yugoslavia: Opportunities and constraints. *Journal of International Business Studies* 18:1, 111-134.
- Awadzi, W. K. (1987). *Determinants of Joint Venture Performance. A Study of International Joint Ventures in the United States*. Unpublished Ph.D. dissertation (Louisiana State University)
- Barkema, H., Bell, J. & J. M. Pennings (1996). Foreign entry, cultural barriers, and learning. *Strategic Management Journal* 17, 151-166.
- Barkema, H., O. Shenkar, F. Vermeulen and J. Bell (1997). Working abroad, working with others: How firms learn to operate international joint ventures. *Academy of Management Journal* 40:2, 426-442.
- Barkema, H. & F. Vermeulen (1997). What differences in the cultural backgrounds of partners are detrimental for international joint ventures? *Journal of International Business Studies* 28:4, 845-864.
- Beamish, P. W. (1985). The characteristics of joint ventures in developed and developing countries. *Columbia Journal of World Business* 20:3, 13-19.
- Beamish, P. W. (1984). *Joint venture performance in developing countries*. Unpublished doctoral dissertation. University of Western Ontario.
- Beamish, P. W. (1985). The characteristics of joint venture in developed and developing countries. *Columbia Journal of World Business* 20:3, 13-19.
- Beamish, P. W. (1988). *Multinational Joint Ventures in Developing Countries*. New York: Routledge.
- Beamish, P. W. & A. C. Inkpen (1995). Keeping international joint ventures stable and profitable. *Long Range Planning* 28:3, 26-36.
- Benito, G. & J. Larimo (1995). Divestment of foreign production operations. The case of foreign direct investments from two Nordic countries. Proceedings of the University of Vaasa. Discussion Papers 187.
- Blodgett, L. L. (1992). Factors in the instability of international joint ventures. An event history analysis. *Strategic Management Journal* 13: 475–481
- Chen, H., M.Y. Hu & J.C.P. Shieh (1991). The wealth effect of international joint ventures: The case of U.S. investment in China. *Financial management* 20:4, 31-41.
- Chowdhury, J. (1992). Performance of international joint ventures and wholly owned foreign subsidiaries. A comparative perspective. *Management International Review* 32:2, 115-133.
- Contractor, F. & P. Lorange (1988). Why should firms cooperate? The strategy and economic basis for cooperative ventures. In “*Cooperative strategies in international business*”, edited by Contractor F. & P. Lorange, p. 3-28. Lexington, MA: Lexington books.
- Davidson, W. H. & D. G. McFedridge (1984). Recent directions in international strategies: Production rationalization or portfolio adjustment? *Columbia Journal of World Business*, 19:2, 95-101.
- Delacroix, J. (1993). The European subsidiaries of American multinationals: An exercise in ecological analysis. In: “*Organization theory and the multinational Enterprise*” edited by S. Ghoshal and E. Westney. New York: St. Martin’s press.
- Duncan, J. (1982). Impacts of new entry and horizontal joint ventures on industrial rates of return. *The Review of Economics and Statistics* 64:1, 339-342.
- Erden, D. (1997). Stability and satisfaction in cooperative FDI. In “*Cooperative strategies: European Perspectives*” edited by P. W. Beamish and J. P. Killing, p. 158-183. San Francisco: New Lexington Press.
- Fey, C. & P. Beamish (1999). *Organizational climate similarity and performance: International joint ventures in Russia*. Research working paper series 99-101. Stockholm School of Economics in Saint Petersburg.
- Franko, L. W. (1971). *Joint Venture Survival in Multinational Corporations*. New York: Praeger Publishers.
- Geringer, J. M. & L. Hebert (1989). Control and performance of international joint ventures. *Journal of International Business Studies* 22:2, 235-254.
- Garcia-Canal, E., A. Valdes & A. Arino (1999). More than two are a crowd. Different paths to effectiveness in dyadic and multi-party joint ventures. *Research paper 385. IESE, University of Navarra, Spain*.
- Geringer, J.M. (1988). *Joint venture partner selection: Strategies for developed countries*. Westport, CT: Quorum books.
- Geringer, J. M. & L. Hebert (1991). Measuring performance of international joint ventures. *Journal of International Business Studies* 22: 249-263
- Glaister, K. & P. Buckley (1999). Performance relationships in UK international alliances. *Management International Review* 39:2, 123–147.

- Hannah, M. T. & J. Freeman (1984). Structural inertia and organizational change. *American Sociological Review* 49, 149-164.
- Harrigan, K.R. (1985). *Strategies for joint ventures*. Lexington, MA: Lexington books.
- Hedlund, G. H. (1994). A model of knowledge management and the N-form corporation. *Strategic Management Journal* 15, 73-90.
- Hennart, J.-F., D.-J. Kim & M. Zeng (1998). The impact of joint venture status on the longevity of Japanese stakes in U.S. manufacturing affiliates. *Organization Science* 9:3, 1-14.
- Hennart, J.-F. & J. Larimo (1998). The impact of culture on the strategy of multinational enterprises: Does national origin affect ownership decisions? *Journal of International Business Studies* 29:3, 515-538.
- Hofstede, G. (1980). *Culture's consequences: international differences in work-related values*. Beverly Hills, Calif.: Sage publications.
- Hostede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive* 7:1, 81-94.
- Hu, M.Y., H. Chen & J. C. Shieh (1992). Impact of U.S.-China joint ventures on stockholders wealth by degree of international involvement. *Management International Review* 32:2, 135-148.
- Hu, M. Y. & H. Chen (1996). An empirical analysis of factors explaining foreign joint venture performance in China. *Journal of Business Research* 35: , 165-173.
- Kachra, A. & L. Hebert (1999). Managerial behavior, IJV structure and venture performance. *Working paper 199-22. Richard Ivey School of Business, University of Western Ontario, London, Ontario, Canada.*
- Killing, J. P. (1983). *Strategies for Joint Venture Success*. New York: Routledge.
- Kogut, B. (1988). A study of the life cycle of joint ventures. In “*Cooperative strategies in International Business*” edited by F. Contractor & P. Lorange, p. 169-185. Lexington Mass, Lexington.
- Kogut, B. & H. Singh (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies* 19:3, 411-432.
- Koh, J. & N. Venkatraman (1991). Joint venture formations and stock market reactions: An assessment in the information technology sector. *Academy of Management Journal* 34: 869-892.
- Larimo, J. (1993). *Foreign direct investment behaviour and performance. An analysis of Finnish direct investments in OECD countries*. Acta Wasaensia. Nr. 32. University of Vaasa.
- Larimo, J. (1998). *Determinants of divestments in foreign production operations made by Finnish firms in OECD countries*. Proceedings of the University of Vaasa. Discussion Papers 233.
- Larimo, J. (2000). *Divestment of foreign production operations: Similarities and differences determinants?* Paper presented at the AIB Annual Conference in Phoenix, Arizona, November 2000.
- Larimo, J. (2001). International joint venture performance: An integrative review of empirical literature in 1970-2001. Paper presented at the 26th Annual Conference in Paris, December 2001.
- Lasserre, P. (1999). Joint venture satisfaction in Asia Pacific. *Asia Pacific Journal of Management* 16:1, 1-28.
- Lee, C. & P. W. Beamish (1995). The characteristics and performance of Korean joint ventures in LDCs, *Journal of International Business Studies* 26:3, 637-654.
- Li, J. (1995) Foreign entry and survival: Effects of strategic choices on performance in international markets. *Strategic Management Journal* 16, 333-351.
- Luo, Y. (1995). Linking strategic and moderating factors to performance of international joint ventures in China. *The Mid-Atlantic Journal of Business* 31:1, 5-23.
- Luo, Y. (1995). Business strategy, market structure, and performance of international joint ventures: The case of joint ventures in China. *Management International Review* 35:3, 241-264.
- Luo, Y. (1997). Partner selection and venturing success: The case of joint ventures with firms in the People's Republic of China. *Organization Science* 8:6, 648-662.
- Luo, Y. & M. Chen (1997). Business strategy, investment strategy, and performance of international joint ventures: The case of China. In “*Cooperative Strategies: Asian Pacific Perspectives*” edited by P. W. Beamish & J. P. Killing, p. 341-374. San Francisco. New Lexington Press.
- Luo, Y. (2002). Product diversification in international joint ventures: Performance implications in an emerging market. *Strategic Management Journal* 23, 1-20.
- Lyles, M.A. & Salk (1996). Knowledge acquisition from foreign parents in international joint ventures: An empirical examination in the Hungarian context. *Journal of International Business Studies* (special issue) 877-903.
- Lyles, M., M. Sulaiman, J. Barden & R. Kechik (1999). Factors affecting international joint venture performance: A study of Malaysian joint ventures. *Journal of Asian Business* 15:2, 1-20.
- Makino, S. (1995). *Joint venture ownership structure and performance: Japanese joint ventures in Asia*. Unpublished Ph.D. dissertation, University of Western Ontario, London, Ontario, Canada.

- Makino, S. & A. Delios (1996). Local knowledge transfer and performance: Implications for alliance formation in Asia. *Journal of International Business Studies* (special issue) 905-927.
- Mariotti, S. & L. Piscitello (1997). Divestment as failure or part of a restructuring strategy. In: "Global Business in the Information Age". Proceedings of the 23rd Annual EIBA Conference in Stuttgart, December 1997.
- Merchant, H. (1997). International joint venture performance of firms in the nonmanufacturing sector. In "Cooperative strategies: North American Perspectives" edited by P. W. Beamish and J. P. Killing, p. 428-456. San Francisco: New Lexington Press.
- Meschi, P.-X. & L.T.W. Cheng (2002). Stock price reactions to Sino-European joint ventures. *Journal of World Business* 37, 119-126.
- Millington, A. I. & B. T. Bayliss (1997). Instability of market penetration joint ventures: A study of UK joint ventures in the European Union. *International Business Review* 6:1, 1-17.
- Mjoen, H. & S. Tallman (1997). Control and Performance in International Joint Ventures. *Organization Science* 8:3, 257-273.
- Namakura, M. (1991). Modeling the performance of U.S. direct investment in Japan: Some empirical estimates. *Managerial and Decision Economics* 12, 103-121.
- Olk, P. (1997). The effect of partner differences on the performance of R&D consortia. In "Cooperative strategies: North American Perspectives" edited by P. W. Beamish and J. P. Killing, p. 133-159. San Francisco: New Lexington Press.
- Osland G. & S. Cavusgil (1996). Performance issues in U.S.-China joint ventures. *California Management Review* 38:2, 106-129.
- Pangarkar, N. & H. Lee (2001). Joint venture strategies and success: An empirical study of Singaporean firms. *Journal of Asian Business* 17:3, 1-13.
- Park, S.H. & D. Kim (1997). Market Valuation of joint Ventures: Joint Venture Characteristics and Wealth Gains. *Journal of Business Venturing* 12, 83-108.
- Park, S. H. & M. V. Russo (1996). When competition eclipses cooperation: An event history analysis of joint venture failure. *Management Science*, 42: 875-890.
- Park, S. H. & G. R. Ungson (1997). The effect of national culture, organizational complementarity, and economic motivation on joint venture dissolution. *Academy of Management Journal* 40: 279-307.
- Parker, B. & Y. Zeira (1996). Parent company characteristics and international joint ventures' success in England and the USA. In "Creating and Managing International Joint Ventures" edited by A. Woodside & R. Pitts, p. 107-124. Quorum Books, Westport, Connecticut.
- Robson, M. & C. Katsikeas (1998). *Determinants of international joint venture performance: An integrative review of empirical literature*. In *International Business and Emerging Markets* Conference Proceedings of the 25th Annual Conference of Academy of International Business UK Chapter ed. By C. Millar and C. Choi p. 566-588. City University Business School, London.
- Saxton, T. (1997). The effects of partner and relationship characteristics on alliance outcomes. *Academy of Management Journal* 40:2, 443-461.
- Schneider, S. & A. de Meyer (1991). Interpreting and responding to strategic issues: The impact of national culture. *Strategic Management Journal* 12: 307-320.
- Shenkar, O. & Y. Zeira (1992). Role conflict and role ambiguity of chief executive offices in international joint ventures. *Journal of International Business Studies* 23:1, 55-75.
- Sim, A. & M. Ali (2000). Determinants of stability in international joint ventures: Evidence from a developing country context. *Asia Pacific Journal of Management* 17, 373-397.
- Simiar, F. (1983). Major causes of joint venture failures in the Middle East: The case of Iran. *Management International Review* 23:1, 58-68.
- Soeters, J. & H. Schreuder (1988). The interaction between national and organizational cultures in accounting firms. *Accounting, Organizations and Society* 13: 75-85.
- Soonkyo, C. (2000). *Partner nationality, network relations, and venture survival: The case of Japanese cooperative ventures in North-America*. Paper presented at the AIB Annual Conference in Phoenix, Arizona, November 2000.
- Steensma H. K. & M. A. Lyles (2000). Explaining IJV Survival in a Transnational Economy through Social Exchange and Knowledge-Based Perspectives. *Strategic Management Journal* 21, 831-851.
- Teece, D. (1997). Technological transfer by multinational firms: The resource cost of international technology transfer. *Economic Journal* 87, 242-261.
- Tomlinson, J. W. C. (1970). *The Joint Venture Process in International Business: India and Pakistan*. Cambridge: MIT Press.
- Voris, M. (1998). *Power and influence in joint venture relationships and their impact on performance*. Unpublished Ph.D. dissertation, Florida International University, United States.

Yamawaki, H. (1995). *Exit of Japanese multinationals in U.S. and European manufacturing industries*. Unpublished working paper. Department of Economics, Catholic University of Louvain, Belgium.

Yehekel, O., Y. Zeira, O. Shenkar & W. Newburry (2001). Parent company dissimilarity and equity international joint venture effectiveness. *Journal of International Management* 7:2, 81-104.

Wille, J. (1988). Joint venturing strategies. *The handbook of joint venturing*. Homewood, IL: Dow Jones-Irwin.

Zeira, Y., W. Newburry & O. Yehekel (1997). Factors affecting the effectiveness of equity international joint ventures in Hungary. *Management International Review* 37:3, 259-279.

Table 1. Summary of results in earlier IJV performance studies

Table 2. Operationalisation of variables

Table 3. Results of the binomial regression analysis: 1. Survival and 2. Stability

Table 4. Summary of the hypothesis and results

Appendix 1. Descriptive statistics and correlation matrix

Table 1. Summary of results in earlier IJV performance studies

| Variable | Number of studies included | Direction of influence on performance | | |
|--|---|--|-----------|------------|
| | | POS | NS | NEG |
| Cultural distance | 27 | 10 | 5 | 12 |
| Age of the IJV | 17 | 9 | 8 | - |
| Dominant partner ownership | 16 | 4 | 9 | 3 |
| Size of the IJV | 15 | 5 | 7 | 3 |
| Foreign parent control | 12 | 3 | 6 | 3 |
| Commitment to the IJV | 11 | 9 | 1 | 1 |
| Interpartner conflict | 11 | - | 2 | 9 |
| Related business IJV | 11 | 7 | 1 | 3 |
| Relatedness of partners' industries | 9 | 2 | 2 | 5 |
| Dominant parent control | 8 | 2 | 3 | 3 |
| Size of the foreign partner | 8 | 3 | 2 | 3 |
| Existence of R&D operations | 7 | 2 | 4 | 1 |
| Earlier collaboration between partners | 6 | 3 | 3 | - |
| Size asymmetry | 6 | 1 | 5 | - |
| Target country experience | 5 | 3 | 1 | 1 |
| Number of partners | 4 | - | 3 | 1 |
| International experience | 4 | 1 | 2 | 1 |

Table 2. Operationalisation of variables

PARENT SIZE (PARSIZE) : Total sales of the company in the year preceding the FDI changed to FIM values in 2001. A logarithmic version is taken because it may be expected that the influence is not linear.

INTERNATIONAL EXPERIENCE (INTEXP) : The number of foreign manufacturing investments made by the Finnish firm before making the reviewed IJV.

TARGET COUNTRY EXPERIENCE (TCEXP): The length of earlier manufacturing experience in the target country.

RELATEDNESS OF THE UNIT (URELATEDNESS): Dummy variable equal to one if the foreign company had experience from the same SIC field of industry of the IJV, otherwise zero.

CULTURAL DISTANCE (CULTDIST): Cultural distance between Finland and the target country of the IJV based on four dimensions by Hofstede (1980 & 1993) and the formula developed by Kogut & Singh (1988) using all countries for which Hofstede informs the values of the four cultural dimensions.

POWER DISTANCE (PDI), INDIVIDUALISM (IDV), MASCULINITY (MAS), UNCERTAINTY AVOIDANCE (UAI): Distance between Finland and the target country of the IJV along the four dimensions by Hofstede (1980 & 1993)

ACQFORM OF ESTABLISHMENT (ACQFORM): Dummy variable equal to one if the IJV was a partial acquisition and zero if it was a greenfield investment.

NUMBER OF PARTNERS (NUMPART): Number of partners in the IJV.

DOMINANT FINNISH PARTNER OWNERSHIP (DFPO): Whether the share of the Finnish partner was 51-94 (=1) or less (=0).

AGE OF THE IJV (AGE): Number of years from the establishment of the units to 2001 or to the divestment of the unit.

Table 3. Results of the binomial regression analysis: 1. Survival and 2. Stability

| | EXPECTED SIGN | 1. Survival | | 2. Stability | |
|---------------------------|---------------|-------------|--------------------|--------------|--------------------|
| | | coefficient | significance | coefficient | significance |
| CONSTANT | | 4.309 | 0.000 | 2.873 | 0.000 |
| PSIZE | 0 | -0.599 | 0.001 ^d | -0.516 | 0.007 ^c |
| INTEXP: Survival | + | 0.114 | 0.651 | - | - |
| INTEXP: Stability | - | - | - | 0.011 | 0.967 |
| TCEXP: Survival | + | 0.014 | 0.362 | - | - |
| TCEXP: Stability | - | - | - | 0.014 | 0.329 |
| UNIT RELATEDNESS | + | 1.107 | 0.003 ^c | 0.907 | 0.057 ^a |
| CULTDIST | - | -0.260 | 0.091 ^a | -0.051 | 0.736 |
| UAI | - | 0.010 | 0.059 ^a | 0.009 | 0.076 ^a |
| MAS | - | 0.000 | 0.980 | 0.002 | 0.781 |
| PDI | 0 | 0.006 | 0.364 | 0.004 | 0.593 |
| IDV | 0 | -0.008 | 0.226 | -0.008 | 0.237 |
| ACQFORM | - | 0.088 | 0.662 | -0.482 | 0.018 ^b |
| NUMPART | 0 | 0.054 | 0.740 | 0.220 | 0.164 |
| DFPO | 0 | 0.064 | 0.731 | 0.120 | 0.536 |
| AGE: Survival | + | -0.157 | 0.000 ^d | - | - |
| AGE: Stability | - | - | - | -0.179 | 0.000 ^d |
| Number of observations | | 657 | | 657 | |
| % of correct observations | | 68.2 | | 70.9 | |

a ≤ 0.1 b ≤ 0.05 c ≤ 0.01 d ≤ 0.001

Table 4. Summary of the hypothesis and results

| | | Expected sign | Based on survival | Based on stability |
|------|-------------------|---------------|-------------------|--------------------|
| H1 | PSIZE | 0 | Not supported | Not supported |
| H2A | INTEXP: Survival | + | Not supported | - |
| H2B | INTEXP: Stability | - | - | Not supported |
| H3A | TCEXP: Survival | + | Not supported | - |
| H3B | TCPEXP: Stability | - | - | Not supported |
| H4 | UNIT RELATEDNESS | + | Supported | Supported |
| H5 | CULTDIST | - | Supported | Not supported |
| H6 | UAI & MAS | - | Not supported | Not supported |
| H7 | PDI & IDV | 0 | Supported | Supported |
| H8 | FORM: ACQ | - | Not supported | Supported |
| H9 | NUMPART | 0 | Supported | Supported |
| H10 | DFPO | 0 | Supported | Supported |
| H11A | AGE: Survival | + | Not supported | - |
| H11B | AGE: Stability | - | - | Supported |

Appendix 1. Descriptive statistics and the correlation matrix of the independent variables

| | Mean | Std. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| PSIZE (LOG) (1) | 3,575 | 0,781 | 1,000 | | | | | | | | | | | | |
| UNITRELATEDNESS (2) | 0,932 | 0,250 | -0,060 | 1,000 | | | | | | | | | | | |
| INTEXP (LOG) (3) | 1,117 | 0,591 | 0,777 | -0,090 | 1,000 | | | | | | | | | | |
| TCEXP (4) | 3,470 | 6,540 | 0,273 | 0,027 | 0,310 | 1,000 | | | | | | | | | |
| CULTDIST (5) | 1,670 | 1,074 | 0,059 | -0,075 | 0,108 | -0,089 | 1,000 | | | | | | | | |
| PDI (6) | 18,420 | 22,520 | 0,037 | -0,115 | 0,075 | -0,140 | 0,684 | 1,000 | | | | | | | |
| IDV (7) | -4,190 | 22,510 | 0,003 | 0,130 | -0,057 | 0,239 | -0,574 | -0,702 | 1,000 | | | | | | |
| MAS (8) | 17,120 | 22,320 | 0,110 | -0,016 | 0,163 | 0,007 | 0,548 | 0,262 | -0,083 | 1,000 | | | | | |
| UAI (9) | -3,750 | 21,460 | 0,070 | -0,078 | 0,111 | -0,032 | 0,189 | 0,362 | -0,234 | 0,414 | 1,000 | | | | |
| ACQFORM (10) | 0,620 | 0,490 | 0,016 | 0,089 | -0,032 | 0,148 | -0,297 | -0,362 | 0,364 | -0,146 | -0,079 | 1,000 | | | |
| NUMPART (11) | 2,184 | 0,555 | -0,024 | -0,068 | -0,015 | -0,055 | -0,007 | 0,074 | -0,096 | 0,026 | 0,008 | -0,032 | 1,000 | | |
| FORPARTDOM (12) | 0,390 | 0,490 | -0,060 | 0,090 | -0,095 | -0,103 | -0,128 | -0,115 | 0,057 | -0,064 | -0,040 | 0,173 | -0,110 | 1,000 | |
| AGE (13) | 11,138 | 5,026 | -0,267 | 0,100 | -0,336 | -0,152 | -0,044 | -0,080 | 0,165 | -0,130 | -0,107 | 0,086 | 0,050 | -0,040 | 1,000 |