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**INTERNATIONAL STRATEGIC ALLIANCES:
STOCK MARKET RESPONSES FROM DUTCH FIRMS PARTNERING
WITH EU, US AND JAPANESE FIRMS**

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ABSTRACT

This paper examines the effect on the market valuation of large Dutch firms following the announcement of forming international strategic alliances (ISAs). These stock market effects are distinguished by type of alliance and country of origin of the partnering firms during the period 1985-1992. While ISAs are generally found to have a positive effect on firms' market value, strategically and culturally distant foreign partners generate a strong negative effect on a firm's market value. The results underscore the importance of conducting a strategic, operational and cultural audit of the partnering firms and the envisaged partnership. The audit needs to be taken as a starting point in developing the essential co-operation skills to make the alliance work and should become integrated within a comprehensive performance scorecard.

INTRODUCTION

International strategic alliances (ISAs) have become increasingly important to the modern economic organization of global markets. There is a growing literature analysing the use, organization, and managerial assessment of alliances in various international strategic settings. In practice, however, the majority of firms do not systematically track the performance of their ISA, nor relate it to their strategic objectives, despite the fact that investors often tend to react strongly to the announcement of an ISA¹. Scholarly research on ISAs has mostly examined their impact on the stock market value of the partnering firms². This research has most often taken a US perspective and focused on the type of alliance, the sector, the size, and the experience of the firms. Important differences are found with respect to the type of alliance in terms of shared activity (marketing, technology) and formal structure. For instance, it has been found that 1) announcements of technological alliances generate greater returns than marketing alliance announcements, 2) related joint ventures are expected to perform better than unrelated joint ventures, and 3) abnormal returns are negatively correlated with profitability and size. Because of the strong focus on ISAs among US firms, the effect of the diversity of the partners in terms of their national origin has largely been ignored.

This study focuses on ISAs concluded during the period 1985-1992 by large Dutch firms listed on the Amsterdam Stock Exchange (see appendix I for a description of the data). A study of Dutch firms over the period 1985-1992 is particularly interesting because at that time Dutch firms were witnessing strong market integration in Europe, which offered unknown opportunities to strengthen competitiveness and reorganize activities. Because of the replication of most activities in the fragmented markets of the EU and their limited presence outside Europe, especially Asia, Dutch firms, had to deal with strong scale and scope disadvantages compared to their American and Japanese competitors. We believe that our analysis can be easily extended to firms from other EU Member States and may offer major insights for firms setting up alliances with firms from those central and Eastern countries which soon will join the EU.

VALUE CREATION THROUGH ISA

From a strategic perspective ISAs create value through combining resources that complement each other and can be leveraged in global markets. The use of an ISA by firms should therefore be integrated within their overall corporate strategy. However, not all features of an ISA can be decided before its establishment, and the choice and selection of a partner is most often the subject of a bounded search process among limited market opportunities. The difficulty in finding an international partner may help explain that ISAs are often an emergent process rather than a well planned strategic decision-making process. These arguments imply that forming an ISA will convey important new information about the strategic potential of a firm, and hence is expected to have an important impact on the value of that firm.

While the complementarities and leveraging of valuable resources constitutes necessary conditions to create value, the partnership requires key collaborative skills to foster and manage the relationships between the partnering firms and the interface with the joint activity or joint venture. Studies have identified three key skills for a successful ISA³: diplomatic vision, acceptance of other cultures, and shared objectives and vision. These skills are essentially interacting with four levels of influence: the national/macro background of the partnering firms, the industry environment, the organisation of the firm, and individual manager perceptions. Our study focuses on the first and second influences to identify whether the country of origin of the partner, encompassing its strategic, institutional and cultural context, contributes to the value created by an ISA.

Not all ISAs are aimed at expanding the operations of firms. An important number of ISAs are used as instruments to restructure and downscale business units. ISAs most often provide firms with real options to further expand or divest business units in a global context. Examination of US-Japanese alliances during the 1980's, found that the typical US-Japanese alliance corresponded to "a call option on portfolio reconfiguration for the Japanese firm and a put option on financial restructuring for its US partner"⁴. ISA were preferred to immediate divestiture of less profitable divisions, as firms expected to improve the final acquisition terms by combining resources with the partnering firm through the ISA. Many of the Dutch firms appeared to be facing similar financial pressure to restructure in the late 80's. Access to Japanese and other Asian markets and business systems, from where growing competition was coming, pressed many Dutch firms to set up ISAs with Japanese and Asian firms⁵.

An illustrating case: Philips NV

A prominent electronics firm in our database, Philips NV, has been particularly hurt by strong global competition and its relatively weak presence in Asia in the eighties. In 1990, the Dutch electronics firm seemed close to collapse. In order to drastically restructure its global operations, the company developed a string of global joint ventures. Many of these joint ventures, including the better-known Whirlpool-Philips joint venture hosting Philips' white goods division, comprised a fade out option through which the company was able to divest the division gradually over time. More recently, after a failed joint venture with the US firm Lucent technology to massively penetrate the US digital mobile market in the late nineties and facing a weakening position in Europe, Philips decided in June 2001 to be no longer an independent maker of mobile phones, but to manufacture them in a joint venture with China Electronic Corporation. The latter group obtained the controlling stake in the joint venture. At the same time, using its own customer sales and distribution channels, and transferring technology to the joint venture, Philips expects to significantly increase its market share in China, the fastest growing market.

Following the announcement of the joint venture on June 26, 2001 shares in Philips were down 3 per cent. Analysts reacted negatively to this restructuring decision, as they expect Philips' position to become weaker in Europe and the company to potentially face problems similar to what they experienced with the Masushita joint venture in a recent past (IDG Net Techwire, www.thestandard.com). Having been faced with many restrictions to invest in Japan, Philips held a 35 percent stake in a joint venture with Matsushita, Matsushita Electronics Corporation (MEC), until 1993. Philips provided MEC with technology for cathode ray tubes and lighting, but MEC's operations remained limited to manufacturing and played no role in the increasing penetration of Philips-branded products in Japan. Over time, Matsushita obtained equal or superior technological capabilities in a substantial number of MEC's product lines.

Discord arose between Philips and Matsushita on how to implement MEC's overseas expansion, in particular over semiconductor sales and production in the US (where Philips' subsidiary Signetics is manufacturing) and cathode ray tube production in China and Europe (where Philips also has its own manufacturing plants). In 1993, Philips, which was troubled by a large debt burden and in the midst of a painful rationalisation process, indicated it would prefer to pull out of the venture. Matsushita eventually agreed to buy out Philips' stake for 185 billion Yen (about 1.65 billion US\$). The buyout left Matsushita free to pursue its own strategy abroad and to compete head-on with Philips outside Japan.

While the previous examples illustrate cases of forced restructuring, Philips has set up many other alliances and joint ventures in the wide portfolio of its activities that clearly offered the company strong growth options. For instance, through a series of strategically well-chosen joint ventures and acquisitions Philips Medical Systems has been showing a remarkable strong growth in this line of business. In 1997 Philips entered into a joint venture with the German based Siemens Medical Engineering division and the French headquartered Thales Electronic Devices to develop and manufacture a new generation of flat digital detectors for X-ray imaging systems.

More recently, Philips Medical Systems and the Israeli based SHL Telemedicine established the joint venture Philips Heartcare Telemedicine Services Europe. From its strong position in Europe, and through recent acquisitions of Marconi's Medical Systems business and Agilent's Healthcare Solutions Group, Philips has in a short span of time grown into the world's second largest manufacturer of medical diagnostic imaging equipment.

Strategic alliances and stock returns: partner location effects

Considering the various motives and types of ISAs, it is not surprising that statistical studies have found divergent stock market reactions to the announcement of an ISA. In this context positive stock market reactions have been found for ISAs that are used to increase strategic flexibility or the firm's long-term investment possibilities, whereas negative reactions have been observed for ISAs involving the closing of plants⁶, and unplanned divestitures⁷. Similarly, in contrast to expansionary business relocations, a negative effect on the value of the firm has been found for relocation announcements motivated by capacity reduction or consolidation operation.

Finally, systematic differences have been found between technological alliances and marketing alliances, with technological alliances found to have a greater positive effect⁸. This differential effect is attributed to the market's perception of technological alliances having more option value for generating new activities and future income streams, whereas marketing alliances often involve deals to share markets in mature industries.

Since most previous studies have dealt with domestic alliances or specific industry case studies, country of origin differences between partners have received limited attention and have not been formally addressed in statistical testing. This is surprising given the arguments outlined above. There are several reasons why the country of origin of the partnering firms might be expected to have a significant impact on firm values. First, the more economically and culturally distant the partner the higher the transactional and strategic risks to manage the alliance, especially when the essential skills to cope with these risks are lacking⁹. Second, performance standards of partners based in different parts of the world may strongly differ, as they reflect differences in social norms, regulations, and governance structures¹⁰. Third, the search for suitable partners in an ISA is a costly and uncertain process. As a result, many ISAs are unexpected and largely determined by sudden opportunities¹¹. The choice of a foreign partner originating from a less familiar national background adds to this effect and creates extra risk that the alliance will quickly dissolve. In line with the previous three arguments, research has found that joint ventures dissolve more quickly the more culturally distant the (Dutch) firm is from the partnering firm¹². Fourth, the country of origin of the partner most often reflects the competitive position of the partner and, as such, the type of growth option acquired by the firm through the ISA. Within this process, investors rationally expect the stronger partner to acquire the call option to expand while the weaker partner acquires the put option to sell off divisions or certain activities¹³. Clearly, as mentioned above, the market will react very differently, following this type of information.

Methodology

Our empirical analysis uses standard equity-capital event methods to compute abnormal returns to traded equity following the announcement of an ISA¹⁴. Under semi-strong form efficiency of capital markets, an assumption supported by the finance literature, stock prices reflect all publicly available information. If the formation of a strategic alliance provides information that causes an upward or downward revaluation of the firm's expected

future earnings, then the stock price will reflect this as soon as the information becomes public through the formal announcement of the alliance. Therefore, announcement events are expected to be correlated with the deviations of actual returns from the predicted returns, based on the firm's historical return.

The abnormal returns are calculated as the residuals of the standard market model (CAPM) calculated over 75 days. These abnormal returns are cumulated over a window starting 8 days before the event day. Since the announcement of a strategic alliance is mostly preceded by rumours and reports about intensified negotiations between the partners, it is reasonable to expect observable stock price effects some days before the actual announcement date. Further, since the announcements are taken from newspapers and do not come from wire data, the exact announcement date of the ISA is not known and may already have taken place some days before being reported in the newspaper¹⁵. For both these reasons, a pre-event window spanning some days before the announcement date needs to be analysed to ensure that the reaction of the stock market to (rumours of) the announcement are fully taken into account in the analysis of abnormal returns. As stated, here we use a pre-event window starting 8 days prior to the announcement (changing the length of the window did not significantly change the results).

A standard t-test¹⁶ is used to determine whether the abnormal returns are significantly different from zero. Because parametric test statistics are rather sensitive to outliers, especially in small samples¹⁷, and other related statistical problems including heteroscedasticity and an event induced shift in variance¹⁸, nonparametric tests were also applied and yielded similar evidence¹⁹.

RESULTS

Insert Table 1 About Here

Table 1 shows that the most important abnormal returns are found for strategic alliances of Dutch firms with Japanese firms. In this case, the t-statistic rejects the null-hypothesis of no effect at least at the 10% level. For Dutch-Japanese ISAs the cumulative abnormal return is equal to a loss of 3.65 percent which suggests a strong effect that is identified early by the market. This result is similar to what other studies found for US firms partnering with Japanese firms in that same period²⁰. ISAs with non-European firms, which are competitively and culturally distant, generally lead to negative market valuations. Alliances with US based firms that are competitively and culturally less distant than Japanese following Hofstede's²¹ metric do not have a significant effect on the stock returns of the Dutch partner. Strategic alliances with firms based in other European countries show a clear positive effect (about 2 percent in the pre-announcement period). This positive response is the strongest for production and marketing alliances, suggesting strong strategic growth options from efficiency gains and market strengthening gains resulting from a better co-ordination of activities in the emerging single market of Europe.

Insert Table 2 About Here

As a further analysis of our data, Table 2 shows the results of an analysis of variance by means of a regression relating CARs (cumulative abnormal returns) to a set of dummy variables reflecting the country or region of origin of the partnering firms. The base region is taken as Europe (intercept value), so that the coefficients for the other country variables are the difference in the mean CAR for ISAs with a partner from the particular country versus an ISA with a partner from Europe. All F-tests reject the null hypothesis of no differences between the mean CAR response across the country of origin at a significance level of 5 percent or less. Table 2 shows that the most marked differences in mean response are found for Japanese and European alliances. There are also large differences in CARs between

European alliances and alliances with firms based outside the Triad (EU, US and Japan)²². From the cross-sectional analysis it is clear that EU alliances have a positive impact on the stock market returns of the Dutch partner²³. In comparison to alliances with a European partner, partnerships with a non-European firm produce smaller cumulative abnormal returns. The differences in CARs when compared with European alliances are significantly larger for alliances with a Japanese partner than they are for partnerships with US based firms.

We further distinguished technological ISAs with Japanese partners (the ones with the most significant returns) according to their long run status, i.e. alliances where the Dutch partner's line of business was acquired in a later stage by the Japanese partner versus those where the alliance was still going on, or terminated without further co-operation. Interestingly, the latter category represented only 30 % of the technological alliances with Japanese firms so that 70% ended in the acquisition by the Japanese partner while no alliances involved acquisitions by Dutch firms. We found no significant difference in the mean response between the two sets of alliances.

The testing was extended to cover other characteristics of the alliances including the sectoral scope of the alliances, the relative size of both partners, profitability, and the alliance intensity. Controlling for these factors did not change the nationality findings and added only marginally to the total explained variation²⁴.

Managerial implications and some limitations

The results of this analysis support a number of past assumptions regarding the performance of ISAs and provide some interesting insights into the link between institutional and competitive diversity of the partnering firms and value creation. The results suggest the necessity to explicitly consider the long-term strategic impact on the global position of the firm, as well as the relational risk in the formation of ISAs, especially with partners from a different economic, social and cultural origin.

These findings do not minimize the role of ISAs in creating valuable growth opportunities. ISAs, and the options they provide to restructure operations globally, have become building blocks of a new dynamic strategy concept. However, the value of an ISA depends strongly on the volatility and competitive structure of global markets, the strategic intent, bargaining power and organisational background of the partnering firms. Managers

therefore need to make an explicit audit of these factors, integrate them with their own global strategy, and learn to deal with uncertainty in a proactive sense, in order to maximize the value of flexibility and long-term investment possibilities over time. This audit should be integrated within the design of a scorecard from which the strategic, operational, relational financial, and relational fitness can be continuously monitored and improved. The knowledge that certain types of ISA demand specific attention in one or other dimension of the scorecard should help to improve the effectiveness and efficiency of such a systematic approach²⁵. Our study illustrates how the national / industrial context of partnering firms are key features that relate closely to the value creation potential and, perhaps more importantly, to the value enhancement and appropriation potential of the partnering firms. The results suggest that investors expected an ISA between a Dutch firm and another European firm to strengthen the firm's market position in an integrating EU market, whereas a partnership with a competitively strong and culturally distant Japanese partner was expected to generate negative firm value, at least during the period 1985-1992. Using our results in a pro-active sense, we may expect the forthcoming enlargement of the EU with ten Central and Eastern European countries to create new profitable ISA opportunities for Dutch and other EU based firms.

Working with partners from different national origins tends to substantially increase the relational risk, which, if unmanaged, may undermine the value creation potential of ISAs. From a managerial perspective, our results therefore emphasize the need to better understand and control relational risk. Partnering firms should develop the essential skills, including understanding the partners' strategic objectives and organizational culture, and not focus solely on operational and/or financial targets. Moreover, to protect against competitive risks and maximize the potential benefits of co-operation it is critical to develop clear joint business purposes and to design a culture that is responsive to its environment and personnel as well as granting operational and decision-making independence through which the partners may enlarge the potential for co-operation. Incompatible cultural differences between partners should be made explicit and, through organized dialogue and adapted management systems, used in a constructive way to enhance co-operation²⁶.

In addition to the above-mentioned audit, a well-prepared plan should include well-developed credible contingency plans with clear exit options if the co-operation fails to achieve the desired objectives or operational effectiveness. Prior communication of these plans will improve the valuation of the ISA by investors. Investors will react negatively to the use of reactive or defensive ISAs to rationalize past management decisions and/or to

compromise on competitive outcomes, as the latter type of ISA announcements will be interpreted as unfavourable information about the firm's future investment opportunities and growth potential. Especially firms with a history of less successful ISAs may be sensitive to such reactions, and should learn from past mistakes.

Finally, we point out some limitations of our study and offer suggestions for future work. First, the nationality effect in our results encompasses both a competitiveness effect as well as a relational risk effect. Building micro measures of relational risk and competitive performance at the level of the individual partners²⁷ could help to disentangle these two effects. Such research may also be used to explain the choice between equity and non-equity ISAs in terms of relational and performance risk as well as illustrate the ownership stake of the partners and the chosen governance mechanism in relation to the cultural and institutional background of the partnering firms.

Second, while this study documents the diversity in stock market reactions for ISAs with partners of different national origin, it needs to be emphasized that these reactions are contingent upon the particular environmental conditions that prevailed during the period 1985-1992.

Appendix I: data

The events correspond to the announcement in the Dutch financial press of formal alliances between internationally operating firms during the period 1985-1992. The alliances involve a long-term contract for co-operative development of new technologies or joint marketing and/or production of goods and services. All types of alliances ranging from loose contractual agreements to joint ventures are included. Confounding events, such as alliances at the time of the October 1987 stock market crash, were eliminated from the sample. Descriptions of the contents of the alliances and the actual announcement dates, as well as stock market returns, were taken from specialised financial sources²⁸.

The selection procedure resulted in a total sample of 105 events. Of these 105 events, 44 involved the announcement of alliances for technological co-operation, while the other cases concerned production and/or joint marketing alliances. As expected, the greatest number of alliances (50) concerned alliances with West-European partners, mainly in production and/or marketing. Further, the sample covered 24 alliances with US firms, 14 alliances with Japanese firms, and 17 alliances with firms based outside the Triad region, mainly in other Asian countries.

More than 80 % of the alliances are horizontal co-operations with more than 70 % of alliances involving partnering firms whose main activity was in the same industry sector (3 digit SIC-level). The majority of Dutch partners belong to three sectors: chemicals, electronics and transport. In 60 % of the cases, the Dutch partner is more than twice the size of the foreign partner²⁹.

The geographical scope of the alliance was not defined in 30 % of the cases. Of the specified cases, 44 % had an unrestricted global scope, 8 % covered only the EU, while the remaining 38 % included restrictions covering one country or a particular set of countries.

TABLE 1

Cumulative abnormal returns following the announcement of an ISA distinguished by type of the alliance and by nationality of the partnering firm.

	Technology	Production-Marketing	All
Europe (n=50)	1,01 (1,22)	2,66 (3,59)*	2,00 (3,58)*
US (n=24)	-0,49 (-0,39)	-0,15 (-0,12)	-0,35 (-0,01)
Japan (n=14)	-6,85 (-6,56)*	-0,44 (-0,34)	-3,65 (-4,17)*
Non-Triad (n=17)	-1,05 (-0,59)	-2,15 (-1,94)*	-1,95 (-1,98)*

* Denotes significance at a level of 10 percent or lower

TABLE 2

Testing for differences in cumulative abnormal returns: non-European partner versus a European partner (base = EU partner, t-statistics in parentheses)

	All alliances	Technology	Production Marketing
Europe	2.00 (2.77)*	1.01 (1.00)	2.66 (2.72)*
ΔUS	-2.35 (-1.86)*	-1.50 (-0.96)	-2.81 (-1.44)
ΔJapan	-5.65 (-3.66)*	-7.86 (-3.98)*	-3.11 (-1.38)
ΔNon-Triad	-3.95 (-2.76)*	-2.06 (-0.74)	-4.81 (-2.77)*
	R ² = 0.15 F = 5.81*	R ² = 0.29 F = 5.32*	R ² = 0.13 F = 2.84*

* Denotes significance at a level of 10 percent or lower

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- ²² The greatest differences are found for technology alliances, for which the explained variation rises to 29 per cent.
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²⁴ Das et al., 1998 (reference see 3). The extensive results are presented in the original study (reference see 1).

²⁵ Such a performance scorecard approach is strongly advocated by Bramford and Ernst (reference see 2)

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