A COLLATERAL BASED THEORY OF INTERNATIONAL EQUITY JOINT VENTURES

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ABSTRACT

This paper proposes a new framework within which to examine the ownership patterns associated with cross border equity joint ventures (EJV). The framework synthesises existing theories of JV operations, which are based on transaction cost economies, strategic motives, organisational learning, resource based theory, and asymmetric information by linking each explanation to the role of equity as guarantee capital. In particular, it focuses on the specific role and the economies and diseconomies of such guarantee capital, and its relationship to the assets of the EJV partners.

1.1. DEFINITION OF A JV FORMATION

Equity joint ventures are an important form of foreign direct investment, which involves ownership and confers effective management control. They are an important means of entry into markets which are difficult for foreign firms to penetrate because of legal, regulatory or cultural barriers. Traditionally, EJVs are typically alliances between firms from developed economies and firms or public sector entities in developing countries. From firms in developed economies perspective, these ventures are usually set up to enable them to overcome entry barriers to national markets, often government imposed, such as trade barriers and legislation against foreign ownership. From the perspective of developing country partner, EJVs appear to be the preferred means of acquiring foreign marketing and management skills and access to capital and technology, stimulating local export-oriented activities. Traditional ventures are usually to be found in mature industries, involving standardised products, and located in developing partner country's market. However, the foreign ownership structure of the EJV will depend on the relative costs and benefits of such ownership. Transaction cost framework stipulates that firms will choose a level of foreign equity ownership only if the associated benefits exceed the overall costs (Gomes and Casseres, 1989; Hennart, 1991; Nakamurs and Yeung, 1994). Another approach to investigating the foreign equity ownership in an EJV is based on the bargaining power of the partners involved. This equity ownership is the outcome of complex negotiations between the foreign partner, the local partner, and possibly the host country government (Fagre and Wells, 1982; Kobrin, 1987; Dunning, 1988; Gomes and Casseres, 1990; Blodgett,

1991; Gary and Yan, 1992).[1]This paper argues for a different determinant of the equity capital ownership in an EJV structure base on the guaranteeing property of equity capital.

The past decade has witnessed a growing interest in the development of theories of EJVs (Beamish and Banks 1987; Geringer and Hebert 1989; Harrigan 1986; Hennart 1988; Kogut 1988). EJVs and contractual JVs (CJVs) are the basic forms of JV encountered in international business. An EJV can be defined as an organisation created as a new and separate legal corporate entity, which is the product of a joint investment by two or more firms from different countries.[2] It is constructed as a hybrid organisation in which the EJV parent firms remain independent with different motivations and objectives (Borys and Jemison 1989), although they also contribute to the management process of the EJV. Parent firms, acting as owners, have the authority to determine EJV tasks and activities, but EJVs in reality are, at least legally speaking, independent organisations. This means that EJVs can sign contracts and arrange exchanges in the market. EJVs also have separate organisational structures, rules and procedures, management teams and employees. They may act for their own benefits and interests, independently of, and even at odds with, the interest of their parent companies.

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[1] Several sources of bargaining power haven been identified in the literature, including the ownership of technology, degree of product differentiation, level of control over market access, and the amount of capital contribution from various partners (Fagre and Wells,1982); technical leadership, advertising intensity, and export capability of the multinational partner (Lecraw, 1984); tax/subsidy of the host country's government, and transfer pricing of inputs by the multinational firm (Al-Saadon and Das, 1996).

[2] The analyses given through out this paper consider JVs formed only by two parties. It is also assumed that partners forming an EJV have different origins.

On the other hand, CJVs unlike EJVs, have no separate legal entity and provide no equity collateral. Rather, they involve the supply of technology, marketing and production know-how or management skills by one partner to the other on a contractual basis. This form of collaboration provides no control over the very assets and skills firms may seek, as the ownership of such assets and skills remains with the respective partner. These assets and skills are only provided for carrying out agreed tasks. In CJVs task are performed within their respective facilities, as in the example of a contract to act as second source for a well-specify product. Partners control the venture through contracts that may specify product configurations, delivery schedules, price, or other terms. In an EJV the parents provide an agreed portion of the "equity". This may take the form of funds or capital equipment, premises and management know-how. Contribution of equity capital provides insight as to why a firm chooses an EJV over a CJV. We argue that one major determinant of this choice will be based on the role and nature of collateral in guaranteeing transactions between parties.

An EJV has the following basic characteristics:

➤ *It involves two or more independent companies that create a shared entity, which involves the active management participation of the parent firms;*

➤ *The equity participation and the risk and returns of the investment are shared according to a contract.*

These characteristics of an EJV create a superior monitoring mechanism and alignment of incentives to reveal information, and guarantee performance. Instrumental to achieving this alignment are the rules of sharing costs and/or profits and the mutual investment in dedicated assets (assets, which are specialised to purchase or sales from a specific firm). Thus, both parties gain or lose by the performance of the venture. It is by mutual hostage positions through joint commitment of financial or real assets that superior alignment of incentives is achieved, and the agreement on the division of profits or costs is stabilised. In an EJV both parties share the residual value of the venture without specifying the performance requirements or behaviour of each party. Instead, the initial commitments and rules of profit sharing are specified, along with administration procedures for control and evaluation. An EJV provides an alignment of incentives through a mutual dedication of resources (pool of capital in terms of strategic resources or equity capital) along with better monitoring capabilities through ownership control rights.

This framework provides an incentive for the partners to guarantee their performance by posting collateral. It also reduces the costs of monitoring, meaning the performance and commitment of the partners does not have to be checked constantly. The reduction of monitoring cost is achieved by making parties residual claimants in proportion to the variability of their contribution to the value of output.[3] The parties' incomes are derived from their residual claim on the value of output. If parties do not fulfil their commitment their income stream will also suffer. This point becomes

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[3] In this paper "residual" is defined using Barzel (1987) definition. He defines "residual" as discrepancies between the contract rate of pay and the costless-transacting equilibrium rates. The

clearer as we will explain later, one of the properties of collateral, the creation of a pool of equity capital will reduce monitoring costs. This is in contrast to CJVs, where no equity is provided to guarantee performances. The structure of CJVs is such that it does not require any collateral to be posted by the partners. They are one-off contractual agreements for the supply of technology, marketing capabilities or production facilities. The terms and conditions of the pay-off are designed according to a contract and no third legal entity is created. Therefore, the benefits of collateral to guarantee performance do not materialise. These are the main difference between the two forms of JVs. The focus here is to develop hypotheses, which explicitly link the form taken by JVs to the role of collateral. These hypotheses will be developed along the lines of measurement cost theory, and provide a testable basis upon which to determine which form of JVs would emerge in any particular relationship. Therefore, the differences are explained in the context of a theoretical model that is developed using a collateral-based foundation.

We will proceed by drawing a distinction between JVs in which the parties undertake similar activities and provide similar inputs (horizontal JVs) and ventures where the contributions of the parties are complementary (vertical JVs). This distinction will later be used to identify cases where collateral as a guarantee can be efficiently provided. In other words, in which type of JV formation, horizontal or vertical, it is easier to exploit the economic properties of collateral as a guarantee, and in which formation it is more difficult.

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output of the collaboration among owners is never fully predictable, parties are faced with residuals in all their transactions; residuals take numerous forms, and there is no such thing as the residual.

1.2. HORIZONTAL AND VERTICAL JVs

1.2.1. Horizontal JVs

When a venture is used as a mean of diversifying from, or enlarging the scope of a firm's ongoing activities, the way in which the venture is related to its owners determines its pattern of diversification. A JV is said to be horizontally related to its owner(s) if produces the same product, in the same market, with the same technology that its owner(s) utilise, albeit in a different geographic arena. A horizontal JV refers to a firm(s) that may form a venture that creates a horizontally related competitor to expand its market scope, expand or flesh out its product lines, or rationalise excess capacity. Innovation may also be a firm's primary motive to integrate. The rational for a horizontal JV can be to limit excess capacity, to achieve risk reduction through joint efforts, to save on costs and to deter potential entrant. (Harrigan, 1986). To summarise, in a horizontal venture partners provide similar inputs to the venture.

A horizontal JV reduces inter-party moral hazard and monitoring costs because the partners businesses are related. Business relatedness, is the situation, where the nature of business activity for both partners is similar. The transaction cost literature suggests that greater similarity between partners' business confers production and transaction oriented gains upon these firms. Transactionally, higher levels of such

relatedness permit firms to better identify the credibility of their partner's intended contribution. Moreover such relatedness allows the detection of opportunism. Business relatedness reduces information asymmetry between partners, as both have insights into the productivity of their collective resources. Within this context relative partner size also becomes important. That is the nature of administrative protocols (systems and procedures) engaged by a firm to that of its JV partner. The transaction cost theory suggests that similarity between partners' administrative mechanisms confer managerial gains upon the involved firms. For example, administrative similarity reduces costs of organising resources, by diminishing partners' need to standardise dissimilar internal policies and procedures. This facilitates better JV management, and renders partners' motivations more compatible and understandable to each other (Porter and Fuller, 1986).

Within a horizontal JV as it is defined above it would be expected that the need for direct monitoring of the parties' performance be reduced. This is due to the parties understanding of each other's activities, and the fact they provide the similar inputs to the venture. This leads to a reduction in the asymmetric information problem and problems arising from an inability to signal the true value of assets to one another. Therefore, the necessity for posting collateral to guarantee the outcome of joint activity may also be reduced. This will be the main point that we will try to link with asset specifity and opacity. The objective is to determine the ratio of equity capital required by partners in relation to the nature of their assets.

1.2.2. Vertical JVs

In a vertical JV each partner contributes one or more different elements in the production and distribution chains. The inputs of the partners are, in this case, complementary, not similar. A vertical JV refers to those ventures that are at a different stage of the "transformation chain" than their owners. These ventures are formed to decrease dependency on outsiders and circumvent market imperfections. They can also be used to develop young industries. Sometimes competitors join forces to build supply plants that are larger than either firm could use alone to exploit scale economies, partners may also jointly pioneer new distribution channels. If effective product differentiation could give their firms sustainable advantages (and if economies necessitate sharing a facility), a manager may forge a vertical JV. Most likely, partners will do so because quality control depends on good relationship between production stages. Thus, supplier (or buyers) may form a co-operative venture to improve raw material or component quality, to design new products, or to shore up a domestic firm's position against importers. Earlier studies, which regarded JVs primarily as a means of entering industrialising countries (where infrastructure often did not exist previously), found many vertical ventures. Vertical JVs often are necessary early in the development of an economy to build roads, electrical systems, potable water access, and other necessary infrastructures (Harrigan 1986).

Traditionally, vertical integration advantages are said to be as follow:

➢ avoidance of interfirm contracting, transactions, and negotiations costs (Williamson, 1975);

- reduction in cost or achieving economies of scale from combining common administrative, production , transport, or information processing activities in two or more stages of production or distribution;
- internalising technological or administrative abilities and secrets within a single firm;

- gaining a better understanding of strategy within the industry as a whole (enabling the integrated firm to outperform its more fragmented competitors);
- the ability to implement technological changes more quickly and over more stages of the value chain.

Vertical JV is transactions between suppliers (upstream partners) which perform first and buyers (downstream) which perform second.	Horizontal JV is co-operative transactions in which both parties will use the output from the JV themselves or both will sell the output to their customers.

In the context of transaction costs approach, firms vertically integrate when the share of rents resulting from transaction-specific investment cannot be guaranteed by *ex ante* contracting (Williamson, 1975, 1985, 1991, Klein et. al., 1978; Grossman and Hart, 1986). For example, transaction between a supplier of strategic resources (an independent lab, distributors, suppliers, employees, etc.) and a buyer (a firm) exposes both parties to opportunist behaviours of each other. Therefore, specific investment

and further transaction will not be undertaken, even though such exchange would be profitable to both parties. Thus, it is reasonable to infer that internal accumulation of strategic resources reflects higher levels of specific investment than subcontracted activities or external acquisition. Internalisation processes can also be due to information motivations. When the knowledge involved in certain activities is not firm specific, vertical integration allows the firm to minimise the exposure of proprietary knowledge to competitors (Teece, 1986). It is noticeable that transaction cost logic does not forego information `issues when assuming the contractual costs between agents with bounded rationality are positively related to the uncertainty involved in transactions. The inability to find suitable performance measures might rise from the opaqueness of assets and casual ambiguity that typically define the strategic content of resources and capabilities (Chi 1994).

The general point here is that vertical JVs require greater degree of direct monitoring. This is caused due to the larger asymmetric information that exists between the parties in a vertical transaction. The disparate information sets would also create difficulty for each party to signal the true value of its assets to the other. Therefore, the role of collateral may become essential to overcome these problems and to provide guarantees of satisfactory outcome to each party involved in the venture. In a vertical integration chain the upstream party would perform first and the downstream party second to produce the final product. This relationship would also have a bearing on the ratio of equity capital provided in an EJV by each party, given the nature of their asset. Downstream party has to provide larger share of equity capital because it has to guarantee own actions (the timing of production activity prevents measurement of product output by the first party). Here again the nature of assets would determine

the ratio of collateral to be posted by EJV partners. The opaque and specific assets are explained within the boundaries of resource-based theory. The objective here is to predict the level of equity capital required by each party by linking it to the assets type in the situations where parties are vertically or horizontally integrated, based on the measurement cost theory.

Following from this basic definition of JVs, in the next section we start by explaining the core organising element of this study the theory of collateral and its properties. This theory forms the bases for the hypotheses that will be developed throughout the reminder of this paper. The aim is to formulate an alternative emphasis and provide synthesis of the predictions of existing theories of JVs formation in the context of this collateral-based model.

We begin by explaining the essential properties of the collateral model as an explanatory framework, focusing on measurement/monitoring costs and moral hazard.

1.3.1. Measurement/Monitoring Costs and Moral Hazard

When parties co-operate in an EJV, the contribution each makes to the value of final output will ultimately depend upon the terms and conditions governing the division of the value of output and the technology adopted to monitor and police their activities within the venture.[4] Efficiency requires the choice of the institutional remuneration

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[4] In reality, the output of a JV is heterogeneous, even if it is ostensibly a single market product enterprise. Generally, no two products, even if manufactured on the same production line, perform exactly alike, and no two individual workers are identical to each other. The measurement necessary to evaluate fully each machines, workers or organisations contribution to the value of output are

and the imposition of policing schemes that maximise the value of joint output net of the costs attributable to shirking (opportunistic behaviour) and monitoring.

One form of opportunistic behaviour, which must be mentioned here, is expropriation of the assets by transacting parties. To eliminate one party to the collaboration engaging in such activity, its performance must be monitored at all times. Alchian and Woodward (1987) argue that an EJV is an efficient organisational device because it avoids the opportunity for expropriation, which would result if only one party owned resources and sold its services to the other. This argument is also in line with the property of collateral model where equity capital provided by each party (proportionate to the variability of their contribution) would reduce the incentive for expropriation of assets. Parties' income is proportional to the value of their residual claim on the output. Therefore, they would be deterred from reducing their future incomes by behaving opportunistically. Examples of expropriation of assets can be found in transactions involving asset-specific investments and incomplete contracts. One party can attempt to hold up its counterparty (expropriate some of its wealth) if the counterparty finds it costly to switch to a new transaction partner (Klein et al. 1978). Hold-up hazards are more evident when parties undertake vertical ventures than in horizontal ventures. A vertical venture is a transaction between suppliers and buyers, where each makes a complementary input into the vertical integration chain. Buyers' performance (since they perform second) depends on the input of the suppliers (performing first), therefore, the relationship can be more exposed to hold-

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prohibitively costly. It follows, therefore, that differences among such factors or the respective organisational contribution will not be fully priced. The difficulty is compounded when organisations rent rather than sell their (non-human or human) assets (for example under a licensing contract) since rentals require repeated measurements of the asset. It follows that because of costly measurement,

up hazards. For example in a vertical venture, a supplier that makes asset-specific investments to fill a buyer's order is exposed to hold-up, which can take the form of the buyer demanding concessions on price, quality, quantity, or delivery terms when the contract is renewed or renegotiated. Buyers that become reliant on a particular supplier face hold-up hazards in the form of the supplier demanding similar concessions, but in ways favourable to the supplier and harmful to the buyer. However, in a horizontal venture parties do not rely on each other for the supply of inputs, as both contribute similar inputs to the venture. Hold-up hazards create transaction costs that can cause a market transaction to fail. Alchian and Woodward's argument draws on a transaction cost economies (Williamson, 1979) in which firms faced with hold-up hazards choose appropriate governance mechanisms to resolve these problems economically. An EJV is a type of a mutual reliance relation, which Williamson (1983) describes as when buyer and supplier have reciprocal exposure of specialised assets with the assets acting as 'hostage' to protect against expropriation. The role of collateral enforces parties to align their incentives. This reciprocal exposure of valuable investments reduces the ability of either party to hold up the other by threatening to switch to another transaction partner. However the transaction cost argument for integration does not explain how the scope for opportunistic behaviour between buyers and sellers changes when one of the self-interested owners becomes an equally self-interested employee of the other owner. Defining integration in terms of the ownership of assets and residual claims can provide a better explanation. This is the point that has been focused on by the collateral model.

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buyers and sellers of commodities seldom from contracts that constantly reflect the equilibrium rate of remuneration (pay).

Let us now consider different types of transactions that can emerge between two parties. First, suppose that one party to the JV has a comparative advantage in supplying finance capital whereas the other has a comparative advantage in conducting such activities as buying raw materials, arranging for space, obtaining credit, and selling. These parties can collaborate under various contractual arrangements. They can operate for example, as two independent organisations, as joint venture partners in form of EJVs or CJVs sharing the value of output, or as employer and employee following integration into a single corporation. In the last case, whoever is the employer can employ the other by a piece rate, by time input or in some other way.

Owners of specialised resources are better informed of the nature of their output than their potential buyers. The firm-market purchases can then be viewed as transactions between well-informed specialised input owners and less informed shareholders. The former would be expected to guarantees their product or advice by assuming the bulk of the variability of the transaction outcome.[5]

Second, now assume that the tasks of one party in a JV, firm A, are routine. Measuring this party's contribution and productive effort then is relatively easy. For instance, a small sample of the firm's effort or output (for example the terms and conditions upon which it raises financing can be provided) yields a great deal of

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[5] Bondholders provide one of such guarantees advice sold to firms. They provide advice on the scope of a firm's operations, which they guarantee by furnishing the borrower with bonds that are subject to covenants. New bonds, which are generally assigned the lowest seniority among all debts, will be paid-off last in the case of bankruptcy, their claims on the firm's assets stands just above the firm's equity. Such bonds are secure, then only as long as the value of equity remains positive. Bond underwriters specialists who usually buy from issuers the right to sell the bonds will gain as the net price at which they can sell the bonds get higher, their profit margin will decline as the expectation of bankruptcy rises. In order to obtain the highest net price for such bonds the underwriter must acquire expertise in borrower's line of business so that they can steer the borrowing firm toward profitable investments and away from losing propositions without incurring excessive supervision costs.

information on its performance. The operations of the second party, firm B, are more difficult to measure and evaluate. The outcome of this party's activities depends on such factors as whether or not bargain prices for purchased inputs are available, how much the actual quality deviates from that which is expected, and which marketing and distribution deals can be made concerning the sale of the final output. Because of the variability in these factors, it is costly to separate, in any particular instance, the effect of luck, from the effect of variations in the level of effort. If the two parties' trade with each other when operating as independent firms, the specialist business party B, when not monitored, may be able to charge input prices that are too high and to pay prices that are too low when buying the same inputs. Competition will eliminate any excess returns from such trades, but elimination of the undesirable practices, which themselves consume resources will be costly. If sharing is adopted as the method of reward for the co-operators, then again the party B, whose actions are difficult to monitor, will be able to gain from what is viewed here as opportunism, or the newly created moral hazard opportunities. The party may reduce its effort level and successfully disguise the reduction in the value of output as bad luck.

Third, now consider a situation in which the business specialist firm acts as the sole entrepreneur, employing the services of another firm providing finance under the terms of an appropriate contract, for example on a fee basis.[6] Since the productive effort of the properly supervised "employee" firm is easy to evaluate and is a good measure of its output. The business firm's income, which is the residual, depends both

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[6] Barzel and Suen, (1988), define "firm" as the totality of the variability contractually guaranteed by equity (or other types of ownership) capital, weighing each contract by the share of its variability that is assumed by the equity capital. The firm, then, is a nexus of outcome guarantees. By this definition, firms are mutually exclusive.

on chance and on its own efforts. Since the corporation's ability to affect its expected income is a function of its contribution only, the incentive for opportunistic behaviour disappears and it becomes irrelevant that the chance component is difficult to isolate.

The price of the service or commodity the firms produce must also be set. The determination of prices, particularly on a continuing basis, is costly and once again subject to error. By paying their collaborators a fee rather than the value of their marginal product, the business firm assumes the effect of price-variability of output and again becomes the residual claimant. This situation may be said to reflect the case where parties form a CJV, which is a non-equity form of collaboration between parties. In this case only exchange of performance (product configurations, delivery schedules, price, or other terms) is required and parties do not provide equity capital for jointly owned entity, as EJVs do. When the firm bears the full risk of the business it is conducting, it also bears the full consequence of any reduction in its own effort. Bearing the risk here is an act that promotes efficiency, though not necessarily an act of insurance.

Note, however, that paying the collaborating party a fixed fee does not reward that party for effort that enhances the value of output. Efficiency requires that any factor owner co-operating with another in production be made a residual claimant to at least part of his party contribution. Although fee recipients are not usually viewed as residual claimants, their remuneration must be correlated with their contribution to the value of output.

Barzel and Wing Suen (1988), and Grossman and Hart (1986), demonstrate that maximising the net value of joint output in the presence of variability implies the following proposition. In the presence of interfirm collaboration, the greater the difficulty in measuring one firm's contribution with respect to that of another, then the more likely that the first firm's income derives from a residual claim on the value of output. Rephrasing the argument, a party should bear a larger proportion of the value of the residual claim, the greater their potential to engage in opportunistic behaviour.[7] This proposition will be used as a key general point, which is also related to the theories of EJVs.

The following section is designed to define the general proposition generated in the above section in the context of the characteristics of the assets that each party brings to the venture. Assets characteristics determine which party is more likely to affect the outcome of an EJV and therefore has to bear a larger share of the variability.

1.3.1.1. Specificity of Partner's Assets

In order to explain fully the characteristics of the assets the RBT can be used to approximate the specific and opaque degree of a firm's resources.[8] In the case of specific assets Vicente-Lorente (2001), defines them as that type of asset that has a shadow price higher than its market price or the opportunity cost for its owner. They are not specific by themselves but in relation to their use. Therefore, specific assets are

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[7] The term 'potential' here is referring to a party's maximising behaviour given the assets, skills and most importantly, the contractual constraints they face.

[8] Vicente-Lorente (2001), definitions for specific and opaque assets is used in this paper.

valuable as long as the firm survives, or as far as the activity they are used to undertake is feasible, respectively. Such assets may not generate the same value if they are applied outside their specific activity. Specific assets may (or may not) be easy to measure in terms of their exact value, if they are used for the same activity by another party. However, the owner of such assets would find it difficult to sell specific assets to another party as they are specific only to his operations. If the measurement of the value of a specific asset in a particular use is problematic, providers of such assets should become residual claimants to the value of the activity to guarantee their actions. The guarantee would serve as an inducement to the EJV partner to undertake such venture in the presence of specific assets.

One situation to be considered here is what happens if both parties contribution of assets to EJVs value is easy to measure, and it is in terms of specific assets. Another consideration in this contractual relationship is whether partners of EJVs are horizontally or vertically integrating. The need to provide guarantee by each partner in terms of equity capital generates this hypothesis.

Hypothesis:

In a horizontal and vertical EJV with both parties possessing given level of specific assets, ceteris-paribus, we would expect both parties provide relatively equal level of equity capital.

In the case of a vertical EJV with partners having specific assets the contribution of equity capital is relatively equal between both parties regardless of which party is upstream or down stream. This is because both partners to the EJV face the same level of measurement cost regardless of who makes the first contribution. It must also be noted that when both parties have specific assets a horizontal EJV becomes a more efficient form of collaboration than a CJV because it avoids the hold-up hazard problems.

1.3.1.2. Opacity of partner's assets

Let us now consider the case when both parties posses opaque assets. Opaque assets are defined as type of assets that due to their nature or to the firm's actions posses a value that can not be imitated or easily measured as a result of related information not being communicated to outsiders. Therefore, it is not only the valuation of these assets that creates measurement cost to the recipient, but also the transferability of them. When both party posses a given level of opaque assets, they have to guarantee their actions to each other. They do that by providing a given percentage of the equity capital. The determination of this ratio depends on whether these parties are horizontally or vertically transacting. This relationship generates two these hypotheses.

Hypotheses:

In a horizontal EJV with both parties possessing given level of opaque assets, ceteris-paribus, we would expect both parties provide relatively equal level of equity capital.

In a vertical EJV with both parties possessing given level of opaque assets, ceteris-paribus, and the party which performs second in the vertical integration chain (downstream) is expected to provide a larger share of equity capital.

In the above hypothesis the downstream party is performing second and therefore is better positioned to measure output quality of upstream party which is performing first. Performing second in the vertical integration chain allows the downstream party to benefit from measuring output quality prior to the performance of its own contribution. On the other hand, the upstream partner, not being able to measure the output quality of its downstream partner prior to making its own contribution requires guarantee. Therefore downstream partner would be expected to provide a larger share of equity capital, as it must guarantee own actions.

1.3.1.3. Opacity and specificity of partner's assets

When considering parties to an EJV as such that one party has a given level of opaque assets and the other has a given level of specific assets, another set of hypotheses emerges. It must be noted that both parties in the transaction require guaranteeing

their actions; the factor to consider is which party's activity is more likely to be opportunistically. Each should bear a proportion of the residual from the transaction according to the effect they have on the variability of outcome. This is to say which party provides the lager share of equity capital. The theory of collateral determines that the greater the difficulty in measuring one party's effort to that of other, then the more likely that the first party should also bear the larger proportion of the equity capital. The provider of the opaque assets to the venture must always guarantee own action due to difficulty of measuring and transferring such assets to the second party. It has to signal the value of these opaque assets to the other party by providing a higher level of equity capital. One determinant of who provides the larger share of equity capital is whether these parties are vertically or horizontally transacting. In the case of a vertical transaction, another variable which has a bearing on the provision of equity capital is whether the party is upstream or downstream. This relationship gives rise to another set of hypotheses.

Hypotheses:

In an EJV, ceteris-paribus, the party with the more opaque assets, provides a larger share of equity capital to guarantee own actions than its respective partner which has a given level of specific assets.

In the case of a vertical EJV, the downstream party can still measure output quality prior to performance of its own contribution. Therefore the proportion of equity capital being provided by the upstream party with opaque assets is less than if it is the

downstream partner which has the opaque assets. This ratio is also bigger than what we would expect to see in a horizontal EJV with similar composition.

In a vertical EJV, ceteris-paribus, party with a given level of opaque assets and performing second (downstream) will provide even a larger share of equity capital than when it is upstream.

This is because upstream party cannot measure the quality of the downstream party's contribution prior to understanding its contribution to the venture.

The main point of this section, which defines the hypotheses, is to relate the costs of policing and measuring each party's contribution, to the type of assets they contribute to the EJV and EJV format in terms of horizontal or vertical. An inability to measure a partner's performance suggests the increased use of collateral by that party as a guarantee, if no other "hostage" to performance can be provided. The hypotheses developed here determine the circumstances and type of EJVs activities for which policing costs should be relatively low and those where they will be relatively high. In the latter case, the burden of guarantee in terms of a larger share of equity capital is with the partner whose activities are more difficult to measure.

To test these hypotheses manufacturing and service industry can be used as dummy variables. The characteristics of firms' assets in the manufacturing industry are more specific, while the characteristics of firms' assets in the service industry are more

opaque. These considerations are presented in the discussion of contractual implication for an EJV later on.

1.3.2. The Economics of Guarantees

The provision of guarantees through equity capital is subject to both economies and diseconomies of scale. One expects firms collaborating under an EJV to organise to exploit the former, and reduce the impact of the latter. The economics of guarantee can be divided into four sections. First, as a given amount of guarantee capital can simultaneously guarantee many actions, economies of scope and scale in the use of equity capital as a guarantee may be present throughout the entire range of activities. Second, a firm guaranteeing own activities and output also has to police the other firm's actions. Third, since guaranteed ventures are subject to random shocks, and collateral may unexpectedly depreciate, the available amount of collateral will change over time. Fourth, when the same collateral guarantees several ventures, free riding opportunities arise and their effect must be contained. We now consider each in turn.

1.3.2.1. Scale Economies

Consider the collateral provided by an investment of equity in EJV. How do the previous considerations relate to such a guarantee? The first property of guarantee capital is economies of scale throughout the entire range of activities. Therefore we could also expect to see that due to the role of equity and its guaranteeing function an EJV may undertake multiple tasks for a given level of equity. The underlying factor

here is that equity capital can provide guaranteeing properties for wide range of activities that the venture can undertake. We argued that the need for guaranteeing performance is required when there is difficulty in measuring one party's contribution to the final output. The party that provides the bigger share of the equity capital in an EJV also indicates that its productive efforts are not easily measurable. Guarantee capital is more valued the better is the definition of claims over it. Owners of guarantee capital can enhance its value by assembling prospects, which are least positively correlated among themselves. The negative correlation among the different prospects yields economies of scale, on the other hand, when this correlation is positive diseconomies of scale is present. [9]

For example, if guarantee is the value of a commodity, which is subject to substantial fluctuations in supply, by guaranteeing complements to it the overall variability to which the guarantee is subject is reduced. Another way is to adopt production methods that reduce the correlation among potential claims. This is to restrict the maximum amounts that each prospect may receive and to make such amounts an increasing function of time. The use of such methods enhances the guarantee rights to the guarantee capital. Therefore, the determinant of multiple products activity in an EJV is based on the correlation of quality across products. If this correlation is positive the EJV performs single product and experiences diseconomies of scale. On the other hand, a negative correlation across product quality is an indication of economies of scale and the EJV performing multiple tasks.

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[9] At least two forces seem to generate scale diseconomies to guarantee capital. One is in maintaining the priority order of damage claims, i.e.; property right in the guarantee. Such order may still be adversely affected by mixing together what previously were reasonably well ordered sets of claims. The other force that may limit the scope of combining guarantee prospects relates to theft. Theft within firms seems more difficult to prevent as firms become more diverse.

Presence of economies of scale in JVs activities can also be explained using asymmetric information theory. According to Hennart and Reddy (1997), a JV is attractive when a firm would face substantial costs of integrating assets through an acquisition (also Hennart, 1988; Kogut, 1988). They expected that such *ex post* transaction costs would be larger when desired assets are commingled with nondesired assets in the target firm. This post acquisition integration problem is most likely to be substantial when target firm is large in size and employees a non-divisionalised organisational structure. Indigestibility problems are less significant in acquisitions involving either small target firms or targeted assets that are largely isolated within a semi-autonomous division. By contrast, JVs are attractive under conditions of indigestibility because JVs enable the expanding firm to link into targeted assets without the need of disentangling these resources. The indisitibility theory although recognise the JV structure has a preferred form of collaboration between two parties. However it does not necessarily argue for an EJV formation. Firms can still avoid indigestibility problems perhaps under a CJV format. We have argued, given measurement cost theory and properties of guarantee that formation of an EJV would protect the parties involved, from the variation in output caused by opportunistic behaviours (this discussion was presented extensively in the previous section). By forming an EJV benefits from economies of scale and scope generated from guarantee capital allows the venture to perform wider range of activities. The underlying factor behind the theory of collateral is to emphasis that the collateral provided within the EJV can insure partners' activities even when they perform multiple tasks.

One of the points emphasised by asymmetric information theory is the partner venture business relatedness. That is to the nature of business activity undertaken by a stand-alone firm, the EJV partner, and that of the venture in which it participates. Reuer and Koza (2000) classify the EJVs into information asymmetric groups based on the EJV and the partner firms' industries. When both partner firms and the EJV are in the same industry, we have the case of lowest information asymmetric. This would suggest that greater similarities between the businesses of these entities confer scale and scope economies upon these firms. Increase in scale facilitate reduction in a partner's overall production costs by increasing the firm's experience or allowing the firm to secure transaction specific gains such as quantity discounts (Porter, 1985). Higher levels of partner venture relatedness also yield economies of scope, since opportunities for learning, and transferring skills and knowledge across value chains increases with similarity between businesses (Porter, 1985). According to these arguments, it seems that a horizontal EJV would have the potential of generating more of economies of scope and scale than a vertical EJV. However, this point mainly refers to economies of scale and scope within the production line. The interest here is generating economies of scale and scope through equity capital and its guaranteeing role. In our discussions so far we have argued for the case where type of assets that parties bring into the venture will determine the ratio of equity capital between EJV partners. It must also be noted that the nature of assets does not determine the scope for economies of scales. The factor to consider is the equity capital that can provide guaranteeing properties for wider range of activities that the EJV undertakes.

1.3.2.2. Monitoring and Collateral Requirements

The second seems to afford scale economies to the extent that the monitored activities can be easily measured and are similar to each other.

For example, in the case of financing being provided by knowledgeable firms who have the capability of identifying good and bad projects (referred to as experts), constant monitoring is costly and cannot be performed continuously. Experts go through the screening process, they review business plans of young firms and design contracts with entrepreneurs that minimise potential agency costs. Experts monitor the firm's progress and if they learn negative information about future returns, the project will be cut off from new financing. The duration of funding and hence the intensity of monitoring should be negatively related to expected agency costs. Agency costs increase as the tangibility of assets declines, the share growth options in firm value rises, and asset specificity grows. Agency theory predicts that the information generated by experts is valuable. Chan (1983) develops a model in which experts improve allocation efficiency by overcoming asymmetric information. Admati and Pfleiderer (1994) derive robust financial contracts when lead experts are better informed than other investors are. They demonstrate that a contract in which lead experts also provide for the proportion of equity capital is the only form of financing that they can protect themselves from the opportunistic behaviour of the their counterpart. Experts also have to guarantee own actions, they do that by accounting for part of the equity capital. The ratio of equity capital provided by each party is based on measurability of each party's productive effort. If monitoring and information gathering are important, experts should provide a proportion of equity capital in firms in which asymmetric information is likely to be a problem, another

word the joint activities are associated with high monitoring cost. This is an indication of difficulty to measure the firm's productive effort and its potential to engage in opportunistic behaviour. Therefore experts will seek guarantee in form of making the firm to bear a larger proportion of the residual.

Examples of such a relationship between experts and firms can be found in early stage companies with short or no histories to examine and being difficult to evaluate. Similarly firms in industries with significant growth opportunities and high R&D intensities are also likely to require close monitoring. The economies of supervision in these contractual relationships will be as such that larger contribution of equity capital is required from the firms compared to experts. They have to guarantee their performance and compensate the experts for bearing uncertainty over outcome. These examples highlight the case for firms, which their assets are more opaque.

The nature of the assets (opaque/specific) that firms contribute to the venture would have a bearing on the division of equity capital between experts and firms. Superior information gathered by experts about firms with specific assets implies that they can easily measure firms' productive efforts and therefore do not require guarantee. However this situation can be altered if their EJV partner brings opaque asset into the venture. Another factor to consider is the horizontal or vertical transaction that exists in this contractual relationship. We would argue that since experts and firms are from different line of business, and they provide complementary inputs to the venture (the former provides the financing and the latter needed resources), therefore they are vertically transacting. Economies of supervision are, therefore important to this contractual relationship.

The discussion presented above leads to the following hypotheses.

Hypotheses:

When experts collaborate with a firm with a given level of specific assets, ceteris-paribus, the structure of the EJV is as such that experts provide larger share of equity capital to guarantee its actions. This ratio will be higher when experts are downstream.

When experts collaborate with a firm with a given level of opaque assets, ceteris-paribus, the structure of the EJV is as such that the firm provides a larger share of equity capital. This ratio will be higher when the firm is downstream.

We would expect to see larger contribution of equity capital by the firm with opaque

assets when guarantee is required than when experts have to guarantee their actions.

1.3.2.3. The Timing of Guarantee payments

Return now to the nature of the scale economies underlying the collateral guaranteeing

specialist advice when parties transacting. The third component of the value of

guarantees is also concerned with the timing of guarantee payments in relation to the

amount available. When the size and probability of having to make a guarantee

payment is relatively small, a given amount of collateral can guarantee several

ventures simultaneously, giving rise to economies of scale in its use. The size and

probability of default/failure in EJVs will be positively related to certain features of

these undertakings, they include:

> The costs of monitoring and supervising overseas may relate to the cultural

difference arguments. Cultural relatedness between partners can facilitate

better EJV execution, it can harmonise the partner's management style,

therefore, gaining from reduction in monitoring costs and harmonisation. Some

researches (Merchant and Schendel, 2000) have identified the need for

alikeness of partner's organisational not national cultures as a better proxy of

similarity between firms' work related mental programmes[10]. The same

argument can be presented for task related and partner related context between

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[10] They found no support for hypothesis of a positive relationship between the firm and its shareholder
value and the level of national culture relatedness between the firm and its EJV partner.

EJV partners. Greater business similarity between the partners gives rise to economies of scale in supervision. For example if both partners and the EJV were in the same industry this would provide the lowest asymmetric information and less need to guarantee a given activity. On the other hand if the EJV and its respective partners were in different industries, this would give rise to highest asymmetric information. This situation is subject to diseconomies of scale in supervision because a given guarantee capital covers dissimilar activities.

➤ The knowledge and experience of the agents conducting the EJV. This fact can related to the partner relatedness context, which includes previous EJV experience, such experiences provides firms with criteria for judging the efficiency of their partners' actions, and being able to anticipate and respond to challenges related to an EJV implementation. The relative size of the partner and the project would also determine the scope of administrative protocols that must be converted into a common ground. The similarity in systems and procedures makes this transformation less costly according to transaction cost theory. Collateral model also predicts that a party whose inclination to affect the outcome of a transaction decreases should also bear less of its variability.

➤ The inherent risks, the natural and circumstances of the activity. Consider a potential EJV partner attracted by the high-perceived returns, wishing to invest their (finance) capital in an overseas venture. While they must determine the most desirable venture in which to invest, they are likely to vary in the extent of their knowledge concerning the opportunities, or the extent of the

difficulties, likely to be incurred by such operations. It needs to acquire advice from local specialists concerning the geographical areas and types of goods to move into or avoid. Given their inability to determine the accuracy of such advice at the time of purchase, one would expect the firm to insist it would somehow be guaranteed. One possibility is that of forming an EJV with non-transferable shares (transferability of the shares will be explained in the next section) may be the cost-effective way for the firm to guarantee its specialist's advice on the nature of the trading firm's arrangements and advice. Moreover, prospective partners must believe there is a high probability that the EJV in which they invest will stay solvent until their investments are redeemed.

An additional consideration is also relevant. The returns to investing in the specialised skills of supervision and monitoring are highest when they are utilised most efficiently. Efficiency in use is subject to scale economies. Similarly, supervision of individuals undertaking tasks with which a firm is familiar is facilitated by the opportunity to compare one activity with another on a regular basis, even if the tasks themselves are not routine. Such opportunities would be accorded relatively more frequently to partners in EJVs operating in similar "cultural" surroundings or making similar products to the parent firms own activity, or in horizontal as opposed to vertical EJVs.

Moreover, the value of the collateral established by equity capital depends upon the maintenance of priorities in the property rights in the guarantee. Combining what

were previously well ordered sets of rights may adversely effect maintaining this value.

Another feature that would attenuate the possibility of integrating claims to collateral relates to shirking which is more difficult to prevent as organisations increase in diversity, and supervision tasks become more complex and costly.

Opportunism in EJVs as they have been characterised here, is associated with reductions in the quality of investment and advice specialist members of the firm provide, or the effort they impart in securing a profitable venture. Firms whose activities are guaranteed will have an increased incentive to engage opportunistically if they can claim for themselves the reduction in cost such shirking entails. Opportunism possibilities are to some extend mitigated by the device of separable stocks of guarantee capital, each having distinct claims associated with it. This is because the losses such behaviour entails can no longer be offset by gains from more profitable ventures, in which the shirking individuals were not personally involved, or in which the opportunities to shirk are more effectively constrained, but which nevertheless form part of their remuneration package.

Other relevant elements of the relationship between the party and its equity capital are apparent. Collateral can serve its function only if information of its existence is well known to parties demanding the guarantee. The limited liability nature of the equity subscribed implies the guarantee provided by the partner firms is restricted but virtually costlessly verified and policed. When the venture fails they are simply not remunerated. In other forms of collaboration between parties (CJVs, marketing agreements etc.) other methods are required to verify if any collateral guarantees will

be honoured. Specifically, the contractual relationships evolved within those parties may provide the enforcement mechanism. Reputation affects facilitated the communication of information relating to value of the collateral each party possesses.

1.3.2.4. Free Riding Possibilities

We turn now to the fourth consideration, free riding possibilities. In order to benefit from the scale economies associated with collateral, individuals often have to combine their capital. They can co-operate through backing each other's guarantees while remaining independent, as in CJVs, or alternatively they can form an integrated pool of financial capital, as in the EJV. For organisations that do not have expertise in the same tasks, and therefore cannot monitor the quality of each other's activities, the latter arrangement has several advantages. A party's valuation of a guaranteed product, such as investment advice depends upon their estimate of the amount of collateral backing the product. This is often easier when the collateral is pooled. Parties will also believe they can enforce the guarantee with a greater probability when the collateral is combined. Thus, the rights to the guarantee are more clearly delineated when the capital is pooled than when the individuals who co-operate remain independent.

Moreover, when parties decide to back each other's activities, each ceases to bear the full cost of their own behaviour. To induce one another to avoid incentives to free ride, they may voluntarily constrain their own actions when such free riding is costly to monitor, as for instance, when some firms are not specialists in measuring the pertinent activities. Integration into an EJV is an extreme form of restriction, as the

entire financial capital is used for collateral. However, parties still have an opportunity to free ride if their equity rights in the firm are freely transferable. If the transfer of rights occurs before their shirking was revealed, transferability enables them to enjoy the benefits of shirking without incurring its full cost. This is the rationale the analysis provides for the observation that rights to equity claims in EJVs should not be freely transferable. The pre-emption rights should be provided within an EJV format as such that any of the parties wanting to sell has to offer its shares in the first instance to the other party. The vendor shareholder may be required to specify a price, alternatively, the price may be determined by some outside expert, usually an independent firm of chartered accountants. If the offer is declined, the vendor shareholder is normally permitted to sell to some third party (perhaps the only one that is acceptable to the other shareholder) but not at any lower price.

An alternative procedure is sometimes adopted. What happens is that either party (party A for this purpose) can offer to sell its shares at a specific price to the other party, B and B then has the option of either buying A's shares or requiring A to purchase its (party B's) shares at the same price per share. A is, of course, in some dilemma for if it puts too high a price on its shares it may end up having to pay this price for B's shares. It can, nevertheless, be a useful provision to include in an EJV to try and discourage the disposal of shares by the parties, and thus preserve the continuity of the arrangements, and to insure a fair price is paid. Some EJVs impose a complete bar on disposal for an initial period, up to 5 years, and thereafter provide for pre-emption rights.[11]

Removing the right to transfer reduces the costs associated with changes in the value of an individual's collateral while the guarantees were still in effect. The constraints thereby mitigated the incentive to engage in free riding activities, as they increased the likelihood that the firm has to bear the full costs of its actions. From these discussions it can be hypothesised that the cost to the party with a larger share of equity capital is greater if they engage in free riding activities. This is due to two factors. First, their income stream is derived form their proportionate residual claim. Transfer of share may not offer the same price for the shares as the future earnings that the venture can generate. This is especially if the parties have to buy each other's shares at specific price. Second this party' free riding actions create costs through out the range of the activities that the venture undertakes.

1.3.3. The Bonding Role of Share Capital

As generally each party to a contract assumes part of the variability of the outcome, the majority of individuals with whom parties of an EJV transact are to some extent within the firm itself. The shares of the individual value of the output assumed by each party, however, are not uniform. The central result of this section is that the owners of equity capital will not assume the bulk of the residual from transactions with parties that choose to guarantee their actions. Rather, their transacting partners will, and such transactions largely occur not within firms, but in the market between firms. A firm, which mainly transacts in such a fashion, emerges as a nearly empty box, consisting largely of equity capital and of little else.

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[11] The explanation of transferability of the shares represents UK's view on the legal issues involved in creation of an EJV.

The nature of the transactions between the owners of various factors of production depends upon the skills the different factor owners possess. For example, consider a marketing and distribution firm, which specialises in conducting such activities as seeking profitable trading ventures, buying and selling finished products and arranging for storage and shipment. The firm discovers that the landed price of an imported good is expected to be lower than the current domestic price. Price fluctuations, changes in shipping costs and spoilage all introduce variability to the expected return. The firm can raise capital to finance the project in several ways. It could enter into various forms of contractual relationship with other trading firms (who may then become jointly and severally liable for any resulting debts). It could obtain capital from a second firm with a competitive advantage in supplying capital by making loans, selling bonds and floating stock. It could also self-finance.

Let's consider the case where a firm faces asymmetric information problems and also has exhausted all of its internal funds. As a result it may have to refuse new orders from buyers that require new production resources. What options is available to this firm to undertake the new venture? According to the measurement cost theory structuring the transaction as an EJV allows one party to provide non-financial resources while the other party provides financing or other resources with less information asymmetry than another capital provider because the firm can more easily monitor the venture. The use of equity will guarantee the transactions between the firms and reduces the opportunistic behaviour of each party. Moreover, the provider of the capital in an EJV has a more secure 'collateral' position than another lender because it owns part of the venture, therefore has a claim on the residual value of the

venture. In regard to the need for guarantees when parties transact the measurement cost theory predicts that high monitoring costs would enforce the formation of EJVs. It was also highlighted that the choice of financing could be external when such costs are lower.

Assets characteristics play an important role when choice of financing a project becomes external. This importance is highlighted within the RBT literature as well as the theory of capital structure. The reason being that the costs of both financial distress and liquidation depend on the nature of a firm's assets. It has also been stated in most empirical research on capital structure that tangible assets serve as collateral to obtain better credit conditions from lenders. In addition, tangible assets appear to be negatively related to liquidation costs (Alderson and Betker, 1996).[12]

For example, collateral-specific assets can pledge as security for a loan. A collateralised lender's claim to specific assets reduces its losses if the borrower becomes bankrupt. In the case of financial distress, firm specific assets will suffer larger losses of value when the firm is reorganised or liquidated. Thus, the theory suggests that equity financing is optimal for assets whose value is sensitive to the financial condition of the firm (Myers, 1977; Williamson, 1988). Since specific assets have a limited capacity to insure lender against bankruptcy, debt holders will react by charging a risk premium to debt cost, enforcing an inverse relationship between specific resources and financial leverage. This factor leads to an increase in the average cost of the firm's funds if we assume that debt financing is cheaper than

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[12]   These explanations are widely supported by regular positive correlation between leverage and the fixed to total asset ratio commonly used to proxy assets tangibility (Bradley et. al, (1984; Titman and Wessels, 1988; Harris and Raviv, 1991; Rajan and Zingales, 1995).

equity financing. Tax effects (Modigliani and Miller, 1963) and agency costs (Jensen and Meckling, 1976) are potential explanations for higher costs of equity financing.

Now suppose that it is known to all that the variability of the venture depends entirely on forces beyond the firm's control. The firm's actions are routine, and it introduces no uncertainty into the picture. The risks faced by such a firm can then be readily transacted in the market. In that case, the firm's net pecuniary return from these alternative forms of finance will vary only to the extent that it earns more or less of a premium for bearing risk.

In contrast, consider the position of a firm searching for profitable new commercial ventures. The expected return to all these ventures and the variability of the return depend not only upon random forces but also on the diligence and effort of firm in securing trading, marketing and distribution rights. How can the venture be financed if it is costly to monitor both the firm's effort and its ability to affect a trade-off of a lower expected overall return for exceptionally high return at lower probabilities? Policing costs differ across firms due to both differences in expertise in conducting inter-firm measurement, and also opportunities to effect policing activity. The cost of policing effort may be so high that other firms may refrain from buying shares in the project. They may be willing, however, to lend the entrepreneur at a fixed rate which, as compensation for their expectation of default, sufficiently exceeds the market rate of interest. If the risk of default were constant, the initial firm would bear the consequences of the project's outcome variability. By the previous assumptions, however, the ability to affect the probability distribution of outcomes is costly to detect, and in this case the default probability cannot be considered constant. Under

the stated conditions, as long as the firm does not finance the whole project, no contract realising the entire joint gain can be obtained.

Individuals who forward loans to the firms at a fixed rate fully share losses since the value of the loan can fall to zero, but they do not share gains, since the loan value does not rise with the venture's success. The firm, therefore, can be expected to search for riskier projects at the expense of a lower expected joint rate of return. Following well-known results (e.g. Jensen and Meckling (1976), the expected joint return from the project will be highest, with self-financing, and will decline as the share of external financing increases.

Now let us look at how a firm obtains funding for its proposed ventures. Guaranteeing its activities through the posting of collateral is one mechanism. In order to finance a project, firms that possess the innovative idea have two choices to make, they can seek fund from experts who have the capability of identifying good and bad projects. The second option is to refer to banks (non-experts), however it can be argued that non-experts do not have the ability to discriminate between good and bad quality investment projects.

Experts, weigh potential agent and monitoring costs when determining how frequently they should re-evaluate projects and supply capital. They are concerned that firms' private benefits from certain investments or strategies may not be perfectly correlated with shareholders' monetary return. Agency theory sheds light on factors

affecting the duration and size of venture capital investment.[13] Experts can charge a low rate of interest for financing because their expertise enables them to identify good quality projects and to avoid unprofitable investments. On the other hand, non-expert charges a higher rate of interest in order to screen bad projects, because they are less capable of assessing the idea and cannot copy it. The problem here arises from expert's ability to assess as well as copy the firm's ideas and disclosure to them invites the possibility of competition. In such a case the theory of monitoring cost would argue that posting collateral by both exports and firms would reduce the measurement cost and guarantees their actions. This mechanism would reduce the possibility of EJV partners to engage in opportunistic behaviour. According to the measurement cost theory, the structure of the EJV would be as such that provider of the resources in terms of opaque assets is more inclines to affect the outcome. Thus, that party should also bear more of the variability of the joint action by having a larger claim on the residual and this is the same as guaranteeing own action. In this case experts, offer the financing required undertaking the venture and their efforts are less incline to affect the variability of the outcome. Therefore, they would bear smaller share of the residual claim, as they do not have to guarantee their action in the same proportion than their EJV partner. However experts' contribution to the pool of equity capital will be larger if the assets of their EJV partner are specific. In this case it is the firm that seeks guarantees. This relationship was explained in the hypotheses of the monitoring and collateral requirement section.

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[13] Agency theory is predicted on the belief that individual economic agents choose actions that maximise their personal utility. Within the modern corporation often exist a separation between the individual making the decisions (managers) and the individuals bearing the wealth consequences of those decisions (shareholders). This raises the possibility of conflicts of interest, where managres may prefer to undertake actions that run counter to the preferences of shareholders. Examples of such actions include the payment of excessive salaries to managers, resistance to value increasing take over bids, and outright shirking.

The optimal financing choice depends on the gap between experts and non-experts in knowledge about the new idea. The knowledge gap reinforces the notion of monitoring costs, larger the knowledge gap the higher are the monitoring costs. If the non-experts' assessing skill is similar to that of experts, the firm raises funds from non-expert by disclosing her idea to them.[14] This avoids revealing the idea to experts and thereby creating potential competition. On the other hand, when the details of the proposed project are complicated and the knowledge gap is large, the firm discloses to experts and they provide fund. In this case experts and the firm have an incentive to collude in form of an EJV in order to commit their resources to the development of the new idea rather than to compete for the same project.

The emphasis here is that technological innovations increase the knowledge gap between exports and non-exports and therefore increases monitoring costs. As the collateral theory predicts in the case of high monitoring costs the formation of an EJV is the optimal way to guarantee the outcome of the transactions. The party with the innovative idea would also have the greater inclination to affect the outcome relative to its partner. Therefore should bear more of the variability of the joint action. By bearing variability, is the same as having a claim on the residual, and it is also the same as guaranteeing own action. Many researchers (Wetzel 1987; Freear and Wetzel 1990; and Freear, Sohl, and Wetzel 1994) have found supporting advance of informal

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[14] Banks can not do the same sort of monitoring. This is because regulations limit bank's ability to hold shares, they can not use equity to fund projects. Assets substitution becomes a problem if banks provide debt financing for very high risk projects. Though several papers focus on monitoring by banks (James, 1987; Petersen and Rajan, 1994, 1995; Hoshi, Kashyap, and Scharfstein, 1991), banks may not have the necessary skills to evaluate projects with few collateralisable assets and significant *ex ante* uncertainty. In addition, Petersen and Rajan (1995) argue that banks in competitive markets will be unable to finance high-risk projects because they are unable to extract rents in subsequent transactions with the firm.

venture capital market to be a better source of financing for high tech projects. They argued that these individual own a substantial business, finance venture firms, which are engaged in a similar business, and provide proportion of equity in the venture firm. Such established individuals are thought to be the largest source of financing in starting up new venture capital funds (Fenn, Liang, and Prowse, 1996).[15]

The discussion presented here reinforces the hypotheses made in monitoring and collateral requirement section. The relationship between experts and a firm with opaque assets can be tested for high tech firms (dummy variable). The reason for choosing high tech firms is based on the fact that pervious studies have generally hypothesised a greater tendency in such firms to form an EJV. However the structure of the EJV has not been analysed given the properties of collateral. This study defines the contractual relationship in terms of equity capital contribution by the high tech firm and its EJV partner (experts).

1.3.4. The Contractual Implications

We now argue that EJVs may be an efficient contractual relationship, which emerges between trading specialists and others/financiers who do not have such expertise but who contribute to the value of productive activity. The contractual relations that have been seen to characterise these associations are then argued to be the least costly solution to the moral hazard problem occasioned by costly measurement. We have

[15] Shane (1994) found that between 1980 and 1993, pharmaceutical firms supplied 40% of external funds to biotechnology after their initial public offerings. Therefore, these arguments support the

taken the explanation given by Chadee and Qiu (2001) and the study by Merchant and Schendel (2000) in establishing the contractual relationship between parties in an EJV.[16]

The level of equity contribution (share of ownership) that each party makes to the pool of capital determines the division of profit and losses. Hu and Chen (1993) distinguish between minority and majority shareholders by using a categorical variable where firms with less than, and more than, 50% of equity ownership are categorised as minority and majority shareholders, respectively. The higher level of equity shareholding by one party indicates that their activities are associated with high measurement cost, due to the nature of their assets being difficult to evaluate in the case of opaque assets, by their respective partner. This means that the party would also have a higher claim on the residual value of the firm.

The factors that have a bearing on the contribution of equity capital in an EJV can be summarise as; culture and location issues, partners' industry, and size of the venture.

1.3.4.1. Culture and location issues

One factor that can influence the bargaining power and therefore the degree of ownership in an EJV is the location specific advantages (Dunning, 1988; Hamel, 1991). Generally, it is hypothesised that lower levels of foreign ownership of EJVs

theory that technological complexity of projects yields a large knowledge gap between expert and banks.

[16] Chadee and Qiu (2001) model incorporated elements of both the transaction cost approach and the bargaining power approach in modelling the share of foreign ownership of EJVs in China.

are associated with host regions with overall higher risk and transaction cost. Location also gives rise to issue of the political risk in host country. It refers to the risk that political forces will cause drastic changes in a country's business environment so as to affect firm profitability. According to transaction cost theory lower levels of political risk better facilitate extraction of a venture's competitive potential. Firms operating in less politically risky countries are also less vulnerable to the negative effects of government-induced factors. Lower levels of host country political risk reflect favourably upon ultimate EJV performance and so on the expected EJV performance of involved firms. The relevance of host country influence to the collateral theory is the level of guarantees required form each transacting party. The performance of the partner of an EJV, which is from politically unstable country, can affect the outcome of the joint activity in greater degree. In another word, the behaviour of such a partner becomes more opportunistic. This party has to guarantee own actions by assuming the larger proportion of the residual from the transaction. This proposition is in line with the prediction of transaction cost theory and the ratio of equity ownership between parties to an EJV under political uncertainty and cultural distances.

Another variable that has been included in past research is the origin of the foreign partner. This factor is included on the basis that foreigners from different culture and economic backgrounds are likely to seek different levels of ownership in EJVs. This could be the result of different negotiation skills and familiarity with the local market and business environment. The more difficulty one party has in assessing the other party's contribution to the joint activity, the greater is that party's need to guarantee transaction by assuming larger share of equity capital. The party with less knowledge

of social cultural environment demands higher level of guarantees form its local partner. In order to capture the cultural and economic dissimilarity between one country and another, country of origin is often used as a surrogate for social cultural distance (Ueno and Sekaran, 1992). It should be noted that the country of origin does not only reflect the socio-cultural distances among the countries but factors such as population and level of economic development are also subsumed under country of origin (Hu and Chen, 1993).

This discussion leads to the following hypothesis.

Hypothesis:

The structure of an EJV between parties from dissimilar cultural background, ceteris-paribus, is as such that the party with more knowledge of the host country would also provide a bigger share of equity capital.

Cultural relatedness between parties can also be viewed in term of the nature of work related programs' of a firm to that of its EJV partner (Hofstede, 1991). Culture similarity facilitates better executing an EJV because it harmonises the partners' approach towards the venture. An EJV involving culturally more similar firms will be less vulnerable to failure. Moreover cultural aliens facilitate better co-ordination and control between firms, since they will have the same expectations. This will allow them to predict each other conduct more accurately than would otherwise be possible, and therefore economise on culturally embedded transaction costs (Eiteman, 1990).

From collateral theory we understood that inducement for an EJV is caused by high costs of measuring and monitoring parties' activities. This notion indicates that when parties are from similar cultural setting the uncertainty attached to their activities is reduced and therefore, equity capital contribution to the EJV becomes relatively equal.

Hypothesis:

The greater cultural relatedness between two parties in an EJV, ceteris-paribus the more likely that equity capital contribution to be relatively equal.

1.3.4.2. Partners' Industry

A key contractual characteristic that must be address here is the type of industries that parties are from. The relevance of this to the discussion of equity capital is to determine the nature of assets in terms of opaque or specific. As it has been argued opacity or specificity determines the ratio of equity capital provided by the partners of the EJV. Firms from manufacturing industry are different from those in service industry due to the unique characteristics of service industry. The main difference is that services, being intangible, non-sortable, and untransportable, cannot be traded without requiring the providers or receivers to physically relocate (Bhagwati, 1984). One of unique characteristics of firms in service industry is inseparability of producer-consumer interaction. These assets characteristics of firms in service

industry can be defined as opacity.[17] Thus, the opaqueness of assets within service firms suggests that the ownership structure of EJVs formed in this industry should be different from traditional manufacturing firms. As the nature of the assets in service industry becomes opaque there is a higher measurement cost associated with transfer of such assets to their relative partners. The collateral model predicted that in the case of high measurement costs the actions of the parties must be guaranteed. An EJV format would secure the position of the parties, they are required to provide equity capital. By doing so they are held hostage to their actions, as both would also have a claim on the residual value. However, the ownership structure of the EJV will be as such that party, which has a higher inclination to affect the outcome, should also bear more of the variability of the joint action.[18] Bearing variability is the same as having a claim on the residual. This party then provides for the bigger share of equity capital relative to its respective EJV partner.

Given the definition of specific assets by Vicente-Lorente (2001) it can be argued that firms in the manufacturing industry exhibit type of assets that are more specific.[19] The characteristics of assets becomes more specific to the firm's operations and easier to measure. Nevertheless, the usefulness of these assets to other party's operation must be determined. The specific assets have low opportunity costs and their transferability outside their use imposes uncertainty. Within an EJV structure, if measuring the value

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[17] Using Vicente-Lorente (2001) the uniqueness of an asset bundle due to path-dependent process, supply restrictions (for example, a particular location or innate human skills), or absence of available information being passed to outsiders willing to exploit it to achieve their purpose is defined as opacity.

[18] Term "inclination" throughout this thesis indicates the individual's maximising behaviour given his assets, skills, and most importantly, contractual constraints.

of specific assets in a particular use is difficult then the provider of these asset should also provide a larger share of equity capital. The contractual relationship between EJV partners from manufacturing and service industry can also be determined given their horizontal/vertical integration. In the vertical transaction the factor that has a bearing on the contractual relationship is which EJV partner is upstream or downstream.

The hypotheses formulated here are extension of the discussion presented in measurement costs and moral hazard section. The aim has been to test those hypotheses given service industry, and manufacturing industry as dummy variables.

Hypotheses:

In the service industry with both parties having a given level of opaque assets, ceteris-paribus, and the contribution of equity capital to the horizontal EJV will be relatively equal by the partners.

In the service industry with both parties having a given level of opaque assets, ceteris-paribus, party that performs second (downstream) in the vertical integration chain would also provide the bigger share of equity capital.

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[19] They recognised specific assets as a clear example of the straightforward connection between resources and competitive advantage. Specific assets are firm specific or activity specific depending on their deployment inside a particular firm or applied to a distinctive activity generating value.

In the manufacturing industry with both parties having a given level of specific assets, ceteris-paribus, and the contribution of equity capital to the horizontal and vertical EJV would be relatively equal by the partners.

In a horizontal EJV between a firm with specific assets from manufacturing industries and a firm with opaque assets from service industry, ceteris-paribus, the firm from service industry provides a bigger share of equity capital.

In a vertical EJV, ceteris-paribus, between a firm with specific assets from manufacturing industries and a firm with opaque assets from service industry, the firm from service industry performing second (being downstream) provides even a bigger share of equity capital than when it is performing first (upstream).

It must be noted that in a vertical EJV with both parties from manufacturing industry having specific assets the contribution of equity capital is equal regardless of which party is upstream or downstream.

1.3.4.3. Size of the Venture

Another factor that affects the contractual relationship is the size of a project. Big projects usually require large amounts of capital and are therefore more risky than smaller projects from the investor's perspective. Anderson and Gatignon (1986) find evidence that foreign firms usually seek a smaller share of equity in entering into markets when the investment amount required is higher. It is generally hypothesised that a negative relationship exists between the size of the project and the level of equity ownership of EJVs. The risk exposure is proportionate to the total amount of the investment because when the total investment of the venture goes up, the foreign partner's resource commitment will go up event though its equity share stays the same (pan, 1996). Such exposure can be reduced by contributing a smaller share of capital to the venture. The size of the EJV activity and the level of guarantee required can also be explained taking into account the economies of scale in guarantee. It was mentioned earlier on that one of the attributes of the guarantee capital is the presence of economies of scale in its use since given amount of capital can guarantee simultaneously many actions.

Guarantee capital serves as a 'stand-by' it is called into use only in case of emergency.[20] As the number of guarantee capital increase, the amount of guarantee capital required attaining a given guarantee level increases at a lower rate. [21]However, guarantee capital is subject to both economies and diseconomies of scale. An EJV formation, which pools the capital of its partners into a single unit, organises as such

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[20] Guarantee capital is not physical capital but the right over it. Affecting a guarantee requires the transfer of such rights from the guarantor to the guaranteed. The marginal product of guarantee capital is positive, and different from that of physical capital.

[21] In Barzel and Suen (1988), it is shown that this statement holds when n, the number of products or of independent commitments, goes to infinity. It is also shown that although the statement is not necessarily true for $n = 2$, as n gets larger the statement is more likely to hold. A negative covariance among commitments enhances economies of scale; a positive covariance makes them less pronounced.

that it can exploit the scale economies and reduce the impact of those of the diseconomies. Size of the EJV determines the balancing of such factors. Diseconomies of scale can emerge when dealing with large size EJVs, this is due to supervision task becoming more complex. The larger the size of the EJV the more difficult it is to prevent theft. One type of theft is associated with product quality. One party to the EJV may be able to gain from producing damaged products by claiming the reduction in costs for itself. Such theft seems easier the larger is the size of the EJV.

2.4. Summary

In the previous section it was assumed that the activities of at least one potential EJV partner were not routine. Owners of specialised resources, such as the human capital possessed by trading partners, are generally better informed as to the nature of the effect their activities have on output quality than potential collaborators. They may, therefore, possess an incentive to substitute low quality for high-quality output if not constrained. As a consequence, collaborators will either insist on policing the activity of the firm, or inspecting the output or require that the firm activities be guaranteed. As monitoring is costly, and output quality eventually tends to be revealed, the latter arrangement is generally the more attractive of the two, so we postulate that most collaborations will be guaranteed. The guarantee can be obtained as such that the firm who provided the opaque or specific assets to the EJV is made a residual claimant to at least part of the variability of output arising from its activities.

The key point advanced in this paper is that the organisation form of an equity joint venture emerges as the least costly solution to the moral hazard problem occasioned

by costly monitoring of specialist activity. We have argued that this explanation provides a superior one to the existing alternatives, which focus upon transaction costs, asymmetric information, and resource based theory. The argument is not that equity joint ventures absolve companies of problems associated with costly monitoring of specialist behaviour. It is an explanation of EJVs focusing on the guarantee role of equity capital in the presence of costly measurement that can provide the basis for synthesising much of the existing literature on EJVs. Its inclusion both completes and in many ways complements the alternative explanations of the governance structure for firms.

REFERENCES

Admati A.R., Pfleiderer P. 1994. Robust financial contracting and the role for venture capitalists. Journal of Finance, 49: 371-402.

Agarwal S, Ramaswami S. 1992. Choice of foreign entry mode: impact of ownership, location, and internalisation factors Journal of International Business Studies 23: 1-27.

Alcain A, Woodword S. 1987. Reflections on the Theory of the Firm. Journal of Institutional and Theoretical Economics, 143 (Jan): 110-136.

Alderson MJ, Betker BL. 1996. Liquidation costs and accounting data. Financial Management, 25: 25-36.

Al-Saadon Y, Das S.P. 1996. Host-country policy, transfer pricing and ownership distribution in international joint venture: A theoretical analysis. International Journal of Industrial Organ, 14: 345-63

Anderson E. Gatignon H. 1986. Modes of foreign entry: a transaction cost analysis and proposition. Journal of International Business Studies 17: 1-16

Argyres N. 1996. Evidence on the role of firm capabilities in vertical integration decisions. Strategic Management Journal, 17(2): 129-150.

Balakrishnan S, Koza M.P. 1993. Information asymmetry, adverse selection, and joint ventures, Journal of Economic Behaviour and Organisation, 20: 99-117.

Barney J. 1986. Strategic factor markets: expectations, luck, and business strategy. Management Science 32: 1231-1241.

Barzel Y, Wing S: 1988. The allocation and Guarantee of Outcome Variability. Working Paper, January.

Barzel Y. 1987. The Entrepreneurs' Reward for Self-Policing. Economic Inquiry, (Jan): 103-116.

Beamish P.W. Banks J.C. 1987. Equity joint ventures and the theory of multinational enterprise. Journal of Internaional Business studies, 18(2): 1-16

Bhagat S, Shleifer A, Vishny R. 1990. Hostile Takeovers in the 1980s: The Return to Corporate Specialisation. In Brookings Papers on Economic Activity. Washington, DC: Brooking Institution.

Bhagwati J. 1984. Splintering and disembodiment of services and developing nations. World Economy, 7(2): 133-143.

Blodgett L.L. 1991. Partner contribution as predictors of equity share in international joint ventures. Journal of International Business Studies, 21(1): 63-78.

Borys B, Jemison D. 1989. Hybrid arrangements as strategic alliances. Academy of Management Review, 14: 234-249.

Bradley M, Jarrell G, Kim E. 1984. On the existence of an optimal capital structure. Journal Finance, 39: 857-878.

Broder D.F, McDermott J.E, Casna R.P 1996. International Joint Ventures: Legal and tax issues. 2nd edition, Professional Information Publication.

Buckley P, Casson M. 1976. The Future of the Multinational Enterprise. Homles & Meier: New York.

McDonald F. Burton F. 2002. International Business. 1st edition, Thomson Publication.

Caves RE. 1996. Multinational Enterprise and Economic Analysis. 2nd edition. Cambridge University Press: New York.

Chadee D.D, Qiu F. 2001. Foreign ownership of equity joint ventures in China: A pooled cross-section-time series analysis. Journal of Business Research, 52: 123-133.

Chan Y. 1983. On the positive of financial intermediation in allocation of venture capital market with imperfect information. Journal of Finance, 38: 1543-1568.

Chi T. 1994. Trading in strategic resources: necessary conditions, transactions problems, and choice of exchange structure. Strategic Management Journal 12(1): 33-48.

Dunning J. 1988. Explaining International Production. Unwin Hyman: London

Dunning JH. 1988. The eclectic paradigm of international production: a restatement and some possible extensions. Journal of International Business Studies, 19(1): 1-31.

Eiteman D. 1990. American executive perceptions of negotiating joint ventures with the People's Republic of China: lessons learned. Columbia Journal of World Business, 25(4): 59-67.

Fagre N, Wells N. 1982. Bargaining power of multinationals and host governments. Journal of International Business Studies. Fall: 9-23.

Fenn G.W, Liang N, Prowse S. 1996. The Economics of the Private Equity Market. Board of Governors of the Federal Reserve System Stuff Study 168.

Freear J, Wetzel W.E. 1990. Who bankrolls high-tech entrepreneurs? Journal of Business Venturing, 5(2): 77-89.

Freear J, Wetzel W.E, Sohl J.E. 1994. The Private Investor Market for Venture Capital. The Financier: ACMT; 1(2): 7-15.

Gary B, Yan A. 1992. A negotiation model of joint venture formation, structure and performance: Implications for global management. Advance International Company Management, 7: 41-75.

Gatignon H, Anderson E. 1988. The multinational corporation's degree of control over foreign subsidiaries: an empirical test of a transaction cost explanation. Journal of Law, Economics and Organisation, 4: 304-336.

Geringer J.M., Hebert L. 1989. Control and performance of international joint ventures. Journal of International Business Studies, 20: 235-254.

Gomes-Casseres B. 1989. Ownership Structure of Foreign Subsidiaries. Journal of Economic behaviour and Organisation 11: 1-25.

Gomes-Casseres B. 1990. Firm ownership preferences and host government restrictions: An integrated approach. Journal of International Business Studies, 3 Gomes-Casseres 3 (1): 33-50.

Grossman S.J, Hart O.D 1986. The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration. Journal of Political Economy 94 (4): 961-719.

Hall R. 1992. The strategic analysis of intangible resources and capabilities to sustainable competitive advantage. Strategic Management Journal 13: 135-144.

Hall R. 1993. A framework linking intangible resources and capabilities to sustainable competitive advantage. Strategic Management Journal 14: 607-618.

Hamel G. 1991. Competition for competence and inter-partner learning within international strategic alliances. Strategic Management Journal, Summer Special Issue, 12: 83-103.

Harrigan K.R. 1986. Managing for joint ventures success. San Francisco: New Lexington Press.

Harris M, Raviv A. 1991. The theory of capital structure. Journal of Finance, 46: 297-355.

Hennart J.F. 1982. The Theory of the Multinationals Enterprise. University of Michigan Press: Ann Arbor, MI.

Hennart J.F. 1988. A transaction cost theory of equity joint ventures. Strategic Management Journals, 9: 361-374.

Hennart J.F. 1991. The transaction cost theory of joint ventures: An empirical study of Japanese subsidiaries in the United States. Management Science, 37: 483-497.

Hennart J.F, Reddy S. 1997. The choice between mergers/acquisitions and joint ventures: The case of Japanese investors in the United States. Strategic Management Journals, 18(1): 1-12.

Hofstede G. 1980. Culture's Consequence: International Differences in Work-related Values. Sage: Beverly Hills, CA.

Hofstede G. 1991. Cultures and Organisations: Software of the Mind. McGraw-Hill: New York.

Hoshi T, Kashyap A, Scharfstein D. 1991. Corporate structure, liquidity, and Investment. Quarterly Journal of Economics, 106: 33-60

Hu MY, Chen H. 1993.Foreign ownership in Chinese joint ventures: a transaction cost analysis. Journal of Business Research, 26: 149-160.

Itami H, Roehl T. 1987. Mobilising Invisible Assets. Harvard University Press: Cambridge, MA.

James C. 1987. Some evidence on the uniqueness of bank loans: A comparison of bank borrowing, private placements, and public offerings. Journal of Financial Economics, 19: 217-235.

Jensen MC, Meckling WH. 1976. Theory of the firm: managerial behaviour, agency costs and ownership structure. Journal of Financial Economics, 3: 305-360.

Johanson J, Vahlne J. (1977). The Internationalisation Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitment. Journal of International Studies 8: 23-32.

Johnson S.A, Houston M.B. 2000. A Re-examination of the Motives and Gains in Joint Ventures. Journal of Finance, 35(1): 67-85.

Kaiser D, Kirby G, Fan G. 1996. Greater China: Political Economy, Inward Investment, and Business Culture. London: Frank Cass.

Kaplan S, Weisbach M. 1992. The Success of Acquisitions: Evidence from Divestitures. Journal of Finance, 47 (March): 107-138.

Klein B, Crawford R, Alchain A. 1978. Vertical integration, appropriable rents, and the competitive contracting process. Journal of Law and Economics 21: 297-326.

Kobrin S.J. 1987. Testing the bargaining hypothesis in the manufacturing sector in developing countries. International Organisation (Autumn), 609-638.

Kogut B. 1988. Joint ventures: Theoretical and empirical perspective. Strategic Management Journal, 3: 319-332.

Kogut B. 1991. Joint Ventures and the option to expand and acquire. Management Science, 37(1): 19-33

Kogut B, Singh H. 1988. The effect of international culture on the choice of entry mode. Journal of International Business Studies, 19: 414-432

Lecraw D.J., 1984. Bargaining power, ownership, and profitability of transnational corporations in developing countries. Journal of International Business Studies (Spring-Summer): 27-43

McConnell J, Nantell T. 1985. Corporate Combinations and Common Stock Returns. The Case of Joint Ventures. Journal of Finance, 40(June): 519-536.

McWilliams A, Gray SR. 1995. Understanding quasi-integration. Journal of Business Strategies 12(1): 69-85.

Merchant H, Schendel D. 2000. How do international joint ventures create shareholder value? Strategic Management Journal, 21: 723-737.

Modigliani F, Miller M. 1963. Corporate income taxes and the cost of capital: a correction. American Economic Review, 53: 433-443.

Morck R, Yeung B. 1992. Internalisation: an event study test. Journal of International Economics. 33: 41-56.

Myers SC. 1977. Determinants of corporate borrowing. Journal of Financial Economics, 5: 147-175.

Nakamura M, Yeung B. 1994. On the determinants on foreign ownership shares: Evidence from US firms' joint ventures in Japan. Managerial Decisions Economics, 15(2): 95-106.

Pan Y. 1996. Influences on foreign equity ownership level in joint ventures in China. Journal of International Business Studies, 27(1): 1-26.

Penrose ET. 1959. The Theory of the Growth of the Firm. Wiley: New York.

Peteraf M. 1993. The cornerstones of competitive advantage: a resource-based view. Strategic Management Journal 14(3): 179-191.

Petersen M, Rajan R. 1994. The benefits of firm-creditor relationships: A study of small business financings. Journal of Finance, 49: 3-35.

Petersen M, Rajan R. 1995. The effect of credit market competition on lending relationships. Quarterly Journal of Economics, 110: 407-444.

Polanyi M.1967. The tacit Dimention. Doubleday, New York.

Porter ME. 1985. Competitive Advantage. Free Press: New York.

Porter ME, Fuller M. 1986. Coalition and global strategy. In competition in Global Industries, Porter ME (ed.). Harvard Business School Press: Boston, MA: 315-343.

Prahalad CK, Hamel G. 1990. The core competence of the corporation. Harvard Business Review, 68(3): 79-91.

Rajan RG, Zingales L. 1995. What do we know about capital structure? Some evidence from international data. Journal of Finance, 50: 1421-1460.

Ravenscraft D, Scherer F. 1987. Mergers; Sell offs and Economic Efficiency. Washington, DC. Brooking Institution.

Reuer J.J. 2001. From hybrids to hierarchies: Shareholder wealth effects of joint venture partner buyouts. Strategic Management Journal. 22: 27-44.

Reuer J.J, Koza M.P. 2000. Asymmetric information and joint venture performance: theory and evidence for domestic and international joint ventures. Strategic Management Journal, 21: 81-88.

Reuer J.J, Miller K.D. 1997. Agency costs anf the performance implications of international joint venture internalisation. Strategic Management Journal, 18:6, 425-438.

Ronen S, Shenkar O. 1985. Clustering countries on attitudinal dimensions: a review and synthesis. Academy of Management Review. 10: 435-454.

Root F. 1994. Entry Strategies for International Markets. Lexington: New York

Rubin PH. 1973. The expansion of firms. Journal of Political Economy 81: 937-949.

Rugman A. 1981. Inside the Multinationals: The Economies of Internal Markets. Groom Helm: London

Shane H. 1994. The Influence of Asymmetric Information on Biotechnology Firm's Source of Funding. mimeo, Finance Department, The Wharton School of University of Pennsylvania.

Teece DJ. 1986. Transaction Cost Economics and the Multinational Enterprise: An Assessment. Journal of Economic Behaviour and Organisation, 7: 21-45.

Titman S, Wessels R. 1988. The determinants of capital structure choice. Journal of Finance, 43: 1-19.

Ueda M. 1997. Expertise and Finance: Mergers motivated by technological change. Department of Economics and Business, University Pompeu Fabra. Sep.

Ueno S, Sekaran U. 1992. The influence of culture on budget control practices in the USA and Japan: an empirical study. Journal of International Business Studies, 23: 659-674.

Vicente-Lorente JD. 2001. Specificity and Opacity Resource-Based Determinants of Capital Structure: Evidence for Spanish Manufacturing Firms. Strategic Management Journal 22: 157-177.

Vickers J. 1985. Pre-emptive patenting, joint ventures, and the persistence of oligopoly. International Journal of Industrial Organisation, 3: 261-273.

Wetzel W.E. 1987. The Informal Venture Capital Market Aspects of Scale and Market Efficiency. Journal of Business Venturing, 2(4): 299-313.

Williamson OE. 1975. Markets and hierarchies: Analysis and Antitrust Implications, Basic Books, New York.

Williamson OE. 1979. Transaction Cost Economics: The Governance of Contractual Relations. Journal of Law and Economics, 22(Oct): 233-261.

Williamson OE. 1983. Credible Commitments: Using Hostages to Support Exchange. American Economics Review, 73(Sep): 519-540.

Williamson OE. 1985. The Economic Institutions of Capitalism, Free Press, New York.

Williamson OE. 1988. Corporate finance and corporate governance. Journal of Finance, 43: 567-591.

Williamson OE. 1991. Comparative economic organisation: the analysis of discrete structural alternatives. Administrative Science Quarterly, 36: 269-296.

Wolff J.A., Reed R. 2000. Firm resources and joint ventures: What determines zero-sum versus positive-sum outcomes? Managerial Decisions Economics, 21: 269-284.