THE ANTECEDENTS OF FOREIGN JOINT VENTURE FORMATION IN TRANSITION ECONOMIES – A LONGITUDINAL ANALYSIS

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Introduction

As firms in transition economies seek to grow, they face certain constraints. These constraints vary between firms and national contexts, and emanate from barriers to market penetration, both domestic and foreign (Filatotchev, Isachenkova & Mickiewicz, 2007a; Yiu, Lau & Bruton, 2007), access to resources (financial, informational) (Gorg & Greenaway, 2004; Hutchinson & Xavier, 2006), specific firm and national path dependencies (Godoy & Stiglitz, 2006; Hitt, Ahlstrom, Dacin, Levitas & Svobodina, 2004) and higher levels of contextual, regulatory and economic uncertainty than might be commonly experienced in developed economic systems (Dixit, 1989; Hoskisson, Eden, Lau & Wright, 2000).

Much research has focused on issues relating to the financing constraints derived from the nascent capital markets and banking systems in transition economies (Könings, Rizov & Vandenbussche, 2003). This has led to various positive and strategic responses by policy makers and the managers of the constrained firms themselves. These policy initiatives have been both proactive and reactive, incorporating ‘soft budget constraints’ (the refinancing of insolvent firms and industries in transition and emerging economies from the public purse) and the development of regional, national and sectoral development banks and development agencies.

Among private firms, there has been a reported higher propensity to reinvest internal and retained funds in the growth of private firms than has been reported in developed economies (Filatotchev, Isachenkova & Mickiewicz, 2007b). This may be opportunistic (as the growth rates of these firms and economies is generally high) or by necessity (due to the absence of traditional forms of investment financing). Nonetheless, this tends to act as a real constraint on growth, as retained earnings during growth phases tend to be limited by normal operational and investment imperatives.

One means to secure both the financial and informational resources required for growth is through the receipt of foreign direct investment (henceforth FDI). Inward FDI into transition economies has been notable in recent years, both for its scale and its transformative nature (Campos & Kinoshita, 2002; Luo & Peng, 1999). Recipient firms have been shown to benefit from the transfer of know-how and technology, and also provide preferred access to the investing multinational corporation’s (henceforth MNC) value chains (Barrell & Holland, 2000).

Much research on MNC FDI into transition economies has adopted the MNC perspective. This research can be broadly characterised as considering the reasons a firm from a developed nation would seek to invest in a transition economy. Where research has been undertaken into the determinants of investment from the recipient point of view, it has tended to investigate the decision in terms of national systems (Bevan and Estrin, 2000; Resmini, 2000) rather than in terms of the characteristics of those individual firms that receive the investment (Campos & Kinoshita, 2002; Janicki & Wunnava, 2004).

Source of Data and Research Methodology

In this paper, we explore the firm level attributes of recipient firms of FDI. We do this research by using a panel dataset of 1399 firms from Central and Eastern Europe (CEE) and the Former Soviet Union (FSU). This dataset was first gathered to assess national governance, political effectiveness and corruption within transition economies on behalf of major donor and developmental agencies the World Bank and the European Bank for Reconstruction and Development entitled “Business Environment and Enterprise Performance Survey”, henceforth BEEPS. It is a rich source of firm level information about the views and experiences of managers operating within transition economies.

Companies with more than 10,000 employees were excluded from the sample for confidentiality reasons, as were firms that commenced operations in after 2002. The dataset can thus be said to be purposefully gathered rather than truly representative, although it does provide a very good cross sectional analysis of generally small to medium enterprises operating in the transition economies of the FSU and CEE regions. The data was collected in 2002 as a cross-sectional survey, and followed up in 2005. In total, some 1,500 firms participated in both surveys (around 30% of 2005 responders had also participated in 2002), and an identifier was included in the 2005 data to panel match responses with 2002 responses, thus allowing some longitudinal data to be extracted.
We utilised a binary logistic regression approach to assess the impact on contemporaneous and previous control and independent variables on the discrete choice dependent variable of our study – which is drawn from the response to the question in the 2005 iteration of the survey “Has your company [agreed to a new joint venture with a foreign partner] over the last 36 months?”. This question ties to the previous iteration of the survey which was undertaken in 2002, and from which we draw various antecedent independent variables in our model.

Binary logistic regression analysis of the discrete choice to form or not to form a joint venture is commonly used in the literature on FDI (Hennart, 1991; Makino & Neupert, 2000; Cui & Jiang, 2008; Dikova & van Witteloostuijn, 2007).

As intended, our study benefits significantly from the use of intertemporaneous independent variables to assess prior period context, firm performance and experience impacts on FDI entry decisions. The great majority of studies in the FDI literature employ, by necessity, cross sectional data that implicitly assumes the absence of lag effects and path dependencies in decision making. The use of panel data in this study allows us to assess these cumulative and lag impacts in our model.

Development of Hypotheses and Research Model Controls for Variance in National Context

It has been noted that within these former Eastern Bloc countries, there has been great variance in the level of success regarding economic transformation and reform (Hellman, Jones, Kaufmann & Schankerman, 2000). It has been suggested that some of the observed variance in economic, political and regulatory reform can be attributed to a westward (i.e. towards the European Union) perspective of many of the western periphery States of the former Eastern Bloc (for example, Croatia, Estonia, Hungary, Slovakia, Slovenia and Poland) (Kaminski, 2000).

These nations, in aspiring to EU membership, were required to undertake major governmental and economic reforms that were not shared by nations on the Eastern periphery (for example, Moldova, Ukraine, Kazakhstan, Kyrgyzstan and Russia itself) (Åslund, 2007). Generally, there is a developing consensus that those firms that were caught more in the EU sphere of influence since the collapse of Soviet communism in 1989 have fared better in terms of economic and regulatory reform and hence corporate performance and growth (Black, Kraakman & Tarassova, 2000; Estrin & Wright, 1999; Filatotchev, Wright, Uhlenbruck, Tihanyi & Hoskisson, 2003).

An investigation of the various national conditions across a range of items would extend this study beyond our adopted focus – which is the determinants and consequences of FDI for firms in transition economies, however we were mindful of these fundamental macro-political drivers of variance, and the fact that national context has been shown to be an important driver of joint venture formation and dissolution in previous studies (Park & Ungson, 1997). We thus included country identifiers as categorical control variables in all of our analyses. Where these categorical variables were significant for individual countries, this is noted separately.

Controls for Size, Industry Effects, Prior Experience and Initial Ownership

Prior research in FDI often controls for the impact of focal firm size and industry (Chang & Rosenzweig, 2001; Kogut & Singh, 1988). Generally, larger firms are more likely to attract FDI as there are substantial supervisory and transaction costs accrued by the foreign investor irrespective of size, thus (ceteris paribus) making a larger investment more attractive.

Where available, prior studies have controlled for industry, at least at the level of services v. manufacturing. There is an expectation that different firms will utilise FDI for different purposes, with manufacturing firms drawing in financial resources, operational technology and market knowledge, while services firms would tend to utilise FDI to improve processual technologies and access to markets and information (Kostova, 1999). The survey does not report industry of operations, per se, but rather the percentage of sales coming from the sectors of mining, construction, manufacturing, transport, wholesale and retail trade, real estate, hospitality and other. These percentages were recoded into industry dummy variables where more than 50% of a firm’s sales came from one of these industries.

Prior experience in the use of joint ventures and other types of FDI have been shown to predispose a firm to future such arrangements (Lyles & Salk, 2006; Belderbos & Zou, 2007). We thus control for the formation of FDI joint ventures in the previously reported period (1999-2002) to control for the effects of ongoing FDI arrangements and the predisposition of firms to use such arrangements.

Finally, we control for initial (formation) ownership arrangements. Many firms in the CEE and FSU regions were originally created as some form of State-owned establishment, and have been privatised in the years since the economic reforms of the late 1980s and 1990s. Generally, former State-owned firms are more conservative, and have access to different forms of financing and markets (Meyer, 2002; Meyer & Lieb-D6czy, 2003). As such, we felt it was important to control for the initial ownership structure of the firm through the use of a dummy (InitialOwnershipDm) that is reported as 0 (zero) if a firm was originally State-owned, and 1 (one) if the firm was established initially as a privately owned concern.

The following table provides summary information regarding the various industry controls, original ownership state (State-owned or private) and
the prevalence of prior period FDI joint venture arrangements by country.

<<<Insert Table 1 about here >>>

Independent Variables and Hypotheses

Development

Alliances, in their various forms, are of increasing importance in global businesses, with their number recently growing by 25% per year in the United States (Pekar and Harbison, 1998), with similar levels of growth reported elsewhere (Khanna, Gulati & Nohria, 1998). In the construction of a taxonomy of motivation for alliance participation, Hagedoorn (1993) noted that potential technology complementarities and compatibilities, time-to-market considerations and access to distribution channels provide the basic motivation for most firms.

Firms seeking growth will look to the formation of strategic alliances and international joint ventures as a secondary or tertiary step in their internationalisation strategies (Steensma, Barden, Dhanaraj, Lyles & Tihanyi, 2008; Tong, Reuer & Peng, 2008). The formation of such formal arrangements can thus be anticipated by prior development of international ties between the focal firm and international partners, whether it be through engagement with international financiers (banks, financial services firms), through the employment of impatriate staff or through the development of trading relationships with international markets (for both inputs and/or outputs).

In this study, we thus suggest that the formation of formal IJV arrangements will be preceded by a general internationalisation of the focal firm in terms of international factor and output markets.

Hypothesis 1: Firms engaged in international resource acquisition and other international transactions in the previous period will be more likely to form FDI based joint ventures in the focal period.

Strategic alliances with international partners can provide firms from transition economies with two clear benefits in terms of market access. First, they can supply into the value chains of MNCs, potentially better harnessing their comparative advantage relating to relatively highly skilled, low cost labour, and other benefits. Secondly, transition economy firms can act as agents of distribution for the products and services developed elsewhere by MNCs. Such arrangements, especially when formalised in terms of a joint venture, will often provide the recipient firm with valuable products and service knowledge, and access to preferential pricing.

Related somewhat to these market access motivations include motivations related to risk sharing (Das and Teng, 2001, Beatty and Zajac, 1994) and the reduction of the systemic risk inherent in 'go it alone' strategies in terms of new product development and other projects (Park and Ungson, 1997). Where firms compete in similar or complementary markets, the potential exists for the risk dilution due to co-development, developmental cooperation and potentially reduced competition (Gomes-Casseres, 1996). Non-zero sum game arrangements may emerge, where firms compete to expand market aggregates while also harnessing the economies available from resource sharing. Thus we suggest that firms interested in risk mitigation (Amit and Wernerfeldt, 1990; Baird and Thomas, 1985; Beatty and Zajac, 1994) are also likely to be interested in alliance and joint venture formation.

Hypothesis 2: Firms experiencing local market competitive pressure in the previous period will be more likely to form FDI based joint ventures in the focal period.

We suggest, in our study, that FDI-based joint ventures are an important tool of financial resource acquisition by the recipient firm. Nohria and Garcia-Pont, in their various studies, found that alliances and joint ventures (between firms in the motor vehicle industry) were formed in response to market imperfections that were acting as barriers to accessing particular resources (Garcia-Pont & Nohria, 2002; Garcia-Pont, Canales, Noboa & del Aguil, 2009). Thus, such arrangements were formed as a direct response to firms requiring access to resources not held internally.

Badaracco (1991) and other authors have noted the knowledge-sharing rationale that provides the key emphasis for most alliances in knowledge-based and evolving industries. The potential knowledge resources to be exchanged in these arrangements range from the most intangible and tacit elements of organisational operations through reputational elements embodied in brands, trademarks and distribution channels through to formal arrangements for the use of physical resources and other tangible assets like capital and firm components and other products.

Hypothesis 3: Firms with a greater relative focus on research & development, innovation and quality improvement in the previous period will be more likely to form FDI based joint ventures in the focal period.

FDI based joint ventures have been shown to be a means by which recipient firms can generate investment capital. This is especially relevant in developing markets, where local banks, stock markets, venture capitalists and the like potential sources of investment capital are generally less maturely developed than in the case in developed economies. We thus suggest that firms reporting difficulties in previous periods in the acquisition of funds will be more predisposed to the formation of FDI based joint ventures in the focal period. We were mindful, however, that international financial markets place a risk premium on lending to transition economies, and evidence that local finance sources were difficult to secure may in fact mean that focal firms in transition economies were less likely to secure international funding and would potentially be
less attractive transition-economy partners for foreign MNCs. We developed and tested the following hypothesis, however, to assess any impact of local financial markets in prior periods on future period FDI JV participation.

**Hypothesis 4:** Firms reporting difficulties in sourcing investment capital in the previous period will be more likely to form FDI based joint ventures in the focal period.

<<<Insert Table 2 about here >>>

**Results**

We use binary logistic regression models in stepwise combination, with the formation of an international joint venture in the years 2002-2005 as the dependent variable. We utilise country dummy variables to account for national contextual issues and historical path dependencies (discussed earlier) in all models.

The first stage model (1) introduces, in addition to country dummy variables, control variables for firm size (reported in the survey in categories (see endnote 1)), industry controls (as per Table 1), prior JIV experience (from the 2002 survey, reported as a dummy variable 1 for prior experience and 0 otherwise, and a dummy to represent initial ownership (0 for prior State-owned or 1 for initially privately owned).

Of our introduced control variables, prior JIV experience positively and significantly (p < 0.01) covaries with FDI JIV formation in the focal period.

The next stage model relates to **hypothesis 1** and introduces relevant measures of international market engagement, with a focus on (1) the proportion of employed impiatrates within the organisation, (2) the proportion of total firm sales within the domestic market and (3) the commencement of exporting to a new country in the preceding three years (dichotomous variable).

The results here support hypothesis 1. The ratio of impiatrates, percentage of domestic sales, and exports to a new country destination co-vary as expected with the dependent variable. The directionality of new exports is as expected due to coding (the response was coded 1 for yes, 2 for no), thus the negative directionality indicates that new exporting covaries positively with FDI JIV formation.

The next stage model relates to **hypothesis 2**. At this stage we introduce a single measure to gauge domestic competitive pressure - namely the gross profit margin achieved in the local marketplace for goods and/or services created and sold by the firm.

We find some support for hypothesis 2, although the significance of this variable only becomes apparent in the next and final stepwise combinations of the model. As we had hypothesised, lower margins on domestic sales seem to positively impact on the decision to form FDI JVs.

The next stage model relates to **hypothesis 3**. At this stage, we introduce dichotomous measures relating to innovation ('upgraded an existing product line'), the introduction of new technology ('introduced new technology that has substantially changes the way that the main product is produced') and the seeking of quality accreditation (obtained ISO 9000). We expect that these complementary activities will illustrate the commitment of firms seeking to develop and improve their operational technologies and systems, and covariance with internationalisation (in the form of FDI JIV formation in a later period) will be indicative that firms are seeking to improve towards global best practice in their value adding processes.

Again, the directionality of the coefficient (negative) is as predicted due to the variables' coding (the response was coded 1 for yes, 2 for no), thus the negative directionality indicates that the introduction of new production technologies, the upgrade of production lines and the introduction of ISO 9000 accreditation all co-vary positively (albeit the first two variables do not present significantly, while ISO 9000 accreditation does (p < 0.1)) with FDI JIV formation. Hence we find partial support for hypothesis 3.

The final stage model (relating to **hypothesis 4**) introduces measures relating to the access to and the cost of financing. Here we use two measures ('access to financing' and 'cost of financing'), derived from questions relating to these barriers to growth answered on a four point semantic differential scale, with 1 (no obstacle), 2 (minor obstacle), 3 (moderate obstacle) and 4 (major obstacle). The addition of these variables do not seem to provide any improvement in model fit, and do not present significantly. Hence, we reject hypothesis 4.

<<<Insert Table 3 about here >>>

**Discussion and Conclusions**

The purpose of this study was to assess the antecedents of international joint venture formation in transition economies. In employing a longitudinal dataset from former Eastern Bloc nations, the study provides insights into a novel context (transition economies) while also extending the wider literature on the antecedents to international joint venture formation using longitudinal data.

Our model provides adequate fit (Nagelkerke Pseudo R² of 0.28, p <0.001) to illustrate that the variables chosen provide some interesting and valuable insights into the discrete decision to form an international joint venture.

Overall, internationalisation of firms in transition economies (through the employment of foreign impiatrates), the ratio of exports to imports, and the commencement of exporting to a new destination are also highly anticipatory of the formation of an international joint venture in later periods. This would support the view that the formation of international JVs coincides with a maturing of the focal firm’s international trading relationships. These results are
directionally consistent with Calderón, Loayza & Servén (2004) who showed in their research that economic growth and the improvements in trade and rates of investment return serves as a powerful 'pull' factor for foreign investment, including JVIs. Other studies also support this connection between economic growth and the instantiation of follow-on investment vehicles (Attanasio, Picci, & Scocculus, 2000; Blomstrom, Lipsey and Zeehan, 1996).

We find some limited support for the notion that the formation of international joint ventures is anticipated by challenging domestic market conditions (as proxied by gross margins on sales). We expect that this might be a two-edged sword - the costs of internationalization can be significant, and unprofitable firms in transition economies may lack the internal resources to undertake such ventures. Further, MNCs may select only leading firms in transition economies as potential partners. Nonetheless, we see some partial evidence to suggest that domestic market 'crowding out' may inspire the formation of JIVs by firms in transition economies.

An alternative explanation for this result may also reside in the shape and form of FDI associated with various competitive markets. Mattoo, Olarreaga & Saggi (2004) found that in more recent times, entry into foreign markets had shifted towards acquisitions, in light of the reduction of cross-border technology transfer costs. Combined with the OECD (2001) finding that foreign acquisitions are more likely to occur in host countries with low levels of competition, the potential for the formation of JIVs in highly competitive domestic markets appears plausible (i.e., the joint venture may present a less expensive and less disruptive form of competitive entry).

The introduction into our model of variables measuring firm innovation and process improvement variables produces a significant improvement in overall explanatory power (p < 0.1). Again, our longitudinal dataset would indicate that such improvements temporarily precede JIV formation, although we would anticipate that such actions may in fact also coincide with prior period JIV formation (i.e. they also occur contemporaneously with earlier JIVs). This is in fact borne out by the correlations between these variables and prior period JIVs, reported in Table 2. Unsurprisingly, this result provided further weight to the argument that the focused and interstitial injection of innovative technologies and processes, research and development, and quality systems under various FDI vehicles (including the JIVs) lifts the rate of technical progress and economic growth (Barrell & Pain, 1999; Bloningen, 2005; Coe & Helpman, 1995; Young and Lan, 1997). A further explanation for this result was also drawn from the technology diffusion research literature that found that a relatively equal joint venture would meet the partners' desires to mutually protect critical knowledge-based capital (Ethier & Markusen, 1996).

Finally, we find no support for the suggestion that difficulty in finding local investment capital in prior periods anticipates future period JIV formation. This lends support to the idea that JIV formation tends to be pursued by the stronger and more financially viable firms within an economy, and tends not to be a strategic possibility as a source of investment funds from abroad for firms unable to acquire such funds domestically. The explanation for this result might also usefully reside in our broader understanding of capital flight (i.e., movement of domestic capital to offshore locations rendering low levels of available local investment capital). In developing and transition economies, capital flight is primarily caused by general economic mismanagement and structural inefficiencies, rather than the treatment of foreign investments (Gertler & Rogoff, 1999; Kant, 1996). Also, foreign investment inflows are typically associated with reductions in capital flight profiles (Kant, 1996). Importantly, this plausibly suggests that foreign investments (including JIVs) may flow after the resolution of the capital flight problems in transitional economies, rather than as a response to them.

Also, a caveat is worth mentioning. As is the case with all work based on secondary data, we were restricted in our analyses to data available within the BEEPS survey. The data gathering strategy employed by the various BEEPS sponsors appears robust, although the limitations of the panel data would mean that the data may not be specifically representative of all firms in the economies examined. Overall, however, the findings provide a useful insight into the manner and rationales of internationalisation and FDI JV formation in transition economies.

References

3. Åslund, A. 2007. How capitalism was built: the transformation of Central and Eastern Europe, Russia, and Central Asia: London: Cambridge University Press.


Table 1. Description of Sample Industry and Initial Ownership Makeup

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<th>Country</th>
<th>Total</th>
<th>Mining</th>
<th>Construction</th>
<th>Manufacturing</th>
<th>Transport</th>
<th>Wholesale and Retail Trade</th>
<th>Real Estate and Business Services</th>
<th>Hotels and Hospitality</th>
<th>Other Industry</th>
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<th>West in an FDI JV in 2002</th>
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465
**Table 2. Descriptive Statistics**

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<tr>
<td>Kyrgyz Rep.</td>
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<td>Total</td>
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</table>

**Table 3. Binary Logistic Regression Results**

Dependent Variable - Formation of an International Joint Venture between 2002 and 2005

<table>
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<th>Country Dummies Included</th>
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<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>MiningDm</td>
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<tr>
<td>TransportDm</td>
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<td>-2.11</td>
<td>-2.32</td>
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<td>OtherIndustryDm</td>
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<td>InitialOwnershipDm</td>
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<td>Ratio of Expatriates</td>
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<tr>
<td>Percentage Sales Domestic</td>
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</tbody>
</table>

Correlation significant at 0.01; Correlation significant at 0.05.
### Endnotes

1. The categories for firm size are as follows (all figures in thousands of US dollars equivalence: (1) under 10 (2) 10-19 (3) 20-49 (4) 50-99 (5) 100-249 (6) 250-499 (7) 500-999 (8) 1000-1999 (9) 2000-4999 (10) 5000-9999 (11) 10000-19999 (12) 20000-49999 (13) more than 50000.

Values of  above 1.0 indicate a positive covariance with the DV, below 1.0 indicate a negative covariance. * p < .05, ** p < .01, *** p < .001