Cultural Differences, Insecure Property Rights and Modes of Entry by Multinational Corporations

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Motivation

- MNC play a key role in the globalization process
- *Alliances* – joint ventures and licensing agreements – are one of the most important organizational forms: In 1998-1999 over 20000 registered worldwide (Anand and Khanna (2000))
- In many markets key tradeoff is between `knowledge` provided by the local partner and `dissipation` of proprietary information of the MNC
- This paper: Analze the choice of the mode of entry by the MNC based on this tradeoff
Literature Review

- Cai (2003)
- Smarzynska and Wei (2002)
- Aghion and Tirole (1997)
Conclusion

- Trade-off of joint-venture with licensing and wholly-owned subsidiary comes through:
  - Credibility effect
  - “Insurance” effect
  - Bargaining power effect

- In general, the trade-off is not monotonic in property rights protection
Setup


- Two risk neutral firms: multinational corporation (M) and domestic firm (D), operating in segmented markets

- Three organizational forms: licensing, wholly-owned subsidiary (or green field), and joint-venture

- Under all forms, D first proposes an investment project
Setup

- Forms differ in the allocation of formal authority
  - Licensing: D has the right
  - Wholly-owned: M has the right
  - Joint-venture: D and M share the right

- Forms also differ in residual claims
  - (can be endogenized along the line of GHM)
  - Licensing: $s(D) = 1$
  - Wholly-owned: $s(M) = \beta$, $s(D) = 1 - \beta$, depending on dispensability of domestic firm, $\beta \in [0, 1]$
  - Joint-venture: $s(M) = \beta$, $s(D) = 1 - \beta$, $\beta \leq \beta^*$
Setup

- Project identification
  - With probability $e$, $D$ identifies an innovative, high profit project
  - With probability $1 - e$, only a low profit project can be proposed
Setup

- **Moral hazard** under insecure property rights

  - If D identifies an “innovative” project, it can behave honestly or opportunistically
  - Honest behavior yields (total) return $\Pi$
  - Opportunistic behavior yields return $\Pi + \lambda(k - l)$, where $\lambda$ is the probability of failure in property rights enforcement, $(k-l)<0$
  - Interpretation: opportunistic type investment allows D to “expropriate” M, i.e., in addition to the residual claim on the distribution of $\Pi$, k accrues to D and - l accrues to M
Setup

- Monitoring and Compromise
  - With (exogenous) probability $\rho$, M observes opportunistic type investment, if proposed
  - In a wholly-owned subsidiary and a joint-venture, M chooses whether to veto upon observing opportunistic type investment and propose a revision
  - In a wholly-owned subsidiary, the revision is implemented
  - In a joint-venture, the revision is subject to approval by D; if D vetoes the revision, the low profit (default) project is implemented
  - Return of the low profit project normalized to zero
Setup

- **Local knowledge** difference
  - M is unable to make initial proposal
  - Revision generates a return, \( \pi \in (-\infty, \Pi) \), distributed according to cumulative density function \( G(\pi, \theta) \), with the actual value unknown to M but known to D

- “Better” local knowledge \((\theta > \theta') \) iff
  \[ G(\pi, \theta) \geq G(\pi, \theta') \]

- Notice that D will veto all of M revisions generating a negative payoff, so
  \[ E^J_{\pi} > E^W_{\pi} \]
Sequence

D proposes honest type

High profit project

1 - e

D proposes opportunistic type

1 - \( \rho \)

Low profit project

\( \rho \)

D vetoes

M vetoes

D does not veto

M does not veto

D does not veto
Analysis: *ex post*

- *Ex post:* conditional on the high profit project identified

- Licensing
  - D always chooses opportunistic type
  - *Ex post* social surplus
    \[ \Pi + \lambda (k - l) \]
Analysis: **ex post**

- **Wholly-owned subsidiary**
  - M vetoes and revises D’s proposal of an opportunistic type iff
    \[ \beta E^W\pi \geq \beta \Pi - \lambda l \text{ or } \lambda \geq \beta (\Pi - E^W\pi)/l \]
  - Anticipating this to happen with probability \( \rho \), D behaves honestly iff
    \[ (1 - \beta)\Pi \geq (1 - \rho)[(1 - \beta)\Pi + \lambda k] + \rho(1 - \beta)E^W\pi \]
  - In equilibrium D behaves honestly iff
    \[ \rho(1 - \beta)(\Pi - E^W\pi)/[(1 - \rho)k] \geq \lambda \geq \beta (\Pi - E^W\pi)/l \]

- **Assumption**
  \[ \rho l(1 - \beta) > (1 - \rho)\beta k \]
Analysis: *ex post*

<table>
<thead>
<tr>
<th>$\theta$</th>
<th>$\lambda$</th>
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<td>M always vetoes; Opportunistic type chosen</td>
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Analysis: *ex post*

- **Joint-venture**
  - An equilibrium where “honest” type is implemented iff
    \[ \rho(1 - \beta)(\Pi - E^J\pi) / [(1 - \rho)k] \geq \lambda \geq \beta(\Pi - E^J\pi)/l \]
  - Remember: \( E^J\pi > E^W\pi \)

- **Assumption**
  - \( \rho l (1 - \beta) > (1 - \rho) \beta k \)
Analysis: *ex post*

- M always vetoes; Opportunistic type chosen
- M vetoes only when observing opportunistic type; Honest type chosen
- M rubber stamps; Opportunistic type chosen
Analysis: *ex post*

- *Ex post* social surpluses across organizational forms

1. None dominates
2. Joint-venture dominates
3. Wholly-owned and joint-venture dominate
4. Wholly-owned dominates
Analysis: *ex post*

- Two sources for gains of joint-venture over licensing
  - Monitoring produces incentives
  - Veto rights provides “insurance”

- Two sources for gains of joint-venture over wholly-owned subsidiary
  - Better use of local knowledge improves monitoring credibility, hence produces better incentives
  - Better use of local knowledge creates better “insurance”
Analysis: *ex post*

- One source for loss of joint-venture over wholly-owned subsidiary
  - Better use of local knowledge provides “insurance” to D as well, bad for incentives
Analysis: *ex ante*

- Identification of the high return project requires an effort $e$, with cost $c(e)$

- **Licensing**: 
  - $e_L = \arg\max e(\Pi + \lambda k) - c(e)$

- **Wholly owned subsidiary and joint-venture** 
  - $e_{W_h} = e_{J_h} = \arg\max e(1 - \beta)\Pi - c(e)$ in “honest” type equilibrium
  - $e_{W_r} = e_{J_r} = \arg\max e[(1 - \beta)\Pi + \lambda k] - c(e)$ in rubber-stamp equilibrium
Analysis: \textit{ex ante}

- In an always-veto equilibrium
  - Assume revision is based upon \textit{ex ante} project identification
  - \(e^W_v = e(1 - \beta)E^W\pi - c(e)\) under wholly-owned subsidiary
  - \(e^J_v = e(1 - \beta)E^J\pi - c(e)\) under joint-venture

- Better \textit{ex ante} incentives under licensing than under wholly-owned subsidiary and joint-venture

- Better \textit{ex ante} incentives under joint-venture than under wholly-owned subsidiary in an always-veto equilibrium
Analysis: *ex ante*

- *Ex ante* social surpluses across organizational forms

- Licensing dominates
- Joint-venture dominates
- Wholly-owned and joint-venture dominate
- Wholly-owned dominates
Analysis: *ex ante*

- Comparative statics: Increase in $\beta$
**Analysis: ex ante**

- *Ex ante* effect of increase in $\beta$
  - Reduces D’s *ex ante* incentive

- *Ex post* effect of increase in $\beta$
  - Recall an equilibrium where “honest” type is implemented iff
    $$\rho(1 - \beta)(\Pi - E\pi)/[(1 − \rho)k] \geq \lambda \geq \beta(\Pi - E\pi)/l$$
  - Increase in $\beta$ reduces D’s (*ex post*) incentive, and reduces monitoring credibility
Analysis: *ex ante*, $\beta^W > \beta^J$

- Joint-venture: protecting D’s bargaining power and hence both *ex ante* and *ex post* incentives
Conclusion

- Trade-off of joint-venture with licensing and wholly-owned subsidiary comes through:
  - Credibility effect
  - Insurance effect
  - Bargaining power effect

- In general, the trade-off not monotonic in property rights protection