

THE EFFICACY OF INVESTMENTS IN SUPPLIER RELATIONSHIPS & ENVIRONMENTAL MANAGEMENT

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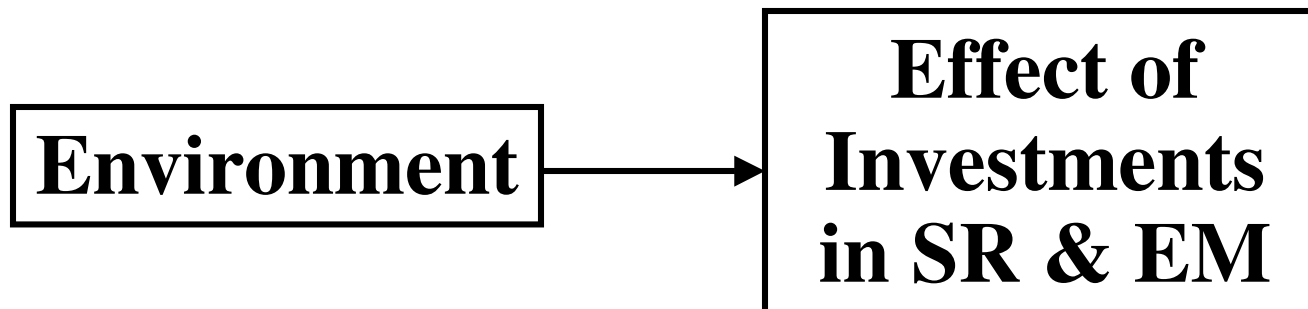
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RESEARCH QUESTION

- Are investments in EM & Supplier Relationship equally beneficial in all environments (dynamic & hostile)?



LITERATURE REVIEW

Business Environment (Burnes and Stalker 1961, Ward et al. 1995)

- Hostile: Mechanized organizational structures, competitive, low growth, low profit
- Dynamic: Organic organizational structures, innovation, risk taking

LITERATURE REVIEW

Investment in EM (IEM)

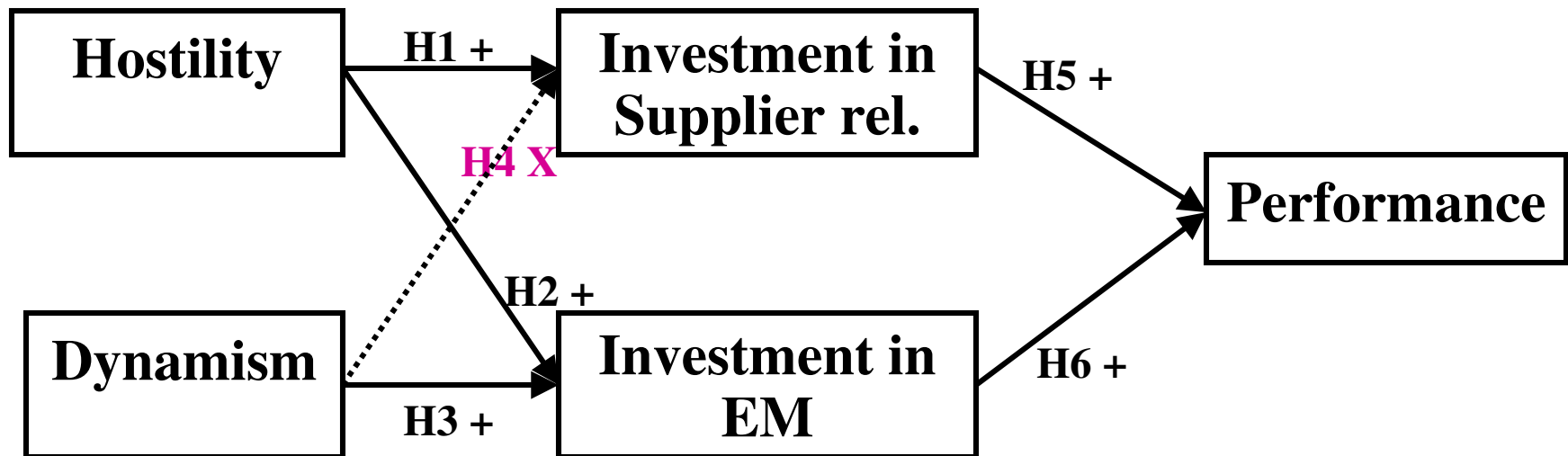
- IEM improves operational & financial performance (Kalssen and Whybark, 1999; Christmann, 2000)
- In a **dynamic** environment: Improves profits
 - Redesigning process & product innovation (Russo & Fouts, 1997)
- In a **hostile** environment: Mixed review
 - Waste reduction & efficiency (Christmann, 2000)
 - Mechanized structures → Not for innovation (Kemp, 1993; Shrivastava, 1995)

LITERATURE REVIEW

Investment in Supplier Relationship (ISR)

- Companies look for improvement from supply chain → Lean Supply Chain (Elmuti, 2002)
- In a **hostile** environment, ISR → Lower costs
 - Supply base consolidation (Helper, 1991)
- In a **dynamic** environment, ISR → ???
 - Access to technology? Switching cost? (Ellram, 1994)

RESEARCH MODEL (Path Analysis)



RESEARCH METHODOLOGY

Survey

- GMRG questionnaire + Add-on
- Respondents: manufacturing and purchasing managers
 - inter-rater reliability (Boyer and Verhema, 2000)
- Samples: 109/628, or 16%
 - Taiwan = 64 high-tech firms
 - Northwest US = 39

RESEARCH METHODOLOGY

Scales

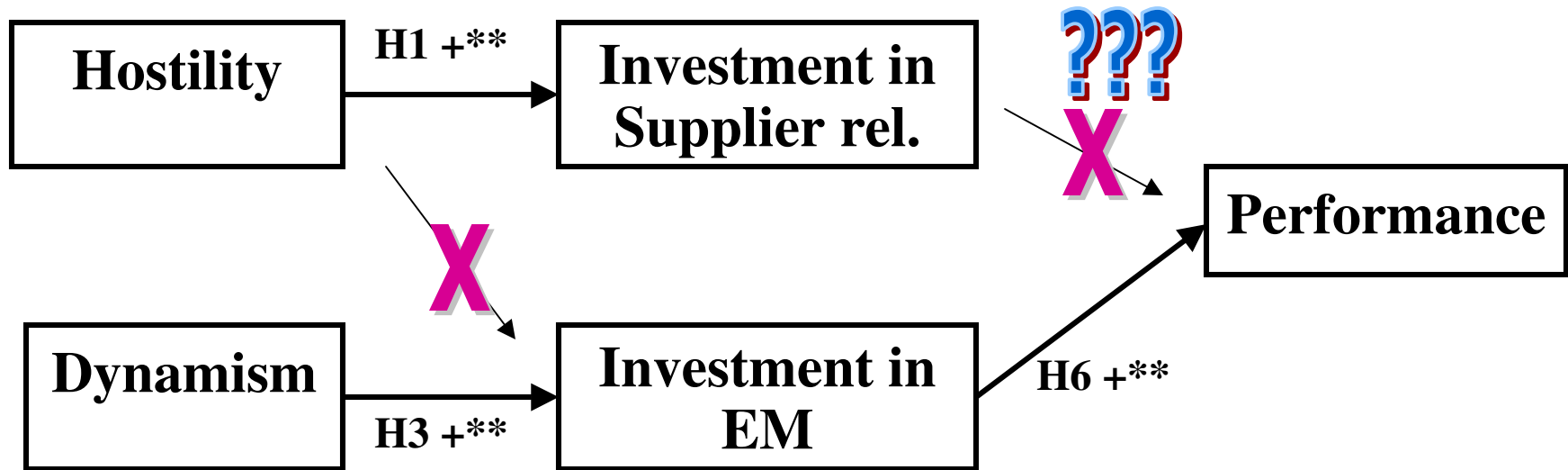
- External environment (Ward et al., 1995)
 - Hostility & Dynamism
- Supplier relationship (Carr and Pearson, 1999; Shin et al., 2000)
 - Loyalty, communication, number of suppliers, new product design participation.

RESEARCH METHODOLOGY

Scales

- **EM Investment**
 - Investment in ISO1400, pollution prevention, recycling of materials, waste reduction (GMRG 1.22)
- **Performance**
 - A composite of a number of plant level metrics including quality, price, and flexibility (Ahmad and Schroeder, 2003)

STATISTICAL RESULTS #1

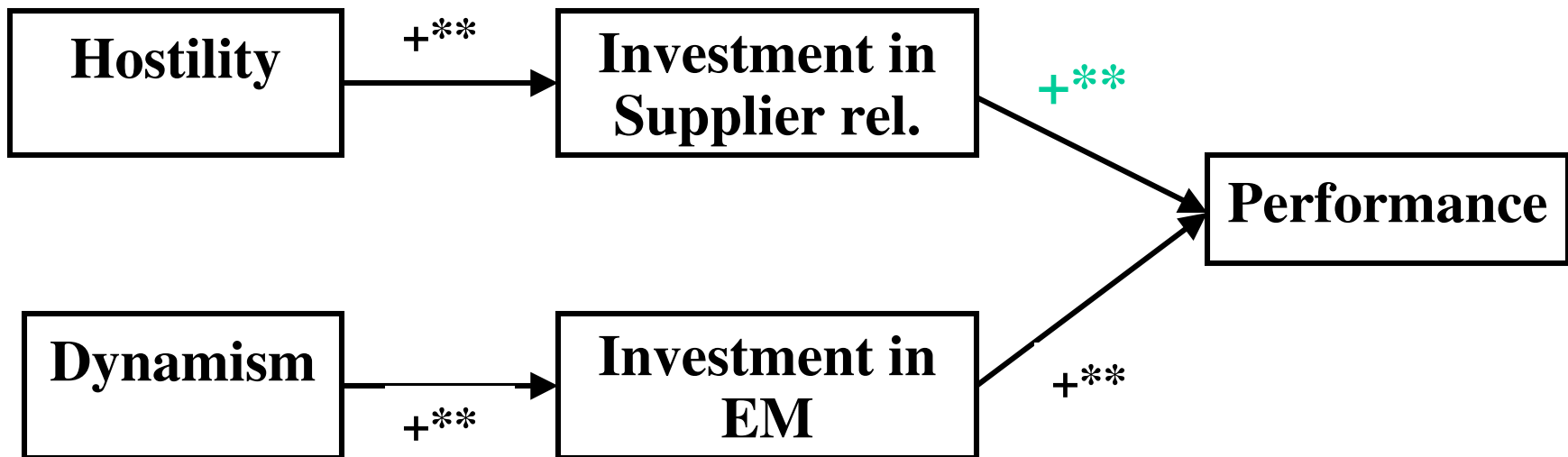




IMPORTANCE OF PURCHASED PARTS

- **ISR & Performance**
 - Benefits of supplier relationships will mainly accrue to those firms who place a heavy emphasis on purchasing (Krause, 1999)
- Two groups
 - High level vs. Low level of importance on purchased inputs

RESULTS #2: HIGH IMPORTANCE OF PURCHASED PARTS



CONCLUSIONS: ISR

- Investing in supplier relationships will only benefit those firms where purchasing is important
 - This finding is not really surprising, but it reinforces that there is not one set of purchasing practices that is right for every situation
- Many firms have responded to the increased hostility in the market by squeezing suppliers (Green, 2000; Stallkamp, 2001)
 - Our results indicate that relying on strong arm tactics and returning to the adversarial relationships will result in lower overall performance

CONCLUSIONS: IEM

- *American firms vs. Taiwanese firms*
 - American firms react to increases in dynamism with decreased investments in EM
 - Taiwanese firms respond strongly to increased dynamism with increased investments in EM systems
- Hostility is not driving firms to invest in environmental management

FUTURE RESERACH

- Supply Chain Environmental Management (SCEM)

