Critical Analysis of the use of Absorptive Capacity in IS Research

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FIT5182 DSS Internship
Informal Presentation

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Purpose and Structure

• To inform the group about ACAP theory and how it has evolved [ACAP Theory]
• To give a summary of applications of ACAP discovered in literature to date [ACAP in IS Literature]
• To provide an update on the progress of the literature review [Review Progress]
• To get your input [Input]

Questions and Discussion
ACAP Theory
What is ACAP?

• Seminal Work – Cohen and Levinthal (1990) – *Administrative Science Quarterly*

• **ACAP is:**
  – the firm’s ability to recognise the value of new external information, assimilate it, and exploit it commercially (Cohen and Levinthal, 1990)
  – a broad set of skills and capabilities required to deal with the tacit elements of transferred knowledge, and the need to modify or transform the knowledge acquired (Mowery and Oxley, 1995)
Cohen and Levinthal (1990)

Figure 1: Initial model of ACAP, Cohen and Levinthal (1990)
How has ACAP evolved?

- **Seminal Work** – Cohen and Levinthal (1990) – *Administrative Science Quarterly*
- **Other major construct definition articles** that sought to build on ACAP theory include
  - Zahra and George (2002),
  - Lane et al (2006),
  - Todorova and Duirisin (2007)
- **all provide expanded construct definitions and conceptual models**, while other articles provide support to theory development
Zahra and George (2002)

Figure 2: A model of ACAP, Zahra and George (2002)
Figure 3: A model of ACAP, Lane et al (2006)
Todorova and Duirisin (2007)

Figure 4: A model of ACAP, Todorova and Duirisin (2007)
# Theoretical Model Summary

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Burning Issues

- **Operationalization and Measurement**
  - Conceptualization: Capability or Asset?
  - Instrument: artifact or survey?
- **Applications in IS research**
- **Impacts on IS**
ACAP in IS Literature
ACAP in IS Literature

• Of articles reviewed to date:
  – Some recurrent research area applications:
    > Business value of IT
    > ERP systems, adoption and implementation, and
    > Knowledge – management, transfer, integration
  – Roberts et al (2011)
    > Comprehensive literature review, but only up to
      2008 and inclusive of some minor journals and
      conferences
## Summary Stats for ACAP in IS research (so far reviewed)

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<tbody>
<tr>
<td>Percentage</td>
<td>100%</td>
<td>71%</td>
<td>21%</td>
<td>14%</td>
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| Asset                  | 14%                                     |
| Capiblity              | 71%                                     |
| NA                     | 14%                                     |

| Role of ACAP: Single, or one of a few IV | 64% |
| Role of ACAP: Mediating          | 21% |
| Role of ACAP: Unknown            | 14% |

| Survey                  | 36% |
| Single Case             | 7%  |
| Multi Case              | 21% |
| Mixed/Field             | 14% |
| Literature Review       | 14% |
| NA                      | 7%  |
Focus of ACAP in IS Research (reviewed so far)

<table>
<thead>
<tr>
<th>Business Value of Open Source Technology</th>
<th>Enabling Role of IT</th>
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<tr>
<td>Client Extra Costs in Offshore Projects</td>
<td>ERP Implementation Knowledge Transfer</td>
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<td>ERP Assimilation</td>
<td>IT enabled Knowledge Capabilities</td>
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<tr>
<td>Interorganisational Systems Outcomes</td>
<td>Adoption of IS</td>
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<tr>
<td>Absorptive Capacity and Information Systems Research</td>
<td>Commitment and Information Sharing in Global Supply Chains</td>
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<td>Software Reuse</td>
<td>Data Warehouse Adoption</td>
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<tr>
<td>Information Systems Development</td>
<td>Performance of ERP Usage</td>
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How to classify?
ACAP Opportunities in IS research

• **ACAP mostly used in the knowledge management domain**
  – Only 1 article relating specifically to the BI knowledge domain of IT
  – What about decision making?

• **Measurement clarification**
Review Progress
Data Collection

210 articles ID’d
Screened 120
20 of interest

“A” IS

“A*” ACAP Theory

“A*” ACAP in IS Research
Data Collection

• **Need to look at**
  – “A” IS Journals
  – More “A*” non IS Journals
Input
Discussion points to investigate
References

Questions?

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