Example research projects using case studies

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Aims of this session

• Show examples of case study research

• Highlight some considerations for your case study research
Define existing uncertainties

Dynamic Environment

New technologies & customer requirements

New markets

New competitors

New initiatives

Resources

The store of tangible and intangible firm specific resources that the firm has internalised.

Competences

The configuration of resources that form specific and distinctive skills areas.

Capabilities

The routines or processes which allow the firm to reconfigure its resources.

Strategy to ensure growth

Industry performance
Main elements of a research project

- Broad research area / outline research question
- Literature review
- Refined research question
- Research method
- Data acquisition
- Analysis
- Conclusions
What is the point of a case study?
Some examples
“Japanese innovation strategy and the acquisition of UK IT firms”

PhD Research Project
ESRC Funded
Project background

• In early 1990s, a number of UK information technology firms were acquired by the Japanese firms.

• This activity attracted attention as:
  – Japanese internationalisation focused upon JVs and greenfield sites
  – Japanese companies inexperienced at managing international acquisitions
  – Use of acquisitions for strategic reasons very difficult
Japanese M&A activity

Questions raised

Changes in industrial environment

Conceptual approach needed

Examine literature

Develop basic conceptual approach

Apply to example acquisitions

Develop & refine conceptual framework
Theoretical view

- ‘Mainstream’ strategy
- Management of innovation
- Management of acquisitions

- Didn’t really help explain!

- Resource-based view of the firm
- Development of simple model
  - testing?
What was required?

- Assess evidence required to investigate research question in light of conceptual approach developed
- Consider methods appropriate to obtaining evidence
<table>
<thead>
<tr>
<th>Research strategy</th>
<th>Form of research questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>how, why?</td>
</tr>
<tr>
<td>Survey</td>
<td>who, what, where, how many, how much?</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>who, what, where, how many, how much?</td>
</tr>
<tr>
<td>History</td>
<td>how, why?</td>
</tr>
<tr>
<td>Case study</td>
<td>how, why?</td>
</tr>
</tbody>
</table>

Source: Adapted from Yin (1994)
Use of cases for theory building

“[..] theory building from case study research is particularity appropriate because theory building does not rely upon previous literature or prior empirical evidence.”

## Types of case study

<table>
<thead>
<tr>
<th>Single-case designs</th>
<th>Multiple-case designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single unit of analysis</td>
<td>Type 1</td>
</tr>
<tr>
<td>Multiple units of analysis</td>
<td>Type 3</td>
</tr>
</tbody>
</table>

Source: Yin, 1994
But how many?
Use of case studies

- “. case studies should be evaluated in terms of the adequacy of the theoretical inferences that can be generated. The aim is not to infer findings from a sample to a population, but to engender patterns and linkages of theoretical importance.”

Multiple case study design

Define & design
- Develop theory
- Select cases
- Design data collection protocol

Prepare, collect & analyse
- Conduct 1st case study
- Conduct 2nd case study
- Conduct 3rd case study

Analyse & conclude
- Draw cross-case conclusions
- Modify theory
- Develop policy implications
- Write cross-case report
- Write individual case report

Source: Yin, 1994
# Sources of data

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Examples include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation</td>
<td>Letters, minutes of meetings, reports, newspaper articles.</td>
</tr>
<tr>
<td>Archival records</td>
<td>Service records, survey data, organisational records.</td>
</tr>
<tr>
<td>Interviews</td>
<td>Open ended interviews, focused interviews, structured interviews.</td>
</tr>
<tr>
<td>Direct observations</td>
<td>Site observations (including meetings, factory work).</td>
</tr>
<tr>
<td>Participant observation</td>
<td>Researcher assumes role within case study situation.</td>
</tr>
<tr>
<td>Physical artefacts</td>
<td>Physical devices, tools or instruments which are collected or observed.</td>
</tr>
</tbody>
</table>

Source: Yin, 1994
Primary versus secondary data

• **Primary** - data specifically acquired for the present programme of research

• **Secondary** - data collected for some other purpose and kept archived in some form
Matrix of options for sources

<table>
<thead>
<tr>
<th></th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matrix of options

**Primary**

- Interviews with Japanese parent company personnel
- Interviews with UK subsidiary personnel
- Interviews with competitors
- Interviews with financiers
- Interviews with journalists

**Secondary**

- Parent company information sources
- Previous case studies related to parent company
- Public sector information services
- News archives
- Commercial industry reports

**Internal**

**External**
<table>
<thead>
<tr>
<th>Japanese parent firm</th>
<th>Case A</th>
<th>Case B</th>
<th>Case C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fujitsu</td>
<td>Mitsubishi Electric</td>
<td>Kao Corporation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business areas</th>
<th>Communication systems, computer systems, electronic devices.</th>
<th>IT systems, heavy electrical machinery, consumer electronics.</th>
<th>Detergents, cosmetics, fatty chemicals, edible oils, IT products.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate sales at time of acquisition / £m</td>
<td>12,000</td>
<td>15,000</td>
<td>2,700</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acquired UK firm</th>
<th>ICL</th>
<th>Apricot Computers Ltd (hardware division)</th>
<th>Protoscan Software Services</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Business areas</th>
<th>Computer systems, computer services.</th>
<th>Computer systems.</th>
<th>Software support services.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate sales at time of acquisition / £m</td>
<td>1,600</td>
<td>81</td>
<td>3.4*</td>
</tr>
</tbody>
</table>
Data collection protocol

Stage 1

Research agenda → Secondary data acquisition

Stage 2

Primary data acquisition → Data compilation
<table>
<thead>
<tr>
<th></th>
<th><strong>Positivist viewpoint</strong></th>
<th><strong>Phenomenological viewpoint</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Validity</strong></td>
<td>Does the instrument measure what it is supposed to measure?</td>
<td>Has the researcher gained full access to the knowledge and meanings of informants?</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>Will the measure yield the same results on different occasions (Assuming no real change in what is to be measured)?</td>
<td>Will similar observations be made by different researchers on different occasions?</td>
</tr>
<tr>
<td><strong>Generalisability</strong></td>
<td>What is the probability that patterns observed in a sample will also be present in the wider population from which the sample is drawn?</td>
<td>How likely is it that ideas and theories generated in one setting will also apply in other settings?</td>
</tr>
</tbody>
</table>
Case studies showed …

- Partners
- Customers
- Suppliers
- Acquired UK firm
- Parent Japanese firm
Results

• New framework for linking RBV of firm with development of organisational capability to respond to rapidly changing environment

• Move from theory building to theory testing
Previous actions

Define existing

Resources
The store of tangible and intangible firm-specific resources that the firm has internalised.

Competences
The configuration of resources that form specific and distinctive skills areas.

Capabilities
The routines or processes which allow the firm to reconfigure its resources.

New technologies & customer requirements

New products/services

New markets

New competitors

New industries

Environment
Uncertain Dynamic

Restrict/enable

Strategy to ensure growth

Implementation of strategy

Firm performance

Industry performance

Can change
“Manufacturing Mobility”

Post-doctoral research project
EPSRC Funded
Project overview

- Audit manufacturing plants between transfer is planned
- Map conditions for transfer and receipt
- Develop generalisable project management framework
Methodology

• Empirical evidence to build initial framework
  – Survey
  – Case studies
• Testing through application
  – Tools and techniques

• Survey
  – Missed the ‘richness’ of detail of transfer
• Case studies
  – Provided richness but are they generalisable?
Cases included:

- Camelot lottery terminals
- Biscuit making machinery
- Control devices
- Telecommunications equipment

- Telecommunications devices
- IT software duplicating technology
- Power generation systems
- Electrical components
<table>
<thead>
<tr>
<th></th>
<th>Exploring</th>
<th>Evaluating</th>
<th>Packaging and adapting</th>
<th>Transferring</th>
<th>Embedding</th>
<th>Feeding back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Suppliers</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material control</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
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<tr>
<td>Organisat.</td>
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<tr>
<td>Quality</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>External environ.</td>
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</tbody>
</table>
Results

- Case studies provided empirical evidence to develop framework
- Framework developed into workbook
- Workbook applied in industry
- On-going refinement
- Spin-off projects
Centre for Technology Management

Structure, approach, experiences, ..

Business model, financing, growth, ..

Established firm

Why?

How?

Start-up

Cisco Systems
BMW
BT
THE BOC GROUP
asymptote
bango
1Limited
artimi
<cps>
NOKIA Connecting People
PHILIPS
Rolls-Royce
ARM
CSR
Plastic Logic

UNIVERSITY OF CAMBRIDGE
<table>
<thead>
<tr>
<th>A large firm..</th>
<th>A start-up ..</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ponderous, slow and stupid</td>
<td>• a bunch of cowboys</td>
</tr>
<tr>
<td>• preoccupied with reviewing everything to death</td>
<td>• shooting from the hip</td>
</tr>
<tr>
<td>• awash in mindless procedures</td>
<td>• disorganised, slippery</td>
</tr>
<tr>
<td>• risk averse, procrastinating</td>
<td>• going off in all directions, unfocused</td>
</tr>
<tr>
<td>• characterised by paralysis through analysis</td>
<td>• characterised by sloppy work</td>
</tr>
<tr>
<td>• divided, fragmented</td>
<td>• exclusive, clannish, hostile</td>
</tr>
</tbody>
</table>

Source: Doz and Hamel (1998) p. 154
Complexity ..
Summary

• Examples of case studies
  – For theory building
  – For theory building > application
Over to you ...
Aims of this session

- Show examples of case study research
- Highlight some considerations for your case study research
References

• Yin, R. K., 1994, Case Study Research: Design and Methods, Sage.