Academic Research Methods Applied to Management Consulting

Ansgar Richter

European Business School
Agenda

- The structure of academic papers
  - Study design
  - Publishing research on management consulting
Empirical papers have a clear-cut structure, theory papers don’t

Differences between theory papers and empirical papers

**Theory papers**
- Literature reviews focused on theory
- New theory development (potentially developing propositions for testing)
- Critiques of existing theory
- Theoretical papers that use a bit of evidence to support the argument
- Theory comparisons

**Empirical papers**
- Hypothesis-testing papers …
- Reviews focusing on existing empirical work …
- Explorative papers …
- Case studies …
- … that build on / extend / test / develop theory

Structure not very well-defined; storyline counts

Structure very well-defined; storyline counts for the theoretical sections
Adopt a structure that emphasizes your contribution

The structure of a theory paper

Introduction

Main sections
- Define key concepts
- Develop theory
- Compare / contrast with existing theory
- Develop propositions for testing

(Discussion)
e.g. Discuss implications for research and practice; develop agenda for future research

References

Problem

- Very few good theory papers on management consulting published in mainstream academic journals

Examples:

- A lot of theory work in MC published in (edited) books
Offer big ideas on a relevant issue

Criteria for theory papers

Offer big ideas

- Ask yourself: What is truly new here? Who should care about what I want to say? – Check with others whether your ideas are big!
- Does your paper run ahead of existing empirical research in terms of pointing your audience to hitherto unanticipated research questions?

Structure

- Engagement with real problems is better than ploughing through existing literature
- Write a good, engaging storyline
- A good theory paper has a beginning, middle, end: Begin and end a paper with a strong statement of the relevance of your ideas

Critique, revise

- Have your paper reviewed before submitting it (e.g. conferences, seminars) – submitted papers should be, in your view, publishable

Offer big ideas on a relevant issue

Five caveats for theory papers

Don’t copy
- Each paper must make a unique theory contribution; so don’t copy (not even from yourself)

Don’t lengthen
- Don’t lengthen literature reviews; focus on what you have learned from it
- Don’t exaggerate citing others

Don’t follow a recipe
- Don’t develop formal propositions or include figures unless these things contribute to your theory development effort

Don’t personalize your critique
- Don’t mount personal attacks on the authors of other theories
- Bear in mind that critiquing theory is not yet a scientific advance: It is necessary to offer alternative theory

Don’t mistake your audience
- Bear in mind the mission statement and the specific audience of the journal you target

The structure of an empirical paper

- Introduction
- Theory / Review (and hypotheses)
- Methods
- Results
- Discussion
- References
- (Appendix)
### Introduction

<table>
<thead>
<tr>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Main purpose of the introduction: To set out your objective</td>
</tr>
<tr>
<td>Theory / Review (and hypotheses)</td>
<td>Sub-structure:</td>
</tr>
<tr>
<td>Methods</td>
<td>- Background / introduction to the debate; identification of the 'research gap'</td>
</tr>
<tr>
<td>Results</td>
<td>- Statement of the <strong>research question</strong>; delimitation of your study</td>
</tr>
<tr>
<td>Discussion</td>
<td>- Explain why the research question is interesting</td>
</tr>
<tr>
<td>References</td>
<td>- Provide an indication of your findings (<em>this is a personal opinion</em>)</td>
</tr>
<tr>
<td>(Appendix)</td>
<td>- Outline structure of the paper</td>
</tr>
<tr>
<td></td>
<td>- Length: no more than 10% of the paper (maximum)</td>
</tr>
</tbody>
</table>
Theory / Review

- Outline the general theoretical approach first, then apply it to the specific case
- Avoid historical accounts of your theory
- Clarify your theoretical contribution:
  - Extend / fine-tune an existing theory
  - Compare two competing theories
  - Test applicability of a theory …
- If necessary, illustrate your theory by tables / figures
- Express hypotheses if you have specific expectations; phrase them carefully (e.g. avoid overstatements)
- Formulate expectations even if you cannot formulate hypotheses
Don’t emphasize that you are doing research on MC; emphasize your theory contribution!

Examples of recent and forthcoming papers on MC


Management consulting? That’s just your sample!
Methods

- Data / Sample
- Measures
  - Dependent variable(s)
  - Independent variables
  - (Moderating / mediating variables)
  - (Control variables)

Use appendix to explain complex measures. In qual. papers, explain coding well. In quant. papers, use well-established measures wherever possible.

- Methods (e.g. qualitative, statistical, …)
- In mgmt journals, include a correlation matrix
Results

- Sub-structure:
  - Descriptive / univariate results
  - Multivariate results
  - In regression analyses, enter variables thus:
    - Control variables
    - Independent variables
    - Interaction effects
  - Report on model quality (e.g. $R^2$, $F$, test linear combinations of variables, etc.). Increasingly popular: Confidence intervals (rather than $t$-statistics), non-parametric tests
  - Refer to hypotheses and tables / figures
  - Don’t begin discussion
Discussion

Sub-structure:

- Brief summary
- Theoretical implications (reflection on theory in the light of the results)
- Limitations of the study
- Future research
- Managerial implications
- Optional: Short outlook (don’t write a separate conclusion section)

Make sure that Discussion section relates back to introduction (have you fulfilled the initial promise to the reader? If not, rewrite Introduction and / or Discussion sections)

Often in one sub-section
Can be here (but less customary)
References

- Apply reference style guide of target journal
- Note: Length of reference list varies greatly by journal, but avoid over-referencing (at least in international journals)
- Things to reference
  - Some "classical" papers that identify the research tradition that you want to become a part of
  - Recent theory contributions
  - Recent empirical results
  - Studies in which your constructs are validated
  - Papers from the journal to which you submit
  - Only a few methodological studies
Relative lengths of the sections in an empirical paper

Analysis: Length of each section in the first five papers in AMJ 48(3), 2005, weighted by total length of the paper concerned (excluding tables, figures, appendices, but including references)

<table>
<thead>
<tr>
<th>Section</th>
<th>W. Average (Range)</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5,3% (2,2% - 6,6%)</td>
<td>- Even for an empirical journal, theoretical contribution is critical</td>
</tr>
<tr>
<td>Theory / Review</td>
<td>31,0% (15,0% - 33,3%)</td>
<td>(Theory and Discussion sections)</td>
</tr>
<tr>
<td>Methods</td>
<td>15,0% (9,0% - 21,4%)</td>
<td>- Keep the Introduction short</td>
</tr>
<tr>
<td>Results</td>
<td>11,5% (5,3% - 15,1%)</td>
<td>- Results section usually short</td>
</tr>
<tr>
<td>Discussion</td>
<td>22,0% (14,3% - 31,5%)</td>
<td>- Least heterogeneity in the References section</td>
</tr>
<tr>
<td>References</td>
<td>15,2% (12,6% - 19,1%)</td>
<td>- Only 1 in 5 papers has appendix</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- All papers have (2-4) tables, most have (1-3) figures</td>
</tr>
</tbody>
</table>
Agenda

- The structure of academic papers
- Study design
- Publishing research on management consulting
**Identifying a research question: An iterative process**

**Relationship between research question and your answer**

- A research question is not a topic area
- Any topic area has an infinite number of research questions

**Topic area**

- There is no such thing as an entirely empirical paper

**Research question**

- Theory
- Potentially evidence
A topic does not substitute for a research question

Characteristics of a good research question (1/2)

A good research question …

**Question character**
- … is a true question, i.e. it ends with a question mark

**Originality**
- … is one that has not (implicitly nor explicitly) been addressed / answered before (”research gap“)

**Interest**
- … is interesting, i.e. when answered, it has the potential to disconfirm beliefs/assumptions/prior evidence/existing theory

**Relevancy**
- … is relevant, i.e. there are theoretical and/or practical implications that follow from it once it is answered
- … is related to the current debate among your target audience (i.e. the readership of the target journal)

Analogy to statistics: You seek to disconfirm the Null
Particularly important for theory papers!

Only a necessary, not a sufficient condition
A topic does not substitute for a research question

Characteristics of a good research question (2/2)

A good research question …

**Answerable**
- … can be answered on the basis of the theory developed and/or the evidence provided

**Motivation**
- … is motivated by factors that are of concern to a wider audience (i.e. not just to you and your supervisor – identify your audience clearly and make it neither too wide nor too narrow). Many papers are rejected because they address an „overly narrow topic“, i.e. a topic for which the audience is too small.

Identifying a research question is an iterative process
Research questions address the *relationship* between phenomena.

**Structure of a research question**

- **Antecedent(s) of interest**
  - Antecedent 1
  - Antecedent 2
  - Antecedent 3

- **Antecedents to control for**
  - ?

- **Consequence**

What does „a relationship“ between antecedent and consequence mean? A **change** in the antecedent leads to a **change** in the consequence; hence for the purpose of research design you must allow both antecedents (including control factors) and consequence to **vary**.
Hold the unit of analysis constant

Example: Richter & Schröder, 2007

H 1: Service standardization  
(eases outside monitoring)

H 2.1: Capital requirements  
(hard to provide by employees)

H 2.2: Operative risk  
(foregone diversification opportunities)

H 3.1: Firm size  
(raises costs of internal governance)

H 2.2: Employee heterogeneity  
(raises costs of internal governance)

Internal allocation of ownership rights
While you must allow antecedents and consequences to vary, you must hold the unit of analysis constant.

The unit of analysis "carries" the antecedent and the consequence as its characteristics.

- **Antecedent** → ? → **Consequence**

To find out the unit of analysis of a study, it is usually best to look at the consequence (dependent variable).

**Problem:** Often, it is difficult to measure the variables of interest at the level of the unit of analysis.

Research that is beset by this problem is never going to be as strong as research that circumvents this issue.

**Unit of analysis**

- **Typical examples:**
  - Small:
    - Individual
    - Relationship
    - Team/group/business unit
    - Firm
    - Sector
    - Economy/country
  - Big:
    - The bigger the unit of analysis, the more difficult research tends to get
    - "Natural" units of analysis work best

---

European Business School
International University Schloß Reichartshausen

Ansgar Richter
August 2007
There are trends in research units

Unit of analysis by type in international management articles in *AMJ*

![Graph showing trends in unit of analysis by type in AMJ articles](image)

Source: Kirkman & Law, AMJ, Vol. 48(3), 2005, p. 384
Operationalisation is the critical step in empirical research

Relationship between constructs and measures

Operationalisation

```
\text{Intelligence} \rightarrow \text{Performance}
```

```
\text{Score in test} \_1^{t=0} \rightarrow \text{Score in test} \_2^{t=0} \rightarrow \text{Score in test} \_3^{t=0}
```

```
\text{Level at which you build your theory and derive your hypotheses}
```

```
\text{Level at which you conduct your empirical analysis}
```

"Operationalisation" -> information loss
Choose “natural” operationalizations

Example: Richter & Schröder, 2007

Service standardization
- Implementation of IT products (binary variable)
- Outsourcing (binary variable)

Capital requirements
- Office infrastructure (factor of offices, countries, continents)
- Outsourcing (binary variable)

Operative risk
- Volatility of turnover 1999-2003

Firm size
- Log (average number of employees 2002-2003)

Employee heterogeneity
- Number of industries served

Ownership allocation
0: Some outside ownership
1: Only inside ownership

Control variables:
- Log (age of firm)
- Country of origin

Method: Logit
Practical rules for making your operationalisations convincing

- Avoid heavily theoretical constructs in the first place -> if you can, limit yourself to only a few of them, and discuss them in depth

- Use measures whose validity has been shown in previous research (see journals such as Educational and Psychological Measurement); provide references for the validity of your measures

- Operationalise „hand-made“ scores carefully
  - Make rating principles explicit: „The raters assigned the value 1 if, and only if, the following conditions were fulfilled: (a) …, (b) … . They assigned the value of 2 if …“
  - Provide statistics on inter-rater agreement and how disagreements were resolved

- Choose appropriate aggregation methods:
  - Generate appealing categorical measures
  - When using averages, check whether they are meaningful
  - When factor-analyzing data, provide the following statistics and comment on them:
    - eigenvalue of the factor(s) identified
    - per cent of the variance accounted for by the factor(s)
    - factor leadings of the items
    - value of Kronbach's $\alpha$ (measure of internal reliability)
The relationship between using the help of management consultants and performance

Examples of potential research questions

(1) Does the execution of consulting projects lead to greater firm performance?
(2) Do different types of consulting projects have different effects on the performance of firms?
(3) What are the conditions for the successful execution of consulting projects in firms?
(4) Do different types of consulting teams (e.g. in terms of size, heterogeneity, prior experience of team members) show differences in performance?
(5) Does a firm's announcement that it is using the services of consultants affect its capital market performance?
(6) How long does the effect of consulting on firm performance last?
(7) Which types of firms benefit (in terms of performance improvement) from the execution of consulting projects?
Potential research design for question ( )

Antecedent(s) under investigation:

Nature of construct(s) and appropriate variable(s):

Consequence under investigation:

Nature of construct and appropriate variable(s):

Data to look for:
Agenda

- The structure of academic papers
- Study design
- Publishing research on management consulting
The publishing process - overview

Preparation of MS
- Check suitability of the MS with editor

Formal submission of MS
- Desk rejection
- Review
- Rejection

Revise & resubmit

Conditional acceptance; preparation of final MS

Publication

Rejection

MS = Manuscript
Some practical rules for getting published in management consulting

- The upside: There is a large array of publication outlets
- The downside: You can’t just write about management consulting, but need to make a broader theoretical / empirical contribution
- Watch out for special issues (e.g. JOB, JABS, Org. Studies)
- Watch out for terms that are broader than management consulting (e.g. professional services)
- Get information e.g. from the MC Division of the AoM!
- Presenting work at (good) conferences helps a lot