# Patterns in Management Research: An Analysis of US American, European and German Approaches

Kurt Matzler, Birgit Renzl

### Abstract

Several studies indicate different approaches to management research in the USA and Europe. Little is known, however, about inter-European differences. In this study, therefore, a comparative content analysis of 1,002 articles in the leading four US American, European (in English language) and German management journals published in 2000 and 2001 was conducted. The results show clear differences in research patterns (theoretical versus empirical; and if empirical, nomothetic or idiographic), purpose and data collection methods, and collaborative behavior of authors in the respective geographic areas.

Key words: management research, research paradigms, publications.

### Patterns in management research: The USA versus Europe

Management research differs substantially between Europe and America. It is often argued that there is a continental divide in research paradigms (Bengtsson, 2001). Differences persist in the prevailing theories, the research methodology and in publication patterns.

In an attempt to confront US American and European approaches in organizational research Kassem (1976) highlighted a number of differences regarding the central orientation of the authors, the approach, the methodology, etc. He described the US American researcher as a practical theorist strongly associated with business schools. The approach is rather miscroscopic (behavioural) and the methodology includes laboratory experiments, surveys, observations, longitudinal studies and one-case studies. European researchers, in contrast, are rather "abstract theorists" that are strongly associated with departments of sociology. Their approach is rather macroscopic (structural) and the preferred method is comparative case studies. Although this description of the two varying approaches is almost 30 years old, it is "surprisingly up-to-date" as Geert Hofstede puts it and he says: "Give me a new theory and I will tell you the nationality of its author" (Hofstede, 1996).

In comparative studies, the US American approach is often described as nomothetic. Researchers are primarily interested in developing and testing causal theory (e.g. Koza & Thoenig, 1995), the focus is on deductive reasoning, quantitative studies and theory testing. Empirical research is predominantly quantitative and involves an analysis of a small number of variables measured within a large sample. The European approach, in contrast, is described as being rather qualitative aiming at theory development. Europeans tend to pursue an idiographic research approach characterized by qualitative, multi-aspect in-depth studies of a small number of cases.

In fact, numerous empirical studies find significant differences. Collin et al. (1996) tested the hypothesis that there persist differences in research patterns in US American and European Management Journals. They found that US authors publish more frequently in US journals than in European journals and that they cite more frequently US journals than European ones. Furthermore, books are less frequently among the references in US journals than in European ones and the number of co-authored articles is significantly higher in the US than in Europe. The authors also confirm the US American's preference for hypothesis testing and quantitative studies. These findings indicate that in fact the "market" for management research can be segmented in terms of geographic borders.

The notion of "market segmentation" in management research is also supported by bibliometric studies. Üsdiken and Pasadeos (1995), for instance, analyzed citation and co-citation networks and found that there is no European contribution among the most cited sources in ASQ (Administrative Science Quarterly) articles published by North American authors. In OS (Organization Studies) articles, in contrast, a strong flow of ideas from US American to European authors can be observed. Some authors affirm a dominant role of US management research. Most of the top management journals are published in the USA and their editors and editorial board members are US American scholars (e.g. Pettigrew, 2001). European management research is increasingly influenced by US American standards. Especially in the UK there seems to be a strong trend to apply US standards to the assessment of research quality and to view publications in leading US journals as an indicator for research excellence (Starkley & Madan, 2001).

Notwithstanding there still exists a key difference in the use of publication outlets. Whereas in the USA publications in top peer-reviewed journals are considered as a prerequisite for tenure and job security, in most European countries much research output is disseminated through book publications (Collin et al., 1996; Koza et al., 1995).

Another stream of research finds that country differences exist not only in research approaches and paradigms but also in the prevailing theories and models. Lammers (1990), for instance, compared sociological thought on organizations between the U.S., Great Britain, France, Germany and the Netherlands and conclude that "… most studies of organizations represent either the model of a socio-cultural system, or a conglomerate of interest groups, or a mixture of the two." Although he observes a general trend towards pluriformity the main dimensions of variation between the organizations still persist.

Hofstede (1996) proposes that in organization theories the nationality of the author "... implies and implicits paradigm as to what an organization is, comes from and tries to achieve." Power, for instance, corresponds to the French tradition; the German paradigm is order and in the Nordic countries the basic paradigm is equality, the American paradigm is the market (Hofstede, 1996). As researchers from different countries have different paradigms in mind, Hofstede argues that a universal consensus about any theory of organizations is basically impossible.

Differences in research traditions and publication patterns are mainly attributed to cultural differences and the nationality of the author (Hofstede, 1996), the institutional differences (Perry, 1993; Whitley, 2000, 2003) and the incentive schemes of the market (Collin et al., 1996). Researchers who comply with the dominating paradigm in the respective market are more likely to be successful and promoted. Academic careers in Europe and in the United Stated proceed differently. Chairs and early tenure, long term job security, less focus on research output in Europe create less pressure to publish (Koza et al., 1995). In contrast, US American incentive schemes, which stress quick and voluminous publishing, oblige researchers to cooperate in order to achieve a maximum research output (Collin et al., 1996). Furthermore, Europe is characterized by individual country academic systems and low geographic mobility of researchers. Most articles and books appear in the native language of the authors which means that language differences still hinder an open flow and exchange of ideas. As a consequence, Europeans are less inclined to cooperate in international research projects.

Previous studies that investigate differences in research and publications patterns have in common that they analyze only publications in English journals. Particularities of management research and publication patterns in the single European countries are not taken into consideration. Hence, little is known about inter-European differences. One of the largest research communities in Europe is the German speaking area (Austria, Germany and Switzerland). The purpose of this paper, therefore, is to shed light on German management research patterns and to compare it with the US American and (English) European approach.

### German management research

A previous study in German research in strategic management found two characteristics which distinguishe it from US American research: a preference for broad issues and conceptual work (Matzler, Hinterhuber, Friedrich von den Eichen, & Stahl, 2003). This observation is consistent with the European research tradition (Bengtsson, 2001; Collin et al., 1996) which focuses on theory development rather than on narrow theory testing based on large scale empirical studies. As, however, most leading international journals require empirical content it becomes evident that German researchers' share of publications must necessarily be small and their standing within the international academic community weak. This study, though, included only strategic management

articles and it is not clear, whether these findings apply for general management research. Therefore, the purpose of this study is to analyze differences between US American, European and German management research in terms of research patterns (theoretical versus empirical; and if empirical, nomothetic or idiographic), purpose and data collection methods.

Additionally, the issue of differences in regard to collaborative authorship is raised in this context. Collin et al. (Collin et al., 1996) argue that US American researchers are more obliged to cooperate in order to enhance the quantity of their publications as publications in refereed journals is regarded as extremely important. A number of factors might have influenced collaborative behaviour of European researchers (Bengtsson, 2001). The European Union promotes and finances collaborations between researchers of different countries, an increasing number of conferences (e.g. EURAM, EGOS, EMAC) facilitate interaction and new information technologies render exchange of ideas more efficient and easier to manage. The question is, whether German researchers collaborate to the same extent as their European and US American colleagues and to what extent they collaborate on a national or international level.

Therefore, the purpose of this paper is to analyze German management research in four respects: (a) research methodology, i.e. theoretical versus empirical work; (b) purpose of the theoretical articles (theory review versus theory development) and purpose of empirical studies (hypothesis development, descriptive studies, theory testing); (c) quantitative versus qualitative approaches in empirical studies; and (d) collaborative behavior (the frequency of co-authored publications and the frequency of national or international cooperation).

### Method

To analyze German management research compared with US American and the (English) European management research, a content analysis of the leading management journals of each geographic area in the years 2000 and 2001 was undertaken. From each region four journals were selected. Overall, 1,002 articles were included in the analysis. The selection of the US journals was based on the impact factors of the Social Science Citation Index. European management journals were taken from Collin et al.'s study (Collin et al., 1996). In order to embrace the relatively important Scandinavian market (see Baden-Fuller et al.'s research ranking of European business schools Baden-Fuller, Ravazzolo, & Schweizer, 2000), we decided to include the Scandinavian Journal of Management which replaced Human Relations form Collin et al.'s (Collin et al., 1996) list. Objective measures of journal quality such as citation counts were not available in German management research. The Social Citation Index contains only one single German journal (Betriebswirtschaftliche Forschung und Praxis). Therefore, the selection was based on their reputation among scholars. The journals were taken from a ranking based on a study measuring quality and reputation as perceived by scholars (Matzler, Hinterhuber, Pechlaner, & Geier, 2001).

In the German-speaking area we considered the following four journals: Betriebswirtschaftliche Forschung und Praxis (BfuP), Die Betriebswirtschaft (DBW), Zeitschrift für Betriebswirtschaft (ZfB), Zeitschrift für betriebswirtschaftliche Forschung (ZfbF).

The selection of four European journals consists of the British Journal of Management (BJM), Journal of Management Studies (JMS), Organization Studies (OS), Scandinavian Journal of Management (SJM) and from the US American journals we included Academy of Management Journal (AMJ), Academy of Management Review (AMR), Administrative Science Quarterly (ASQ), and the Strategic Management Journal (SMJ).

Publications were coded according to the following items. Firstly, the articles were screened for authorship: one single author or collaborative work between two or more authors within one university, national or international cooperation respectively. We also distinguished between authors from the scientific community and practitioners. Then, the articles were classified concerning research methodology, either pure theoretical work or empirical studies. Within the theoretical work we distinguished between theory reviews versus theory development. Accordingly, the articles including empirical work were classified into the three categories theory/hypotheses development, descriptive studies, theory/hypotheses testing, and methods used. Regarding methods used, we made a distinction between predominantly quantitative (archival

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studies, survey, experiments, meta analyses) and predominately qualitative research (case studies, interviews, experiments, document analyses, action research) as indicated by the authors in their decription of the methodology used.

## Results

The study comprised a total of 1,002 articles, 340 out of which account for the German area, 270 for the European and 392 for the US-American area (Table 1).

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Journal	Articles
Betriebswirtschaftliche Forschung und Praxis (BfuP)	73
Die Betriebswirtschaft (DBW)	76
Zeitschrift für Betriebswirtschaft (ZfB)	124
Zeitschrift für betriebswirtschaftliche Forschung (ZfbF)	67
Total German Journals	340
British Journal of Management (BJM)	64
Journal of Management Studies (JMS)	98
Organization Studies (OS)	64
Scandinavian Journal of Management (SJM)	44
Total European Journals	270
Academy of Management Journal (AMJ)	143
Academy of Management Review (AMR)	72
Administrative Science Quarterly (ASQ)	46
Strategic Management Journal (SMJ)	131
Total US American Journals	392
Total	1,002

In the following sections we report the findings concerning methodological issues and collaborative behaviour.

### **Methodological Issues**

### Theoretical versus empirical articles

Regarding research methodology significant differences were found (Table 2). As expected, US American research is dominated by empirical studies. 74.5% of the published articles are of empirical nature, the share in European journals is somewhat lower (66.7%). The majority (58.8%) of the articles in the German management journal are purely theoretical, thus supporting Matzler et al.'s (Matzler et al., 2003) findings in German strategic management research. The  $\chi^2$  value of 89.854 (p< 0.001) and the corrected standardized residual in each cell show the significant differences between each geographic region.

		Geographic Area		
	German Journals	European Journals	US American Journals	Total
Empirical	140	180	292	612
	(41.2%)	(66.7%)	(74.5%)	(61.1%)
Corr. stand. res.	-9.3	2.2	7.0	
Theoretical	200	90	100	390
	(58.8%)	(33.3%)	(25.5%)	(38.9%)
Corr. stand. res.	9.3	-2.2	-7.0	
Total	340	270	392	1,002

Theoretical v	versus empirical	articles
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 $\chi^2$  value 89.854:, p< .001

Comparing the purpose of theoretical articles (Table 3) the results show that Theory Review is significantly more common in German management journals (33.0%) than in European (6.7%) and US American (6.0%) management journals ( $\chi^2$  value: 34.375, p< .001, all corrected standardized residuals above 4.0).

Table 3

	German Journals	European Journals	US American Journals	Total
Theory Review	66	6	6	78
	(33.0%)	(6.7%)	(6.0%)	(20.0%)
Corr. stand. res.	9.8	4.0	5.9	
Theory	134	84	94	312
Development	(67.0%)	(93.3%)	(94.0%)	(80.0%)
Corr. stand. res.	-9.8	-4.0	-5.9	
Total	200	90	100	390

Theoretical articles: Theory review and theory development

χ<sup>2</sup> value: 34.375, p< .001

Considering empirical work, quantitative research holds the majority in all three areas analysed and accounts for 87.7% in the US American journals (Table 4). European journals are more mixed in their research orientation; 50.6% of the empirical articles are quantitative and 49.4% are of a qualitative nature. Interestingly, German journals are ranking right in between of US American and European journals (65.5% quantitative studies). Again, the differences between the geographic regions are highly significant ( $\chi^2$  value: 79.238, p<.001).

In some of the empirical studies, of course, both qualitative and quantitative approaches were found. In this case, the article was categorized according to the predominating approach, e.g. when an exploratory study was undertaken as a basis of a quantitative study. Only when the qualitative and quantitative studies were considered equitable, two entries were allowed. This, for example, was the case when two separate studies were undertaken.

These results confirm Collin et al.'s (Collin et al., 1996) and Bengtsson's (Bengtsson, 2001) findings. US American research is mainly nomothetic (i.e. deductive reasoning, theory testing, quantitative studies) and European research is more balanced but rather idiographic (i.e. qualitative, theory building, in-depth studies of a small number of cases). German management research seems to fit neither into the US American nor into the European approach. Most articles are theoretical, if empirical studies are undertaken they are predominately quantitative.

	Geographic Area					
	German Journals	European Journals	US American Journals	Total		
Qualitative	49	89	36	174		
	(35.0%)	(49.4%)	(12.3%)	(28.4%)		
Corr. stand. res.	7.5	3.9	-10.8			
Quantitative	91	91	256	438		
	(65.0%)	(50.6%)	(87.7%)	(71.6%)		
Corr. stand. res.	-7.5	-3.9	10.8			
Total	140	180	292	612		

Qualitative versus quantitative studies

χ<sup>2</sup> value: 79.238, p< .001

Another significant difference is related to the purpose of empirical studies (Table 5). In German journals, descriptive articles held the majority (52.9%) whereas US American empirical work is dominated by hypothesis testing (88.4%). European journals seem to be more balanced. Again, German management research is significantly different from European and US American research patterns.

Table 5

		Geograph	nic Area		
_	German Journals	European Journals	US American Journals	Total	χ²
Hypothesis devel-	3	39	26	68	33.147***
opment	(2.1%)	(21.7%)	(8.9%)	(11.1%)	
Corr. stand. res.	-3.8	5.4	-1.7		
Descriptive	74	70	8	152	154.296***
	(52.9%)	(38.9%)	(2.7%)	(24.8%)	
Corr. stand. res.	8.7	5.2	-12.7		
Hypothesis test	63	71	258	392	140.597***
	(45.0%)	(39.4%)	(88.4%)	(64.1%)	
Corr. stand. res.	-5.1	-8.2	11.8		
Total	140	180	292	612	

\*\*\* p< .001

Table 6 reports the four most frequently used data collection methods in quantitative studies in the three geographic areas respectively. If two or more different methods were used, only the primary method was coded. Multiple entries were only allowed, when two or more different data collection methods were considered equally important, e.g. when two independent empirical studies with different methods were undertaken. Archival data and surveys are the most applied methods within the quantitative studies in all three areas. The differences, however, are not significant.

Significant differences are found in the data collection methods of qualitative studies (Table 7). Case studies account for 92.5% in the German area compared to 65.3% in the European and 55.6% in the US American management journals. Authors of articles in European journals seem to be the most flexible in data collection methods. German researchers rely mostly on case studies when they conduct qualitative research.

Table 6

	Geographic Area					
	German Journals	European Journals	US American Journals	Total	χ²	
Archival Data	42	43	132	217	3.058n.s.	
	(42.4%)	(43.9%)	(51.4%)	(47.8%)		
Corr. stand. res.	-1.2	9	1.7			
Survey	52	59	129	240	2.858n.s.	
	(52.5%)	(60.2%)	(50.2%)	(52.9%)		
Corr. stand. res.	1	1.6	-1.3			
Experiment	5	1	7	13	2.917n.s.	
	(5.1%)	(1.0%)	(2.7%)	(2.9%)		
Corr. stand. res.	1.5	-1.2	2			
Meta analysis	0	0	2	2		
-	(0%)	(0%)	(0.8%)	(0.4%)		
Corr. stand. res.						

Quantitative studies - Data collection

n.s. = not significant

Table 7

Qualitative studies – Data collection					
		Geographic Area			
-	German Journals	European Journals	US American Journals	Total	χ²
Action Research	0 (0%)	2 (1.9%)	1 (2.7%)	3 (1.6%)	1.056n.s.
Corr. stand. res.	-1.0	.4	.6		
Case Study	41 (93.2%)	61 (58.7%)	21 (56.8%)	123 (66.5%)	18.508***
Corr. stand. res.	4.3	-2.6	-1.4		
Document/Content Analyses <i>Corr. stand. res.</i>	2 (4.5%) -1.1	10 (9.6%) .5	4 (10.8%) .5	16 (8.6%)	1.280n.s.
Interviews	1 (2.3%)	39 (37.5%)	11 (29.7%)	51 (27.6%)	19.324***
Corr. stand. res.	-4.3	3.4	.3		

\*\*\* p<.001, \*\* p<.05, n.s. = not significant

To sum up, with the exception of data collection methods in quantitative studies, on all the variables related to research methodology German management research differs significantly from European and US American research. It does fit neither into the US American nor into the European research tradition. Therefore, one can not speak of a European research tradition per se. There obviously are clear differences between the geographic areas.

### Collaboration

It is generally believed that the quantity of articles in refereed journals is considered more important for the career in America (e.g. Collin et al., 1996). Several studies found that US American researchers are the most productive in terms of number of articles published in refereed journals (Engwall, 1996). Therefore, US American researchers are more inclined to collaborate in order to enhance the number of publications. As a consequence, one can expect a higher number of

co-authored articles in US American journals. In fact, collaboration, according to the results of our study, is found more frequently in US American journals, where only 21.9% of the articles are written by only one author (Table 8). The average number of authors is 2.21 in the USA, 1.81 in Europe and 1.68 in German Journals accordingly. Thus, in German management research there is little co-authorship (49.2% of the articles are written by one single author).

Co. authorsd articles

	Geographic Area				
	German Journals	European Journals	US American Journals		
One author	167	116	86		
	(49.2%)	(43.0%)	(21.9%)		
Corr. stand. res.	5.8	2.4	-7.9		
Co-authored	173	154	306		
	(50.8%)	(57.0%)	(78.1%)		
Corr. stand. res.	-5.8	-2.4	7.9		
Average number of	1.68	1.81	2.21		
authors (S.D.)	(.83)	(.84)	(.93)		

χ<sup>2</sup> value: 81.743, p< .001 ANOVA: F=35.718; p = .000

Co-authorship on the international, national and university level also differs among the geographic areas. Despite the fact, that some EU programs are designed to enhance international collaboration, European and especially German articles with international co-authorship are far behind the articles published in US journals. One could expect, however, that if German authors collaborate internationally they publish their work in English journals. Surprisingly, in 2000 only five articles written by German authors were found in the international journals (4 out of them co-authored with international partners).

Table 9

Cooperation on an international, national, within university level, and with practitioners – percentage of total articles

		Geographic Area			
	German Jour- nals	European Journals	US American Journals	Total	χ²
International Coop- eration <i>Corr. stand. res.</i>	10 (2.9%) -6.4	34 (12.6%) .2	78 (19.9%) 6.0	122 (12.2%)	46.019***
National Cooperation Corr. stand. res.	27 (7.9%) -10.2	71 (26.3%) 8	184 (46.9%) 10.6	282 (28.1%)	137.549***
Cooperation within universities Corr. stand. res.	117 (34.4%) 11.7	71 (26.3%) 7.1	86 (21.9%) 8.6	274 (27.3%)	14.462***
Cooperation with practitioners <i>Corr. stand. res.</i>	51 (15. 0%) 7.7	8 (3.0%) -2.8	7 (1.8%) -4.9	66 (6.6%)	59.560***

\*\*\* p<.001

In total, most cooperation is at the national and university level across all three geographic areas (28.1% and 27.3% of all articles respectively). In German management research, the

Table 8

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highest level of cooperation is at the university level (34.4% of all articles selected). Whereas in European Journals cooperation within university and national cooperation (26.3% for both) are most common, US American researchers predominantly collaborate on the national level (46.9%). In the German area only 2.9% of the total articles are co-authored on an international basis compared with 12.6% in the European and 19.9% in the US American area.

Table 10

	Geographic Area				
-	German Journals	European Journals	US American Journals	Total	χ²
Practitioners	92 (27.1%)	9 (3.3%)	7 (1.8%)	108 (10.8%)	142.236***
Corr. stand. res.	11.9	-4.6	-7.4	(10.070)	
Academics	294	269	390	953	82.588***
Corr. stand. res.	(86.5%) -11.9	(99.6%) -4.6	(99.5%) 11.6	(95.1%)	

Authors – academics and practitioners

\*\*\* p< .001

Concerning co-authorship with practitioners involved, the figures in German management research (15.0% of the total of articles) are considerably higher than in the European (3.0%) and US American (1.8%) area (see Table 9). Furthermore, as Table 10 shows, in European and US American journals there is almost always an academic involved (99.6% and 99.5%), whereas in German journals 27.1% of the articles are authored by practitioners.

### Conclusion

In this paper we analyzed German management research concerning research patterns and collaborative behavior of the authors. Significant differences were found on the following variables:

- Theoretical versus empirical nature of the article
- Purpose of theoretical articles (theory review versus theory development)
- Purpose of empirical articles (hypothesis development and descriptive studies versus hypothesis testing)
- Methods used in qualitative studies
- Number of co-authored articles
- Collaboration (international, national and university level)
- Collaboration with practitioners.

To conclude, in terms of methodology German management research differs significantly from the US American and the so-called European approach. German researchers have a preference for theory development, publishing a very high number of purely conceptual articles. If, however, empirical studies are undertaken they are predominantly of a quantitative nature. But, in contrast to the US American approach, a relatively high number of these articles are descriptive. Furthermore, US American and European researchers are frequently collaborating on an international and national level. In German management research the majority of published research is carried out by one single author and international collaborations and collaborations between different universities are relatively rare. If articles are co-authored, German researchers prefer collaboration within the same department or university. These findings not only confirm previous studies that found a continental divide in management research but also show that within Europe clear differences exist. Hence, European management research is characterized by a considerable variety in methods and publication patterns. As a consequence, we can not speak of *the* European approach of management research. It is reasonable to assume that also in other European research communities differences also exist. This assumption about European variety, however, needs further elaboration.

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