

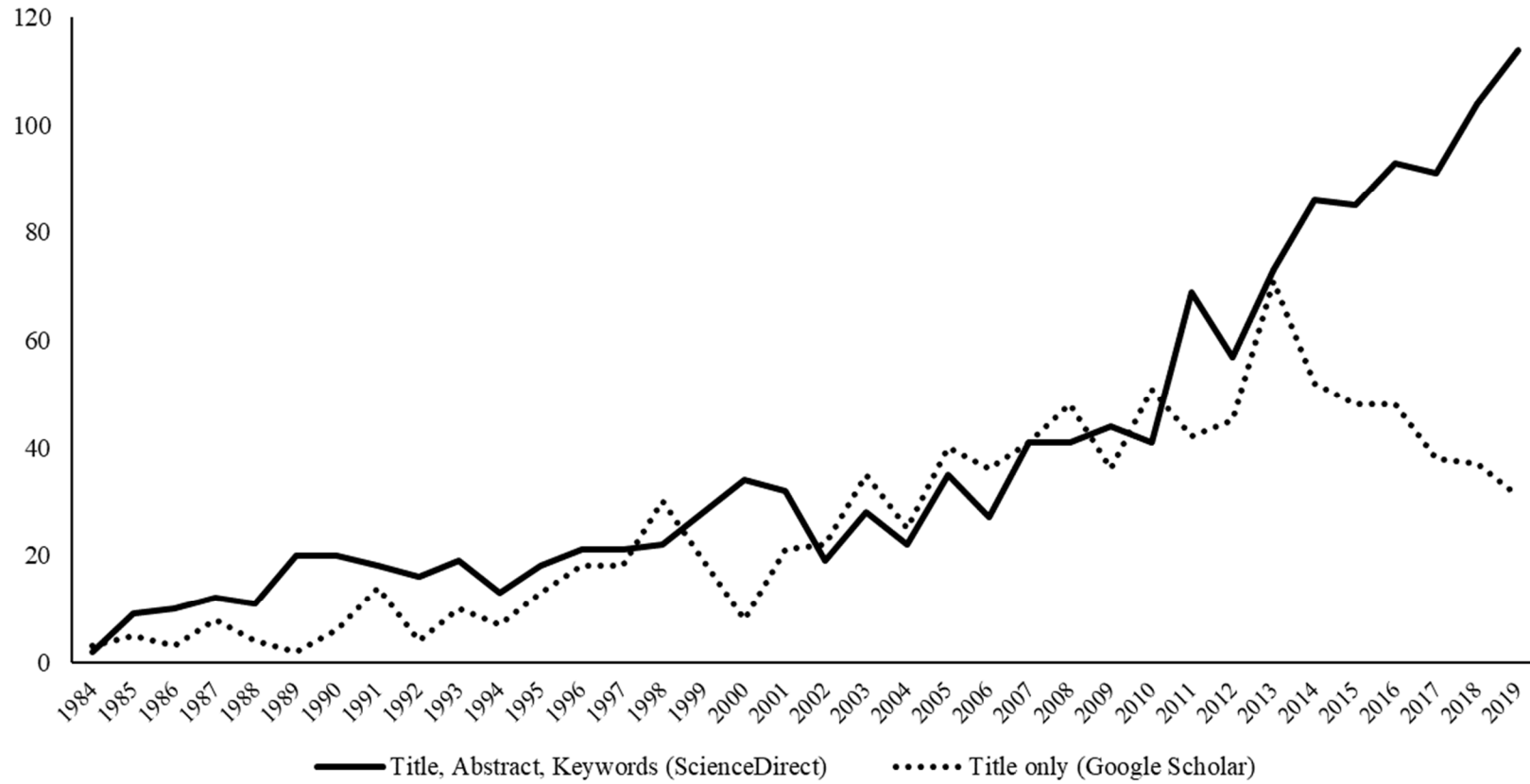
Re-Examining Strategic Flexibility: A Meta-Analysis of its Antecedents, Consequences and Contingencies

WEB APPENDIX

Dennis Herhausen, Robert E. Morgan, Danilo Brozović, and Henk W. Volberda

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Web Appendix 1: Studies on Strategic Flexibility published by Year



Notes: The search on Science Direct was limited to research and review articles to ensure a high quality of studies.

Web Appendix 2: Studies included in the Meta Analysis

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Web Appendix 3: Details of the Studies

No.	Literature Stream	Type	Sample Size	Antecedents	Consequences	Contingencies
1	Management	Survey data	217	✓	✓	✓
2	Management	Survey data	203	✓	✓	
3	Management	Survey data	312	✓	✓	✓
4	Management	Survey data	155		✓	
5	Marketing	Survey data	725	✓	✓	✓
6	Management	Survey data	222	✓	✓	✓
7	Innovation	Survey data	175	✓	✓	✓
8	Management	Panel data	25/125	✓	✓	
9	Marketing	Survey data	243	✓	✓	✓
10	Management	Survey data	29	✓		
11	Entrepreneurship	Survey data	142	✓	✓	
12	Strategy	Survey data	169	✓	✓	✓
13	Management	Survey data	100		✓	
14	Management	Survey data	107	✓	✓	
15	Strategy	Survey data	426	✓	✓	✓
16	Strategy	Survey data	783	✓	✓	
17	Operations	Survey data	135	✓		
18	Marketing	Survey data	160	✓	✓	
19	Management	Survey data	160		✓	
20	Operations	Survey data	141	✓	✓	
21	Management	Survey data	139		✓	
22	Management	Survey data	148	✓	✓	
23	Management	Survey data	143		✓	
24	Management	Survey data	122	✓	✓	✓
25	Management	Survey data	148	✓		
26	Management	Survey data	132	✓		
27	Management	Survey data	448		✓	
28	Management	Survey data	148		✓	
29	Management	Survey data	173	✓	✓	
30	Management	Survey data	453	✓		
31	Innovation	Survey data	180	✓	✓	✓
32	Management	Survey data	203	✓		
33	Management	Survey data	200		✓	✓
34	Management	Survey data	203	✓		
35	Management	Panel data	155	✓	✓	
36	Management	Survey data	41	✓	✓	
37	Operations	Survey data	180/237		✓	
38	Management	Survey data	117	✓		
39	Entrepreneurship	Survey data	110	✓	✓	✓
40	Marketing	Survey data	120	✓	✓	✓
41	Management	Panel data	245	✓	✓	
42	Management	Survey data	166	✓	✓	✓

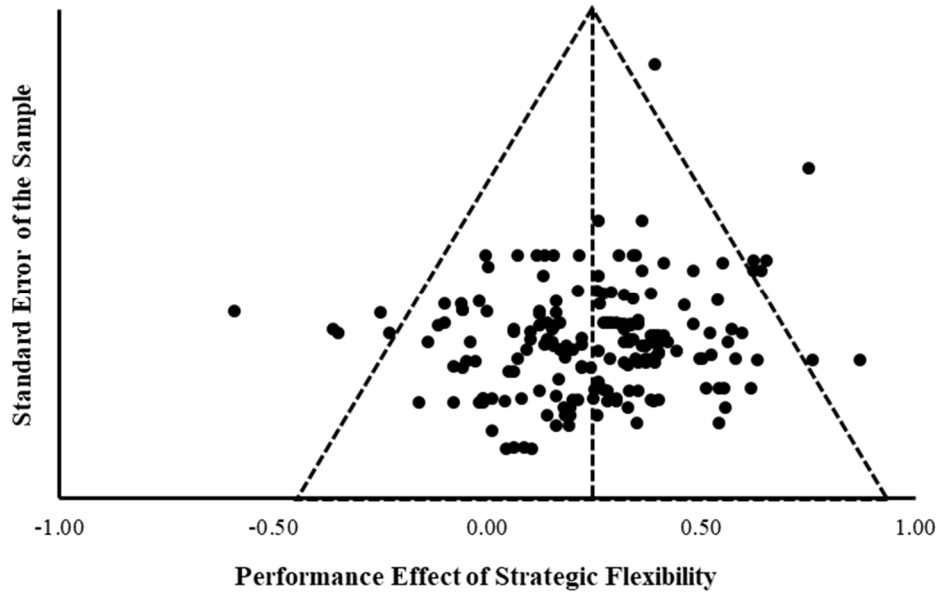
No.	Literature Stream	Type	Sample Size	Antecedents	Consequences	Contingencies
43	Marketing	Survey data	433		✓	✓
44	Marketing	Survey data	218	✓	✓	✓
45	Marketing	Survey data	143	✓	✓	
46	Management	Survey data	139	✓	✓	
47	Marketing	Survey data	149	✓	✓	
48	Management	Survey data	104		✓	
49	Innovation	Survey data	102		✓	
50	Entrepreneurship	Survey data	87	✓	✓	✓
51	Marketing	Survey data	173	✓	✓	✓
52	Innovation	Survey data	83/78		✓	
53	Innovation	Survey data	76/83	✓	✓	
54	Marketing	Survey data	141	✓	✓	
55	Marketing	Survey data	1581/1729		✓	
56	Strategy	Survey data	59	✓		
57	Strategy	Panel data	263	✓	✓	
58	Strategy	Panel data	455	✓	✓	✓
59	Management	Survey data	508	✓	✓	
60	Innovation	Survey data	227	✓	✓	✓
61	Management	Survey data	607	✓	✓	✓
62	Innovation	Survey data	351	✓	✓	
63	Marketing	Survey data	135	✓		
64	Operations	Survey data	403	✓	✓	✓
65	Management	Survey data	156	✓	✓	✓
66	Strategy	Survey data	441		✓	
67	Entrepreneurship	Survey data	135		✓	
68	Management	Panel data	195	✓	✓	
69	Strategy	Panel data	124/101		✓	
70	Management	Survey data	167	✓	✓	✓
71	Strategy	Survey data	109		✓	
72	Management	Survey data	230	✓	✓	✓
73	Management	Survey data	366		✓	
74	Marketing	Survey data	122	✓	✓	
75	Management	Survey data	181	✓	✓	
76	Management	Survey data	80		✓	
77	Marketing	Survey data	141	✓	✓	
78	Management	Survey data	57	✓	✓	
79	Marketing	Survey data	204		✓	
80	Innovation	Survey data	249		✓	
81	Management	Panel data	925	✓	✓	✓
82	Strategy	Survey data	1904	✓		
83	Entrepreneurship	Survey data	417	✓	✓	
84	Management	Survey data	294/123	✓		
85	Innovation	Survey data	227	✓		
86	Innovation	Survey data	213		✓	

No.	Literature Stream	Type	Sample Size	Antecedents	Consequences	Contingencies
87	Management	Panel data	100	✓	✓	
88	Strategy	Panel data	73	✓	✓	✓
89	Marketing	Survey data	161	✓		
90	Management	Survey data	113	✓	✓	
91	Management	Survey data	213	✓		
92	Management	Survey data	91	✓		
93	Management	Survey data	737		✓	
94	Management	Survey data	181	✓	✓	✓
95	Entrepreneurship	Survey data	358	✓	✓	
96	Management	Survey data	153/153	✓	✓	✓
97	Entrepreneurship	Survey data	115	✓	✓	
98	Strategy	Survey data	192	✓	✓	✓

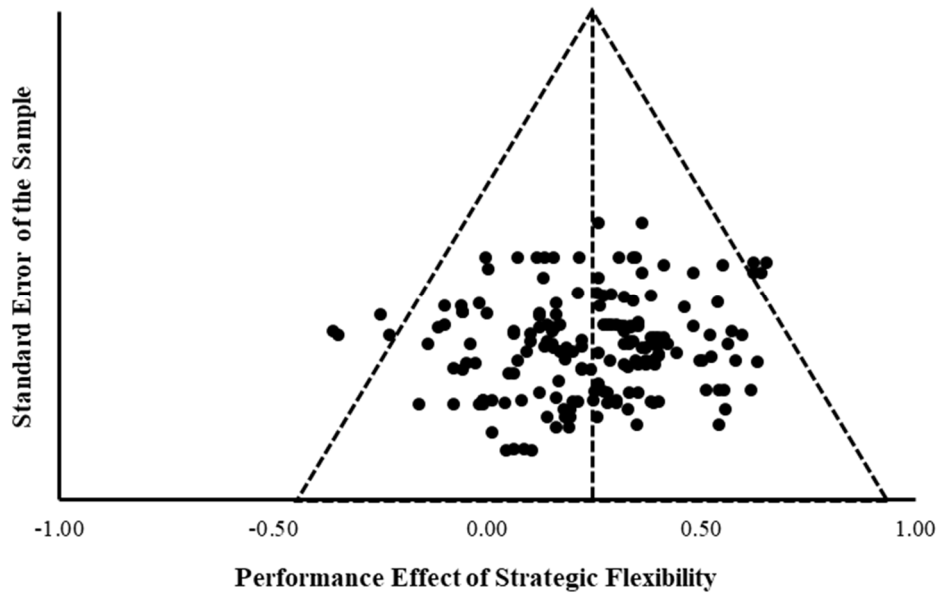
Note: In line with the conventional meta-analytic approach (e.g. Bergh *et al.* 2016, Combs *et al.* 2019), we base our analyses of antecedents, consequences and contingencies of strategic flexibility on bivariate correlations reported in the original studies. Thus, our classification of antecedents, consequences and contingencies do not necessarily match the conceptual models in the original studies.

Web Appendix 4: Funnel Plots of the Performance Effect

A: Funnel Plot for all Effect Sizes in the Population



B: Funnel Plot for the Trimmed Effect Sizes in the Population



Note: We followed the suggestions from Egger *et al.*, (1997) and Sterne and Egger (2001) and used the standard error of the sample to measure precision of the original studies.

Web Appendix 5: Meta-Analytic Correlation Matrix

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Entrepreneurial orientation												
2. Market orientation	<i>0.32</i>											
3. Learning orientation	<i>0.12</i>	<i>0.33</i>										
4. Decentralization	0.00	0.00	0.00									
5. Slack resources	<i>0.17</i>	0.13	<i>0.29</i>	<i>0.40</i>								
6. Formal routines	<i>0.32</i>	-0.02	<i>0.39</i>	<i>-0.62</i>	0.07							
7. Firm size	0.05	0.02	<i>-0.24</i>	-0.06	-0.02	0.05						
8. Firm age	-0.08	0.02	-0.05	<i>0.11</i>	0.05	0.09	<i>0.11</i>					
9. Past success	0.04	<i>0.11</i>	<i>0.29</i>	-0.03	-0.05	0.00	0.06	0.09				
10. Environmental dynamism	0.06	<i>0.16</i>	<i>0.24</i>	0.00	0.01	<i>0.13</i>	-0.02	-0.02	<i>-0.14</i>			
11. Demand uncertainty	<i>0.10</i>	<i>0.15</i>	-0.06	0.00	0.00	0.00	0.00	0.04	-0.05	<i>0.21</i>		
12. Competitive intensity	<i>0.12</i>	<i>0.20</i>	<i>0.19</i>	0.00	<i>0.12</i>	0.01	-0.03	-0.01	-0.02	<i>0.75</i>	<i>0.30</i>	
13. Strategic flexibility	<i>0.51</i>	<i>0.40</i>	<i>0.40</i>	<i>0.28</i>	<i>0.24</i>	<i>0.12</i>	-0.03	0.01	-0.06	<i>0.22</i>	0.06	<i>0.30</i>

Note: Correlations in italics are significant at $p < 0.05$ (two-sided tests).

Web Appendix 6: Categorization of Performance Measures

Innovation Outcomes	Market Outcomes	Financial Outcomes
Exploitative innovation	Business performance (non-financial)	Acquisition performance (financial)
Exploratory innovation		After-tax return on sales
Incremental innovation	Business unit performance (non-financial)	Average profits per customer
Innovation	Change in market share	Business performance (financial)
Innovation climate	Competitive advantage	E-commerce performance
Innovation performance	Competitive position	Export sales performance
Innovative capacity	Customer performance	Financial firm performance
Innovative HR practices	Customer retention	Financial performance
New product development program performance	Customer satisfaction	Financial results
New product program performance	Customer value	Firm financial performance
New product success	Firm performance (non-financial)	Firm performance (financial)
Radical innovation	Market performance	Firm value
Value creation innovation	Market share	Lower cost
Value proposition innovation	Non-financial firm performance	Market profitability
	Organizational performance (non-financial)	Net income
	Reputation	Operating efficiency
	Service quality	Organizational performance (financial)
	Strategic business performance (non-financial)	Overall firm performance (financial)
	Website performance	Overall profitability
		Profit growth
		Profit rate
		Profitability
		Return on assets
		Return on investment
		Return on sales
		Return on total assets
		Return on total assets growth
		Sales
		Sales growth
		Sales volume
		Strategic business performance (financial)
		Stock price performance
		Tobin's q
		Total sales growth

Note: We categorize the various operationalizations of firm performance, in line with other meta-analyses and systematic reviews (e.g. Katsikeas *et al.*, 2016; Kirca *et al.*, 2005; Rubera and Kirca 2012). We considered the measurement items rather than the construct names for our categorization. Performance measure that did not fit in the three categories were coded as “other performance outcomes”.

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