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Sara Polier

Forward-looking External Search as a Driver for Innovation

An Empirical Analysis of the Value
Contribution of Different Search
Strategies for Corporate Foresight

With a foreword by Prof. Dr. Cornelius Herstatt

 Springer Gabler

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Dissertation Technische Universität Hamburg/2018

Forschungs-/Entwicklungs-/Innovations-Management
ISBN 978-3-658-26180-1 ISBN 978-3-658-26181-8 (eBook)
<https://doi.org/10.1007/978-3-658-26181-8>

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Foreword

Strategic Foresight describes the future-oriented behavior of companies to anticipate changes in the external corporate environment. Companies face a variety of difficulties, from searching beyond organizational boundaries to addressing a high degree of uncertainty.

In recent years, the search for valuable knowledge outside company boundaries has received significant attention. A wealth of research can be found in the areas of Open Innovation, User Innovation – focusing on an innovation perspective – as well as External Search and Strategic Foresight – focusing on a strategy perspective. Dr. Polier's work combines both research streams and advances the idea of Open Foresight.

Few systematic studies in the context of Open Foresight have been carried out to date. This is the focus of Dr. Polier's monograph. Focusing on the phenomenon of forward-looking external search in the context of Foresight, Dr. Polier's work is among the first to combine and systematically examine the areas of Foresight and External Search. The work comprises a co-citation analysis followed by a mixed-methods approach encompassing a large-scale quantitative survey and subsequent expert interviews.

A first contribution of her work lies in a systematic analysis of the existing body of literature in the field of External Search. The in-depth study demonstrates that the current focus of work is mainly driven by the innovation literature focusing on external search for product innovations and solution knowledge throughout the innovation process. As a consequence, the findings reveal that research related to identifying future change is underrepresented in the current landscape. Against this background, the benefit of integrating both research areas is emphasized, constituting a significant contribution of Dr. Polier's research.

In her second study, Dr. Polier examines the relationship between the scope and direction of forward-looking external search and the value it adds for a company's foresight activities. For this purpose, she combines a quantitative survey with expert interviews. Her contribution should be seen in the context of the controversial question of how to effectively capture the value of corporate foresight activities. The study's results contribute valuable insights into this question and serve as an important stimulus for future research.

Overall, Dr. Polier succeeds in presenting an interesting and relevant contribution to innovation and strategy research from both a theoretical and a practical point of view.

Univ. Prof. Dr. Cornelius Herstatt
Hamburg in January 2019

Acknowledgements

In today's dynamic environment, competitive advantage is largely driven by a firm's ability to constantly adapt to change by identifying emerging demands and opportunities for innovation. Paying attention to early signs of future trends and discontinuities in a forward-looking manner enables firms to detect future change early and to adjust their strategic direction accordingly. However, searching for signs of future change is challenging, since they often originate outside of a firm's current business focus. Consequently, firms must leverage external knowledge from groups such as customers, value chain partners or academia to enrich their internal knowledge stock and reduce the risk of blind spots.

This thesis bridges literature from the research bodies of organizational search and corporate foresight to gain a deeper understanding of the role of forward-looking external search for gaining value from corporate foresight. Hereby, the study not only advances current research in the fields of external search and foresight but also provides valuable guidance for practitioners engaging in innovation and foresight activities.

This work would not have been possible without the ongoing support of my supervisors, colleagues, friends, family, and my husband. I would like to express my sincere gratitude to all of them for offering valuable feedback, engaging in thoughtful discussions, sharing their experience and contributing in any possible way to the successful completion of my studies over the past three years. In particular, I am grateful for the excellent research guidance and practical support of my supervisors Prof. Dr. Herstatt and Prof. Dr. Späth who, in a genuinely caring manner, provided direction to my studies and inspired my curiosity.

Hanover, January 2019

Sara Polier

Table of Content

1 Introduction.....	1
1.1 Research motivation.....	1
1.2 Research objectives and contribution	3
1.3 Outline of the thesis.....	5
2 Theoretical Foundations of Organizational Search and Corporate Foresight.....	7
2.1 Organizational search	7
2.1.1 External search.....	8
2.1.2 Forward-looking search.....	10
2.1.3 Balancing exploration and exploitation	12
2.2 Corporate foresight.....	13
2.2.1 Search for early signs of future change.....	14
2.2.2 Open foresight	16
2.2.3 Organizational implementation of foresight	17
2.2.4 Value contribution of foresight.....	18
3 The Research Field of External Search	21
3.1 Methodological approach	22
3.1.1 Selection of core dataset on external search.....	22
3.1.2 Co-citation analysis.....	24
3.1.2.1 Extraction of references.....	24
3.1.2.2 Retrieval of co-citation scores.....	25
3.1.2.3 Centrality and cluster analysis	25
3.1.3 Content analysis	26
3.1.3.1 Category selection.....	27
3.1.3.2 Descriptive analysis.....	27
3.2 Findings from co-citation and content analysis	28
3.2.1 Intellectual structure of the research field of external search.....	28
3.2.1.1 Network density and centrality measures.....	28
3.2.1.2 Cluster distribution.....	30
3.2.2 Current focus of research on external search.....	34
3.2.3 Dimensions of external search strategies.....	37
3.2.3.1 External search scope	38
3.2.3.2 External search direction	41
4 Research Questions and Hypotheses for the Empirical Study	43
4.1 Research gap and further research questions	43
4.2 Research framework and hypotheses development	45
4.2.1 Direct effects of forward-looking external search on the value of foresight	46

4.2.1.1 Scope of forward-looking external search	46
4.2.1.2 Direction of forward-looking external search	52
4.2.2 Mediating effects of exploratory learning	56
4.2.3 Moderating effects of foresight formalization	59
5 Empirical Study on Forward-looking External Search	61
5.1 Methodological approach	61
5.1.1 Research design	61
5.1.2 Sample definition and selection	62
5.1.3 Quantitative study	67
5.1.3.1 Operationalization of the research framework	69
5.1.3.2 Study implementation	81
5.1.3.3 Method of data analysis	85
5.1.3.4 Data cleansing and preparation	86
5.1.4 Qualitative study	91
5.1.4.1 Study implementation	92
5.1.4.2 Method of data analysis	95
5.2 Findings from the quantitative study	97
5.2.1 Data distribution and bias treatment	97
5.2.1.1 Data distribution	97
5.2.1.2 Bias treatment	98
5.2.2 Descriptive analysis	100
5.2.2.1 Sample description	101
5.2.2.2 Descriptive analysis of main constructs	105
5.2.2.3 Group comparisons and correlation analysis	110
5.2.3 Model 1: Forward-looking external search scope and the value of foresight	114
5.2.3.1 Measurement model	114
5.2.3.2 Structural model	126
5.2.3.3 Evaluation of control variables	133
5.2.3.4 Mediating effects of exploratory learning	135
5.2.3.5 Moderating effects of foresight formalization	136
5.2.3.6 Unobserved heterogeneity	143
5.2.4 Model 2: Forward-looking external search direction and the value of foresight	145
5.2.4.1 Measurement model	145
5.2.4.2 Structural model	148
5.2.4.3 Evaluation of control variables	153
5.2.4.4 Mediating effects of exploratory learning	154
5.2.4.5 Moderating effects of foresight formalization	155
5.2.4.6 Unobserved heterogeneity	160
5.2.5 Model evaluation for the control group	161
5.2.6 Cluster analysis of forward-looking external search strategies	163

5.2.7 Summary evaluation of hypotheses	166
5.3 Findings from the qualitative study	168
5.3.1 Forward-looking external search behavior.....	168
5.3.2 Value contribution of foresight.....	170
5.3.3 Internal organization of foresight.....	172
5.3.4 Barriers and success factors for value contribution from foresight.....	174
5.3.4.1 Results orientation.....	175
5.3.4.2 Organization and structures.....	176
5.3.4.3 Resources	177
5.3.4.4 Management commitment	177
5.3.4.5 Communication.....	178
5.3.4.6 Culture and people	179
6 Discussion of Findings	181
6.1 Intellectual structure and current focus of the research field of external search	181
6.2 Forward-looking external search and the value of foresight.....	183
6.2.1 Forward-looking external search scope.....	183
6.2.2 Forward-looking external search direction.....	187
6.2.3 Value contribution of foresight.....	189
6.2.4 The mediating role of exploratory learning	192
6.2.5 The moderating role of the formalization of foresight.....	194
6.2.6 Summary evaluation of empirical results	197
7 Conclusion	199
7.1 Theoretical implications	199
7.1.1 Implications for research on external search	199
7.1.2 Implications for research on corporate foresight	200
7.2 Managerial implications	203
7.3 Limitations and future research	206
References.....	209
Appendix.....	241

Index of Figures

Figure 1: Structure of the thesis.....	6
Figure 2: Generic three-stage process of corporate foresight.....	15
Figure 3: Value contributions of corporate foresight for innovation management.....	20
Figure 4: Methodological approach for reviewing the field of external search.....	22
Figure 5: Overview of co-citation network (L > 0.45, C > 3) with clusters.....	30
Figure 6: Number of publications in core dataset across years.....	34
Figure 7: Research framework and hypotheses for the empirical study.....	46
Figure 8: Sample distribution by industry.....	101
Figure 9: Sample distribution by firm size (FTE).....	102
Figure 10: Sample distribution by firm age (years).....	102
Figure 11: Sample distribution by country (headquarter).....	103
Figure 12: Sample distribution by position of respondents.....	104
Figure 13: Sample distribution by tenure of respondents (years).....	104
Figure 14: Usage of market sources.....	106
Figure 15: Usage of scientific sources.....	106
Figure 16: Usage of intermediary sources.....	106
Figure 17: Search direction by industry, mean degree of usage.....	107
Figure 18: Technological distance of search.....	107
Figure 19: Geographical distance of search.....	107
Figure 20: Value contribution of foresight as initiator.....	108
Figure 21: Value contribution of foresight as strategist.....	109
Figure 22: Value contribution of foresight as opponent.....	109
Figure 23: Exploratory learning, mean degree of agreement.....	110
Figure 24: Foresight formalization, mean degree of agreement.....	110
Figure 25: Value contribution of foresight as second-order construct.....	123
Figure 26: Overview of structural model results for model 1a.....	128
Figure 27: Overview of structural model results for model 1b.....	130
Figure 28: Structural modeling approach for moderator construct.....	137
Figure 29: Simple slope plot for moderating effect: Top management support (model 1b).....	141
Figure 30: Simple slope plot for moderating effect: Diffusion channels (model 1b).....	142
Figure 31: Overview of structural model results for model 2a.....	148
Figure 32: Overview of structural model results for model 2b.....	150
Figure 33: Simple slope plot for moderating effect: Top-down trigger (model 2b).....	156
Figure 34: Simple slope plot for moderating effect: Org. responsibility (model 2b).....	157
Figure 35: Simple slope plot for moderating effect: Processes (model 2b).....	158

Figure 36: Simple slope plot for moderating effect: Top management support (model 2b)..	159
Figure 37: Identified barriers and success factors from expert interviews	174
Figure 38: R&D intensity (as percentage of net sales) of firms in main sample.....	278
Figure 39: Innovation performance (as percentage of total annual sales) in main sample ..	278
Figure 40: Firm performance (operating profits) in main sample.....	279
Figure 41: Firm performance (compared to main competitor) in main sample	279
Figure 42: Dedicated resources for foresight activities in main sample.....	280
Figure 43: R&D intensity (as percentage of net sales) of firms in control group	280
Figure 44: Innovation performance (as percentage of total annual sales) in control group..	281
Figure 45: Firm performance (compared to main competitor) in control group.....	281
Figure 46: Dedicated resources for foresight activities in control group	282
Figure 47: Distribution per industry for R&D Scoreboard firms.....	282
Figure 48: Distribution of firm size (FTE) for R&D Scoreboard firms	283
Figure 49: Distribution of country (headquarter) for R&D Scoreboard firms	283
Figure 50: Usage of external knowledge sources (control group)	284
Figure 51: Technological distance of search (control group).....	284
Figure 52: Geographical distance of search (control group)	284
Figure 53: Value contribution of foresight as initiator (control group)	285
Figure 54: Value contribution of foresight as strategist (control group)	285
Figure 55: Value contribution of foresight as opponent (control group).....	285
Figure 56: Exploratory learning (control group), mean degree of agreement	286
Figure 57: Foresight formalization (control group), mean degree of agreement.....	286
Figure 58: Final measurement model 1	289
Figure 59: Final measurement model 2	300

Index of Tables

Table 1: Overview of most central publications in co-citation network.....	29
Table 2: Journal distribution of publications in co-citation clusters.....	31
Table 3: Journal distribution of publications in core dataset.....	35
Table 4: Most frequent keywords of publications in core dataset.....	35
Table 5: Most frequently cited publications in core dataset.....	36
Table 6: Dimensions of external search strategies discussed in core dataset.....	37
Table 7: Target sample criteria and characteristics.....	64
Table 8: Operationalization of search breadth, search depth, and the search directions.....	72
Table 9: Operationalization of technological and geographical distance of search.....	74
Table 10: Operationalization of the value contribution of foresight.....	77
Table 11: Operationalization of exploratory learning.....	78
Table 12: Operationalization of foresight formalization.....	79
Table 13: Response rate for main sample and control group.....	87
Table 14: Final sample for main sample and control group.....	91
Table 15: Overview of expert interviews.....	95
Table 16: Group comparison for varying levels of search.....	111
Table 17: Correlations of main constructs and control variables.....	113
Table 18: EFA results for value contribution of foresight (after exclusion of OP02).....	116
Table 19: EFA results for exploratory learning (after exclusion of EL03, EL04, and EL05).....	117
Table 20: EFA results across all reflective constructs.....	118
Table 21: Indicator reliability for model 1.....	119
Table 22: Internal consistency reliability for model 1.....	120
Table 23: Convergent validity for model 1.....	121
Table 24: Discriminant validity for model 1: Cross loadings.....	122
Table 25: Discriminant validity for model 1: Fornell-Larcker criterion.....	122
Table 26: Discriminant validity for model 1: Heterotrait-monotrait ratio.....	123
Table 27: Evaluation of second-order measurement model for model 1a.....	125
Table 28: Structural model results for model 1a: VIF, TOL, and path coefficients.....	129
Table 29: Structural model results for model 1a: R^2 , f^2 , Q^2 , and q^2	129
Table 30: Structural model results for model 1b: VIF, TOL, and path coefficients.....	131
Table 31: Structural model results for model 1b: R^2 , f^2 , Q^2 , and q^2	132
Table 32: Structural model results for model 1b with and without control variables.....	134
Table 33: Results of mediator analysis for model 1b.....	136
Table 34: Results of moderator analysis for model 1b: Top-down trigger.....	139
Table 35: Results of moderator analysis for model 1b: Organizational responsibility.....	139

Table 36: Results of moderator analysis for model 1b: Processes.....	140
Table 37: Results of moderator analysis for model 1b: Top management support.....	141
Table 38: Results of moderator analysis for model 1b: Diffusion channels	142
Table 39: Results of FIMIX-PLS for model 1b.....	144
Table 40: Multicollinearity for model 2a	146
Table 41: Indicator relevance and significance for model 2a	147
Table 42: Structural model results for model 2a: VIF, TOL, and path coefficients	149
Table 43: Structural model results for model 2a: R^2 , f^2 , Q^2 , and q^2	149
Table 44: Structural model results for model 2b: VIF, TOL, and path coefficients	151
Table 45: Structural model results for model 2b: R^2 , f^2 , Q^2 , and q^2	152
Table 46: Structural model results for model 2b with and without control variables.....	153
Table 47: Results of mediator analysis for model 2b	154
Table 48: Results of moderator analysis for model 2b: Top-down trigger	155
Table 49: Results of moderator analysis for model 2b: Organizational responsibility	156
Table 50: Results of moderator analysis for model 2b: Processes.....	158
Table 51: Results of moderator analysis for model 2b: Top management support.....	159
Table 52: Results of moderator analysis for model 2b: Diffusion channels	160
Table 53: Results of FIMIX-PLS for model 2b.....	160
Table 54: Structural model results for the control group (model 1b).....	161
Table 55: Structural model results for the control group (model 2b).....	162
Table 56: Results of cluster analysis: Size of clusters and mean of clustering variables.....	164
Table 57: Results of cluster analysis: Mean of FsValue, ExpLearning, and Formalization ..	165
Table 58: Overview of hypotheses evaluation	167
Table 59: Sensitivity analysis for link strength (L) at constant component size ($C > 3$)	242
Table 60: Sensitivity analysis for component size (C) at constant link strength ($L > 0.45$) ..	243
Table 61: Coding scheme for content analysis of core dataset.....	244
Table 62: Overview of clusters in co-citation network	245
Table 63: Analysis of skewness, kurtosis, and normality for main sample	269
Table 64: Analysis of skewness, kurtosis, and normality for control group.....	270
Table 65: Analysis of response bias for main sample and control group.....	272
Table 66: Correlation analysis for main constructs (main sample).....	274
Table 67: Correlation matrix for model 1b including marker variable (main sample)	275
Table 68: Correlation matrix for model 2b including marker variable (main sample)	275
Table 69: Structural model results for model 1b: Marker variable (main sample).....	276
Table 70: Structural model results for model 2b: Marker variable (main sample).....	277
Table 71: EFA results for value contribution of foresight (prior to exclusion of indicators)...	287
Table 72: EFA results for exploratory learning (prior to exclusion of indicators).....	288

Table 73: EFA results for exploratory learning (after exclusion of EL03 and EL05).....	288
Table 74: Structural model results for model 1b including control variables	290
Table 75: Simple effects of moderator analysis for model 1b: Top-down trigger	292
Table 76: Simple effects of moderator analysis for model 1b: Org. responsibility.....	293
Table 77: Simple effects of moderator analysis for model 1b: Processes	294
Table 78: Simple effects of moderator analysis for model 1b: Top management support ..	295
Table 79: Simple effects of moderator analysis for model 1b: Diffusion channels	296
Table 80: Results of FIMIX-PLS for model 1b: Information criteria	297
Table 81: Results of FIMIX-PLS for model 1b: Relative segment size	297
Table 82: Indicator reliability, internal consistency, and convergent validity for model 2	298
Table 83: Discriminant validity for model 2: Cross loadings	299
Table 84: Discriminant validity for model 2: Fornell-Larcker criterion	299
Table 85: Discriminant validity for model 2: Heterotrait-monotrait ratio	300
Table 86: Structural model results for model 2b including control variables	301
Table 87: Simple effects of moderator analysis for model 2b: Top-down trigger	303
Table 88: Simple effects of moderator analysis for model 2b: Org. responsibility.....	304
Table 89: Simple effects of moderator analysis for model 2b: Processes	305
Table 90: Simple effects of moderator analysis for model 2b: Top management support ..	306
Table 91: Simple effects of moderator analysis for model 2b: Diffusion channels	307
Table 92: Results of FIMIX-PLS for model 2b: Information criteria	308
Table 93: Results of FIMIX-PLS for model 1b: Relative segment size	308
Table 94: Reflective measurement model results for model 1 (control group).....	309
Table 95: Structural model results for model 1b (control group).....	310
Table 96: Results of mediator analysis for model 1b (control group).....	311
Table 97: Results of moderator analysis for model 1b (control group)	312
Table 98: Reflective measurement model results for model 2 (control group).....	314
Table 99: Formative measurement model results for model 2 (control group)	315
Table 100: Structural model results for model 2b (control group).....	316
Table 101: Results of mediator analysis for model 2b (control group).....	317
Table 102: Results of moderator analysis for model 2b (control group)	318
Table 103: Results of cluster analysis: Silhouette measure and cluster size.....	320
Table 104: Results of cluster analysis: Firm characteristics.....	320
Table 105: Overview of dimensions, categories, and codes from expert interviews.....	321

List of Abbreviations

AIC	Akaike's information criterion
AVE	Average variance extracted
BIC	Bayesian information criterion
C	Component size
CAIC	Consistent Akaike's information criterion
CB-SEM	Covariance-based structural equation modeling
CEO	Chief Executive Officer
CITC	Corrected item-to-total correlation
CoCit-Score	Co-citation score
DF	Degrees of freedom
e.g.	exempli gratia (English: for example)
EFA	Exploratory factor analysis
EL	Exploratory learning (indicator coding)
EM	Expectation maximization
EN	Entropy statistic
et al.	et alii (English: and others)
EU	European Union
ExpLearning	Exploratory learning (construct coding)
F	Test statistic of F-test (F-statistic)
f ²	Effect size f ²
FF	Formalization of foresight (indicator coding)
FIMIX-PLS	Finite mixture partial least squares
FsValue	Value contribution of foresight (construct coding)
FTE	Full-time equivalent
GD	Geographical distance (indicator coding)
GeoDist	Geographical distance (construct coding)
H	Hypothesis
HTMT	Heterotrait-monotrait ratio
i.e.	id est (English: that is)
ID	Identification
IIC	Inter-item correlation
IN	Value contribution of foresight as initiator (indicator coding)
incl.	including
KMO	Kaiser-Meyer-Olkin
KS test	Kolmogorov-Smirnov test

KS	Knowledge source (indicator coding)
L	Link strength
MANOVA	Multivariate analysis of variance
Max.	Maximum value
MCAR	Missing completely at random
Min.	Minimum value
MSA	Measure of sampling adequacy
MW test	Mann-Whitney U test
N	Sample size
n.s.	not significant
n/a	not applicable
OP	Value contribution of foresight as opponent (indicator coding)
ORA	Organizational Risk Analyzer
p	Probability (p-value)
PLS-POS	Partial least squares prediction-oriented segmentation
PLS-SEM	Partial least squares structural equation modeling
q ²	Effect size q ² (relative impact of predictive relevance)
Q ²	Predictive relevance (Stone-Geisser's Q ²)
R&D	Research and development
R ²	Coefficient of determination (explained variance)
R ² _{adj}	Adjusted coefficient of determination
RQ	Research question
s.	significant
SD	Standard deviation
SEM	Structural equation modeling
Sig.	Significance
ST	Value contribution of foresight as strategist (indicator coding)
SW test	Shapiro-Wilk test
T	Test statistic of T-test (T-statistic)
TD	Technological distance (indicator coding)
TechDist	Technological distance (construct coding)
TOL	Tolerance statistic
US	United States (of America)
VIF	Variance inflation factor