Contextual Ambidexterity in Organizations: Antecedents and Performance Consequences

DISSERTATION
of the University of St. Gallen,
Graduate School of Business Administration,
Economics, Law and Social Sciences (HSG)
to obtain the title of
Doctor of Philosophy in Management

submitted by

Christian A. J. Schudy
from
Germany

Approved on the application of

Prof. Dr. Heike Bruch
and

Prof. Dr. Martin Hilb

Dissertation no. 3865
Difo-Druck GmbH, Bamberg 2010
The University of St. Gallen, Graduate School of Business Administration, Economics, Law and Social Sciences (HSG) hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St. Gallen, November 2, 2010

The President:

Prof. Dr. Ernst Mohr, PhD
Acknowledgements

Many people contributed to this epic voyage, and I thank them.

First and foremost, I express my gratitude to my supervisor, Prof. Dr. Heike Bruch. Heike encouraged me with her enthusiasm and supported me in many ways. She challenged my assumptions, gave invaluable feedback, and provided great opportunities. Moreover, I also am indebted to my co-supervisor, Prof. Dr. Martin Hilb for his support and feedback.

I thank my colleagues at the Institute for Leadership and HR Management for creating an inspiring atmosphere, reviewing my work, and for our many pleasant talks at the coffee bar and in their offices. These all helped me through the ups and downs of this journey. Thank you guys; I had such a great time with you! Among them are Dr. Stephan Boehm, Dr. Simon DeJong, Daniela Dolle, Petra Kipfelsberger, Simon Koerner, Justus Kunz, Dr. Florian Kunze, Ulrich Leicht Deobald, Nina Lins, David Maus, Dr. Jochen Menges, Dr. Sabine Poralla, Dr. Anneloes Raes, Andrea Schmid, Slawomir Skwarek, Leonie Spalckhaver, Dr. Anne Spychala, Dr. Bernd Vogel, Dr. Frank Walter, and Jette Wiegel.

I also thank my friends from the peer-group, Dr. Taiga Brahm, Dr. Karin Kreutzer, and Dr. Christine Seeliger, and my friends from Konstanz, who made the last years really worthwhile.

I am very grateful to my parents, Inge and Dieter Schudy, and to my two brothers, Simeon and Tobias Schudy, who have supported me throughout my life. Their encouragement, support, and understanding have brought me to where I am today.

Finally, I thank the most important person in my life, Jane Wolf, from the bottom of my heart. She gave me love, trust, and support in good and in challenging situations over the last couple of years.

St. Gallen, November 2010

Christian Schudy
Overview of Contents

1 Introduction ............................................................................................................... 1
   1.1 Relevance of the Topic and Research Problem ............................................. 1
   1.2 Literature Review and Development of Research Questions ....................... 4
   1.3 Methodological Approach ........................................................................... 28
   1.4 Outline of the Dissertation .......................................................................... 31

2 Study 1 - Transformational Leadership Climate, Contextual Ambidexterity,
   and Firm Performance .......................................................................................... 35
   2.1 Introduction, Relevance, and Intended Contributions ................................. 35
   2.2 Theoretical Background ............................................................................. 37
   2.3 Hypotheses Development .......................................................................... 39
   2.4 Method ....................................................................................................... 47
   2.5 Results ...................................................................................................... 55
   2.6 Discussion ................................................................................................. 58

3 Study 2 - Collective Personality, Contextual Ambidexterity, and Firm
   Performance ....................................................................................................... 64
   3.1 Introduction, Relevance, and Intended Contributions ................................. 64
   3.2 Theoretical Background ............................................................................. 67
   3.3 Hypotheses Development .......................................................................... 69
   3.4 Method ....................................................................................................... 78
   3.5 Results ...................................................................................................... 85
   3.6 Discussion ................................................................................................. 92

4 Study 3 - Contextual Ambidexterity, Productive Organizational Energy, and
   Firm Performance ............................................................................................... 97
   4.1 Introduction, Relevance, and Intended Contributions ................................. 97
   4.2 Theoretical Background ............................................................................. 99
   4.3 Hypotheses Development ......................................................................... 101
   4.4 Method ..................................................................................................... 109
   4.5 Results ...................................................................................................... 115
   4.6 Discussion ................................................................................................. 118

5 Overall Discussion .............................................................................................. 123
   5.1 Summary and Integration of the Research Findings .................................. 123
   5.2 Overall Limitations and Directions for Future Research .......................... 125
   5.3 Main Practical Implications ....................................................................... 131
   5.4 Reflections and Overall Conclusion .......................................................... 140

References ............................................................................................................. 151

Curriculum Vitae ..................................................................................................... 179
# Table of Contents

List of Figures ............................................................................................................. viii

List of Tables ................................................................................................................ ix

List of Abbreviations ..................................................................................................... x

Abstract ........................................................................................................................ xii

Zusammenfassung ........................................................................................................ xiii

1 Introduction ............................................................................................................. 1

1.1 Relevance of the Topic and Research Problem ............................................... 1

1.1.1 The Challenge for Organizations to Succeed ............................................. 1

1.1.2 Research Problem ....................................................................................... 2

1.2 Literature Review and Development of Research Questions ....................... 4

1.2.1 The Concept of Ambidexterity .................................................................... 4

1.2.2 Antecedents of Ambidexterity ....................................................................... 7

1.2.2.1 Culture and Context .............................................................................. 8

1.2.2.2 Leadership .......................................................................................... 10

1.2.2.3 Competencies ..................................................................................... 12

1.2.2.4 Knowledge Exchange Mechanisms .................................................. 13

1.2.3 Consequences of Ambidexterity ................................................................... 14

1.2.3.1 Direct Performance Effects .................................................................... 15

1.2.3.2 Contingent Performance Effects ........................................................ 18

1.2.3.3 Summary of Ambidexterity’s Performance Effects ........................... 19

1.2.4 Summary and Development of Specific Research Agenda ....................... 19

1.2.4.1 Focus on Contextual Ambidexterity .................................................. 19

1.2.4.2 Leadership for Fostering Contextual Ambidexterity ......................... 20

1.2.4.3 Collective Personality to Facilitate Contextual Ambidexterity ......... 21
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.4.4 Productive Organizational Energy as a Mechanism that Links</td>
<td>23</td>
</tr>
<tr>
<td>Contextual Ambidexterity and Firm Performance</td>
<td></td>
</tr>
<tr>
<td>1.2.4.5 Integration of the Studies and Aim of the Dissertation</td>
<td>24</td>
</tr>
<tr>
<td>1.2.4.6 Summary of the Main Contributions to Theory and Practice</td>
<td>26</td>
</tr>
<tr>
<td>1.3 Methodological Approach</td>
<td>28</td>
</tr>
<tr>
<td>1.3.1 Research Paradigm</td>
<td>29</td>
</tr>
<tr>
<td>1.3.2 Study Design</td>
<td>30</td>
</tr>
<tr>
<td>1.4 Outline of the Dissertation</td>
<td>31</td>
</tr>
<tr>
<td>1.4.1 Overall Design</td>
<td>31</td>
</tr>
<tr>
<td>1.4.2 Chapter Structure</td>
<td>32</td>
</tr>
<tr>
<td>2 Study 1 - Transformational Leadership Climate, Contextual Ambidexterity, and Firm Performance</td>
<td>35</td>
</tr>
<tr>
<td>2.1 Introduction, Relevance, and Intended Contributions</td>
<td>35</td>
</tr>
<tr>
<td>2.2 Theoretical Background</td>
<td>37</td>
</tr>
<tr>
<td>2.2.1 Leadership and Contextual Ambidexterity</td>
<td>37</td>
</tr>
<tr>
<td>2.2.2 Transformational Leadership Climate</td>
<td>38</td>
</tr>
<tr>
<td>2.3 Hypotheses Development</td>
<td>39</td>
</tr>
<tr>
<td>2.3.1 Transformational Leadership Climate and Contextual Ambidexterity</td>
<td>39</td>
</tr>
<tr>
<td>2.3.2 Contextual Ambidexterity and Firm Performance</td>
<td>44</td>
</tr>
<tr>
<td>2.3.3 The Mediation Model: TFL Climate, Contextual Ambidexterity, and Firm Performance</td>
<td>46</td>
</tr>
<tr>
<td>2.4 Method</td>
<td>47</td>
</tr>
<tr>
<td>2.4.1 Research Setting and Data Collection</td>
<td>47</td>
</tr>
<tr>
<td>2.4.2 Measurements and Validation</td>
<td>49</td>
</tr>
<tr>
<td>2.4.2.1 Transformational Leadership Climate</td>
<td>49</td>
</tr>
<tr>
<td>2.4.2.2 Contextual Ambidexterity</td>
<td>51</td>
</tr>
<tr>
<td>2.4.2.3 Firm Performance</td>
<td>52</td>
</tr>
<tr>
<td>2.4.2.4 Control Variables</td>
<td>53</td>
</tr>
<tr>
<td>2.4.2.5 Discriminant and Convergent Validity</td>
<td>53</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>2.4.3 Data Analysis</td>
<td>54</td>
</tr>
<tr>
<td>2.5 Results</td>
<td>55</td>
</tr>
<tr>
<td>2.5.1 Descriptive Statistics</td>
<td>55</td>
</tr>
<tr>
<td>2.5.2 Hypotheses Testing</td>
<td>55</td>
</tr>
<tr>
<td>2.5.3 Post-Hoc-Analyses</td>
<td>57</td>
</tr>
<tr>
<td>2.6 Discussion</td>
<td>58</td>
</tr>
<tr>
<td>2.6.1 Summary of Findings and Theoretical Contributions</td>
<td>58</td>
</tr>
<tr>
<td>2.6.2 Practical Implications</td>
<td>61</td>
</tr>
<tr>
<td>2.6.3 Limitations and Future Research</td>
<td>62</td>
</tr>
<tr>
<td>2.6.4 Conclusion</td>
<td>63</td>
</tr>
<tr>
<td>3 Study 2 - Collective Personality, Contextual Ambidexterity, and Firm Performance</td>
<td>64</td>
</tr>
<tr>
<td>3.1 Introduction, Relevance, and Intended Contributions</td>
<td>64</td>
</tr>
<tr>
<td>3.2 Theoretical Background</td>
<td>67</td>
</tr>
<tr>
<td>3.2.1 Contextual Ambidexterity</td>
<td>67</td>
</tr>
<tr>
<td>3.2.2 Collective Personality</td>
<td>67</td>
</tr>
<tr>
<td>3.3 Hypotheses Development</td>
<td>69</td>
</tr>
<tr>
<td>3.3.1 Collective Personality as a Driver of Contextual Ambidexterity</td>
<td>69</td>
</tr>
<tr>
<td>3.3.1.1 Collective Extraversion</td>
<td>69</td>
</tr>
<tr>
<td>3.3.1.2 Collective Agreeableness</td>
<td>70</td>
</tr>
<tr>
<td>3.3.1.3 Collective Conscientiousness</td>
<td>71</td>
</tr>
<tr>
<td>3.3.1.4 Collective Openness to Experience</td>
<td>72</td>
</tr>
<tr>
<td>3.3.1.5 Collective Emotional Stability</td>
<td>73</td>
</tr>
<tr>
<td>3.3.2 Contextual Ambidexterity and Firm Performance</td>
<td>74</td>
</tr>
<tr>
<td>3.3.3 Contextual Ambidexterity as a Mediator in the Collective Personality-Firm Performance Relation</td>
<td>76</td>
</tr>
<tr>
<td>3.4 Method</td>
<td>78</td>
</tr>
<tr>
<td>3.4.1 Research Setting, Data Collection, and Sample</td>
<td>78</td>
</tr>
<tr>
<td>3.4.2 Measurements and Validation</td>
<td>81</td>
</tr>
</tbody>
</table>
Table of Contents

3.4.2.1 Collective Personality ................................................................. 81
3.4.2.2 Contextual Ambidexterity ............................................................... 82
3.4.2.3 Firm Performance ....................................................................... 83
3.4.2.4 Control variables ......................................................................... 84

3.4.3 Data Analysis .................................................................................. 85

3.5 Results ............................................................................................... 85
3.5.1 Descriptive Statistics ................................................................. 85
3.5.2 Hypotheses Testing ..................................................................... 87
3.5.3 Post-Hoc-Analyses ................................................................. 91

3.6 Discussion ......................................................................................... 92
3.6.1 Summary of Findings and Theoretical Contributions ................. 92
3.6.2 Practical Implications ................................................................. 94
3.6.3 Limitations and Future Research Directions ................................ 94
3.6.4 Conclusion ............................................................................... 95

4 Study 3 - Contextual Ambidexterity, Productive Organizational Energy, and Firm Performance ................................................................. 97

4.1 Introduction, Relevance, and Intended Contributions ..................... 97

4.2 Theoretical Background..................................................................... 99
4.2.1 Contextual Ambidexterity ............................................................. 99
4.2.2 Productive Organizational Energy .............................................. 100

4.3 Hypotheses Development ............................................................... 101
4.3.1 Contextual Ambidexterity and Firm Performance ....................... 101
4.3.2 Contextual Ambidexterity and Productive Organizational Energy ... 102
4.3.3 Productive Organizational Energy’s Impact on Firm Performance .... 105
4.3.4 Contextual Ambidexterity, Firm Performance, and the Mediation Effect of Productive Organizational Energy ........................................ 108

4.4 Method ............................................................................................. 109
4.4.1 Research Setting and Data Collection ........................................... 109
4.4.2 Measurements and Validation ..................................................... 111
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4.2.1</td>
<td>Contextual Ambidexterity</td>
<td>111</td>
</tr>
<tr>
<td>4.4.2.2</td>
<td>Productive Organizational Energy</td>
<td>112</td>
</tr>
<tr>
<td>4.4.2.3</td>
<td>Firm Performance</td>
<td>113</td>
</tr>
<tr>
<td>4.4.2.4</td>
<td>Control Variables</td>
<td>114</td>
</tr>
<tr>
<td>4.4.2.5</td>
<td>Discriminant and Convergent Validity</td>
<td>114</td>
</tr>
<tr>
<td>4.4.3</td>
<td>Data Analysis</td>
<td>115</td>
</tr>
<tr>
<td>4.5</td>
<td>Results</td>
<td>115</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Descriptive Statistics</td>
<td>115</td>
</tr>
<tr>
<td>4.5.2</td>
<td>Hypotheses Testing</td>
<td>116</td>
</tr>
<tr>
<td>4.6</td>
<td>Discussion</td>
<td>118</td>
</tr>
<tr>
<td>4.6.1</td>
<td>Summary of Findings and Theoretical Contributions</td>
<td>118</td>
</tr>
<tr>
<td>4.6.2</td>
<td>Practical Implications</td>
<td>119</td>
</tr>
<tr>
<td>4.6.3</td>
<td>Limitations and Future Research Directions</td>
<td>120</td>
</tr>
<tr>
<td>4.6.4</td>
<td>Conclusion</td>
<td>121</td>
</tr>
<tr>
<td>5</td>
<td>Overall Discussion</td>
<td>123</td>
</tr>
<tr>
<td>5.1</td>
<td>Summary and Integration of the Research Findings</td>
<td>123</td>
</tr>
<tr>
<td>5.2</td>
<td>Overall Limitations and Directions for Future Research</td>
<td>125</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Limitations and Ways to Address Them in Future Research</td>
<td>125</td>
</tr>
<tr>
<td>5.2.2</td>
<td>General Ideas for Future Research</td>
<td>127</td>
</tr>
<tr>
<td>5.3</td>
<td>Main Practical Implications</td>
<td>131</td>
</tr>
<tr>
<td>5.3.1</td>
<td>Becoming More Aware of Contextual Ambidexterity’s Performance Implications</td>
<td>132</td>
</tr>
<tr>
<td>5.3.2</td>
<td>Gaining Knowledge on Drivers of Contextual Ambidexterity</td>
<td>133</td>
</tr>
<tr>
<td>5.3.3</td>
<td>Upper Management Strategies to Foster Drivers of Contextual Ambidexterity</td>
<td>134</td>
</tr>
<tr>
<td>5.3.4</td>
<td>Human Resource Management Strategies to Facilitate Drivers of Contextual Ambidexterity</td>
<td>135</td>
</tr>
<tr>
<td>5.3.4.1</td>
<td>Detection Strategies</td>
<td>135</td>
</tr>
<tr>
<td>5.3.4.2</td>
<td>Training Programs</td>
<td>136</td>
</tr>
</tbody>
</table>
# Table of Contents

5.3.4.3 Feedback and Promotion Strategies ................................................. 137
5.3.4.4 Recruitment Strategies ................................................................. 138
5.3.5 Conclusion for the Practical Implications ................................................. 139
5.4 Reflections and Overall Conclusion ............................................................... 140
  5.4.1 Reflections on the Dissertation ......................................................... 140
  5.4.2 Conclusion ................................................................................................. 141
6 Appendix .............................................................................................................. 143
  6.1 Survey Items Study 1 ...................................................................................... 143
  6.2 Survey Items Study 2 ...................................................................................... 147
  6.3 Survey Items Study 3 ...................................................................................... 149
References .................................................................................................................. 151

Curriculum Vitae ...................................................................................................... 179
List of Figures

Figure 1.1. Punctuated Equilibrium ................................................................. 5
Figure 1.2. Different Types of Ambidexterity ................................................... 7
Figure 1.3. Overall Design of the Empirical Studies ...................................... 25
Figure 1.4. Chapter Structure ...................................................................... 34
Figure 2.1. Research Model Study 1 ............................................................... 37
Figure 3.1. Research Model Study 2 ............................................................... 66
Figure 4.1. Research Model Study 3 ............................................................... 99
Figure 5.1. Integrated Research Findings ...................................................... 125
Figure 5.2. Overall Contributions to Practice ............................................... 132
List of Tables

Table 1.1. Main Contributions to Theory ................................................................. 28
Table 2.1. Means, Standard Deviations, and Correlations of the Study Variables..... 56
Table 2.2. Hierarchical Regression Analyses for Hypothesis 1, 2, and 3 ............... 57
Table 2.3. Bootstrap Results for the Mediation Model........................................... 57
Table 3.1. Means, Standard Deviations, and Correlations of the Study Variables..... 86
Table 3.2. Hierarchical Regression Analyses for Hypothesis 1 and 3 ..................... 88
Table 3.3. Hierarchical Regression Analyses for Hypothesis 2 .............................. 90
Table 3.4. Sobel Test: Indirect Effects and Significance for Normal Distribution..... 90
Table 3.5. Bootstrap Results for Indirect Effect ....................................................... 91
Table 4.1. Means, Standard Deviations, and Correlations of the Study Variables... 116
Table 4.2. Hierarchical Regression Analyses for Hypothesis 1, 2, and 3 ............... 117
Table 4.3. Bootstrap Results for the Indirect Effect ............................................... 118
Table 6.1. Survey Items for Transformational Leadership Climate ...................... 143
Table 6.2. Survey Items for Contextual Ambidexterity........................................... 145
Table 6.3. Survey Items for Firm Performance (Study 1) ..................................... 146
Table 6.4. Survey Items for Five Factors of Collective Personality Measure .......... 147
Table 6.5. Survey Items for Firm Performance (Study 2) ..................................... 148
Table 6.6. Survey Items for Productive Organizational Energy ............................ 149
Table 6.7. Survey Items for Firm Performance (Study 3) ..................................... 150
**List of Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFI</td>
<td>Big Five Inventory</td>
</tr>
<tr>
<td>BMWi</td>
<td>German federal ministry of economics and technology</td>
</tr>
<tr>
<td>CEO</td>
<td>chief executive officer</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>chi square value</td>
</tr>
<tr>
<td>cf.</td>
<td>confer / compare</td>
</tr>
<tr>
<td>CFA</td>
<td>confirmatory factor analysis</td>
</tr>
<tr>
<td>CFI</td>
<td>comparative fit index</td>
</tr>
<tr>
<td>CI</td>
<td>confidence interval</td>
</tr>
<tr>
<td>CMIN</td>
<td>minimum value of the discrepancy</td>
</tr>
<tr>
<td>$\Delta$</td>
<td>delta</td>
</tr>
<tr>
<td>df</td>
<td>degrees of freedom</td>
</tr>
<tr>
<td>e.g.</td>
<td>example gratia/for example</td>
</tr>
<tr>
<td>Ed./Eds.</td>
<td>editor/editors</td>
</tr>
<tr>
<td>et al.</td>
<td>et alii</td>
</tr>
<tr>
<td>etc.</td>
<td>et cetera</td>
</tr>
<tr>
<td>F</td>
<td>f-test value</td>
</tr>
<tr>
<td>GFI</td>
<td>goodness of fit index</td>
</tr>
<tr>
<td>H</td>
<td>hypothesis</td>
</tr>
<tr>
<td>HR</td>
<td>human resource</td>
</tr>
<tr>
<td>i.e.</td>
<td>id est/that is</td>
</tr>
<tr>
<td>ICC</td>
<td>intraclass correlation coefficient</td>
</tr>
<tr>
<td>LL</td>
<td>lower limit</td>
</tr>
<tr>
<td>log</td>
<td>common logarithm</td>
</tr>
<tr>
<td>M</td>
<td>mean</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>n</td>
<td>number of observations</td>
</tr>
<tr>
<td>n.s.</td>
<td>not significant</td>
</tr>
<tr>
<td>p</td>
<td>level of significance</td>
</tr>
<tr>
<td>p.</td>
<td>page</td>
</tr>
<tr>
<td>POE</td>
<td>productive organizational energy</td>
</tr>
<tr>
<td>r</td>
<td>Pearson product-moment correlation coefficient</td>
</tr>
<tr>
<td>R²</td>
<td>squared multiple correlation coefficient</td>
</tr>
<tr>
<td>RMSEA</td>
<td>root mean square error of approximation</td>
</tr>
<tr>
<td>r&lt;sub&gt;wg&lt;/sub&gt;</td>
<td>index of interrater agreement</td>
</tr>
<tr>
<td>SD</td>
<td>standard deviation</td>
</tr>
<tr>
<td>SE</td>
<td>standard error</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium sized enterprises</td>
</tr>
<tr>
<td>SPSS</td>
<td>statistical package for the social sciences</td>
</tr>
<tr>
<td>SRMR</td>
<td>Standardized Root Mean Square Residual</td>
</tr>
<tr>
<td>β</td>
<td>beta-coefficient</td>
</tr>
<tr>
<td>t</td>
<td>t-test value</td>
</tr>
<tr>
<td>TFL</td>
<td>transformational leadership</td>
</tr>
<tr>
<td>TLI</td>
<td>tucker lewis index</td>
</tr>
<tr>
<td>TMT</td>
<td>top management team</td>
</tr>
<tr>
<td>UL</td>
<td>upper limit</td>
</tr>
<tr>
<td>vs.</td>
<td>versus</td>
</tr>
</tbody>
</table>
Abstract

Scholars have argued for the importance and need to exploit existing resources and to explore new ones. From simultaneously conducting these activities tensions are considered likely to arise. Organizations that succeed in managing these tensions are theorized to have high and sustained performance. The literature proposes two broad ways on how organizations might balance these tensions. Research on structural ambidexterity suggests separating exploration and exploitation activities into different organizational units. To achieve this type of ambidexterity, the top management has to integrate these separate units. The other approach, contextual ambidexterity, proposes that ambidexterity can be achieved within one unit, based on a context that enables all employees to act in favor of alignment and adaptability. Yet, limited knowledge on how structural ambidexterity might be achieved exists, and even less is known on the antecedents of contextual ambidexterity. Moreover, little empirical research on ambidexterity’s performance impact exists that revealed mixed results.

This dissertation addresses these gaps and presents three separate studies that investigate different antecedents and performance consequences of contextual ambidexterity. Study 1, using a sample of 120 German small and medium sized organizations, demonstrates that transformational leadership (TFL) climate facilitates contextual ambidexterity and firm performance. Study 2 reveals that the five factors of collective personality are positively associated with contextual ambidexterity and firm performance, using a sample consisting of 121 small-to-medium-sized German organizations. Study 3 thoroughly investigates contextual ambidexterity’s impact on firm performance and shows that productive organizational energy (POE) is a vital mediator of this relation. This model is investigated with a sample containing 71 small-to-medium-sized German organizations.

The results from all studies demonstrate contextual ambidexterity to affect different aspects of firm performance. Hence, my dissertation contributes not only to gaining knowledge on contextual ambidexterity’s antecedents, but also to increasing the awareness of its consequences for firm performance. The dissertation integrates the studies’ findings in a concluding chapter and provides specific strategies for transforming organizations into contextual ambidextrous firms.
Zusammenfassung


"It is not the strongest of the species that survives nor the most intelligent, but rather the one most adaptable to change".

Charles Darwin
(as quoted by Leon C. Megginson, 1963, p. 4)

1 Introduction

1.1 Relevance of the Topic and Research Problem

1.1.1 The Challenge for Organizations to Succeed

The organizations’ ultimate goal is to be successful. However, organizations differ markedly with respect to their performance. Statistics show many organizations to struggle for survival. For instance, only 32 percent of the organizations established in 1995 in the UK have existed 10 years later (BIS, 2007). Eurostat reported death rates of about 9 percent for employer enterprises in the EU and the US each year (death rates for 2004: EU: 9.1%; US: 9.0%) (Schrör, 2008). A well-known example of such failure is Polaroid, which became very successful in the 1970s and 1980s with their instant film cameras but went bankrupt in 2001. On the other hand, some organizations have successfully existed for many years. For instance, 3M, an office supplies company established in 1902, still prospers.

The question arising from these facts is why some companies succeed while others fail. March (1991) developed a theory on explorative and exploitative organizational learning, which might explain success and failure of organizations. He suggested that, on the one hand, organizations should exploit their existing resources. This involves leveraging existing competencies, processes, ideas (Jansen, George, Van den Bosch, & Volberda, 2008), and behaviors directed towards existing technology, products, or marketing activities with incremental refinements (Lubatkin, Simsek, Yan, & Veiga, 2006). On the other hand, organizations need to be in tune with their environment and able to adapt to changing demands (March, 1991). This is called exploration and includes the development of new competencies that are directed at future demands. Exploration "is intended to respond to, as well as drive, latent environmental trends by creating innovative technologies and new markets" (Lubatkin et al., 2006, p. 648). Thus, organizations that are successful in exploration adapt to changes in the
environment and explore new competencies, processes, and ideas, and develop new products and services for the existing or emerging markets (Jansen et al., 2008).

For organizations to succeed and survive, it is necessary to be good at both because organizations that exploit while exclude exploration might be trapped in suboptimal stable equilibria, not being in tune with the changing environment. On the other hand, organizations that explore but neglect exploitation will not gain the benefits they could have achieved with their exploration activities because they will not succeed in leveraging their ideas and innovations (March, 1991). However, organizations struggle to be successful at both as activities directed at exploitation and at adapting the organization compete for scarce resources (March, 1991). Hence, tensions between exploration and exploitation occur. Nevertheless, some organizations master these tensions. For example, over all the years, 3M was able to exploit existing resource in pursuit of the organizational goals. Moreover, 3M changed its business several times to remain in tune with the markets. It started as a mining company, later produced sandpaper, cellophane, and magnetic tape recorders, and nowadays, it is a successful producer of office supplies. Another example is IBM, which started its business as a maker of mechanical office equipment in which it was very successful. Today, this industry is outdated. Nevertheless, IBM mastered the challenge to exploit their resources while simultaneously being in tune with the environment. Now, IBM’s main business is service and consulting.

These examples show that certain organizations are able to master the challenges of exploration and exploitation. Organizations that are able to exploit their current resources while simultaneously adapting to changing environments and future demands are called ‘ambidextrous organizations’.

1.1.2 Research Problem
Prior research (e.g., March, 1991) reasoned that exploration and exploitation are mutually exclusive as both compete for scarce resources. Due to the theorized positive performance consequences of conducting exploration and exploitation, emerging research have began to theorize on how organizations might succeed in overcoming the tensions between exploration and exploitation and reason on how ambidexterity
might be achieved. As I will outline in more detail in section 1.2.1, two broad types of ambidexterity have been established.

*Structural ambidexterity* (e.g., Tushman & O’Reilly, 1996) is achieved through structural separation of units for exploration and exploitation. The top management needs to integrate these structural units for the organization to become ambidextrous. It is proposed that *contextual ambidexterity* is achieved within one unit, based on an organizational context that enables employees to conduct activities directed at aligning the organization while simultaneously keeping the organization adaptable (Gibson & Birkinshaw, 2004). Overall, research on ambidexterity is very fragmented as it emerged only recently (e.g., Raisch & Birkinshaw, 2008). Only limited knowledge on how organizations might become ambidextrous exists even for these two broad types. Most of the prior work, which is still limited, delved into the research on structural ambidexterity, thus, even less is known on how contextual ambidexterity might be achieved.

Moreover, ambidextrous organizations seem to perform better compared to organizations that are good at conducting either only explorative or exploitative activities (e.g., March, 1991; Tushman & O’Reilly, 1996). Some research even states that ambidexterity is not only beneficial for organizations but also essential for long-term survival (Tushman & O’Reilly, 1996). Despite the theoretical reasoning for ambidexterity’s positive affect on performance, only little empirical work has been conducted on consequences of ambidexterity. Moreover, even more confusing, these empirical studies revealed mixed results (i.e., positive, negative, no effects; see section 1.2.3).

This discrepancy between ambidexterity’s theoretical reasoning for positive performance effects and the mixed empirical results, combined with the lack of knowledge on how ambidexterity might be achieved, stimulated my dissertation. Therefore, this dissertation’s aim is to shed more light on how organizations might become ambidextrous as well as on whether ambidexterity affects firm performance and how.

Thus, the leitmotif of the antecedents and performance consequences of ambidexterity will guide my dissertation. In the next section, I will provide an extensive literature
review. From this review, I will derive specific research questions on the antecedents and consequences of ambidexterity, which I will answer with my dissertation.

1.2 Literature Review and Development of Research Questions

In the following chapter, I will summarize the prior research on ambidexterity to provide background for my dissertation. First, I will describe different types of ambidexterity to highlight the fundamentally different approaches to balancing exploration and exploitation. Then, I will review prior research on antecedents and consequences of ambidexterity in order to identify gaps and develop research questions for my dissertation.

1.2.1 The Concept of Ambidexterity

Research on organizations heavily argues in favor of the need to explore and exploit (Ancona, Goodman, Lawrence, & Tushman, 2001; Benner & Tushman, 2002; Dougherty, 1992; Eisenhardt & Martin, 2000; Feinberg & Gupta, 2004; Levinthal & March, 1993; March, 1991, 1996, 2006). However, as outlined in the introduction, organizations struggle to manage the tensions between exploration and exploitation. Research has proposed two different and competing strategies to balance exploration and exploitation successfully: punctuated equilibrium (Benner & Tushman, 2003; Burgelman, 1991; Christensen, 1998; Levinthal, 1997; Weick, 1976) and ambidexterity (Burgelman, 2002; Levinthal & March, 1993; Siggelkow & Rivkin, 2006; Tushman & Romanelli, 1985; Vermeulen & Barkema, 2001). The logic behind punctuated equilibrium, also known as temporal cycling, is that short periods of exploration disrupt long periods of exploitation (Gupta, Smith, & Shalley, 2006). Figure 1.1 graphically depicts punctuated equilibrium.
In my dissertation, I will *not* focus on punctuated equilibrium but rather on the other approach, ambidexterity. Punctuated equilibrium and ambidexterity are radically different mechanisms to achieve exploration and exploitation (Gupta, 2006). Whereas temporal cycling best describes punctuated equilibrium, ambidexterity depicts the simultaneous pursuit of exploration and exploitation.

Ambidexterity is derived from the Latin words ‘ambi’ meaning ‘both’ and ‘dexter’ meaning ‘right’ or ‘favorable’. Thus, ambidexterity literally depicts ‘right on both sides’. In biological science, ambidextrous people have equal skills in both hands. In organization science, ambidextrous organizations are good at simultaneous exploration and exploitation. Duncan (1976) was the first to introduce the term ‘organizational ambidexterity’.
Building on earlier work (Burns & Stalker, 1961; Thompson, 1967), Duncan (1976) argued that organizations need to put dual structures into place because initiating and implementing innovation have markedly different needs. These dual structures could be installed either through different business units or through different groups within a business unit. Tushman and O’Reilly (1996) proposed a similar but more comprehensive way to ambidexterity. These authors have theorized that organizations might manage the tensions through structurally separate business units for exploration and exploitation. In this ‘structural ambidexterity’, different subunits have distinct competencies, systems, incentives, processes, and cultures that are internally aligned and directed at exploration and exploitation, respectively. Moreover, Tushman and O’Reilly (1996) theorized that the senior management’s ability to integrate these exploration and exploitation subunits at the organization level is crucial for achieving ambidexterity. Emerging research (Lavie & Rosenkopf, 2006; Lin, Haibin, & Demirkan, 2007; Tiwana, 2008) has extended this structural way to cross-organizational separation of exploration and exploitation in alliances, also referred to as alliance ambidexterity.

A completely different type is ‘contextual ambidexterity’ (Gibson & Birkinshaw, 2004). Gibson and Birkinshaw (2004) have theorized that organizations might achieve ambidexterity within one unit. They have defined contextual ambidexterity as "the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit" (Gibson & Birkinshaw, 2004, p. 209). Alignment depicts the "coherence among all patterns of activities" whereas adaptability "refers to the capacity to reconfigure activities quickly to meet changing demands in the task environment" (Gibson & Birkinshaw, 2004, p. 209). These authors proposed that such contextual ambidextrous organizations enable the employees to decide on the best way to divide their time between the conflicting demands for exploration and exploitation through specific sets of processes and systems. Thus, considerably different from the structural type, all employees, who are able to deal with these tensions through specific contextual features, face the exploration-exploitation tensions within the unit. Figure 1.2 graphically depicts structural and contextual ambidexterity.
1.2.2 Antecedents of Ambidexterity

Although these different types of ambidexterity require specific antecedents, both types include similar aspects only from different angles. Specifically, prior research has discussed the organizational culture and the organizational context within the units in which exploration, exploitation, or ambidexterity should be achieved. Moreover, leaders and their behaviors, competencies of organizational members, and knowledge exchange seem to be crucial for ambidexterity.
1.2.2.1 Culture and Context

The review on ambidexterity and its antecedents revealed that the organizational culture and the organizational context affects exploration, exploitation, and ambidexterity. However, scholars consider different aspects vital, depending on the type of ambidexterity (structural ambidexterity; contextual ambidexterity).

The literature on structural ambidexterity has discussed the need for simultaneous loose and tight cultures (Tushman & O’Reilly, 1996). Tight, in the sense that the corporate culture which should embrace norms and values "critical for innovation, such as openness, autonomy, initiative, and risk taking" is broadly shared in each unit (Tushman & O’Reilly, 1996, p. 26). The culture is loose in the manner that the degree to which these norms and values are expressed is distinct to each unit, dependent on the unit’s pursuit (exploration or exploitation). The separate subunits have different incentives and distinct managers. Tasks, cultures, people, and formal structures are consistent and aligned within the unit regarding the unit’s task (exploration or exploitation), but differ markedly across units (Benner & Tushman, 2003). Moreover, a common organizational culture that facilitates identification and sharing of information and resources is crucial as it promotes the integration of the subunits (Tushman & O’Reilly, 1996).

Organizations that aspire to become ambidextrous within one unit may facilitate contextual ambidexterity through a context that is characterized by hard (high degrees of discipline and stretch) and soft (high degrees of support and trust) elements (Gibson & Birkinshaw, 2004). This behavior-framing context definition can be traced back to Ghoshal and Bartlett (1994). Discipline and stretch is said to induce employees’ strive to meet and exceed the expectations voluntarily, whereas support and trust fosters employees to assist others and to rely on each other (Gibson & Birkinshaw, 2004). Gibson and Birkinshaw (2004) summarized these hard elements in their study as ‘performance management’ and the soft ones as ‘social context’, and they theorized that a context comprised of these elements inspires employees "to do whatever it takes to deliver results" (p. 213); thus, enabling employees to engage in activities geared toward alignment (exploitation) and adaptability (exploration).

In similar vein, Güttel and Konlechner (2009) argued for the importance of cultural values and norms. In their qualitative case study, they have found two overarching
aspects that contribute to contextual ambidexterity. The first aspect is performance orientation and group norms, and the second involves an integrative frame of references. They found that if performance orientation were integrated in the group norms, employees would keep on learning and performing better due to these norms and the social pressure that facilitates them. Moreover, they found that working in teams with projects regarding service and research triggers an integrated frame of reference that enables what they call an ‘ambidextrous mindset,’ which does not favor exploration or exploitation but an equal balance.

Bierly and Daly (2007) proposed certain organizational systems that support simultaneous exploration and exploitation; however, they did not empirically investigate their propositions. These systems include "team-based structures, an organizational culture that values and promotes change, open communication channels, and human resource practices that promote creativity and innovation" (Bierly & Daly, 2007, p. 496).

Nemanich and Vera (2009) have investigated what kind of context might facilitate ambidexterity within teams that are newly integrated due to an acquisition. These authors theorized a learning culture comprised of psychological safety, openness to diverse opinions, and participation in decision-making to foster team ambidexterity and empirically showed its affect in the context of an acquisition.

Overall, when reviewing the literature, it became obvious that the culture and the work context have important means for fostering structural and contextual ambidexterity. In the structural type, a culture that specifically drives exploration or exploitation in the respective unit, and an overall strong culture to integrate the subunits, is theorized to be eminent (e.g., Tushman & O’Reilly, 1996). In contrast, the contextual type promotes specific context conditions to enable and encourage employees to conduct both exploration and exploitation oriented activities as well as to decide on how to best divide their time among these activities. For my dissertation, these considerations are relevant as I will discuss the ways with which the leaders within the company might shape such an ambidexterity context (research question 1), and the ways with which the employees contribute to create such contextual ambidexterity through the behavioral regularities, which are based on their personality (research question 2).
will discuss these topics in more detail in section 1.2.4 where I develop the research agenda for my dissertation.

### 1.2.2.2 Leadership

Leadership is theorized to be crucial for achieving ambidexterity (e.g., Tushman & O’Reilly, 1996). Due to the different types of ambidexterity, prior research has analyzed leadership and its role from various perspectives.

In the *structural type*, the members of the top management team are proposed to balance the tensions between exploration and exploitation (Tushman & O’Reilly, 1996). In doing so, the CEO or the top management team need to be able to differentiate and integrate exploration and exploitation. To pursue this, organizations need to establish senior teams that would understand the different needs of these subunits, articulate a clear and compelling vision, have a clear strategic consensus, relentlessly communicate their strategy, and demonstrate commitment for ambidexterity (O’Reilly & Tushman, 2004, 2008). The managers might be fostered to act like this through a common-fate incentive system (O’Reilly & Tushman, 2008). Smith and Tushman (2005) suggested that managers might balance the contradictions between exploration and exploitation through paradoxical cognition, which might be affected by the top management team design and leader coaching.

Lubatkin and colleagues (2006) have investigated the affect of behavioral integration of the top management teams on ambidexterity. Based on their empirical findings, they concluded that collaborative behavior, information exchange, and joint decision-making of the top management (they summarize this as ‘behavioral integration’) fosters ambidexterity due to a deeper and more diverse understanding of the team’s explicit knowledge. Moreover, this knowledge base can be used better in behaviorally integrated teams.

Jansen and colleagues (Jansen et al., 2008) argued that the tensions between exploration and exploitation might lead to conflicts within the top management team. To avoid such conflicts, the senior team’s shared vision, social integration, and contingency rewards might positively affect ambidexterity. Their results showed a positive significant relation of senior team shared vision and social integration with
ambidexterity. Moreover, they showed that transformational leadership of the executive director acts as a moderator in this relation.

Similar, Jansen and colleagues (Jansen, Tempelaar, Van den Bosch, & Volberda, 2009a) theorized, and provided empirical evidence, that the senior team’s social integration serves as a mechanism for integrating the separate subunits for exploration and exploitation and for achieving organizational ambidexterity. The rationale for this is borrowed from prior research, which suggested that social integration fosters collaborative problem solving (De Cremer, van Knippenberg, van Dijk, & van Leeuwen, 2008) and clarifies key preferences and conflicting roles in senior teams (Eisenhardt, Kahwajy, & Bourgeois, 1997).

Beckman (2006) brought another perspective into the discussion. She examined how the composition of a company’s founding teams shapes the behavior of new firms. Her empirical results showed that founding team consisting of people who have worked together before, have shared understandings and the ability to act quickly thus enabling exploitation. On the other hand, founding teams whose members come from different companies engage more in exploration because they have unique ideas and contacts. Moreover, she concluded that founding teams with common and diverse prior company affiliations are likely to succeed in ambidextrous organizational behavior.

Other scholars focused more explicitly on specific leadership styles that might promote exploration, exploitation, and ambidexterity. Jansen, Vera, and Crossan (2009b) empirically showed that executive directors’ transactional leadership facilitates exploitative innovations while executive directors’ transformational leadership fosters explorative innovations. Others (Nemanich & Vera, 2009) empirically revealed that transformational team leadership affects team’s ambidexterity in the context of an acquisition.

In the contextual type of ambidexterity, the tensions between alignment- and adaption-oriented activities are not dealt with at the top management level but at the individual employees’ level. The research on contextual ambidexterity therefore theorized the organizational context that would enable employees to act in favor of alignment and adaptability (Gibson & Birkinshaw, 2004). Leaders are thus challenged to create a
context that would support the employees in balancing the tensions. Based on Gibson and Birkinshaw (2004), the top management is the key to install systems and processes that support such a context.

In summary, prior research highlights the pivotal role of leaders in facilitating organizational ambidexterity. Research on both types, the structural and the contextual, has focused primarily on the senior management. While the senior management’s role in structural ambidexterity is to integrate the separate units for exploration and exploitation, the contextual type exposes senior leadership’s task in order to install a context that would enable every individual employee to integrate exploration and exploitation at his or her level. I will reflect on the role of leadership in facilitating ambidexterity in section 1.2.4.2 when developing research question 1.

1.2.2.3 Competencies

Research on ambidexterity emphasizes that exploration, exploitation, and their combined accomplishment requires specific knowledge, skills, abilities, and other competencies of the organizational members (e.g., Kang & Snell, 2009; Smith & Tushman, 2005).

In organizations that aim to achieve ambidexterity via separate units for exploration and exploitation, senior managers need "to create meaning to the context of the contradiction and to extract the benefits associated with contradictory strategic agendas" (Smith & Tushman, 2005, p. 524). Therefore, Smith and Tushman (2005) considered senior manager’s ability for paradoxical cognition as crucial. Paradoxical cognition refers to paradoxical cognitive frames and processes of differentiating and integrating. Paradoxical frames are mental templates, which recognize and accept the simultaneous existence of contradictory forces (Smith & Tushman, 2005). These paradoxical frames build the basis for the cognitive processes of differentiating and integration. Managers who are able to differentiate may clearly recognize and articulate the distinctions. Cognitive integration enables managers to shift the levels of analysis and identify potential synergies. Thus, the ability for paradoxical cognition may positively influence the way with which managers balance the contradictions of exploration and exploitation.
Kang and Snell (2009) discussed what kind of human capital, which they define as knowledge, skills, abilities, and other competencies of organizational members, is necessary to successfully conduct explorative and exploitative learning. They have broadly distinguished between specialist and generalist human capital. Specialist human capital seems to be more successful for exploitation than for exploration because specialists have very deep, in-depth knowledge in their specific area. This might be more effective in acquiring and assimilating new knowledge in a narrow range (exploitation). In contrast, they suggested that generalist human capital is more likely to affect exploratory learning because generalist human capital covers a broader range of knowledge for different domains. This broader range of knowledge is available for different tasks. Hence, generalist human capital is likely to descry, comprehend, combine, and apply new knowledge, thus facilitating explorative learning. Moreover, Kang and Snell (2009) integrated these thoughts into a model with specific configurations of human capital (individual knowledge), social capital (knowledge that is embedded in the relational network), and organizational capital (knowledge captured in organizational processes, systems, and structures), and they suggested different configurations of this ‘intellectual capital’ to foster ambidextrous learning within a unit.

In summary, research has started to discuss the type of competencies that might foster exploration, exploitation, and their integration at different levels. Moreover, specific types of human capital are suggested to foster either exploration or exploitation. I will not directly delve into this stream of research with my three studies, but I will discuss how the employees might contribute to ambidexterity with their personality and the behavioral regularities based on their personality. In addition, I will consider the discussion on competencies when proposing the agenda for future research and when developing practical implications.

### 1.2.2.4 Knowledge Exchange Mechanisms

My review on antecedents of ambidexterity showed another important aspect. Research constantly mentioned the importance of knowledge exchange for successful exploration, exploitation, and ambidexterity. For instance, Jansen and colleagues (Jansen, Van Den Bosch, & Volberda, 2006) empirically showed that connectedness –
the density of networks towards various levels of hierarchy – relates positively to exploration as well as exploitation. The reasoning behind this is that the exchange of relevant knowledge is much greater in strongly connected organizations. Hill and Birkinshaw (2006) investigated corporate venture unit’s ambidexterity. Their results provided evidence for a positive effect of corporate venture units’ strong relationships with (a) senior executives in the parent firm, (b) other business units, and (c) the Venture Capital community on venturing ambidexterity, with the rationale that the relevant information and knowledge is then exchanged more easily. Mom and colleagues (Mom, van den Bosch, & Volberda, 2009) investigated individual manager’s ambidexterity. Their empirical investigation indicated that manager’s participation in cross-functional units and their connectedness to other organization members relates positively to manager’s ambidexterity. Other scholars (Taylor & Helfat, 2009) researched ambidexterity in the context of technological transition. When changing a core technology, organizations face the "ambidextrous challenge of ‘exploiting’ existing complementary assets to support the new ‘exploratory’ core technology" (Taylor & Helfat, 2009, p. 718). Taylor and Helfat (2009) argue that organizations, which want to make a transition to a new core technology, need to link organizational units in charge of developing the new technology with units responsible for complementary assets that are vital to the commercialization of this innovation. Similar, Tiwana (2008) found that high levels of knowledge integration of alliance partners positively influence alliance ambidexterity.

Overall, scholars have discussed various aspects of the role of knowledge exchange for achieving ambidexterity. The abovementioned reasoning and findings will be discussed again when recommending directions for future research.

1.2.3 Consequences of Ambidexterity

The reason for scholars to delve into the field of ambidexterity and theorize and empirically investigate the ways in which simultaneous exploration and exploitation might be achieved is grounded in ambidexterity’s hypothesized positive effect on different performance aspects. The rationale for this so called ‘ambidexterity hypothesis’ can be traced back to March’s (1991) article on explorative and exploitative learning. March (1991) argued that organizations need to be responsive
and adaptable to environmental changes and that they need to leverage their current competencies. Focusing on one while neglecting the other will foster severe drawbacks either because the organization is unable to benefit from exploration or because the organization and its competencies are not in tune with their environment any more.

The logic behind all research on ambidexterity’s influence on performance emanates from this rationale (March, 1991), which was described more precisely in the first section of my dissertation. Prior research empirically investigated ambidexterity’s direct and conditional (moderation) effect on different performance outcomes. In the following sections, I will provide an overview summarizing prior empirical findings on the ‘ambidexterity hypothesis’, which states ambidexterity’ positive relation to performance.

### 1.2.3.1 Direct Performance Effects

The empirical research on the direct consequences of ambidexterity has applied various performance aspects, which I cluster into ‘organizational performance’ and ‘innovation performance’ in my review. He and Wong (2004) were the first researchers to test the ‘ambidexterity hypothesis’ empirically. These authors investigated the effect of ambidexterity (in their case the combination of explorative and exploitative innovation strategies) on organizational performance (sales growth rate) with a sample comprising 206 manufacturing firms. Their empirical results revealed that (a) the interaction of explorative and exploitative innovation strategies relates positively to sales growth rate, and that (b) the relative imbalance between explorative and exploitative innovation strategies relates negatively to sales growth rate.

Gibson and Birkinshaw’s (2004) results are in tune with He and Wong’s (2004) findings. These authors explored the influence of contextual ambidexterity on business unit performance. They argued that business units, which are simultaneously aligned and adaptable (contextual ambidexterity), will perform better compared to other units because every individual employee in such a unit is able to contribute to existing customers while simultaneously exploring new opportunities. Their empirical results underpin this rationale. Using a sample including 81 business units from 10
multinational companies, they showed that contextual ambidexterity is positively associated with subjective business unit performance.

In a later study, Hill and Birkinshaw (2006) empirically examined ambidexterity of corporate venture units, defined as the ability to simultaneously use existing and build new capabilities. They found a positive relation with corporate venture unit’s strategic performance (creating breakthrough innovations, investing in disruptive technologies that may cannibalize existing technologies, developing strategic relationships with key external stakeholders, and providing funding for internal venturing activities) from their data consisting of 95 corporate venture units.

Others investigated ambidexterity in small and medium sized enterprises (SMEs). Lubatkin et al. (2006) found that ambidexterity is positively associated with relative firm performance (growth and profitability) in a sample of 139 small and medium sized companies while Cegarra-Navarro and Dewhurst (2007) detected a positive effect on customer capital (profitable customers, company reputation and prestige) in their sample of 269 Spanish SMEs.

Cao, Gedajlovic, and Zhang (2009) in their empirical study tested the effect of two different dimensions of ambidexterity on firm performance. They conceptualized these dimensions as "balanced" and "combined". The balanced dimension refers to a relatively close balance between exploration and exploitation (the difference between the level of exploration and exploitation is low) whereas the combined dimensions refers to their combined magnitude (i.e., interaction). They found that both dimensions are positively associated with firm performance (sales growth, profit growth, market share growth, operational efficiency, cash flow from market operations, and market reputation) in a sample of 122 Chinese high-tech firms when testing these dimensions separately. When integrating both dimensions into one equation, only the combined dimension had a significant effect on performance.

Other researchers examined ambidexterity’s effect on innovation performance. Tushman and colleagues (Tushman, Smith, Wood, Westerman, & O'Reilly, 2004) investigated the role of different organizational designs in innovation outcomes. Their empirical study showed that switching to an ambidextrous design resulted in better innovation performance, which means they found such a design to be significantly
more effective for launching breakthrough products and services and for continued high performance of existing products.

Other scholars (Prieto, Revilla, & Rodriguez, 2007) analyzed ambidexterity at the product development level in 80 Spanish companies. Their empirical results showed that ambidexterity (existing competencies are exploited and new competencies are explored in the product development) relates positively to performance (new product’s development).

Rothaermel and Deeds (2004) examined the effect of exploration-exploitation strategies on new product development in the context of new technology ventures. The results of their archival data study posit a positive link.

Other research (Han, 2007) analyzed strategic ambidexterity, defined as the organizational capability to formulate and conduct paradoxical strategies simultaneously, in two case studies. Based on her empirical results, she concluded that strategic ambidexterity relates positively to short- and long-term internationalization performance (financial and market performance in foreign markets).

In contrast to the previously reviewed research, which has found positive direct effects on performance outcomes, other research reached counterintuitive and contrary results like no direct effect, curvilinear relations, and even negative effects. In their empirical longitudinal study of 1005 software firms, Venkatraman and colleagues (Venkatraman, Lee, & Bala, 2006) found no direct effect of simultaneous exploration and exploitation but showed that alternating sequences of exploration and exploitation (punctuated equilibrium) affected the sales growth of these software companies positively. Similarly, Bierly and Daly (2007) found no direct significant relation between the interaction of exploration and exploitation and firm performance (financial performance and growth). Other scholars (Atuahene-Gima, 2005) explored ambidexterity’s influence on incremental and radical innovation performance. Atuahene-Gima’s (2005) results revealed no direct effect on incremental and a negative effect on radical innovation performance. In a later study, Yang and Atuahene-Gima (2007) found a curvilinear ambidexterity-performance relation in their sample of 300 Chinese high-tech firms. Other research (Lin et al., 2007) discovered a negative impact on firm performance. Lin et al. (2007) investigated ambidexterity of
strategic alliances. The empirical results they achieved based on archival data obtained from five US industries showed that alliance ambidexterity relates to firm performance (net sales over current asset) negatively.

1.2.3.2 Contingent Performance Effects
When theorizing and empirically testing ambidexterity’s impact on performance, researchers considered different internal and external conditions that might moderate this relation positively. Levinthal and March (1993) discussed exploration and exploitation separately (not the combined effect of ambidexterity) and suggested that environmental dynamism and environmental competitiveness moderate the positive link between exploration, exploitation, and performance. Jansen and colleagues (2006) tested these theorized relations empirically and found that exploratory innovation is more effective in dynamic environments whereas exploitative innovation leads to better financial performance (profitability) in more competitive environments.

Others explicitly tested the interactive impact of exploration and exploitation (i.e., ambidexterity). Yang and Atuahene-Gima (2007) found that environmental uncertainty and the use of informal coordinating mechanisms moderate the ambidexterity-performance relation positively while a challenging performance context moderates the ambidexterity-performance relation negatively. In similar vein, Lin et al.’s (2007) empirical study revealed that firm size and environmental uncertainty moderate the relationship between alliance ambidexterity and firm performance positively. In addition to their empirical study, they conducted a computer simulation, which showed that network centrality moderates the alliance ambidexterity-performance relation positively. Moreover, the positive relation between alliance ambidexterity and performance (net resources generated and exchanged over initial resource output) was more pronounced in early years of network formation.

Cao and colleagues (2009) tested internal and external moderators. They reported that the combined ambidexterity dimension’s (interaction of exploration and exploitation) affect on performance is more pronounced in large organizations that act in a munificent environment whereas the balanced ambidexterity dimension’s (difference between exploration and exploitation) association with performance is less pronounced
in larger organizations. Others (Kyriakopoulos & Moorman, 2004) stressed the moderation effect of market orientation on the effect of the combined usage of marketing exploration and exploitation on performance (new product financial performance). These authors found that organizations that combined marketing exploration and exploitation strategies have strong new product performance when their market orientation is high (Kyriakopoulos & Moorman, 2004).

1.2.3.3 Summary of Ambidexterity’s Performance Effects
In summary, ambidexterity is theorized to have a positive effect on different performance dimensions. Nevertheless, prior empirical research garnered mixed results. Some research provides empirical support for ambidexterity’s direct effect (e.g., He & Wong, 2004), but other scholars found contingent (Lin et al., 2007), curvilinear (Yang & Atuahene-Gima, 2007), no effects at all (Venkatraman et al., 2007), or even negative effects (Atuahene-Gima, 2005) on performance. The prevalent reason for conducting research on ambidexterity is its suggested positive association with performance. Therefore, I will clarify this relation and thus include performance consequences in all my studies. I will come back to this in more detail in section 1.2.4 when developing the research questions.

1.2.4 Summary and Development of Specific Research Agenda

1.2.4.1 Focus on Contextual Ambidexterity
The literature review shows that ambidexterity might be a valuable concept for organizations to reach sustained competitive advantage and long-term success (Raisch, Birkinshaw, Probst, & Tushman, 2009). However, the review also showed that it is a very complex phenomenon. Research on ambidexterity is only at its beginning and focuses primarily on structural solutions and on the ways to integrate the separate units for exploration and exploitation activities at the organization level (e.g., Raisch & Birkinshaw, 2008). The contextual type of ambidexterity, which deals with the challenge to achieve ambidexterity within one unit, is almost neglected, notwithstanding its value for many organizations. Especially for smaller and medium sized companies, which account for a large proportion of all organizations, structural
solutions might not be best suited. SMEs might not have the financial resources, slack resources, or the size to create separate organizational units for exploration and exploitation (Lubatkin et al., 2006); thus, it might be difficult for these kinds of organizations to structurally separate exploration and exploitation activities.

Yet, apart from Gibson and Birkinshaw’s (2004) study, not much research analyzed drivers of contextual ambidexterity. A huge field for further investigation, which needs to be cultivated, has opened up, as solutions for how to manage contradictory demands of alignment and adaptability within one unit are still scarce. Prior research has highlighted that contextual ambidexterity is still an under-researched type of ambidexterity (Raisch & Birkinshaw, 2008) and that "it is simply not known how business units or small organizations simultaneously attain exploration and exploitation" (Simsek, Heavey, Veiga, & Souder, 2009, p. 888). Raisch and Birkinshaw (2008, p. 397) suggested that, "broader field studies could help to further substantiate our understanding of contextual ambidexterity."

Thus, I focus my dissertation on contextual ambidexterity, its antecedents, and consequences. Based on my extensive literature review, I have identified three main issues in the field of contextual ambidexterity. I will discuss these open issues in the following sections and develop specific research questions that will guide my dissertation. In doing this, I will both identify factors that foster contextual ambidexterity as well as thoroughly investigate its relation to performance, as performance is the prevalent benefit attribute of ambidexterity.

### 1.2.4.2 Leadership for Fostering Contextual Ambidexterity

As the literature review shows, research clearly depicts the critical role of leaders in facilitating ambidexterity. Knowledge of how leaders might facilitate contextual ambidexterity is yet constrained to top managers’ task to install systems for alignment and adaptability, such as performance management systems (Gibson & Birkinshaw, 2004). Gibson and Birkinshaw (2004) argued that in contextual ambidextrous organizations, every individual employee is able to decide on how to divide his/her time between the conflicting demands for exploration and exploitation. This means that contextual ambidexterity relies on the contribution of every individual employee. Most of these employees work in a context that is not exclusively influenced by the
top management, but also by direct supervisors and middle managers (Floyd & Lane, 2000; Mom et al., 2009). Therefore, I deem leadership of leaders from all levels within the organization as pivotal in fostering contextual ambidexterity.

Moreover, the question arises, how leaders can align the organization while keeping it adaptable. Research suggests that generalists might best support contextual ambidexterity because these kinds of leaders have behavioral repertoires that empower them to manage multiple outcomes (Simsek et al., 2009). I consider transformational leadership (TFL) as a vital leadership style for fostering contextual ambidexterity. It provides a wide behavioral repertoire (see e.g. Bass, 1985) and seems to facilitate both exploration and exploitation (Yukl, 2009). Moreover, I will investigate whether contextual ambidexterity influences the firm’s performance, as only one study established the performance link; however, at the business unit level. I will develop the theoretical reasoning in more detail in chapter 2. Based on the proposed idea, I pose the following research question.

*Research question 1: Do transformational leadership behaviors, which are conducted throughout the organization, create a context for achieving ambidexterity within one unit and thereby facilitate firm performance?*

### 1.2.4.3 Collective Personality to Facilitate Contextual Ambidexterity

Prior research (Gibson & Birkinshaw, 2004) suggested that organizations, which want to become contextually ambidextrous, need organizational members that are able to work toward alignment and toward adaptability. Gibson and Birkinshaw (2004) argued that a specific behavioral context that comprises discipline, stretch, support, and trust, shapes employee’s behaviors toward alignment and adaptability. Research on personality takes a somehow contrary perspective and suggests that individuals show relatively stable behavioral patterns over time and across situations and that these behavioral patterns are rooted in the individual personality (Hogan, 1991; James & Mazerole, 2002). Taken this research lens into account, I propose that not only the ‘behavioral context’ - this is how Gibson and Birkinshaw (2004) call it - shapes the
behaviors of the organizational members, but also personality is a vital antecedent of behavioral patterns and thus affect activities directed at alignment and adaptability.

While the organization shapes the behavioral context, for example, through specific systems and processes, the behavioral patterns based on the personality are rooted within the employees. From an organizational perspective, the employees’ personality cannot be shaped at the individual level, as traits are seen as relatively stable over time (e.g., Zhao & Seibert, 2006). However, the organizations might be able to ‘design’ personality at a collective level through managing the composition of the workforce based on the personality, for instance by selecting employees with a specific personality.

Prior research (Hofmann & Jones, 2005) theorized that individual behavioral regularities emerge at a collective level when individuals interact, for instance, in organizational life. These behavioral regularities are manifested at a collective level as ‘collective personality’ expressed in routines, norms, and path-dependencies (Hofmann & Jones, 2005). Based on these considerations, I propose that collective personality is an antecedent of contextual ambidexterity. My literature review on personality revealed that the five-factor model of personality is the most agreed on and the most comprehensive for examining personality (e.g., Barrick, Stewart, Neubert, & Mount, 1998; Zhao, Seibert, & Lumpkin, 2009). Moreover, it provides a robust taxonomy (Barrick & Mount, 1991; Costa & McCrae, 1988) and is able to explain personality at the organization level (Hofmann & Jones, 2005). Therefore, I will apply the five-factor model of personality when investigating collective personality’s influence on contextual ambidexterity.

Moreover, as contextual ambidexterity is proposed to foster firm performance, I will also include the performance-link in Study 2. I will develop the theoretical reasoning in more detail in chapter 3.

*Research question 2: Do the components of the five facets of collective personality facilitate contextual ambidexterity and thereby enhance firm performance?*
1.2.4.4 **Productive Organizational Energy as a Mechanism that Links Contextual Ambidexterity and Firm Performance**

The literature review on ambidexterity’s performance consequences has shown mixed empirical results. Simsek et al. (2009) pointed out the importance of taking a differentiated look at the performance consequences by considering the type of ambidexterity. Until now, only one study (Gibson & Birkinshaw, 2004) investigated contextual ambidexterity’s influence on performance at the business unit level. Thus, business unit level contextual ambidexterity and business unit performance was investigated. Moreover, the mechanism that links such contextual ambidexterity with performance is not clear.

Gibson and Birkinshaw (2004) argued that in organizations that have systems, which align the organization while simultaneously keeping it adaptive, all employees will act in pursuit of the overarching goals. However, these scholars (Gibson & Birkinshaw, 2004) focused on whether the management systems provide opportunities for alignment and adaptability rather than directly investigate if the employees act in pursuit of these organizational goals.

Simsek et al. (2009) "especially encourage research that tests the assumptions found in the intermediate steps in the causal chain between ambidexterity and envisioned outcomes, particularly focusing on the less visible, but perhaps more pivotal linkages that lead to these outcomes" (p. 891). I directly support this proposition and investigate how contextual ambidexterity relates to performance. I consider productive organizational energy (POE) – the collective activation and direction of employees’ affect, cognition, and behaviors towards organizational-salient goals (Cole, Bruch, & Vogel, 2005) - as a pivotal mediator. The rationale for this has its foundation in research, which proposed that contextual ambidexterity activates and directs all actions within the organization toward the overarching organizational goals, thus leading to enhanced performance (Gibson & Birkinshaw, 2004).

Moreover, Simsek and colleagues (2009) suggested investigating other, more strategically relevant performance consequences. I address both issues in my dissertation and investigate how contextual ambidexterity at the organization level relates to different aspects of firm performance, which was to my best knowledge not done by any prior research.
Research question 3: How does contextual ambidexterity relate to firm performance and does productive organizational energy act as a mediator of the relationship between contextual ambidexterity and firm performance?

1.2.4.5 Integration of the Studies and Aim of the Dissertation

All three research questions aim at illuminating the ambidexterity phenomenon. These research questions along with the associated studies form an integrated – but not exhaustive – model. In sum, all three studies are in line with the leitmotif of contextual ambidexterity’s antecedents and consequences, and illuminate the phenomenon from different perspectives.

Study 1 and Study 2 focus on the antecedents but integrate also the performance consequences. I apply a leadership perspective in the first study and investigate the ways with which all leaders within the company facilitate contextual ambidexterity through TFL behaviors (TFL climate). The second study centers on the workforce itself. I investigate whether a workforce, which comprises employees with high levels of the five factors of personality (i.e., collective personality), fosters contextual ambidexterity. Study 3 focuses on the consequences of contextual ambidexterity. In this study, I explore how contextual ambidexterity relates to firm performance by proposing productive organizational energy as a vital mediator.

Figure 1.3 depicts the three studies, the years of data collection, and the data source of variables. To avoid using duplicate data, I collected the data for Study 1 and Study 2 in 2008 and the data for Study 3 in 2009. In addition, I decided to measure firm performance for Study 1 and 2 (both 2008 data) using different scales. Furthermore, the questionnaire for each variable within one study was completed by different sources to circumvent common method variance. For instance, in Study 1, TFL climate was gathered with a different employee survey version than was contextual ambidexterity, and the top management provided information on firm performance. I will give more detailed information on the measures, sample, data collection, and other aspects in the method section of each study.
Although the three studies are within an integrated framework, I would like to note that they do not exhaustively capture all possible gaps in the research on ambidexterity. My dissertation focuses on contextual ambidexterity, thus structural ambidexterity, its antecedents, consequences, and contingencies are neglected. Moreover, my dissertation does not investigate contingency effects of the antecedents and consequences of contextual ambidexterity. It neither provides theoretical reasoning and empirical investigation explaining how contextual and structural solutions for ambidexterity might be integrated within larger organizations.

Hence, much research needs to be done to fully understand organizational ambidexterity. I will take first steps toward this with my dissertation. The overall aim of my dissertation therefore is:
To gain knowledge about the way in which organizations might become contextually ambidextrous through TFL climate and the five factors of collective personality. Moreover, I aim at revealing a crucial mechanism that links contextual ambidexterity with firm performance. In sum, I strive to obtain insights, which will not only be relevant to theory, but also beneficial to practitioners.

1.2.4.6 Summary of the Main Contributions to Theory and Practice

As outlined in the previous section, my dissertation’s goal is to contribute to theory and practice. The main contributions to theory will be six-fold.

First, I will investigate the role of collective leadership (TFL climate) in achieving contextual ambidexterity. Prior research (e.g., Lubatkin et al., 2006; Tushman & O’Reilly, 1996) has focused mainly on the influence of the CEO and top management’s leadership on ambidexterity. This is due to a focus on structural ambidexterity where these leaders play a specific integrator function. In contextual ambidexterity, which is the focus of my dissertation, leaders and their behaviors from all levels within the organization might be important, as all of them are involved in creating the working context for the employees.

Second, I will contribute to the understanding of collective personality’s influence on contextual ambidexterity. Prior research (Gibson & Birkinshaw, 2004) reasoned that the employees are a vital factor for realizing contextual ambidexterity because they need to be able to balance the tensions between alignment- and adaption-oriented activities. My dissertation will provide five specific facets of personality that - at a collective level - might contribute to mastering these tensions.

Third, I will contribute to a deeper understanding of the ambidexterity-performance relation. Prior research (see e.g., Simsek et al., 2009) has revealed mixed results on ambidexterity’s performance consequences. Thus, a more fine-grained examination of the consequences of specific types of ambidexterity is needed (Simsek et al., 2009). In my dissertation, I will investigate contextual ambidexterity’s influence on various facets of firm performance. Study 3 will provide a vital mechanism (productive organizational energy) underlying this relationship.
Fourth, I will contribute to the emerging research on collective leadership. Prior research on leadership has analyzed mainly individual level leadership and individual level performance outcomes (e.g., Judge & Piccolo, 2004). With my dissertation, I contribute to the research on collective leadership by investigating, for the first time, the influence of TFL climate on firm performance. Moreover, I provide a vital mediating mechanism (contextual ambidexterity) underlying this relationship.

The fifth contribution to theory is to expand further upon the research topic of collective personality and its performance consequences. Prior research has analyzed personality and its consequences mostly on the individual level. In my dissertation, I tie in with Hofmann and Jones (2005) who have investigated collective personality. I contribute to this research topic by increasing the knowledge on collective personality’s impact on firm performance and by providing a vital mediating mechanism for this relation.

Finally, I contribute to the research on positive organizational scholarship (e.g., Cameron, Dutton, & Quinn, 2003). I investigate productive organizational energy as a mediator of the relationship between contextual ambidexterity and firm performance. Prior research has focused on POEs antecedents (Kunze & Bruch, 2010; Walter & Bruch, 2010). My dissertation reveals a yet unidentified antecedent (contextual ambidexterity) and POE’s influence on firm performance, which was not investigated in prior studies. Table 1.1 reviews these contributions to theory.

From a practitioner standpoint, answering this dissertation’s research questions might also offer valuable insights. I tie the proposed relations with my empirical investigations, contributing to practice in several ways. First, I could sensitize organizations to contextual ambidexterity’s influence on performance. Second, I could identify two vital drivers, which might enable organizations to become contextually ambidextrous. Third, if TFL climate and the five facets of collective personality facilitate contextual ambidexterity, organizations might want to think about how to create such a leadership climate and such specific collective personality. I could provide support to organizations to become contextually ambidextrous by developing strategies that would assist the upper management and the HR department in promoting the identified antecedents. Overall, I hope to offer new and valuable insights for theory and practice.
Table 1.1. Main Contributions to Theory

<table>
<thead>
<tr>
<th>Number</th>
<th>Contribution</th>
<th>Included in Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investigating the role of collective leadership (TFL climate) in achieving contextual ambidexterity</td>
<td>Study 1</td>
</tr>
<tr>
<td>2</td>
<td>Understanding collective personality’s influence on contextual ambidexterity</td>
<td>Study 2</td>
</tr>
<tr>
<td>3</td>
<td>Reaching a deeper understanding of the ambidexterity-firm performance relation</td>
<td>Study 1, 2, and 3</td>
</tr>
<tr>
<td>4</td>
<td>Further investigating collective leadership and its performance consequences</td>
<td>Study 1</td>
</tr>
<tr>
<td>5</td>
<td>Gaining a deeper understanding of collective personality and its influence on performance</td>
<td>Study 2</td>
</tr>
<tr>
<td>6</td>
<td>Revealing antecedents and consequences of productive organizational energy</td>
<td>Study 3</td>
</tr>
</tbody>
</table>

1.3 Methodological Approach

Methodological fit is proposed to be the overarching criterion for high-quality research (Edmonson & McManus, 2007). Compelling and rigorous research is possible only when methodological fit, that is, the "internal consistency among elements of a research project," is achieved (Edmonson & McManus, 2007, p. 1155). "The key to good research lies not in choosing the right method, but rather in asking the right question and picking the most powerful method for answering that particular question" (Bouchard, 1976, p. 402). Thus, Edmonson and McManus (2007) advocated internal fit between research question, prior work, research design, and theoretical contribution.

From a critical perspective, it is argued that, "all research methods are seriously flawed" (McGrath, 1981, p. 179). However, considering Edmonson and McManus’
(2007) advice, the next sections will provide reasoning for the chosen research paradigm and study design.

1.3.1 Research Paradigm

Social science research has utilized two very different methodological approaches, qualitative and quantitative. These approaches use very different underlying logics, have different (dis)advantages, and they are conducted in specific research contexts (w.g., King, Keohane, & Verba, 1996). The qualitative approach, although very different in study designs, does not rely on numerical measurement. Usually, a small number of units is investigated fundamentally more in-depth in the qualitative compared to the quantitative approach. Thus, it provides rich and varied information on the phenomenon under investigation (King et al., 1996; Seawright & Collier, 2004). This approach takes a broader perspective on a phenomenon, provides ample internal validity, and it is applied mostly in the nascent research stage of theory development (Edmonson & McManus, 2007). The disadvantage of this approach is that qualitative studies cannot be generalized and easily replicated.

Contrary, the quantitative approach uses numerical measurement and statistical analyses and is interested in specific aspects of phenomena (focused research). Moreover, it tests specific hypotheses; thus, is used for research with mature theories (Edmonson & McManus, 2007). Its advantages are generalizability, external validity, objectivity, and reliability (e.g., King, Keohane, & Verba, 1996; Seawright & Collier, 2004).

Edmonson and McManus (2007) advocated taking into account the stage of theory development when choosing one of these methodological approaches. This stage is on a continuum from nascent to mature theory development. The nascent stage describes topics based on little or no theory, which have attracted little research and formal theorizing; this stage necessitates theory building best achieved through qualitative studies (Edmonson & McManus, 2007). A mature stage in contrast refers to topics where complex theory building already took place. In such situations, research questions challenge or extent prior theory. Thus, in this stage, quantitative studies that
develop and test hypothesis have a good methodological fit and are recommended (Edmonson & McManus, 2007).

In this dissertation, the constructs of interest range from intermediate to mature stage. Prior work on contextual ambidexterity (Gibson & Birkinshaw, 2004), transformational leadership climate (Walter & Bruch, 2010), collective personality (Hofmann & Jones, 2005), productive organizational energy (Cole et al., 2005; Kunze & Bruch, 2010; Walter & Bruch, 2010), and firm performance (e.g., Richard, Devinney, Yip, & Johnson, 2009) has theorized and empirically tested various relationships with other variables. Thus, to develop the research questions, I build on prior theoretical work. A quantitative approach should be used when testing mature theories (Edmonson & McManus, 2007).

In my dissertation, I will rely on a positivist research paradigm (Easterby-Smith, Thorpe, & Lowe, 2002). I will build on prior theories and research when developing the studies’ hypotheses. Thus, all three studies are conceptualized in a deductive manner. Following Popper (1959) and his classical research theory, the aim of this study is to falsify the hypotheses, as the opposite, that is, hypothesis confirmation, is impossible in social sciences (Schnell, Hill, & Esser, 2005).

1.3.2 Study Design
Although qualitative and quantitative designs are different, they face the same "fundamental inferential challenge of eliminating rival explanations" (Brady, Collier, & Seawright, 2004, p. 10). Eliminating these rival explanations is only possible through experiments with randomly assigned values for the independent variable for the units of analysis (Brady, Collier, & Seawright, 2004). Thus, experiments (e.g., Campbell & Stanley, 1963) are the most sophisticated inferential design.

Nevertheless, such experiments are difficult to conduct in field studies, as they interfere with the ‘natural’ organizational context and the functioning of the organization. In most cases, it is not possible to manipulate the explanatory variable in the ‘real’ settings. Thus, research testing mature theories has to rely on correlation-based analyses accompanied by logic (e.g., theoretical arguments) to support causal inference (Edmonson & McManus, 2007).
In my dissertation, I rely on mature theories and test hypothesis in ‘real’ organizational settings to answer my three research questions. In such field studies, McGrath (1982) suggested to choose an unobtrusive method to avoid interference with the ‘original’ organizational context, processes, behaviors, and other factors.

I decided to apply a survey study design, as advocated by McGrath (1982) for such situations. Moreover, research has found that this design choice is applied most often when investigating mature theories (Edmonson & McManus, 2007).

Although the survey study design is shown to fit this dissertation perfectly, which is a main criterion for high quality research (Edmonson & McManus, 2007), it is not flawless. I will discuss the main limitations of the survey design for each study in the respective section (2.6.3, 3.6.3, and 4.6.3). I will further present and discuss the specific measurement, data processing, and data analyses in detail within each study (see sections 2.4, 3.4, and 4.4)

1.4 Outline of the Dissertation

1.4.1 Overall Design
This dissertation aims at providing a deeper understanding for the complex phenomenon of ambidexterity. I strive to reveal the ways with which organizations might manage ambidexterity successfully as well as to investigate whether ambidexterity finally leads to the proposed positive performance results (e.g., Gibson & Birkinshaw, 2004) and how (Simsek et al., 2009). To pursue this aim, I decided to take three steps.

First, I conducted an extensive literature review as the basis for my dissertation, which increases our understanding of ambidexterity, its different types, and its proposed antecedents and consequences.

Second, I address and empirically investigate the research questions, which I raised in the theoretical part of the dissertation. I decided to conduct three separate studies for these investigations. Although this seems somehow unusual for a dissertation, this procedure has several advantages (Kunze, 2010; Macus, 2002; Walter, 2007). Conducting a multi-study dissertation provides the opportunity to take multiple
research perspectives to investigate the antecedents and consequences of ambidexterity. These different perspectives, for instance, a leadership perspective and collective personality characteristics of the employees in my case, are likely to shed light on the complex phenomenon of ambidexterity. Moreover, they simultaneously allow for a more fine-grained picture of the phenomenon and offer the opportunity to integrate the theoretical and empirical findings to form a holistic view on contextual ambidexterity. This approach could increase the scholars and practitioners’ understanding of such a complex phenomenon. Finally, this approach fosters greater parsimony, as arguments, contributions, and implications can be discussed in a more focused way.

In the third step, I integrate the three studies, discuss their overall findings, and point out venues for future research. Based on my findings, I provide practical implications that might assist managers in facilitating ambidexterity within their organization in various ways.

Overall, this dissertation takes a multi-faceted perspective on the outlined research problem and develops specific research questions based on an extensive literature review. It then answers the research questions by testing specific hypotheses in three separate studies. I will apply different methods and approaches to account for the specifics of ambidexterity’s antecedents and consequences. Moreover, I will try to integrate these different perspectives throughout my dissertation, especially in the last chapter. Thus, this approach allows integrating different perspectives and findings to receive a coherent picture of the antecedents and consequences of contextual ambidexterity.

1.4.2 Chapter Structure
The dissertation is divided into five chapters addressing the key research questions. In the following sections, I will provide a short overview of each chapter’s structure, thus enhancing the orientation of my dissertation. Moreover, Figure 1.4 graphically depicts the chapter structure.
• **Chapter 1: Introduction**

This chapter explains the relevance of the topic and the research problem. Moreover, it provides an extensive literature review based on which the specific research questions are developed. Finally, this chapter describes the methodological approach and outlines the dissertation.

• **Chapter 2: Study 1 – Transformational Leadership Climate, Contextual Ambidexterity, and Firm Performance**

This chapter presents the first study of my dissertation, which investigates the pivotal role of transformational leadership climate in fostering contextual ambidexterity and finally firm performance. Based on theoretical work and empirical findings, this chapter provides arguments for the proposed relations that lead to specific hypotheses. This is followed by a method section that gives information on the sample, measures, and statistical methods used to analyze the data. Then, the results are presented and discussed, followed by theoretical contributions, practical implications, limitations of the study, and directions for future research.

• **Chapter 3: Study 2 - Collective Personality, Contextual Ambidexterity, and Firm Performance:**

Chapter 3 describes Study 2, addressing the second research question. In this study, I investigate whether the five facets of collective personality foster contextual ambidexterity, and if this in turn relates positively to firm performance. This empirical study first develops testable hypothesis based on a literature review and prior empirical work. Then the methods and results are presented, followed by a discussion of the results, contributions, practical implications, limitations, and directions for future research.

• **Chapter 4: Study 3 - Contextual Ambidexterity, Productive Organizational Energy, and Firm Performance.**

This chapter presents Study 3 that answers the third research question. I discuss how contextual ambidexterity influences firm performance and use productive
organizational energy as an important mediator. The structure of Chapter 5 is very similar to that in Chapter 2 and Chapter 3.

- **Chapter 5: Overall Discussion and Conclusion.**

This chapter summarizes the key findings of the dissertation and integrates the three studies. Moreover, it describes limitations and offers directions for future research. Based on the integration of the studies, implications for practitioners are derived. Finally, overall conclusions are drawn from the dissertation.

---

**Figure 1.4. Chapter Structure**

- **Chapter 1:** Introduction
  - Relevance and Research Problem
  - Literature review and development of research questions
  - Methodological approach
  - Outline of the dissertation

- **Chapter 2:** Study 1
  - Transformational Leadership Climate, Contextual Ambidexterity, and Firm Performance

- **Chapter 3:** Study 2
  - Collective Personality, Contextual Ambidexterity, and Firm Performance

- **Chapter 4:** Study 3
  - Contextual Ambidexterity, Productive Organizational Energy, and Firm Performance

- **Chapter 5:** Discussion
  - Summary and Integration of Research Findings
  - Overall Limitations and Directions Future Research
  - Practical Implications
  - Conclusion and Outlook
2 Study 1 - Transformational Leadership Climate, Contextual Ambidexterity, and Firm Performance

The first study addresses research question 1 that asks whether transformational leadership climate is a specific organizational level leadership style that provides a context in which simultaneous alignment and adaptability can arise, and if this in turn leads to superior firm performance.

2.1 Introduction, Relevance, and Intended Contributions

Research has theorized (Tushman & O’Reilly, 1996) and empirically showed (Gibson & Birkinshaw, 2004; He & Wong, 2004; Lubatkin et al., 2006) that ambidextrous organizations, that is, organizations that are aligned with their current business and at the same time adapt to future demands (Gibson & Birkinshaw, 2004), perform better compared to other organizations.

However, how can ambidexterity be achieved? Researchers have offered different suggestions for obtaining ambidexterity. Tushman and colleagues (Benner & Tushman, 2003; O'Reilly & Tushman, 2004; Tushman & O’Reilly, 1996) claimed that structural separation of exploration and exploitation activities and their integration at the top management level is crucial, while others have investigated meta-routines (Adler, Goldoftas, & Levine, 1999) and organizational context (Gibson & Birkinshaw, 2004). Many researchers have argued for the importance of leaders in building ambidexterity (e.g., Gibson & Birkinshaw, 2004; Smith & Tushman, 2005; Tushman & O’Reilly, 1996) but focused on the influence of the top management, although prior research highlighted the pivotal role of leaders at other hierarchical levels (e.g., middle management; Floyd & Lane, 2000).

Beckman (2006) examined the composition of a company’s founding team while Lubatkin and colleagues (2006) concentrated on behavioral integration of top management teams. Only recently, senior management’s transformational leadership (TFL) behaviors have been suggested to drive ambidexterity. Jansen and colleagues (2008), showed the moderating role of senior team TFL behaviors in a model that linked senior team attributes (e.g., social integration, contingency rewards) with
organizational ambidexterity while others (Jansen et al., 2009b) independently investigated the direct connection of senior team TFL behaviors with organizational exploratory and exploitative innovation.

The above mentioned research (e.g., Jansen, et al. 2008; 2009b; Lubatkin et al., 2006; Tushman and O’Reilly 1996) is contrary to Floyd and Lane’s (2000) reasoning for the role of middle managers in facilitating ambidexterity. Gibson and Birkinshaw (2004) demonstrated a positive influence of the context on ambidexterity at all organizational levels. Their contextual approach to ambidexterity suggests that ambidexterity is created based on a behavioral context in which every employee is able to contribute to exploration and exploitation. Since senior team leadership as well as the direct supervisor and leaders from other levels influence the work context, I derived, from prior research (Floyd & Lane, 2000; Gibson & Birkinshaw, 2004), that leadership at all organizational levels is pivotal in fostering contextual ambidexterity. Nevertheless, prior research neglected the influence of other leaders than the top management team. Considering this gap, Jansen and colleagues (Jansen et al., 2008; 2009b) have called to investigate the impact of leadership at different hierarchical levels and to explicitly test TFL’s impact on ambidexterity (i.e. the coexistence of the components), as prior research has only investigated top management’s TFL (Jansen et al., 2009b) and its effects on the separate components (exploration and exploitation). Furthermore, research has suggested analyzing TFL, ambidexterity, and organizational performance within a single model (Jansen et al., 2009b). First research on TFL’s effect on ambidexterity found that transformational work team leaders positively influence work team’s ambidexterity in the context of an acquisition (Nemanich & Vera, 2009).

In this study, I investigate a model in which TFL behaviors from all hierarchical levels (TFL climate) influence organizational level’s contextual ambidexterity, which in turn facilitates firm performance (see Figure 2.1). My main argument for deeming TFL climate as a vital driver of contextual ambidexterity is twofold. First, prior research has suggested that the work context of every individual employee is important for ambidexterity (Gibson & Birkinshaw, 2004). Not only the top management, but also the direct supervisors and other leaders within the organization might influence the work context of every individual employee. Therefore, I propose that the behaviors of
all leaders within the organization are crucial (leadership climate). Second, I propose that TFL facilitates contextual ambidexterity because leaders with complex behavioral repertoires are essential for this type of ambidexterity (Raisch & Birkinshaw, 2008). Transformational leaders do exert a variety of behaviors that are directed at exploration and exploitation (Yukl, 2009), thus fostering the alignment and adaptability of the organization.

The main aim of my study is to investigate how not only the top management but TFL climate fosters contextual ambidexterity, and how this in turn influences organizational level performance. In order to test my hypotheses, I analyze a data set consisting of 8,789 individuals from 120 German SMEs. I test the study’s mediation model with the three focal variables, TFL climate, contextual ambidexterity, and firm performance, by conducting the stepwise approach as suggested by Baron & Kenny (1986), followed by the Sobel-Test of significance (Sobel, 1982, 1988). Then, I apply the bootstrap-technique procedure (Preacher & Hayes, 2004; Shrout & Bolger, 2002) to further analyze my hypotheses.

2.2 Theoretical Background

2.2.1 Leadership and Contextual Ambidexterity

Researchers suggested that certain leader behaviors positively relate to ambidexterity (e.g., Gibson & Birkinshaw, 2004; Lubatkin et al., 2006; Nemanich & Vera, 2009; Tushman & O’Reilly, 1996). In line with prior work (Gibson & Birkinshaw, 2004), I define ambidexterity as the ability to adapt and align the organization at the same time. "The capacity to reconfigure activities (…) quickly to meet changing demands in the task environment" (Gibson & Birkinshaw, 2004, p. 209) is referred to as adaptability, whereas all activities working together to one goal is referred to as alignment (Gibson
I investigate contextual ambidexterity at the organization level, which is in line with prior research (Im & Rai, 2008).

In my study, I relate to the concept of contextual ambidexterity (Gibson & Birkinshaw, 2004). This proposes that ambidexterity within an organization results from the individuals who are able to "divide their time between the conflicting demands of alignment and adaptability" (Gibson & Birkinshaw, 2004, p. 211) based on the work context. To create such a work context, leadership has to meet two premises. First, leadership behaviors need to be prevalent throughout the organization, as contextual ambidexterity arises from the individual employees’ level. Not only the top management but also other leaders, including the direct supervisor and middle managers, influence the context of every individual employee. Therefore, leadership climate that results from leader behaviors throughout the organization might influence contextual ambidexterity. My argumentation is in line with prior research, which suggested that leaders are influential shapers and builders of organizational context (e.g., Carmeli & Halevi, 2009; Koene, Vogelaar, & Soeters, 2002; Lewin, Lippitt, & White, 1939; McGregor, 1960; Schein, 1992). Leaders and their behaviors have the ability to create the internal organizational context in which employees act (Schein, 1992).

Second, these leadership behaviors must foster alignment and adaptability. Regarding leadership, prior research (Simsek et al., 2009) suggested that the achievement of ambidexterity within one unit "may be best supported by generalists with behavioral repertoires capable of managing towards multiple outcomes through parallel thinking, and making sure that the divided attention between exploration and exploitation does not inhibit the organization’s ability to succeed at either activity" (p. 890). I propose TFL to be such a leadership style because transformational leaders exert a variety of behaviors that are directed at both exploration and exploitation (Yukl, 2009), and because they develop procedures and processes that support their behaviors (Zhu, Chew, & Spangler, 2005).

2.2.2 Transformational Leadership Climate
Transformational leaders typically have high performance expectations, articulate a clear and captivating vision, foster group goals, provide a role model, give
individualized support, and intellectually stimulate the followers (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Through TFL, employees are willing to perform beyond minimum expectations in ways that facilitate effectiveness (e.g., Bass, 1985; Howell & Avolio, 1993; Podsakoff, MacKenzie, & Bommer, 1996; Yukl, 1989).

TFL climate refers to the shared degree of TFL behaviors that the leaders within an organization collectively direct toward their subordinates (Walter & Bruch, 2010). According to Walter and Bruch (2010), three mechanisms should lead to TFL behaviors that are similar within an organization but heterogeneous across organizations (cf. Klein, Dansereau, & Hall, 1994), which is the premise of TFL climate to function as an organizational level variable. First, attraction-selection-attrition cycles (Ostroff & Bowen, 2000) will form similar individuals and behaviors within an organization and different individuals and behaviors between organizations (Schneider, 1987). Second, socialization processes may lead new members of the organization to adapt their behaviors to the organization’s standards through the exchange with other members of the organization (Schneider & Reichers, 1983), resulting in similar leadership behaviors throughout the organization. Finally, leaders and employees within the same organization typically encounter common experiences and social influences, which lead to the assimilation of behavioral response tendencies within the organization and increased differences between organizations (Kozlowski & Hattrup, 1992).

2.3 Hypotheses Development

2.3.1 Transformational Leadership Climate and Contextual Ambidexterity

The model postulates a positive relationship between TFL climate and contextual ambidexterity. I argue that TFL climate contributes to the creation of simultaneous alignment and adaptability. I will discuss the effect of the six dimensions generally associated with TFL on an organization’s alignment and adaptability.

First, I propose that TFL climate positively relates to alignment, as various TFL behaviors aim at exploiting existing resources toward common objectives (e.g., Yukl, 2009). Articulating a shared and captivating vision seems to be crucial for alignment.
Prior studies argue that aligning employees’ behaviors is contingent upon the consistent communication of a clear vision that all employees share (cf., Beehr, Glazer, Fischer, Linton, & Hansen, 2009). Berson and Avolio (2004, p. 626) concluded that transformational leaders promote a deeper understanding of the organization’s goals, mission, and vision that "is likely to foster greater alignment (…) throughout an organization." Cannella and Monroe (1997) argued that transformational leaders create relationships with their followers that foster the dispersion and implementation of common strategic goals, thus aligning the organization. Berson and Avolio (2004) provided empirical evidence that transformational leaders have a superior communication style, which was in turn associated with the followers’ greater awareness of the organization’s goals. In line with my argumentation, Waldman and Yammarino (1999) similarly stated that charismatic leaders create an overall organizational alignment around the vision, strategic priorities, and purpose by fostering the agreement among their followers. According to prior studies, the formulation and communication of a captivating vision "can be used not only to build commitment to a new vision or strategy, but also to strengthen loyalty to an existing vision and confidence in established practices" (Yukl, 2009, p. 51).

Transformational leaders both communicate and act to build a consistent sense of their organizations’ strategic goals (Bass, 1985; Shamir, House, & Arthur, 1993). This consistent communication and leaders acting as role models might foster employees to have a common perception of the importance of the organization’s goals (Colbert, Kristof-Brown, Bradley, & Barrick, 2008). When the organization’s goals are explicit and perceived important, employees might collectively act to reach these goals, which aligns the organization. In similar vein, Yukl (2009) stated that symbolic actions and role model behaviors might facilitate the employees’ traditional values and their loyalty to the organization, hence facilitating alignment.

Moreover, TFL behaviors aim at fostering the acceptance of group goals. Transformational leaders facilitate collective rather than individual interests (Shamir et al., 1993; Waldman & Yammarino, 1999). Followers of transformational leaders are likely to assign greater importance to the organization’s goals than to their personal objectives (Colbert et al., 2008). These behaviors may contribute to the alignment of the organization as employees cooperate and work together toward the same goals.
Empirical studies in the top management team context support these arguments. Colbert et al. (2008), for example, found that CEO TFL positively relates to goal importance congruence within the top management team.

By definition, transformational leaders set high performance expectations. Jung, Chow, and Wu (2003) argued that showing such high expectations and giving confidence to the employees and their capabilities facilitates their commitment to the mission, vision, and long-term goals. I argue that such commitment is a mechanism for aligning the employees’ behaviors, thus fostering the organization’s alignment. Moreover, Zhu and colleagues (2009) have found that transformational CEOs install systems that support their behaviors, which additionally direct the employees’ efforts to the organizational goals. Hence, employees will enhance their engagement and direct their activities toward reaching overarching goals, which as well fosters alignment.

Providing individualized support might foster alignment as transformational leaders accentuate every single employee’s importance and contribution to the company’s goals. Yukl (2009) argued that individualized consideration further includes the development of employees’ skills that are needed to carry out existing practices effectively, which further aligns the organization.

Finally, intellectual stimulation, a leader behavior that challenges the employees to rethink about how they perform their work, may contribute to better alignment, as further refinements of the common practices might contribute to reaching the common goals more effectively. From a learning perspective, intellectual stimulation might contribute to the organization alignment by facilitating processes of sharing existing knowledge, as stated in prior work (Nemanich & Vera, 2009). Empirical findings support this notion, showing that TFL relates positively to such processes as knowledge dissemination and information preservation (Amitay, Popper, & Lipshitz, 2006).

In sum, I argue that transformational leaders foster the alignment toward common organizational goals. When TFL is conducted throughout the organization, the work context for every individual employee should be aligned through leadership behaviors,
systems, processes, procedures, and routines that direct their behaviors (Zhu et al., 2005).

Second, I suggest that TFL climate relates positively to *adaptability*, as various TFL behaviors are directed at reconfiguring activities to meet changing demands. Bass and Riggio (2006, p. 225) argue that, "transformational leadership is, at its core, about issues around the process of transformation and change". Transformational leaders are expected to transform followers’ basic values, beliefs, and attitudes (e.g., Bommer, Rich, & Rubin, 2005; Podsakoff et al., 1990). Empirical evidence supports this argumentation. For example, Herold, Fedor, Caldwell, and Liu (2008) showed that TFL significantly relates to individual employees’ commitment to change. In their longitudinal study of employees’ attitudes towards change, Bommer et al. (2005) found that TFL decreased employees’ cynicism about organizational change. I thus continue to explore how the different TFL behaviors relate to an organization’s adaptability.

*Articulating a captivating* vision, which transformational leaders exert, might support adaptability. This is in line with social learning theory (Zimbardo & Leippe, 1991), which states that when the new and unexplored issue is presented to the employees as an inspiring and viable opportunity from which they might prosper, successful adaption is more likely. Empirical findings underpin this notion by revealing a positive association between articulating a captivating vision and employees’ receptivity to change (Bommer et al., 2005).

*Acting as role models* might also contribute to the organization’s adaptability. Social learning theory (Bandura, 1986) argues that model behaviors heavily influence the adaptation to new behaviors and the change in attitudes. Thus, not only a captivating vision is vital for the organization’s adaptability, but also role modeling that is in line with the vision and the expected employees’ behaviors. Andersson (1996) stated that failing to provide a role model has such consequences that the followers will become cynical toward the managers and the organization. Thus, role model behaviors may prove necessary for adaptation and may foster employees’ commitment to adapt. Prior research, which provides empirical evidence that role model behaviors reduce cynicism about change, corroborates my argument (Bommer et al., 2005).
Moreover, transformational leaders set and communicate *high performance expectations*. This shows the leader’s confidence in his or her employees’ ability to outperform others as well as in reaching the demanding goals. This argument is well established in the literature. Bommer et al. (2005), for example, applied social learning theory (Bandura, 1986) as an explanatory mechanism. They (Bommer et al., 2005, p. 739) argued that high confidence in the employees as indicated by high performance expectations, "translates into increased employee self-efficacy (...) and ultimately in an increased belief that the proposed change is possible." Thus, the confidence to achieve the goals may in turn make change more acceptable for employees and thus reduce resistance to change. This argument is empirically supported, as high performance expectations negatively relate to cynicism about change (Bommer et al., 2005).

I conclude from social learning theory (Bandura, 1986) that perseverance is more likely to develop in supportive environments. Thus, *providing individualized support* is crucial for conducting change. Such leadership behaviors show employees their importance and give them the assurance that their personal feelings and needs will be considered, even when the organization adapts itself to meet new demands. This way, employees might perceive their work environment as supportive, thus making them more receptive to adaptations. In similar vein, Eisenbach, Watson, and Pillai, (1999) argued that leaders who individually support their followers neutralize the resistance to change, which accompanies every transformation process. Therefore, it is inevitable to get a large number of employees committed to and involved in adaptation processes to reduce the employees’ resistance to change (Eisenbach et al., 1999). Adaptation is possible only when succeeding in this task. Empirical evidence underscores this rationale as individualized support positively relates to enhancing employees’ receptivity to change (e.g., Bommer et al., 2005).

*Fostering the acceptance of group goals* may further support the organizations’ adaptability. As transformational leaders facilitate the acceptance of group goals, employees tend to focus less on their individual objectives while striving more for the organization’s overall goals. Bommer et al. (2005, p. 739) argued, "by becoming part of a larger effort, employees should see change as possible and the results of change as more positive." Empirical findings support my argument by showing a negative
relation between fostering group goals and cynicism about organizational change (Bommer et al., 2005).

Intellectually stimulation is associated with "questioning of assumptions, reframing of problems, and thinking about concepts using novel paradigms" (Sosik, Avolio, & Kahai, 1997, p. 90), thus challenging the employees to think in new ways about their work and activities, or as Jansen Vera, and Crossan. (2009, p. 8) put it: ‘out of the box’. Intellectual stimulation inspires employees to embrace generative and exploratory thinking processes (Jung et al., 2003). Hence, transformational leaders encourage employees to think about adaptation and to adapt their activities by themselves. Bommer et al. ‘s (2005) longitudinal study supports my argument with empirical findings showing a negative association between intellectual stimulation and cynicism about organizational change. In sum, I argue that TFL behaviors conducted throughout the organization create a climate that might enforce the organization’s adaptability.

TFL climate, as an organizational level variable, thus provides a context in which the employees can engage for alignment and adaptability; thus the context in organizations with high levels of TFL climate should foster contextual ambidexterity. Conversely, organizations with a low level of TFL climate should exhibit lower degrees of contextual ambidexterity.

Hypothesis 1: Transformational leadership climate positively relates to contextual ambidexterity.

2.3.2 Contextual Ambidexterity and Firm Performance

The ‘ambidexterity hypothesis’ emphasizes the importance of both being aligned to current tasks (or exploitation) and remaining adaptive to future challenges (or exploration) for company performance (Levinthal & March, 1993; March, 1991). March (1991) argued that a trade-off exists between these contradictory demands because the related activities are competing for scarce resources. Organizations that drive exploration but exclude exploitation will have the costs related to exploration without gaining its benefits (March, 1991). On the other hand, organizations that "engage in exploitation to the exclusion of exploration are likely to find themselves
trapped in suboptimal stable equilibria" (March, 1991, p. 72). This implies that an either / or solution comes at the expense of one of these important activities, which might lead to a ‘failure trap’ or a ‘success trap’ (March, 1991).

Research has suggested that organizations can overcome the trade-off between alignment and adaptability. Organizations that successfully manage these contradictory demands are called ambidextrous and are expected to show superior performance (Tushman & O’Reilly, 1996; He & Wong, 2004). The performance advantage results from the alignment to current challenges while simultaneously being adaptive to future demands (Benner & Tushman, 2003; Gibson & Birkinshaw, 2004; Tushman & O’Reilly, 1996). Aligned organizations are able to streamline their resources toward the current overarching goals, whereas adaptable organizations are able to change their processes and procedures quickly, according to changing demands. Therefore, alignment is directed toward short-term performance improvements while adaptability is directed toward long-term performance enhancements (Gupta et al., 2006). If an organization engages in alignment to the exclusion of adaptability or vice versa, problems are likely to arise and performance is likely to deteriorate. Conversely, organizations that are able to manage these tensions are expected to prosper.

Contextual ambidexterity, as a special type of ambidexterity, is "complex, causally ambiguous, widely dispersed, and time-consuming to develop" (Gibson & Birkinshaw, 2004, p. 210). From a resource-based perspective of the firm (e.g., Barney, 1991), contextual ambidexterity can thus be perceived as a valuable, rare, and costly to imitate resource, which has the potential to become an important source of competitive advantage. Empirical research underlines my argumentation and points to the strategic benefits of contextual ambidexterity. Gibson and Birkinshaw (2004) have observed the positive influence of contextual ambidexterity on subjective performance ratings at the business-unit level. Hill and Birkinshaw (2006) found that the ability to simultaneously use existing and new capabilities in venture capital units is positively associated with strategic venture performance. While these studies explored the relationship between contextual ambidexterity and performance at the subunit level, I suggest a positive relationship between contextual ambidexterity and organization-level performance.
Hypothesis 2: Contextual ambidexterity positively relates to firm performance.

2.3.3 The Mediation Model: TFL Climate, Contextual Ambidexterity, and Firm Performance

TFL behaviors have been associated with beneficial outcomes. Prior empirical studies showed a positive connection between TFL and performance (e.g., Yammarino, Spangler, & Bass, 1993) (for meta-analyses see: Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). Moreover, research provides significant evidence for a positive relationship between individual-level TFL behaviors and individual performance, such as task performance, organizational citizenship behaviors, and job satisfaction (e.g., McColl-Kennedy & Anderson, 2002; Piccolo & Colquitt, 2006; Wang, Law, Hackett, Wang, & Chen, 2005). There is also evidence for a positive link between TFL behaviors and group performance (e.g., Hofmann & Jones, 2005). In yet another study, CEO charismatic leadership was positively associated with financial performance in uncertain environments (Waldman, Ramirez, House, & Puranam, 2001). Based on these combined findings, I propose a positive relationship between TFL behaviors conducted throughout the organization (or TFL climate) and firm performance.

Prior research at the individual level found an indirect TFL-performance relationship. Mechanisms such as leader-member-exchange (Wang et al., 2005), trust in the leader (Bartram & Casimir, 2007), procedural justice (Pillai, Schriesheim, & Williams, 1999), follower attitudes (e.g., Kark, Shamir, & Chen, 2003), self-perceptions (e.g., Bono, & Judge, 2003), job-characteristics (e.g., Piccolo & Colquitt, 2006), and affect (e.g., McColl-Kennedy & Anderson, 2002) were suggested to mediate this relationship. Based on this evidence at the individual level, I propose an indirect relationship between TFL climate and firm performance.

I argue that TFL behaviors that are conducted throughout the organization influence firm performance through the creation of a context in which the employees are able to act in favor of alignment and adaptability. Thus, contextual ambidexterity should be an important mediator of the relationship between TFL climate and firm performance.
Hypothesis 3: Contextual ambidexterity mediates the positive relationship between TFL climate and firm performance.

2.4 Method

2.4.1 Research Setting and Data Collection

I collected the data for the present study between March and July 2008 in cooperation with a German agency specializing in benchmarking SMEs. I decided to conduct my study in the context of SME for conceptual reasons. Scholars argued that these companies might have difficulties to achieve ambidexterity through structural separation (Lubatkin et al., 2006). This is explained by their resource scarcity, which hinders the implementation of such complex structural solutions (Raisch & Birkinshaw, 2008). Lubatkin et al. (2006) have argued that a leadership-based approach to ambidexterity may be more appropriate for SME. Similarly, Gibson and Birkinshaw (2004) proposed that a contextual approach to ambidexterity might be more appropriate for smaller firms or subunits (e.g., business units) of larger firms. As I investigate the way with which TFL climate might foster contextual ambidexterity, a sample of SMEs seems to be adequate.

Initially, the agency solicited participation from 164 organizations. Two basic conditions for the participation were applied: Organizations had (a) to be located in Germany and (b) not exceed 5,000 employees. To stimulate participation, each organization was promised to receive a detailed benchmarking report. Of these 164 organizations, 44 refused to participate or failed to provide sufficient data for important constructs (e.g., executive board members did not assess the performance measures). This resulted in an organizational-level response rate of 73% (n = 120). Participating organizations represented companies from various industries, including services (45%), manufacturing (32%), trade (16%), and finance (7%). They ranged in size from 23 to 4,360 employees (median = 156). Eliminating organizations with 1,000 or more employees (n = 11) did not change the pattern of results. The 120 participant organizations represented a heterogeneous sample with different industry affiliations and firm sizes, increasing the likelihood of finding sufficient variation in employees’
perceptions, leadership behaviors, and firm performance (Ambrose & Schminke, 2003; Schminke, Cropanzano, & Rupp, 2002).

In order to improve consistency of data collection, standardized procedures were employed across all organizations. Data were collected in three steps. First, general information on the participating organizations (including firm size and industry affiliation) was collected through a key informant survey. In larger organizations, the organizations’ HR director completed this survey while in smaller organizations, which do not have the formal position of an HR director, the CEO or another member of the top management team assessed the relevant data. Answers to this key informant survey were required to confirm organizations’ participation in the study.

Second, employee survey data were collected to obtain information on the relevant study variables, i.e., TFL climate and contextual ambidexterity. All employees received a standardized email invitation which was sent through their organization’s HR department or through a top management team member’s email account. This invitation described the study’s purpose and provided a link to a web-based survey hosted by a third company. Four different versions of the employee questionnaire were used, as the survey was part of a larger research project. This allowed for implementing a split-sample design (Dickson, Resick, & Hanges, 2006; Erdogan, Liden, & Kraimer, 2006; Rousseau, 1985), which is important to alleviate concerns about common source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). TFL climate and contextual ambidexterity were measured in two different versions of the employee questionnaire. Based on an algorithm programmed into the survey web site, the respondents were randomly directed to one of the different survey versions. The employees without web access completed randomly distributed paper version of the questionnaire. Professional translators translated all versions of the questionnaire to German. They followed a double-blind back-translation procedure to ensure semantic equivalence with the original English document (Schaffer & Riordan, 2003). Respondents were assured full anonymity.

Overall, 17,826 employees chose to participate in the survey voluntarily. The average within-organization response rate was 61% (standard deviation = 22%). The algorithm described above effectively distributed participating employees to complete one out of four versions of the survey, yielding 4,204 participants who completed the survey.
version including TFL climate and 4,224 participants who completed the survey version including contextual ambidexterity. The effective sample size was 8,428, because this study’s variables were included only in two of the four versions of the questionnaire. In each organization, a minimum of 4 respondents was obtained for each survey version (median = 22). More respondents were male (54%) than female (38%), with 8% choosing not to indicate their gender. Respondents belonged to different age groups but most belonged to the middle age group (16 to 30 years: 22%, 31 to 50 years: 54%, over 50 years: 12%, and ‘no answer’: 12%). The average tenure of the respondents at their companies was slightly above four years. Respondents came from all major functions and represented all hierarchical levels (top management: 2%; middle management: 9%; first-line supervisors: 11%; employees without leadership responsibility: 71%; and ‘no answer’: 7%).

Third, members of the executive board completed a specific questionnaire, which was targeted at questions on firm performance. This procedure was applied based upon the assumption that executive members are most knowledgeable about the company’s performance. Overall, 361 members of the executive boards participated, with a within-company participation ranging from 1 to 12 and an average within-company response rate of 71%.

2.4.2 Measurements and Validation

In this section, I will describe the variable’s measurements and its validation. A complete item list for each measure is available in the appendix.

2.4.2.1 Transformational Leadership Climate

Podsakoff and colleagues (Podsakoff et al., 1996; Podsakoff et al., 1990) developed the TFL measure used in this study. Previous studies have regularly applied this TFL measure and have empirically demonstrated its reliability (e.g., Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Bommer, Rubin, & Baldwin, 2004; Rubin, Munz, & Bommer, 2005). The measure consists of 22 items reflecting the six TFL dimensions: articulating a captivating vision, providing a role model, communicating high performance expectations, providing individualized support, fostering the acceptance
of group goals, and providing intellectual stimulation. Walter and Bruch (2010) have recently applied this measure to capture TFL climate at the organization level.

In this study, I use a referent-shift composition approach (Chan, 1998) to estimate TFL climate at the organization level. Prior research (e.g., Kozlowski & Klein, 2000; Rupp, Bashshur, & Liao, 2007) agreed that this approach (in contrast to the direct composition approach) is most likely to capture climate concepts such as TFL climate. Employees were asked to rate the behaviors of all of their company’s leaders (or the shared degree of TFL behaviors) rather than only those of their direct leader. The employees were asked to assess the extent to which the leaders in the company exhibit TFL behaviors on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). For example, the employees had to rate the following statement: "This organization’s supervisors are always seeking new opportunities for the organization." To calculate TFL climate, I followed prior recommendations and averaged all dimensions (e.g., Agle et al., 2006; Rubin et al., 2005; Walter & Bruch, 2010). I computed the organization-level measure of TFL climate by aggregating the individual employees’ TFL ratings (Walter & Bruch, 2010).

To empirically justify this aggregation and to support the assumptions of the referent shift composition model (Chan, 1998), I calculated the intraclass correlation coefficients ICC(1) and ICC(2) (Bliese, 2000) as well as the \( r_{wg} \) inter-rater agreement statistic (James, Demaree, & Wolf, 1984). ICC(1) values that are based on a significant F-statistic from a one-way variance analysis, ICC(2) values greater than .60, and mean \( r_{wg} \) values greater than .70 are generally considered sufficient (Bliese, 2000; Chen, Mathieu, & Bliese, 2004; James, Demaree, & Wolf, 1984), although no absolute standards exist (Lance, Butts, & Michels, 2006). The aggregation of my measure of TFL climate to the organizational level was appropriate considering these benchmarks (ICC[1] = .15; F[119, 4084] = 7.32; p < .001; ICC[2] = .86; and mean \( r_{wg} \) = .83). The internal consistency estimate, Cronbach’s alpha, for TFL climate at the organizational level was .98, which is a good value, as .70 and above is considered acceptable (e.g. Chen et al., 2004). To confirm the hypothesized six-factor structure, I conducted a confirmatory factor analysis (CFA). To assess the overall model fit, I focused on the Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI), as these indexes were found to perform best in studies with small sample sizes (n < 200) (Sharma, Mukherjee, Kumar, & Dillon, 2005). CFI and TLI values above .90 are
considered acceptable for model fit (Bentler, 1990; Hoyle, 1995; Hu & Bentler, 1998). In addition, I report the Standardized Root Mean Square Residual (SRMR) for which a cut-off of < .10 is considered appropriate (e.g., Kline, 2005). The results of the CFA suggest that the proposed factor structure fits the empirical data well ($\chi^2/df= 2.58; TLI= .91; CFI=.92, SRMR = .10$).

### 2.4.2.2 Contextual Ambidexterity

Gibson and Birkinshaw (2004) developed the contextual ambidexterity measure used in this study. It consists of two separate scales, alignment (sample item: "The management systems in this organization work coherently to support the overall objectives of this organization") and adaptability (sample item: "The management systems in this organization encourage people to challenge outmoded traditions/practices/sacred cows"). Each scale was assessed by three items, which were measured on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). To check discriminant validity, I performed a CFA. The results indicate that the two-factor structure fits the data well ($\chi^2/df= 3.8; TLI= .95; CFI: .97, SRMR = .03$). Furthermore, I compared a one-factor and a two-factor model, yielding significantly better results for the two-factor model (one-factor model: $\chi^2/df=3.8$; two-factor model: $\chi^2/df=9.7$), which provides evidence of discriminate validity (Bagozzi & Phillips, 1982). To calculate a company’s contextual ambidexterity, I followed the procedure suggested by Gibson and Birkinshaw (2004) to separately aggregate the measures for alignment (ICC[1] = .16; F[119, 4084] = 7.50; p <.001; ICC[2] = .87; and mean $r_{wg} = .70$) and adaptability (ICC[1] = .12; F[119, 4084] = 5.78; p <.001; ICC[2] = .83; and mean $r_{wg} = .76$). The internal consistency estimate, Cronbach’s alpha, was .94 for alignment and .88 for adaptability. Since the two processes are seen as interdependent and non-substitutable, contextual ambidexterity was computed, in accordance with prior work, as a multiplicative interaction between alignment and adaptability (Gibson & Birkinshaw, 2004; Mom et al. 2009).
### 2.4.2.3 Firm Performance

Firm performance is a multidimensional construct (e.g., Richard et al., 2009). As Combs, Crook, and Shook (2005) suggested, I differentiate between two performance dimensions – organizational and operational performance – and integrate them to measure firm performance.

I followed Richard et al.’s (2009) recommendation that "researchers should not view the choice of subjective measures as a second-best alternative but, instead, weight the tradeoffs between subjective and objective performance measures against the research context to determine which is more favorable under the circumstances" (Richard et al., 2009, p. 737). In this study, I opted for subjective performance measures for two reasons. First, I investigate a sample consisting of small-to-medium-sized companies. Most of these companies are private, and very limited objective performance data is publicly available. Second, my sample consists of companies from a variety of industries. Objective performance measures may thus not be directly comparable, and industry affiliation may explain performance differences. While I use subjective data, empirical findings show that subjective and objective performance measures are closely correlated (Guthrie, 2001; Wall et al., 2004).

As suggested (Richard et al., 2009) and tested in prior studies (Delaney & Huselid, 1996; Wall et al., 2004), I asked the respondents to benchmark their firm’s performance relative to the performance of their industry rivals on a scale ranging from 1 (far below average) to 7 (far above average). The survey inquired, "Compared to your competitors, how did your company perform since the beginning of 2008 on…’’. Three items described each dimension. Organizational performance was measured with total firm growth, financial position, and return on investments; operational performance was assessed through employee retention, employee productivity, and business process efficiency, as done in prior work (Kunze, Boehm, & Bruch, 2010).

Members of the executive board completed the performance questionnaire. I choose these key informants because the quality of self-reports increases when well-informed respondents are selected (Winter, 2003). Finally, I tested the measure of firm performance and its two underlying dimensions (organizational performance and
operational performance) through confirmatory factor analysis. The results confirmed the overall factor structure ($\chi^2/df = 1.59$; $CFI = .99$; $TLI = .98$, $SRMR = .03$).

### 2.4.2.4 Control Variables

Prior research has shown relationships between organization size and different employee attitudes and behaviors (Pierce, Kostova, & Dirks, 2003; Ragins, Cotton, & Miller, 2000; Schminke et al., 2002). As organization size may bias the results, I controlled for this variable (e.g., Agle et al., 2006; Waldman et al., 2001). In accordance with prior work, I used the log-transformed number of employees to reduce skewness (Schminke, Ambrose, & Cropanzano, 2000; Schminke et al., 2002).

Second, I controlled for company age as prior research has shown that company age is related to norms and institutional routines that are associated with inertial behaviors (Tushman & Romanelli, 1985). Company age reflects the number of years the company has existed (Lubatkin et al., 2006). I used the log-transformed number of years to reduce skewness.

Finally, I considered industry affiliation as a variable that may bias the findings (Dickson et al., 2006; Sine, Mitsushashi, & Kirsch, 2006). I controlled for four industry categories (manufacturing, services, finance, and trade). Organizations were assigned dummy-coded variables, indicating their affiliation with each of these industries.

### 2.4.2.5 Discriminant and Convergent Validity

I conducted a confirmatory factor analysis to test the discriminant and convergent validity of the measures. I used a partial disaggregation technique (Williams & O'Boyle, 2008) to keep the ratio between parameters and cases acceptable, as this ratio influences the standard errors and the stability of the measures (e.g., Brown, Cober, Kane, Levy, & Shalhoop, 2006). More specifically, I averaged the items for each of the six TFL climate dimensions to reduce parameters. In the confirmatory factor analysis, I thus included six items for TFL climate, six for firm performance (measured as a second-order construct), and three each for alignment and adaptability.
I loaded all items on their proposed latent constructs in the first model. This model had an acceptable fit ($\chi^2 = 194.060$, df = 129, p < .001, TLI = .92, CFI = .94, SRMR = .06). To further validate this model, I tested three alternative models and compared them to the four-factor model. The first alternative model was a three factor model in which the items for both alignment and adaptability loaded on one latent construct but everything else remained the same ($\Delta \chi^2 = 74.032$, $\Delta$df = 3, p < .001). The second alternative model included two latent constructs where the TFL climate items as well as the three items for alignment and the three items for adaptability loaded on the same latent variable ($\Delta \chi^2 = 327.372$, $\Delta$df = 5, p < .001) and everything else remained the same. In a last step, I loaded all items on one latent variable ($\Delta \chi^2 = 692.768$, $\Delta$df = 6, p < .001). A chi-square difference test revealed that the proposed four-factor model has a significantly better fit compared to all other models. These results provide evidence that the constructs are not only theoretically but also empirically distinct (Bagozzi & Phillips, 1982).

2.4.3 Data Analysis

I conducted two independent hierarchical regression analyses at the organizational level to test hypotheses 1 and 2 (Cohen & Cohen, 1983). For Hypothesis 3, I examined a mediation model with four control variables. The causal steps approach is the most widely used technique to test mediation (Baron & Kenny, 1986). This approach has limitations as it is aimed at setting conditions for mediation rather than defining tests to control for it. Therefore, previous studies recommend using additional tests to control for mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

First, the widely used Sobel test was conducted to control for the significance of the mediation effect (Sobel, 1982; 1988). As the Sobel test has been criticized due to its limitations (Edwards & Schurer Lambert, 2007; MacKinnon et al., 2002), I decided to refer to bootstrapping as an additional analytical procedure (Preacher & Hayes, 2004; Shrout & Bolger, 2002). This procedure has several advantages, mainly; it is a non-parametric method for estimating the effect-size, which allows for testing hypotheses without making prior assumptions about the sampling distribution of the statistic and about the shape of the variables’ distribution (Efron & Tibshirani, 1993; Mooney & Duval, 1993; Preacher & Hayes, 2004). Bootstrapping is statistically powerful
(Erdogan et al., 2006; MacKinnon, Lockwood, & Williams, 2004; Mallinckrodt, Abraham, Wei, & Russel, 2006). Prior research strongly recommended its use for testing the significance of a mediation model (Cheung & S., 2008; James, Mulaik, & Brett, 2006). I thus used all three methods – causal steps approach, Sobel test, and bootstrap analysis – as complementary procedures to assess the mediation model.

2.5 Results

2.5.1 Descriptive Statistics
Table 2.1 presents means, standard deviations, and bivariate correlations for all variables in this study. The results indicate that (a) TFL climate correlates positively with contextual ambidexterity (\( r = .84; p<.001 \)), and (b) contextual ambidexterity correlates positively with firm performance (\( r = .40; p<.001 \)). Further, TFL climate and contextual ambidexterity are negatively related to both company size (TFL climate: \( r = -.38; p<.001 \); contextual ambidexterity: \( r = -.41; p<.001 \)) and company age (TFL climate: \( r = -.34; p<.05 \); contextual ambidexterity: \( r = -.33; p<.05 \)). Service companies correlate positively with both TFL climate (\( r = .24; p<.001 \)) and contextual ambidexterity (\( r = .22; p<.001 \)) while manufacturing companies are negatively related to TFL climate (\( r = -.31; p<.001 \)). The control variables for the finance industry and the trade industry did not show significant correlations with the variables under investigation. I excluded these two control variables from further analyses, as the inclusion of unnecessary controls can diminish statistical power (Bedeian, 2007) and lead to biased parameter estimates (Becker, 2005).

2.5.2 Hypotheses Testing
Table 2 presents the regression results for Hypotheses 1, 2, and 3. TFL climate is positively associated with contextual ambidexterity, as indicated by a significant regression coefficient (\( \beta = .83, p<.001 \)). Hypothesis 1 is thus supported. Further, contextual ambidexterity is positively associated with firm performance (\( \beta = .40, p<.001 \)), as predicted in Hypothesis 2.

I subsequently tested the mediation model and found a positive relationship between TFL climate and firm performance (\( \beta = .30, p<.01 \)). In a next step, contextual ambidexterity was entered into the regression. Contextual ambidexterity showed a
positive and significant relationship with firm performance ($\beta = .48$, $p<.01$), whereas TFL climate was not significant ($\beta = -.11$; n.s.). I concluded that the conditions for the stepwise approach to mediation (Baron & Kenny, 1986) were fulfilled because the data supported Hypotheses 1 and 2, and the effect of TFL climate on firm performance became non-significant when controlling for contextual ambidexterity. This lends initial support for Hypothesis 3. Moreover, the control variables have no partial effect on firm performance when the study’s variables are included (see Table 2.2).

### Table 2.1. Means, Standard Deviations, and Correlations of the Study Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TFL Climate</td>
<td>3.47</td>
<td>0.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Contextual Ambidexterity</td>
<td>24.09</td>
<td>6.47</td>
<td>.84**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. Firm Performance</td>
<td>5.80</td>
<td>1.08</td>
<td>.31**</td>
<td>.40**</td>
<td>-</td>
</tr>
<tr>
<td>4. Company Size</td>
<td>5.16</td>
<td>1.20</td>
<td>-.38**</td>
<td>-.41**</td>
<td>-.21**</td>
</tr>
<tr>
<td>5. Company Age</td>
<td>3.25</td>
<td>1.04</td>
<td>-.34**</td>
<td>-.33**</td>
<td>-.02</td>
</tr>
<tr>
<td>6. Manufacturing Industry</td>
<td>0.33</td>
<td>0.47</td>
<td>-.31**</td>
<td>-.15</td>
<td>-.08</td>
</tr>
<tr>
<td>7. Service Industry</td>
<td>0.43</td>
<td>0.49</td>
<td>.24**</td>
<td>.22*</td>
<td>.05</td>
</tr>
<tr>
<td>8. Finance Industry</td>
<td>0.07</td>
<td>0.25</td>
<td>.01</td>
<td>-.04</td>
<td>.03</td>
</tr>
<tr>
<td>9. Trade Industry</td>
<td>0.16</td>
<td>0.37</td>
<td>.10</td>
<td>-.04</td>
<td>-.04</td>
</tr>
</tbody>
</table>

*Note. n = 120 organizations; ** = $p<.01$; * = $p<.05$ (two-tailed)*

The subsequent Sobel test showed a positive and significant indirect effect (1.01; $p<.05$). The bootstrap procedure (1.05; $p<.01$) with a 99% confidence interval around the indirect effect, not containing zero (lower limit: .19, upper limit: 2.10) supported this positive and indirect effect. These results provide empirical evidence for a full mediation model in which contextual ambidexterity mediates the relationship between TFL climate and firm performance. Please see Table 2.3 for detailed results of the bootstrap analysis. In sum, the data supports all three hypotheses.
Table 2.2. Hierarchical Regression Analyses for Hypothesis 1, 2, and 3

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Hypothesis 1</th>
<th>Hypothesis 2</th>
<th>Hypothesis 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contextual Ambidexterity</td>
<td>Performance</td>
<td>Performance</td>
</tr>
<tr>
<td>Variables entered</td>
<td>Step 1</td>
<td>Step 2</td>
<td>Step 1</td>
</tr>
<tr>
<td>Company Size</td>
<td>-.34***</td>
<td>-.08</td>
<td>-.26*</td>
</tr>
<tr>
<td>Company Age</td>
<td>-.12</td>
<td>.00</td>
<td>.13</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>-.04</td>
<td>.18**</td>
<td>-.08</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.14</td>
<td>.12</td>
<td>.03</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TFL Climate</td>
<td></td>
<td></td>
<td>.83***</td>
</tr>
<tr>
<td>ΔR²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² (adjusted R²)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. n = 120 organizations. Standardized regression weights are shown. *** = p<.001; ** = p<.01; * = p<.05 (two-tailed)

Table 2.3. Bootstrap Results for the Mediation Model

<table>
<thead>
<tr>
<th>Effects</th>
<th>Standard Error</th>
<th>LL 99% CI</th>
<th>UL 99% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.05</td>
<td>.36</td>
<td>19</td>
<td>.21</td>
</tr>
</tbody>
</table>

Note: n = 120 companies; Bootstrap sample size = 5000; LL = Lower limit; UL = Upper limit; CI = Confidence interval

2.5.3 Post-Hoc-Analyses
Contextual ambidexterity is theorized to be achieved within one organizational business unit (Gibson & Birkinshaw, 2004). I decided to conduct this study with a sample containing only small and medium sized organizations to maximize the possibility to include organization that only have one business unit, hence minimizing
the possibility that organizations might achieve alignment and adaptability through two distinct business units, which would be structural and not contextual ambidexterity. In a post-hoc analysis, I controlled for whether organizations were distinct and independent, or whether they are subsidiary companies or belong to a holding respectively. This analysis showed 85 organizations to be independent and 35 to belong to the second category. Hence, 35 organizations might have the possibility to achieve ambidexterity through distinct business units for alignment and for adaptability. I replicated the study with a reduced sample that only included the 85 independent organizations, to ensure that ambidexterity is achieved within one unit. The results remained the same, supporting all of the study’s hypotheses. This shows that transformational leaders throughout the organization are able to create a context which enables the employees to engage for alignment- and adaption-oriented activities within one organization. Thus, the results support that TFL climate is a viable driver of contextual ambidexterity.

2.6 Discussion

2.6.1 Summary of Findings and Theoretical Contributions

The main objective of this study was to investigate how firms sustain superior performance in their competitive environment by fostering contextual ambidexterity through the creation of a strong TFL climate throughout the organization. The analysis of 120 German small-to-medium-sized companies provides empirical support for the pivotal role of TFL climate as an antecedent of contextual ambidexterity. I further found support for the hypothesized positive relationship between contextual ambidexterity and firm performance. Finally, the empirical results provide support for my theoretical model in which contextual ambidexterity functions as a mediator in the TFL climate-organizational performance relationship.

These findings contribute to the research field of organizational ambidexterity in three ways. First, I describe leadership behaviors from different levels, other than the top management team level, as crucial for ambidexterity. Prior research has focused on how the top management team may affect ambidexterity. For example, Tushman and O’Reilly (1996) argued that senior executives play an important role as integrators of
the differentiated units’ exploitative and exploratory activities in structurally ambidextrous organizations. Lubatkin et al. (2006) found that top management teams’ behavioral integration relates positively to ambidexterity. Similarly, Gibson and Birkinshaw (2004) considered the top management as installers of systems that create the organizational context for ambidexterity. My analyses extend these prior findings by showing that all leaders within the company are important for fostering contextual ambidexterity. Contextual ambidexterity relies upon all employees’ alignment and adaptability activities (Gibson & Birkinshaw, 2004). These employees face leaders at all levels of the organization. It is therefore important to capture TFL behavior across the entire organization. My results respond to a recent call by Jansen, Vera, and Crossan (2009) who suggested that further research is required to explore how leadership activities beyond those of the top management team affect organizational ambidexterity.

Second, I extend prior research (Jansen et al., 2008) that separately investigated the affect of top management teams’ TFL behaviors on exploration and exploitation. In the current study, I explicitly tested TFL climate’s effect on contextual ambidexterity. I thus show that TFL climate can simultaneously influence alignment and adaptability. Contextual ambidexterity requires the coexistence and complementary presence of these two learning processes (Gibson & Birkinshaw, 2004; Raisch et al., 2009). The study’s results revealed that TFL climate influences these two processes simultaneously. Thus, TFL behaviors may be viable for both types of ambidexterity, contextual and structural. Scholars argue for the necessity of the coexistence of contextual and structural ambidexterity within one organization for sustained firm performance (Raisch & Birkinshaw, 2008; Raisch et al., 2009; Simsek, 2009; Yukl, 2008). Yet this area remains unexplored. However, if future theoretical and empirical work substantiates these notions, TFL climate may become even more relevant as an antecedent of ambidexterity.

Third, this study adds to the research on the contextual ambidexterity-performance linkage. It substantiates the ambidexterity hypothesis by empirically investigating and supporting a positive link between contextual ambidexterity and firm performance. While prior studies have established a similar link at the subunit level (Gibson & Birkinshaw, 2004; Hill & Birkinshaw, 2006), this study provides first empirical
evidence that this relationship holds at the organization level. This is important as it allows future research to relate the concept of contextual ambidexterity to organization-level phenomena. Further, I address a recent call by Simsek et al. (2009) to investigate the impact of contextual ambidexterity on multiple strategically relevant performance indicators. To date, organizational ambidexterity has been related to single performance indicators such as sales growth (e.g., He & Wong, 2004). Raisch and Birkinshaw (2008) warned that deploying such one-dimensional indicators of firm performance increases the risk of producing biased estimations of organizational ambidexterity’s contributions to overall success. The multi-dimensional measure, which was utilized for this study, captures both strategic and operational as well as effectiveness and efficiency-oriented measures of performance, which should ensure a more accurate estimation of the ambidexterity – performance relationship. Finally, I tested TFL, ambidexterity, and performance in a single model, as called for by prior work (Jansen et al., 2009b), and to my best knowledge, no other study tested such a comprehensive model before.

In addition to contributing to the organizational ambidexterity research, my findings have several implications for TFL research. I contribute to the emerging research on TFL climate as an organization-level variable (Walter & Bruch, 2010). I thereby respond to Yukl (2008, p. 718) who suggested "to explore the collective, interactive effects of multiple leaders on the performance determinants."

First, I link TFL climate to organizational performance. TFL has been discussed as an effective leadership style (e.g., Judge & Piccolo, 2004), but has mostly been connected to individual (e.g., Bono & Judge, 2003) or team level performance (e.g., Hofmann & Jones, 2005), which is consistent with the preeminent conceptualization of TFL as individual-level behavior. Individual leaders motivate followers or encourage their teams, thus fostering individual or team level performance. Following Walter and Bruch (2010), I have suggested that TFL behaviors, which are conducted throughout the organization, may positively affect firm performance. I have conceptualized TFL as a climate variable to gain further insights on the relation between collective leadership and organizational performance. My study is the first to conceptualize and empirically validate TFL climate’s association with firm performance.
Second, based on prior findings from research conducted at the individual level (e.g., Bartram & Casimir, 2007), which found an indirect relation between TFL and performance; I established a mediation model of the TFL climate-firm performance relation. I found empirical evidence that TFL climate affects firm performance indirectly through the creation of contextual ambidexterity. With these findings, I tie in with prior research that speculated that transformational leaders might "find the right balance between exploiting institutionalized learning from the past and exploring new learning" (Berson et al., 2006, p. 590). My findings open up the black box of the TFL climate-firm performance relation by showing that contextual ambidexterity is a vital mediating mechanism.

### 2.6.2 Practical Implications

This study’s results support earlier findings (Gibson & Birkinshaw, 2004) by highlighting the crucial role of contextual ambidexterity for sustained success in competitive business environments. I showed that organizations, which are aligned towards their current goals but are at the same time flexible to adapt rapidly to changing future demands, have higher firm performance. My study indicates that TFL climate has a significant influence on the firm’s ability to pursue alignment and adaptability simultaneously. Organizations thus should consider actively fostering TFL climate to facilitate contextual ambidexterity and increase firm performance. I believe that TFL climate is more stable over time than the individual TFL behaviors of selected leaders (Walter & Bruch, 2010). TFL climate can thus be considered an important competitive factor that needs to be strategically developed.

To develop a strong TFL climate, the commitment of the CEO and the top management team might be crucial. Their role model acting functions as a catalyst for a culture that values TFL, as the upper echelons signal what behaviors are expected or acceptable (Dutton, 2003) and how activities should be carried out (Tyler & Lind, 1992). In this way, the "favorable" behaviors are likely to spread across the organization, as well as to lower levels of the hierarchy (Tyler & Lind, 1992). Moreover, structures that strengthen TFL climate should be established. Walter and Bruch (2010) found a positive relationship of decentralization and formalization with TFL climate. It is therefore preferable to decentralize decision making while...
formalizing processes and procedures. As TFL climate originates in leaders’ behaviors at all levels, I recommend stimulating and developing TFL behaviors independently of hierarchy. Especially when recruiting leaders for lower hierarchical levels, attention is paid far more often to technical skills than to interpersonal skills (Lowe et al., 1996). In line with prior work (e.g., Lowe et al., 1996) various ways of fostering TFL are possible. I recommend installing development plans that would foster TFL by training leaders at all organizational levels. TFL could be integrated even in an overall competence management system. TFL climate within the organization can be measured using employee surveys with the goal to identify strengths and weaknesses of the leaders regarding the TFL dimensions in order to direct trainings and programs especially towards the dimensions that require the development. Furthermore, organizations could promote transformational leaders and give them incentives to stay within the organization. Moreover, TFL climate may not be fostered only by developing current leaders, but also by hiring new leaders, for example, TFL behaviors may be emphasized in selection and recruiting processes of leaders at all hierarchical levels.

2.6.3 Limitations and Future Research

While my study has several methodological strengths, some limitations should be considered when interpreting the results. First, this study focused on small-to-medium sized companies. The choice of this sample had conceptual reasons. Contextual ambidexterity seems to be more relevant in smaller companies, as it is difficult and costly for these companies to install separate structures for exploration and exploitation (Raisch & Birkinshaw, 2008). For these SMEs, I observed contextual ambidexterity at the company level. Conversely, Gibson and Birkinshaw (2004) explored large multinational companies and found that contextual ambidexterity arises at the business unit level. This study’s results may thus not be generalizable to all types of organizations. It would be interesting to test if my findings hold true in larger organizations and which boundary conditions for my model appear for larger organizations.

Second, all organizations in my sample are located in Germany. TFL has been shown as relevant across different national contexts (Bass, 1997). However, researchers have
noted that characteristics of the national culture can influence leadership and its performance effects (Judge, Woolf, Hurst, & Livingston, 2006). The specific German culture, characterized by relatively low levels of power distance, medium levels of long-term orientation and uncertainty avoidance, as well as high levels of masculinity and individualism (Hofstede, 2001), might have influenced the results. A sample with cross-national data could contribute to overcoming this limitation.

Third, in the analysis of the ambidexterity-performance relation, I investigated ambidexterity as the coexistence of alignment and adaptability (Gibson & Birkinshaw, 2004). To gain more insights into the ambidexterity-performance relation, it would be interesting to investigate the independent effects of these demands on different performance variables, which theoretically rely more on either continuity or change (Raisch & Birkinshaw, 2008). Moreover, boundary conditions such as competitive rivalry and industry dynamism (Jansen et al., 2006) should be considered as potential moderators of the relationship between contextual ambidexterity and firm performance.

### 2.6.4 Conclusion

This study’s aim was to explore how leaders can contribute to fostering ambidexterity. In this research, I moved beyond prior work that focused on (a) executive level leadership behaviors that might foster ambidexterity in organizations with (b) structurally differentiated units for exploration and exploitation activities (e.g., Jansen et al., 2009b). In contrast to prior research, I brought into focus how leadership from all organizational levels might facilitate contextual ambidexterity. Based on my theoretical reasoning and the empirical findings, I conclude that TFL climate plays a crucial role in creating contextual ambidexterity and in sustaining firm performance. With this study, I provide a new direction in research on leadership and ambidexterity, which is fruitful for scholars and practitioners that are interested in understanding how leaders from all organizational levels might contribute to fostering ambidexterity.
3 Study 2 - Collective Personality, Contextual Ambidexterity, and Firm Performance

The second study addresses the research question of whether the five facets of collective personality are associated with higher levels of contextual ambidexterity and if this in turn enhances firm performance.

3.1 Introduction, Relevance, and Intended Contributions

Ambidexterity, an organization's ability to focus on its current tasks while simultaneously adapting to future demands, is heavily argued to be a performance driver (Gibson & Birkinshaw, 2004; He & Wong, 2004; Tushman & O’Reilly, 1996). This proposition is based on March’s (1991) seminal work on explorative and exploitative learning that suggests that organizations need to conduct both exploitation and exploration to prosper, as organizations that only exploit will be trapped in suboptimal stable equilibria, while organizations that only explore will not benefit from their exploration and its costs.

The research on ambidexterity suggests different ways of overcoming the tradeoffs between the seemingly contradictory demands of exploration and exploitation. Tushman and O’Reilly (1996) have proposed a structural solution. Organizations might become ambidextrous through structurally separating exploration and exploitation activities into different units. The main driver of this ‘structural ambidexterity’ is the top management, which needs to be able to integrate these separate units at the organizational level.

A somehow contrary approach to ambidexterity is contextual ambidexterity where an entire unit, in my case the organization, is simultaneously aligned and adaptable (Gibson & Birkinshaw, 2004). Gibson and Birkinshaw (2004) proposed that contextual ambidexterity is achieved through the activities of all employees that direct their efforts toward alignment and adaptability. In other words, "contextual ambidexterity assumes that the ambidexterity of an organization as a whole derives from specific actions of individuals" (Kang & Snell, 2009, p. 66).
Yet, not much is known about how employees foster simultaneous alignment and adaptability within one unit. Gibson and Birkinshaw (2004) suggested that a behavioral context that is comprised of performance management (discipline and stretch) and social context (support and trust) enables every employee to act in pursuit of contextual ambidexterity.

However, prior work on individuals and their behaviors revealed that individuals show relatively stable behavioral patterns over time and across situations (Hogan, 1991; James & Mazerole, 2002; Zhao & Seibert, 2006). Therefore, it is crucial to consider not only the behavioral context (Gibson & Birkinshaw, 2004) but also behavioral regularities of the employees. These behavioral regularities seem to be deeply rooted in individuals ‘personality’ (e.g. Hofmann & Jones, 2005; Hogan, 1991). Hence, I suggest that the personality of the employees predicts ‘ambidextrous behaviors’.

Prior work suggested that norms define appropriate attitudes and behaviors of organizational members (O'Reilly & Chatman, 1996). Yet, research on ambidexterity only started to integrate this idea of behavioral regularities as an antecedent. For example, Adler et al. (1999) proposed that meta-routines – a collective form of behavioral regularities – contribute to the ability to balance exploration and exploitation within one unit. Gütтел and Konlechner (2009) in their qualitative case study found that specific norms (for continuous learning and high performance standards) and collective behavioral patterns foster contextual ambidexterity. Such routines and norms emerge from individual behavioral regularities, referred to as personality, that are manifested at a collective level, referred to as collective personality (Hofmann & Jones, 2005). Yet, only limited knowledge is gained on how the employees of the organization affect organizational processes of ambidexterity with their personality; or in other words, how such collective personality (routines and norms) contributes to contextual ambidexterity. Moreover, the literature on personality has pointed out the need to investigate mediating mechanisms of the relationship between collective personality and performance (Moynihan & Peterson, 2004).

I will close the above described gap with this study. The paper investigates what facets of collective personality enable contextual ambidexterity. I focus on the five-factor model of personality (Costa & McCrae, 1992) for two reasons. First, the five-factor model of personality represents a robust taxonomy of personality (Costa & McCrae,
1988; Barrick & Hambrick, 1991), which provides a comprehensive framework for examining personality and its relations to behaviors, processes, and outcomes (Barrick et al., 1998). Meta-analytic research has noticed that the five factors capture the basic structure of personality (Zhao et al., 2009). Second, the five factor model is able to explain organizational level personality (Hofmann & Jones, 2005), that means, it can be referred to norms, routines, and path-dependencies of collectives. I will theorize how these five facets of collective personality might influence contextual ambidexterity and investigate this relationship empirically. In addition, by investigating contextual ambidexterity’s influence on financial, customer, and employee performance, I directly answer Simsek et al.’s (2009) call to analyze contextual ambidexterity’s relation to strategic performance outcomes more thoroughly. The main argument of my study is that behaviors are deeply rooted in individual personality (Hogan, 1991; James & Mazerole, 2002; Zhao & Seibert, 2006) and therefore the personality of the workforce needs to be associated with behavioral regularities directed at alignment and adaptability. Overall, I investigate what facets of collective personality facilitate contextual ambidexterity, and if contextual ambidexterity in turn is positively related to firm performance. The research model is depicted in figure 3.1.

**Figure 3.1. Research Model Study 2**

With my study, I contribute to the ongoing research on how ambidexterity might be achieved within one unit by broadening the discussion on what kind of collective personality might facilitate contextual ambidexterity. Moreover, I investigate
contextual ambidexterity’s relation to more strategically relevant performance indicators, which is an issue that prior research neglected. Finally, this paper corroborates and extends the research on collective personality (e.g., Hofmann & Jones, 2005) by showing its relation to strategic organizational performance and by providing a viable mediator (contextual ambidexterity) of this relationship.

The paper is structured as follows. First, I will define the constructs, describe the study’s theoretical background, and develop the hypotheses. Then, I will delineate the methods, including the sample and measurement instruments, followed by the study’s results. In the last section, I will discuss the results, point out theoretical contributions and managerial implication, reflect on the limitations, and suggest areas of future research.

3.2 Theoretical Background

3.2.1 Contextual Ambidexterity
Contextual ambidexterity is theorized to be achieved within one unit and to emerge from all employees within this unit. I define it as the organizational ability to adapt and align at the same time. Alignment refers to that all activities within the organization are working in the same direction, while adaptability refers to the capacity to quickly respond to changes in the task environment by altering the organizational activities (Gibson & Birkinshaw, 2004). Contextual ambidexterity was conceptualized at the business unit level (Gibson & Birkinshaw, 2004). I investigate contextual ambidexterity of small and medium sized organizations at the organizational level in line with prior research (Im & Rai, 2008).

3.2.2 Collective Personality
Personality at the individual level is described as the observable content of behavioral regularities of individual persons (Hogan, 1991). At the collective level, these behavioral regularities relate to routines, habits, norms, organizational routines, and path dependencies (e.g. Cyert & March, 1963; Feldman, 1984; Feldman & Rafaeli, 2002; Gersick & Hackman, 1990; Levitt & March, 1988; Nelson & Winter, 1982).
Feldman and Rafaeli (2002) defined these macro-organizational regularities as "recurring patterns of behavior of multiple organizational members involved in performing organizational tasks" (p. 311). This means, "collective personality describes the routines occurring in the collective as a whole" (Hofmann & Jones, 2005, p. 510)

Following Hofmann and Jones (2005), I suggest that behavioral patterns of individual and collective personality are functionally isomorphic. That is, the behavioral regularities resulting from the personality traits are the same at the individual as well as the collective level, although the emerging mechanisms are different. At the individual level, personality traits are seen as intrapersonal, resulting from cognitive and biological processes (Hofmann & Jones, 2005). At the collective level, these personality traits are interpersonal (Hofmann and Jones, 2005). When individuals work together, shared expectations and norms that will develop will be expressed in observable behavioral regularities (Giddens, 1993; Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999). "The key distinction between these collective regularities and those occurring at the individual level is the shared, interpersonal, and interaction-based foundation of collective personality, as opposed to the intrapersonal foundation of individual personality" (Hofmann & Jones, 2005, p. 510).

A viable theory to explain collective personality is the attraction-selection-attrition theory (Schneider, 1987). Prior research has theorized that attraction, selection, and attrition are the mechanisms through which employees tend to become homogenous in terms of personality (Ployhart, 2006; Ployhart, Weekley, & Baughman, 2006; Schneider & Smith, 2004; Schneider, Smith, Taylor, & Fleenor, 1998).

I chose to apply the five-factor model of personality because it is accepted as a comprehensive framework capturing the basic structure of personality (Barrick et al., 1998; Zhao et al. 2009) Moreover, it has a robust taxonomy (Costa & McCrae, 1988; Barrick & Hambrick, 1991) and can explain organizational level personality (Hofmann & Jones, 2005).

The five-factor model (Costa & McCrae, 1992) of personality depicts five personality aspects at the organizational level (Hofmann & Jones, 2005): Collective extraversion is an organization’s tendency to be energetic, active, talkative, assertive, and bold (Bono & Judge, 2004; Hofmann & Jones, 2005; Zhao et al., 2009). Collective
agreeableness is referred to the organization’s tendency to be consensus oriented, cooperative, and effective in solving conflicts (Halfhill, Nielsen, Sundstrom, & Weilbaecher, 2005; Hofmann & Jones, 2005). Collective conscientiousness reflects shared attention to accuracy, timing, and follow-through, a shared strong sense of direction, an organization’s tendency to work hard to achieve goals and to be disciplined and organized (Costa & McCrae, 1992; Halfhill et al., 2005). Collective openness to experience is the organization’s tendency to be intellectually curious, imaginative, creative, and insightful (Bono & Judge, 2004; Zhao et al., 2009). Collective emotional stability at the organization level depicts the shared tendency to be calm, stable, even tempered, hardy, and relaxed (Bono & Judge, 2004; Zhao et al., 2009). As these collective personality traits reflect behavioral norms, expectations, and patterns, it seems likely that they impact the behaviors of the organization and its members, and thus may influence alignment and adaptability.

3.3 Hypotheses Development

3.3.1 Collective Personality as a Driver of Contextual Ambidexterity

In this study, I investigate the ways in which the five facets of collective personality might contribute to achieving contextual ambidexterity. I discuss the theory and deduce hypotheses for each of the five factors separately.

3.3.1.1 Collective Extraversion

Collective extraversion is manifested in energetic, active, talkative, and bold behavioral norms and tendencies (Bono & Judge, 2004; Hofmann & Jones, 2005; Zhao et al., 2009), which might positively influence adaptability and alignment. Collective extraversion might drive adaptability, as it positively contributes to overcoming barriers. For successful adaptation, organizational internal and external actors must be persuaded of new ideas and innovations and of the necessity to take some risks in order to succeed when exploring the new ideas. Moreover, convincing communication, which is attributed to extraverted organizations, may support the development of new processes, the invention of new products, and their successful placement in new markets. Thus, it seems reasonable that extraverted firms might be successful in adapting the organization, because much energy and activity has to be invested to
achieve this. Furthermore, organizations that want to explore new ideas might have to act in an assertive and bold way. Prior research at the individual level supports my argumentation. In their recent meta-analysis, Zhao and colleagues (2009) found a positive significant relation between extraversion and entrepreneurial intentions and showed a positive link between extraversion and entrepreneurial firm’s performance.

Moreover, collective extraversion might also positively relate to alignment. Prior research found that extraversion promotes positive interactions, information exchange, helping behaviors, and cooperation among the employees (e.g. Beersma, Hollenbeck, Humphrey, Moon, Conlon, & Ilgen, 203; Porter, Hollenbeck, Ilgen, Ellis, West, & Moon, 2003) all of which are essential for aligning the activities. Therefore, extraverted routines, shared norms, path dependencies, and action patterns might as well contribute to alignment. To conclude, collective extraversion might positively influence adaptability as well as alignment. Thus, I state the following hypothesis.

**Hypothesis 1a: Collective extraversion relates positively to contextual ambidexterity.**

### 3.3.1.2 Collective Agreeableness

**Collective agreeableness** refers to consensus, cooperation, and effective conflict management (Halfhill et al., 2005; Hofmann & Jones, 2005). Organizations without such norms, values, and behavioral patterns might not be able to explore new grounds, as organizations that internally do not agree on new technologies, markets, or processes, among others, are likely to fail in adapting the organization. When adapting, conflicts might arise within the organization. For instance, the organization needs to decide how to transfer innovative ideas to new products and new processes, which may lead to conflicts. Organizations that are effective in conflict management, such as organizations with high collective agreeableness, might deal with such adaptation-oriented activities better.

On the other hand, collective agreeableness might as well foster aligning the organization. Alignment requires effective handling of relationships with different groups, such as employees, customers, managers, and suppliers, which is considered to be related to agreeableness (Halfhill et al., 2005). For instance, to meet existing
customers’ demands, the relationships must be handled carefully. Similarly, Bell (2007) argued that collective agreeableness might lead to engagement in interpersonal processes. These interpersonal processes are likely to be valuable for aligning the organization, as no coordination is possible without interaction. Moreover, Anderson (2009) proposed that collective agreeableness reduces interpersonal and task conflict, which in turn might lead to better efficiency as the resources are used for the tasks and not for solving conflicts.

Tushman and O’Reilly (1996) claimed that a common organizational culture is like the glue that holds the organization together. To promote ambidexterity, such a culture should foster integration and encourage identification and sharing of information and resources (Tushman & O’Reilly, 1996). Organizations high on agreeableness might support all this, as they are characterized by high levels of cooperation and consensus orientation. Therefore, I propose a positive linear relationship between collective agreeableness and contextual ambidexterity:

\[
Hypothesis \ 1b: \text{Collective agreeableness relates positively to contextual ambidexterity.}
\]

### 3.3.1.3 Collective Conscientiousness

Collective conscientiousness refers to the organization’s tendency to work hard to achieve the organizations goals, to become disciplined and organized, and to share a strong sense of direction (Costa & McCrae, 1992; Halfhill et al., 2005). I suggest that these tendencies will positively relate to contextual ambidexterity.

Successful adaptation is difficult, as a sense for the market and its future development is needed. Conscientious organizations might be successful in identifying and working hard to attain the resources for exploration and to accomplish the tasks of exploration. Prior research (Bell, 2007) supports this by arguing that teams high on conscientiousness are good at organizing and planning, as conscientious team members engage in behaviors directed at problem solving and goal completion (Bell, 2007). This author stated further that such teams might succeed in team transition processes because they can identify the team’s main tasks and resources and develop courses of action to reach the team goals. Similar mechanisms may work in
organizations. A recent meta-analysis found a positive relation of conscientious company leaders with entrepreneurial intentions and entrepreneurial firm performance (Zhao et al., 2009).

Moreover, I suggest that the norms, values, and behavioral tendencies of collective conscientiousness are also positively related to alignment. For achieving greater efficiency and for meeting the existing customer’s demands better, a shared attention to accuracy, timing, and follow-through, as well as hard, organized, and disciplined working is needed. Prior research has consistently related conscientiousness to task focus (Anderson, 2009). Thus, organizations high on conscientiousness are likely to concentrate on the work that has to be done to be successful. Therefore, the organizational activities will be aligned.

I argue that collective conscientiousness relates positively to adaptability and alignment because a sense of direction, hard work directed at the goals, accuracy, timing, and other facets of conscientiousness might function for both in a facilitating manner. Therefore, I post the following hypothesis:

Hypothesis 1c: Collective conscientiousness relates positively to contextual ambidexterity.

### 3.3.1.4 Collective Openness to Experience

Collective openness to experience reflects an organization’s tendency to be intellectually curious, imaginative, insightful, and creative (Bono & Judge, 2004; Zhao et al., 2009). As exploration is about discovery, experimentation, and innovation (March, 1991), I suggest that these collective tendencies will be positively related to adaptability. Organizations high on collective openness to experience might be curious to explore new products, markets, processes, and other facets. Organizations with high imagination are more likely to develop creative solutions and ultimately succeed in adapting the organization. Moreover, for a successful adaptation, opportunities must be recognized. Opportunity recognition "is especially likely to be related to imagination, creativity, and openness to new ideas" (Zhao et al. 2009, p. 5). Theoretical arguments from the team level point to the same direction. Bell (2007) argued that teams high on openness to experience are more adaptable, making changes
in a dynamic team environment more likely. Moreover, empirical evidence from the individual level supports the direction of my hypothesis. In their recent meta-analysis, Zhao and colleagues (2009) showed that openness to experience relates positively to entrepreneurial intentions as well as to entrepreneurial firm performance.

In addition, I propose that collective openness to experience relates positively to organizational alignment. To align the organization, all activities need to be directed towards the overall organizational goal. Organizational learning and ongoing improvements are needed in pursuit of this. Openness to experience is theorized to encourage these two processes (Hofmann & Jones, 2005). Some degree of change is needed even for alignment, as the activities that are currently not aligned need to align. Prior research (DeYoung, Peterson, & Higgins, 2005) has argued that "open people are more permeable to new ideas and experiences; they are motivated to enlarge their experience into novel territory and to examine their experience, discovering novelty even in the previously known" (p. 830). Thus, open people, and similar organizations with openness to experience, are likely to be interested and successful in aligning the organization.

Theoretical reasoning about ambidextrous organizations supports the provided arguments. Tushman and O'Reilly (1996) claimed an overall organizational culture, which is, amongst others, characterized by openness, to be vital for ambidexterity. My argumentation in the previous paragraphs depicts a positive relation between openness to experience and both components of contextual ambidexterity, adaptability and alignment, as some kind of change is involved in reaching both. Therefore, I suggest:

\[ \text{Hypothesis 1d: Collective openness to experience relates positively to contextual ambidexterity.} \]

3.3.1.5 \textbf{Collective Emotional Stability}

\textit{Collective emotional stability} is manifested at the organizational level in form of shared norms and behaviors, such as being calm, stable, even tempered, hardy, and relaxed even in situations that are new or uncomfortable (Bono & Judge, 2004; Zhao et al., 2009). Organizations, which are exploring new possibilities, are likely to face difficult situations as it might be challenging, for instance, to develop new products.
For instance, the development of new processes might take longer as planned, new technologies might not function smoothly right from the beginning, and new markets might not be conquered easily. All this is possible while adapting. Therefore, emotional stability is needed to deal with these kinds of situations, especially when a severe setback happens. Thus, emotional stability might ultimately foster adaptability. Empirical evidence supports this argumentation, as prior research found a positive relationship of emotional stability at the individual level with entrepreneurial intentions and entrepreneurial firm performance (Zhao et al., 2009).

Moreover, I suggest that collective emotional stability relates positively to alignment. Emotionally stable organizations might create a more relaxed atmosphere that would facilitate cooperation, ultimately promoting the alignment (Bell, 2007). Moreover, neurotic (the opposite of emotional stable) organizations might be discouraged by small failures and panic in response to difficult situations (Zhao et al., 2009), which might hamper the organization’s alignment. Moreover, in neurotic organizations, the interaction between its members might result in interpersonal difficulties, potentially breaking down the effective organizational functioning (Hofmann & Jones, 2005). Meta-analytical results at the individual level consistently show that emotional stability relates positively to job performance across occupations (Barrick & Mount, 1991). Based on the above evidence, I propose:

_Hypothesis 1e: Collective emotional stability relates positively to contextual ambidexterity._

### 3.3.2 Contextual Ambidexterity and Firm Performance

Ambidexterity might be a vital driver of firm performance. This reasoning stems from two theories within organizational research. First, March’s (1991) theory on explorative and exploitative learning suggests that organizations need to succeed in both, exploration and exploitation. Organizations that are successful in exploration but fail to exploit might not earn the fruits of their efforts. On the other hand, organizations that exploit without exploring might fail because their products, processes, and other business aspects might become outdated. Thus, being successful at both, exploration and exploitation, is associated with enhanced performance.
Second, the Resource-based view of the firm (Barney, 1991) theorized that company success depends on valuable, rare, imperfectly imitable, and non-substitutable resources and their exploitation (Barney, 1991, 1997). Contextual ambidexterity itself might be such a resource, as it is described as "complex, causally ambiguous, widely dispersed, and time-consuming to develop" (Gibson & Birkinshaw, 2004, p. 210). Moreover, contextual ambidexterity might contribute to the exploitation of other such advantageous resources. People in contextually ambidextrous organizations are able to decide how to invest their time into alignment- and adaptability-related activities (Gibson & Birkinshaw, 2004). With this, contextually ambidextrous organizations enable their employees to take opportunities. Hence, strategically relevant resources might be exploited.

In this study, I conceptualized firm performance to be a multidimensional construct consisting of three dimensions: customer, employee, and financial performance. Contextual ambidexterity might foster customer performance, as the employees in such organizations are enabled to deliver value to existing customers while simultaneously being on the lookout for changes in the task environment (Gibson & Birkinshaw, 2004). Hence, employees act on the behalf of their customers, spot new trends and customer preferences early, and then act accordingly. For instance, when resources that foster customer management systems, marketing, external communication, and product development are exploited consequently, the quality of the product and relational quality that the customers perceive might increase. Moreover, the organization adapts to changes in the task environment, thus new products and services might evolve, which influences customer performance positively, as new customer advantages – for instance new customer care systems or new product functions - may arise. Empirical evidence supports my argument, as prior research (Cegarra-Navarro & Dewhurst, 2007) has found that an ambidexterity context facilitates customer capital (profitable customers, company reputation, and prestige).

Moreover, employee performance might be fostered in contextual ambidextrous organizations. This reasoning is based on Hackman and Oldham’s (1980) Job Characteristics Theory. This theory proposes that challenging, creative, and autonomous tasks provide employees with meaningfulness, which in turn contributes to enhanced satisfaction with the job. I suggest that contextually ambidextrous
organizations provide such a work context, as employees are challenged to exploit and explore and can be autonomous when deciding on how to divide their time between these different tasks. Prior research supports my argument. Hackman and Oldham (1980) have found that high effort in task assigned to a group affects job satisfaction positively. Early researchers on organizations have found that employees working in meaningful environments are more satisfied with their jobs and more committed to the organizational goals (Bowen & Ostroff, 2004). Others (Avey, Aviolo, Crossley, & Luthans, 2009) have provided evidence that psychological ownership has a positive influence on job satisfaction and ‘intentions to stay’ and relates to workplace deviance negatively.

Contextual ambidexterity might also influence financial performance. In such organizations, all activities are directed towards the overall goal, but they might easily shift towards new demands. Thus, organizations are likely to do the right things in the right way. Furthermore, employees engage in overall organizational tasks and are likely to be strongly connected. Communication, cooperation, and resource sharing between employees are positively associated with overall productivity and financial performance (Evans & Davis, 2005; Huselid, 1995). Based on the above evidence I post the following hypothesis:

_Hypothesis 2: Contextual ambidexterity relates positively to firm performance._

### 3.3.3 Contextual Ambidexterity as a Mediator in the Collective Personality-Firm Performance Relation

The prior hypotheses depict a model in which contextual ambidexterity mediates the positive relationship between collective personality and firm performance. Hence, I suggest that all five collective personality factors will contribute to simultaneous alignment and adaptability, which will in turn foster firm performance.

Prior research supports my reasoning for a positive relation between the five-factor model of personality and performance. Early meta-analysis on personality at the individual level (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991) revealed that the five-factor model of personality is useful for predicting job performance. At the collective level, empirical evidence also supports the proposed positive effects of
the five-factor personality model. In their empirical study with 41 assembly and maintenance teams, Barrick and colleagues (Barrick et al., 1998) found that group conscientiousness, agreeableness, extraversion, and emotional stability relate to team performance positively. Stewart’s (2006) meta-analysis on the relationship between team design features and team performance showed preliminary meta-analytical evidence for the relation between ‘team member personality’ and team performance. A meta-analysis conducted by Bell (2007) further supported the relation between team personality and team performance. Her study showed that mean team conscientiousness, openness to experience, and agreeableness are positively related to team performance. As the five-factor model of personality is theorized to be isomorphic at the individual and the collective level (Hofmann & Jones, 2005), I propose that collective personality will be associated with positive organizational outcomes.

Research on individual personality’s impact on collective (in that case team) performance (Barrick et al., 1998; Barry & Stewart, 1997; Neuman, Wagner, & Christiansen, 1999) supports my argumentation for an indirect effect at the collective level. The underlying model in this field of research states "that the individual tendencies described by one’s personality influence the types of behaviors enacted within the collective. This influences how various roles are fulfilled within the collective, and, therefore, overall performance" (Hofmann & Jones, 2005, p. 519). Collective personality is manifested in organizational routines, habits, norms, and path dependencies (e.g. Cyert & March, 1963; Feldman, 1984; Feldman & Rafaeli, 2002; Gersick & Hackman, 1990; Levitt & March, 1988; Nelson & Winter, 1982). These will not affect the firm’s performance per se, but they are able to create contextual ambidexterity through the behaviors they facilitate. I suggest that all of the five personality factors at the collective level will facilitate contextual ambidexterity (Hypothesis 1), which will in turn foster firm performance (Hypothesis 2). Therefore, I propose the following mediation hypotheses:

Hypothesis 3a: Contextual ambidexterity mediates the positive relationship between collective extraversion and firm performance.

Hypothesis 3b: Contextual ambidexterity mediates the positive relationship between collective agreeableness and firm performance.
Hypothesis 3c: Contextual ambidexterity mediates the positive relationship between collective conscientiousness and firm performance.

Hypothesis 3d: Contextual ambidexterity mediates the positive relationship between collective emotional stability and firm performance.

Hypothesis 3e: Contextual ambidexterity mediates the positive relationship between collective openness to experience and firm performance.

3.4 Method

3.4.1 Research Setting, Data Collection, and Sample
I conducted this research with a sample consisting of small and medium-sized German organizations for two reasons. First, 99.7 percent of German companies belong to these types of organizations (BMWi, 2009). Hence, my sample represents ‘typical’ German companies. The other reason is based on prior research. It has been theorized that SMEs have difficulties in realizing ambidexterity through separating exploration and exploitation into structurally different units (Lubatkin et al., 2006). Thus, a contextual approach to ambidexterity seems to be appropriate for small and medium-sized organizations. Similarly, Gibson and Birkinshaw (2004) have argued that contextual ambidexterity might be more fruitful for SMEs and business units.

I have gathered the data for this study between April and June 2008 as a part of a larger research project, which the Institute of Leadership and Human Resource Management of the University of St. Gallen conducted in cooperation with an agency located in Germany that specializes in benchmarking SMEs. The data was gathered during the same data collection as in Study 1. To participate in this research project, organizations had to fulfill two basic premises. First, they had to be located in Germany. Second, they needed to have a maximum of 5,000 employees in total. Initially, the agency solicited participation from 164 organizations. A detailed benchmarking report was promised to these organizations in return for their participation to enhance their willingness to participate.

I employed standardized procedures across all organizations in order to improve equivalence of data collection. I took precautions in order to avoid same-source bias.
In total, six different survey versions were applied: four versions for the employees, one for the key informant from the HR department, and one for the key informants from the top management team.

As this study was part of a larger research project, four different versions of the employee survey were employed, including questions on collective personality, leadership style, organizational structure, satisfaction, and others. All questions inquired only information that the employees are best suited to provide. Participating organizations sent a standardized email invitation to all employees through their HR department (if applicable) or through a top management team member’s email address, describing the study’s purpose and providing a link to a web-based survey hosted by an independent third company. An algorithm was programmed for the survey’s website to randomly direct respondents to one of the four survey versions. In addition, a paper version of the questionnaire was distributed to employees with no web access in a random manner. The data applied in this study comes only from the first employee survey version in which collective personality was assessed.

The second source of information was an HR executive or the CEO in organizations that had no HR department due to their size. This HR survey inquired about general information on the organization (e.g., industry, size, organization age) and information on management and HR systems and practices. In this HR survey, I have gathered the data on the organizations’ contextual ambidexterity. The third informant group consisted of the top management team. In this top management team survey, I asked mainly questions regarding the firm’s performance. Thus, the focal study variables were collected from different sources. In doing this, I have implemented a split-sample design (Rousseau, 1985) (for similar approaches see: Dickson et al., 2006; Erdogan et al., 2006) to alleviate concerns about common source bias (Podsakoff et al., 2003). Professional translators translated all versions of the questionnaire to German using a double-blind back-translation procedure to ensure semantic equivalence with the original English items (Schaffer & Riordan, 2003). Respondents were assured full anonymity.

Of the 164 organizations that were initially invited, 43 failed to exceed the minimum number of employees per employee survey version (I set a minimum of 4 participants), rejected relevant information (e.g., no member of the top management team completed
the performance questionnaire), or decided not to participate in the study at all. This resulted in an organizational level response rate of 74% \((n = 121)\).

Various industries were represented within the sample, including service industry (44%), manufacturing industry (34%), trade industry (16%), and finance and insurance industry (7%). The companies ranged in size from 23 to 4360 employees \((\text{median} = 474)\). Therefore, participating organizations represented a heterogeneous sample from diverse industries and with different sizes, increasing the likelihood of finding substantial variation between organizations on employees’ feelings, perceptions, and behaviors, as suggested by prior research (e.g. Ambrose & Schminke, 2003; Schminke et al., 2002).

In sum, 17,969 employees chose to participate in the study voluntarily. The average within-organization response rate was 74% \((\text{standard deviation} = 22\%)\). The algorithm programmed in the website effectively directed the participating employees to the four different survey versions, resulting in about the same number of participants for every survey version. As the data collection for this study was part of a larger research project, collective personality was included only in one of the four survey version. The questionnaire including collective personality was completed by 4,339 respondents. In each organization, a minimum of 4 respondents completed the employee survey version used \((\text{median} = 24)\).

The sample at the individual level comprised 54 percent of males and 38 percent of females. Eight percent of the participants did not indicate their gender. Respondents belonged to different age groups; however, most participants belonged to the middle age group \((22\% = 16-30 \text{ years old}, 54\% = 31-50 \text{ years old}, 12\% >50 \text{ years old}, 12\% \text{ no answer})\). Participants came from all major functions of their organizations and represented different hierarchical levels \((2\% \text{ top management}; 9\% \text{ middle management}; 11\% \text{ first-line supervisors}; 75\% \text{ employees without leadership responsibility}; 3\% \text{ no answer})\). The respondents had mean company tenure of 8 years. In total, 363 executives completed the top management questionnaire with a within participation range from 1 to 12 participants, and an average within company response rate of 93 percent.
3.4.2 Measurements and Validation

In this section, I will describe the variable’s measurements and its validations. A complete item list for each measure is available in the appendix.

3.4.2.1 Collective Personality

To assess the five factors of personality (extraversion, agreeableness, conscientiousness, openness, and emotional stability), I utilized the 106-Item abbreviated version of the well-established Big Five Inventory (BFI; John, Donahue, & Kentle, 1991), the Big Five Inventory (BFI-10), developed by Rammstedt and John (Rammstedt & John, 2007). This measure was constructed for the use in research settings with extreme time constraints and contains two items per factor. The BFI-10’s psychometric properties have been tested extensively (cf., Rammstedt & John, 2007). These studies support the inventory’s reliability, construct validity, and external validity. I used the German version of this measurement instrument (Rammstedt, 2007) and conducted a referent-shift (Chan, 1998) to assess the personality factors at the collective level. Sample items are: "The employees in our organization are reserved" (extraversion reversed), "The employees in our organization tend to find fault with others" (agreeableness reversed), "The employees in our organization do a thorough job" (conscientiousness), "The employees in our organization get nervous easily" (emotional stability reversed) and "The employees in our organization have an active imagination" (openness to experience). The employees answered to these questions on a Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). I justified the aggregation of the individual answers to the organizational level by calculating the intraclass correlation coefficients (ICC[1] and ICC[2]; Bliese, 2000) and the interrater agreement statistics $r_{wg}$ (James et al., 1984). The intraclass correlation coefficients should have an ICC[2] value of >.70 and ICC[1] values with a significant F-statistic (Chen et al., 2004). For aggregating individual data to the collective level, James (1982) suggested that the $r_{wg}$ should reach values of .60, at minimum. The results for both statistics were in the suggested range with ICC[2] ranging from .73 to .82 and significant F-values for the ICC[1]. The $r_{wg}$ ranged from .71 to .77. Moreover, I tested the reliability of the measures, with values for Cronbach’s alpha ranging from .75 to .86.
To confirm the five-factor structure of collective personality, I conducted a confirmatory factory analysis (CFA) testing the measurement model. This test yielded satisfactory results ($\chi^2$/df$=2.51$ CFI$=.96$; GFI$=.92$; TLI$=.92$; SRMR$=.04$).

### 3.4.2.2 Contextual Ambidexterity
A measurement instrument developed by Gibson and Birkinshaw (2004) assessed contextual ambidexterity. This instrument consists of two separate scales for alignment (sample item: "The management systems in this organization work coherently to support the overall objectives of this organization") and adaptability (sample item: "The management systems in this organization encourage people to challenge outmoded traditions/practices/sacred cows"). Each scale consists of three items measured on a Likert-scale ranging from 1 (strongly disagree) to 7 (strongly agree). The same procedure that Gibson and Birkinshaw (2004) applied was used to compute organization’s contextual ambidexterity. I have calculated the measures for alignment and adaptability separately and computed a multiplicative interaction between alignment and adaptability, since alignment and adaptability are theorized to be non-substitutable and interdependent. Contextual ambidexterity was measured in the survey version, which was completed by a human resource executive. I tested the scale reliability with Cronbach’s alpha (alignment $=.74$; adaptability $=.56$). Cronbach’s alpha for adaptability seems to be relatively low, considering the often suggested minimum value of .70 (e.g. Chen et al., 2004). Nevertheless, there is no absolute cutoff value. For example, Nunnally (1967) and Wittenberg (1998) suggested minimum alpha values of .50 as adequate. Others (Cortina, 1993) clearly show that the number of items effects the scale’s alpha values. The more items a scale contains, the easier it is to receive large alpha values. Cortina (1993) gives the example that a scale, which has an alpha value of .80 and consists of 10 items, has an average inter-item correlation of only .28, whereas a scale with an alpha value of .80 that consists of 3 items has an average inter-item correlation of .57. Based on this argument, I take into account that the applied scale contains only 3 items and regard an alpha value of .56 for the measure of adaptability as adequate.

To test whether alignment and adaptability are two distinct factors, I conducted a CFA, treating alignment and adaptability as separate factors. This CFA yielded satisfactory
results ($\chi^2$/df=2.24; CFI=.95; GFI=.95; TLI=.90; SRMR=.05). Moreover, I tested whether a one-factor model would fit the data better. Thus, I conducted a CFA in which all items loaded on one latent variable ($\Delta\chi^2= 7.194$, $\Delta df = 1$, $p < .01$). A chi-square test of difference revealed that the two-factor model fits the data better than the one-factor model.

### 3.4.2.3 Firm Performance

Firm performance is considered a multidimensional construct (Richard et al., 2009). Based on an extensive review of the measurement of firm performance (Richard et al., 2009), I decided to use subjective performance measures. Richards et al. (2009) encouraged researchers to employ subjective measures (and not to insist on objective ones) if it is favorable in the specific research context. I suppose that within the context of my research, subjective performance measures are more favorable than objective ones for two reasons. First, I investigate a sample of SMEs. Most of these companies are private; therefore, no objective performance data is publicly available. Second, my sample consists of companies from various industries. Thus, objective performance might not be comparable as performance differences might exist based on industry affiliation and on the profitability of specific industries. Moreover, empirical findings show high correlations between subjective and objective performance measures (Guthrie, 2001; Wall et al., 2004).

Prior studies (Delaney & Huselid, 1996; Wall et al., 2004) have suggested that the respondents need to benchmark their firm’s performance relative to the performance of their industry. The members of the top management team had to complete the performance questionnaire. I chose these informants because the quality of self-reports increases with the selection of well-informed respondents (Winter, 2003).

The performance measure was developed based on the one applied by Roca-Puig and colleagues (Roca-Puig, Beltran-Martin, Escrig-Tena, & Bou-Llusar, 2007), which included three facets of firm performance: financial performance (sample item: "There has been a noticeable improvement in financial results"), customer performance (sample item: "Customer management has improved"), and employee performance (sample item: "Employee satisfaction has improved"). The items were assessed on a
scale ranging from 1 (strongly disagree) to 5 (strongly agree). With these different performance aspects, I have formed an overall performance measure.

Following the recommendation from Roca-Puig and colleagues (2007), I reasoned that financial, customer, and employee performance are three sub-dimensions of overall firm performance. Thus, I constructed a second order performance measure and tested its structure with a confirmatory factor analysis. The original measure from Roca-Puig et al. (2007) consisted of three items per performance dimension. When I included all three items per dimension in the measurement model, I achieved unsatisfactory statistical results. This model showed that two items had high cross loadings. Thus, I deleted these two items. The resulting measurement model consisted of financial and customer performance dimensions with two items loading on each dimension and employee performance dimension with three items. This model fit the data well ($\chi^2$/df=1.71; CFI= .99; GFI=.96; TLI=.97; SRMR=.03). Moreover, the reliability analysis showed good results (Cronbach’s alpha = .88).

3.4.2.4 Control variables

I controlled for three different variables: organization size, organization age, and industry affiliation. Scholars revealed that organization size relates to various employee attitudes and behaviors (Pierce & Gardner, 2004; Ragins et al., 2000; Schminke et al., 2002) and hence might bias the study results. To reduce the distribution’s skewness, I calculated the log-transformed number of employees, in line with prior work (e.g. Schminke et al., 2000; Schminke et al., 2002).

Second, organization age is associated with norms and institutional routines, which are related to inertial behaviors (Tushman & Romanelli, 1985). Thus, company age might hinder contextual ambidexterity. Organizational age is calculated as the log-transformed number of years the organization has existed (e.g., Lubatkin et al., 2006) to reduce the distribution’s skewness.

Third, industry affiliation may bias the findings (cf. Dickson et al., 2006; Sine et al., 2006). I included four industry categories (i.e., manufacturing, services, finance and insurance, and trade) as controls, which were dummy-coded (1 = belongs to this industry, 0 = does not belong to this industry).
3.4.3 Data Analysis

For each of the five factors of personality, I opted for independent hierarchical regression analyses at the organizational level to test Hypothesis 1 and 2 (Cohen & Cohen, 1983). To test Hypothesis 3, I conducted a mediation analysis with four control variables. I applied the most widely used technique to test this model, the stepwise approach developed by Baron and Kenny (1986). The significance of this model was tested with the Sobel test (Sobel, 1982; 1988). Due to the criticism of the Sobel-test (Edwards & Schurer Lambert, 2007; MacKinnon et al., 2002) I additionally employed a bootstrap-procedure (Preacher & Hayes, 2004; Shrout & Bolger, 2002), which is a complementary approach to the Sobel test when analyzing a mediation model. It has several advantages, for instance, no assumptions pertaining to the sampling distribution of the statistic and the shape of the distribution of the variables (Efron & Tibshirani, 1993; Mooney & Duval, 1993; Preacher & Hayes, 2004).

3.5 Results

3.5.1 Descriptive Statistics

Table 3.1 summarizes the means, standard deviations, and bivariate correlations of the focal study variables. As expected, the results indicated positive relationships between all five collective personality factors and contextual ambidexterity, with correlations ranging from .29 to .43 (p<.05). Moreover, these collective personality factors (r = .30 to .40; p<.01) and contextual ambidexterity (r= .34; p< .01) are positively related to firm performance. All factors of collective personality showed significant negative correlations with organizational age (r= -.26 to -.44; p< .01) and organizational size (r= -.33 to -.38; p <.01), which was also negatively related to firm performance (r = -.29; p<.01). From the four industry dummy variables, only two, namely manufacturing (r = -.27 to -.37; p<.01) and service industries (r = .23 to .32; p<.01), correlated significantly with the five factors of collective personality.

As only two of the industry dummy variables correlated significantly with some of my study variables, I did not include the non-significant industry control variables (trade industry; finance and insurance industry) in further analysis, as the inclusion of
unnecessary controls diminishes the statistical power (Bedeian, 2007) and may lead to biased parameter estimates (Becker, 2005).

Table 3.1. Means, Standard Deviations, and Correlations of the Study Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Contextual</td>
<td>37.84</td>
<td>7.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambidexterity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Collective</td>
<td>3.66</td>
<td>.38</td>
<td>.29*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Collective</td>
<td>3.18</td>
<td>.37</td>
<td>.32**</td>
<td>.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Collective</td>
<td>4.16</td>
<td>.31</td>
<td>.40**</td>
<td>.61**</td>
<td>.66**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Collective</td>
<td>3.43</td>
<td>.37</td>
<td>.37**</td>
<td>.80**</td>
<td>.64**</td>
<td>.70**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Collective</td>
<td>3.50</td>
<td>.38</td>
<td>.43**</td>
<td>.67**</td>
<td>.78**</td>
<td>.76**</td>
<td>.68**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Firm performance</td>
<td>3.97</td>
<td>.57</td>
<td>.34**</td>
<td>.33*</td>
<td>.30**</td>
<td>.40**</td>
<td>.35**</td>
<td>.36**</td>
<td></td>
</tr>
<tr>
<td>8 Organizational</td>
<td>3.26</td>
<td>1.05</td>
<td>-.11</td>
<td>-.38**</td>
<td>-.28**</td>
<td>-.27**</td>
<td>-.44**</td>
<td>-.26**</td>
<td>-.13</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Organizational</td>
<td>5.16</td>
<td>1.19</td>
<td>-.17</td>
<td>-.33**</td>
<td>-.33**</td>
<td>-.37**</td>
<td>-.38**</td>
<td>-.33**</td>
<td>-.29**</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Manufacturing</td>
<td>.34</td>
<td>.48</td>
<td>.12</td>
<td>-.35**</td>
<td>-.37**</td>
<td>-.31**</td>
<td>-.33**</td>
<td>-.27**</td>
<td>-.05</td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Service Industry</td>
<td>.44</td>
<td>.50</td>
<td>-.01</td>
<td>.24**</td>
<td>.27**</td>
<td>.27**</td>
<td>.32**</td>
<td>.23**</td>
<td>.16</td>
</tr>
<tr>
<td>12 Trade industry</td>
<td>.16</td>
<td>.37</td>
<td>-.07</td>
<td>.08</td>
<td>.13</td>
<td>.02</td>
<td>.00</td>
<td>.09</td>
<td>-.11</td>
</tr>
<tr>
<td>13 Finance &amp;</td>
<td>.07</td>
<td>.25</td>
<td>-.10</td>
<td>.07</td>
<td>-.03</td>
<td>.03</td>
<td>-.01</td>
<td>-.08</td>
<td>-.06</td>
</tr>
<tr>
<td>Insurance Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. n = 121 organizations; ** = p<.01; * = p<.05 (two-tailed).
3.5.2 Hypotheses Testing

Table 3.2 presents the results of the hierarchical regression analyses testing Hypotheses 1a to 1e. As shown, the data supports my hypotheses, indicating a positive relation between each of the five collective personality factors and contextual ambidexterity, with beta-coefficients ranging from .35 to .49 (p<.01). Furthermore, the data provides support for Hypothesis 2, revealing a positive relationship between contextual ambidexterity and firm performance, as indicated by significant regression coefficient (ß = .31; p<.001) (see Table 3.3).

In Hypotheses 3a to 3e, I proposed that contextual ambidexterity mediates the positive relationship between each of the five collective personality factors and firm performance. To test these mediation hypotheses, I used the mediation criteria established by Baron and Kenny (1986) followed by the Sobel significance test (Sobel, 1982, 1988), and the bootstrap procedure.

According to Baron and Kenny’s (1986) three step approach, (1) the independent variable needs to have a significant relation with the mediator, (2) the mediator needs to be significantly related to the dependent variable, and (3) the significant relationship between the independent and the dependent variable needs to become insignificant when entering the mediator into the equation to establish full mediation. For partial mediation, the value of the regression coefficient for the main effect needs to decrease when entering the mediator into the regression equation.
Table 3.2. Hierarchical Regression Analyses for Hypothesis 1 and 3

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Variables entered</th>
<th>Contextual Ambidexterity</th>
<th>Firm performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective Extraversion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Age</td>
<td>-.06</td>
<td>.02</td>
<td>.06</td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.15</td>
<td>-.07</td>
<td>-.31**</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>.19</td>
<td>.30*</td>
<td>.10</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.08</td>
<td>.09</td>
<td>.23</td>
</tr>
<tr>
<td>Collective Extraversion</td>
<td></td>
<td>.35**</td>
<td>.30**</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∆R²</td>
<td>.09***</td>
<td></td>
<td>.07**</td>
</tr>
<tr>
<td>R² (adjusted R²)</td>
<td>.05 (.02)</td>
<td>.14** (.11)</td>
<td>.11** (.08)</td>
</tr>
<tr>
<td>Collective Agreeableness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Age</td>
<td>-.06</td>
<td>-.04</td>
<td>.06</td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.15</td>
<td>-.03</td>
<td>-.31**</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>.19</td>
<td>.32**</td>
<td>.10</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.08</td>
<td>.07</td>
<td>.23</td>
</tr>
<tr>
<td>Coll. Agreeableness</td>
<td></td>
<td>.40**</td>
<td>.25*</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∆R²</td>
<td>.12***</td>
<td></td>
<td>.05*</td>
</tr>
<tr>
<td>R² (adjusted R²)</td>
<td>.05 (.02)</td>
<td>.18*** (.14)</td>
<td>.11** (.08)</td>
</tr>
<tr>
<td>Collective Conscientiousness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Age</td>
<td>-.06</td>
<td>-.05</td>
<td>.06</td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.15</td>
<td>.01</td>
<td>-.31**</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>.19</td>
<td>.30**</td>
<td>.10</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.08</td>
<td>.03</td>
<td>.23</td>
</tr>
<tr>
<td>Collective Conscientiousness</td>
<td></td>
<td>.48***</td>
<td>.36***</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∆R²</td>
<td>.18***</td>
<td></td>
<td>.10***</td>
</tr>
<tr>
<td>R² (adjusted R²)</td>
<td>.05 (.02)</td>
<td>.23*** (.20)</td>
<td>.11** (.08)</td>
</tr>
</tbody>
</table>
### Study 2: Collective Personality, Contextual Ambidexterity, and Firm Performance

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Contextual Ambidexterity</th>
<th>Firm performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables entered</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Collective Openness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Age</td>
<td>-.06</td>
<td>.05</td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.15</td>
<td>-.03</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>.19</td>
<td>.28*</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.08</td>
<td>.03</td>
</tr>
<tr>
<td>Collective Openness</td>
<td>.46***</td>
<td></td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td>.24*</td>
</tr>
<tr>
<td><strong>ΔR²</strong></td>
<td>.15**</td>
<td></td>
</tr>
<tr>
<td><strong>R² (adjusted R²)</strong></td>
<td>.05 (.02)</td>
<td>.20*** (.17)</td>
</tr>
</tbody>
</table>

| **Collective Emotional Stability** |                          |                  |
| Organization Age   | -.06                     | -.04             | .06  | .08  | .09 |
| Organization Size  | -.15                     | -.01             | -.31**| -.22*| -.22*|
| Manufacturing Industry | .19                     | .29**            | .10  | .16  | .09 |
| Service Industry   | .08                      | .04              | .23  | .20  | .19 |
| Collective Emotional Stability | .49***                   |                  | .30**| .19  |
| Contextual Ambidexterity |                  | .23*             |      |      |
| **ΔR²**            | .20***                   |                   | .08**| .04* |
| **R² (adjusted R²)** | .05 (.02)                | .25*** (.21)    | .11** (.08) | .19*** (.15) | .23*** (.19) |

Note. n = 121 organizations; ** = p < .01; * p = <.05 (two-tailed).

The first and second step of Baron and Kenny’s (1986) three-step approach are fulfilled with the regression results for hypotheses 1 and 2. The third step of the data analyses also corroborates the mediation hypotheses 3a to 3e (see Table 3.2). When entering contextual ambidexterity into the equation, the respective collective personality facet either gets insignificant (full mediation) or the beta-weight decreased (partial mediation). Contextual ambidexterity fully mediated the relationship between...
three of the personality factors (collective agreeableness, collective openness, and collective emotional stability) and firm performance. For the other two (collective extraversion and collective conscientiousness), the results reveal partial mediation. Moreover, the Sobel test, which was conducted with an SPSS application from Preacher and Hayes (2004), resulted in significant positive indirect effects with confidence intervals that did not contain zero (see Table 3.4).

Table 3.3. Hierarchical Regression Analyses for Hypothesis 2

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Dependent variable</th>
<th>Firm performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contextual Ambidexterity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Age</td>
<td>.06</td>
<td>.08</td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.31**</td>
<td>-.27**</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>.10</td>
<td>.04</td>
</tr>
<tr>
<td>Service Industry</td>
<td>.23</td>
<td>.20</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td></td>
<td>.31***</td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td></td>
<td>.09***</td>
</tr>
<tr>
<td>( R^2 ) (adjusted ( R^2 ))</td>
<td>.11** (.08)</td>
<td>.20*** (.17)</td>
</tr>
</tbody>
</table>

Note. n = 121 organizations; ** p = < .01; * p = < .05 (two-tailed).

Table 3.4. Sobel Test: Indirect Effects and Significance for Normal Distribution

<table>
<thead>
<tr>
<th></th>
<th>Indirect effect</th>
<th>Standard Error</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective Extraversion</td>
<td>.12*</td>
<td>.05</td>
<td>.01</td>
<td>.22</td>
</tr>
<tr>
<td>Collective Agreeableness</td>
<td>.14*</td>
<td>.06</td>
<td>.02</td>
<td>.25</td>
</tr>
<tr>
<td>Collective Conscientiousness</td>
<td>.16*</td>
<td>.08</td>
<td>.02</td>
<td>.33</td>
</tr>
<tr>
<td>Collective Openness</td>
<td>.14*</td>
<td>.06</td>
<td>.02</td>
<td>.26</td>
</tr>
<tr>
<td>Collective Emotional Stability</td>
<td>.15*</td>
<td>.07</td>
<td>.02</td>
<td>.28</td>
</tr>
</tbody>
</table>

Note: n = 121 companies; * p = < .05 (two-tailed); LL = Lower limit; UL = Upper limit; CI = Confidence interval.
Table 3.5. Bootstrap Results for Indirect Effect

<table>
<thead>
<tr>
<th></th>
<th>Bootstrap results for indirect effect</th>
<th>Standard Error</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective Extraversion</td>
<td>0.13</td>
<td>0.06</td>
<td>0.03</td>
<td>0.27</td>
</tr>
<tr>
<td>Collective Agreeableness</td>
<td>0.16</td>
<td>0.06</td>
<td>0.06</td>
<td>0.30</td>
</tr>
<tr>
<td>Collective Conscientiousness</td>
<td>0.18</td>
<td>0.08</td>
<td>0.05</td>
<td>0.35</td>
</tr>
<tr>
<td>Collective Openness</td>
<td>0.17</td>
<td>0.07</td>
<td>0.06</td>
<td>0.32</td>
</tr>
<tr>
<td>Collective Emotional Stability</td>
<td>0.17</td>
<td>0.07</td>
<td>0.04</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Note: n = 121 companies; Bootstrap sample size = 5000; LL = Lower limit; UL = Upper limit; CI = Confidence interval.

The bootstrap procedure also supported the mediation models (see Table 3.5) with 95% bootstrapped confidence intervals around the indirect effects not including zero. In the bootstrap analyses, I included the same control variables as in the hierarchical regression analyses, employing an SPSS application provided by Preacher and Hayes (2008). As shown, the results of the analyses provide empirical evidence for all of the hypotheses.

### 3.5.3 Post-Hoc-Analyses

Contextual ambidexterity is theorized to be achieved within one unit (Gibson & Birkinshaw, 2004). I chose to conduct this study with a sample containing only SMEs to reduce the possibility that the organizations under investigation might achieve simultaneous alignment and adaptability through differentiated business units (i.e. structural ambidexterity). Although this choice reduces the described risk, it does not rule it out. Therefore, I conducted post hoc analyses with a sample only including organizations that stated to be an independent firm (n = 86) and not to be a subsidiary or belonging to a holding. I replicated all procedures described above to test the hypotheses. The pattern of results remained unchanged compared to the ones in the full sample, indicating that the five factors of collective personality foster ambidexterity within one unit (contextual ambidexterity). With these results, the possible alternative explanation that the organizations might have achieved
ambidexterity through separated business units for alignment and for adaptability is ruled out.

3.6 Discussion

3.6.1 Summary of Findings and Theoretical Contributions
This study’s purpose was to explore what kind of collective personality might stimulate behaviors directed at alignment and adaptability and if contextual ambidexterity relates to strategic firm performance. Following Hofmann and Jones (2005), I have conceptualized the five factors of personality (extraversion, agreeableness, conscientiousness, openness, and emotional stability) at the collective level. Consequently, I investigated how these collective personality factors relate to contextual ambidexterity and deduced hypotheses that stated a positive relation between all five factors and contextual ambidexterity. Moreover, I proposed a positive relationship between contextual ambidexterity and firm performance. With this, I suggested a model, in which contextual ambidexterity mediates the positive relation between each of the collective personality factors and strategic firm performance. The data supports all of these hypotheses.

Overall, my study contributes to several fields of research by corroborating and extending prior theories and findings. First, it contributes to the research on ambidexterity. Until now, not much was known on how contextual ambidexterity might be fostered. Gibson and Birkinshaw (2004) theorized a social context and performance management to facilitate contextual ambidexterity. However, as every individual employee within a contextual ambidextrous organization contributes to contextual ambidexterity by exerting alignment- and adaption-oriented activities, I considered norms and routines based on the personality of the employees, which act as the guiding principles for employees’ behaviors. This has been almost neglected in research on contextual ambidexterity. To my best knowledge, only two studies mentioned routines and norms. Adler et al. (1999) suggested that meta-routines are vital for managing the tensions between exploration and exploitation within one unit, whereas Güttel and Konlechner (2008) found that norms (for continuous learning and high performance standards) support the development of contextual ambidexterity. My
research corroborates and extents these studies and provides broader knowledge on which collective behavioral patterns (such as routines and norms) provide the basis for contextual ambidexterity.

Moreover, my study ties in with Tushman and O’Reilly’s (1996) theory of structural ambidexterity. In their article, Tushman and O’Reilly (1996) proposed that ambidextrous organizations need to have a strong organizational culture that would hold the organization together and consist of values such as openness, autonomy, risk taking, and initiative. In my research, I go one-step further by analyzing behavioral regularities, habits, norms, organizational routines, and path dependencies of the five factors of personality as a contextual driver of ambidexterity.

Second, this research contributes to a more holistic picture of contextual ambidexterity’s performance consequences, as I investigate firm performance in terms of financial, customer, and employee performance. With this, I directly answer to Simsek et al.’s (2009) call to investigate contextual ambidexterity’s influence on more strategically relevant performance indicators.

Finally, I contribute to the research on collective personality. Prior work has expressed "dismay on the paucity of research on the organizational consequences for (...) personality in the aggregate" (Schneider & Smith, 2004, p. 366). I answer to this call and contribute to the upcoming research on collective personality (Hofmann & Jones, 2005). I further corroborate Hofmann and Jones’ (2005) findings of functionally isomorphic behavioral routines at the individual and the collective level. Hofmann and Jones (2005) have found that collective personality influences organizational level performance in a very specific and homogenous sample of fast food restaurants. I extent their findings by investigating the performance effect in a more diverse and representative sample containing 121 organizations from a variety of industries and different sizes. Moreover, the research on individual personality and performance has stressed the importance of developing process models (Barrick, Mount, & Judge, 2001) for this link. As personality at the individual and organizational level is proposed to be functionally isomorphic, I have concluded that such a process model is needed at the collective level as well. Thus, this study clarifies how collective personality influences firm performance by providing contextual ambidexterity as a viable mediator.
In all, this study contributes to the understanding of the functioning of organizations, as I research pivotal organizational characteristics for the achievement of contextual ambidexterity and firm performance.

### 3.6.2 Practical Implications

Additionally, I aimed at deriving implications for practitioners from my research. Organizations might hire individuals who are higher on dimensions of extraversion, agreeableness, conscientiousness, openness, and emotional stability. HR managers can employ several practices to leverage aggregate, organizational personality. Organizations might highlight the organizational personality during recruiting (e.g., give information on the webpage) to attract similar personalities. Personality aspects might become relevant recruitment criteria in addition to the functional qualifications of the applicants. Furthermore, organizations might use recruiters with similar personality traits, as this might further attract the applicants with the desired personality through the perception of a good fit. Moreover, managers should be aware that specific HR practices might enhance these five personality factors at the organizational level. Finally, a transformational leadership climate (Walter & Bruch, 2010) might foster these collective personality factors, as prior research has found that transformational leadership at the individual level influences positively the five facets of personality (Hofmann & Jones, 2005).

### 3.6.3 Limitations and Future Research Directions

From a methodological perspective, this study has several strengths. For instance, I used different sources for each variable, hence precluding common method variance. Moreover, I had a diverse sample concerning industry and organization size, thus enhancing the chance to find generalizable results.

Nevertheless, when interpreting the results, some limitations of this study should be taken into account. First, this was a cross-sectional study; thus, it might be possible, that the direction of relationships is reversed. Successful organizations might have the resources and possibilities to align and adapt the organizations simultaneously. Moreover, contextual ambidextrous organizations might attract people with the five
personality traits, and thus foster collective extraversion, agreeableness, conscientiousness, openness, and emotional stability. I tried to exclude these possibilities through elaborating precise theoretical arguments. Nevertheless, with longitudinal data, the results would be even more convincing. Hence, I encourage research to reproduce my study in a longitudinal setting.

Second, my sample contained only organizations from Germany; therefore, generalizability to other countries with different cultures is limited. The German culture is characterized by relatively low levels of power distance, medium levels of uncertainty avoidance and long-term orientation, and relatively high levels of masculinity and individualism (Hofstede, 2001). These specific values might be related to the organizations’ alignment and adaptability as, for instance, high levels of uncertainty avoidance and short-time orientation might hinder adaptability. Thus, research would benefit from a study, which includes organizations from various cultures to enhance the generalizability of my findings.

Finally, the dependent variable, that is, firm performance, was measured using subjective measures. The sample consisted largely of privately held companies where no objective performance data is publically available. This procedure is in line with Richard et al. (2009) who did an extensive review of the measurement of firm performance. They have suggested that subjective performance measures are not the second best alternative but might be adequate based on the research context. Nevertheless, future research might benefit from extending my measurement of performance to strategic aspects like, for example, market share or market share increase, and including objective performance measures.

### 3.6.4 Conclusion

To conclude, the main aim of this study was to investigate what facets of collective personality might foster contextual ambidexterity and how it relates to strategic performance. The results clearly support my notion that all of the five factors of collective personality are able to drive contextual ambidexterity and firm performance. With these insights, I contribute to research that investigates how ambidexterity might be achieved within one unit. Moreover, I give fruitful implications for practitioners by
providing strategies on how they can foster contextual ambidexterity through the creation of the five facets of collective personality with specific HR management processes and procedures.
4 Study 3 - Contextual Ambidexterity, Productive Organizational Energy, and Firm Performance

The third study of my dissertation addresses research question three, which asked whether contextual ambidexterity relates to firm performance, and if productive organizational energy (POE) acts as a vital mechanism of this relation.

4.1 Introduction, Relevance, and Intended Contributions

Ambidexterity, a firm’s ability to manage seemingly contradictory demands simultaneously, has been proposed to facilitate firm performance (e.g., Gibson & Birkinshaw, 2004; Raisch & Birkinshaw, 2008; Tushman & O’Reilly, 1996). However, this theoretically argued ‘ambidexterity hypothesis’ has been investigated empirically only in few studies, which have gained mixed results (Raisch & Birkinshaw, 2008). Although some researchers have found direct effects (Gibson & Birkinshaw, 2004; He & Wong, 2004; Lubatkin et al., 2006), other studies revealed contingent effects (Lin, Haibin, & Demirkan, 2007), curvilinear effects (Yang & Atuahene-Gima, 2007), no effects at all (Venkatraman et al., 2006), or even a negative relation (Atuahene-Gima, 2005). Overall, the relation between ambidexterity and firm performance has been only poorly researched (Raisch & Birkinshaw, 2008; Simsek et al., 2009). To clarify the inconsistent findings, Simsek and colleagues (Simsek et al., 2009) have developed a typology for organizational ambidexterity and have emphasized the relevance to take a differentiated look at the outcomes of each archetype and to investigate how different types influence the performance. They "especially encourage research that tests the assumptions found in the intermediate steps in the causal chain between ambidexterity and envisioned outcomes, particularly focusing on the less visible, but perhaps more pivotal linkages that lead to these outcomes" (p. 891).

With this study, I directly respond to the need to investigate thoroughly the mechanism that links contextual ambidexterity (harmonic archetype; see Simsek et al., 2009) to performance. Prior research has considered contextual ambidexterity to positively impact performance because employees in such organizations are able to heavily
engage to achieve the organizational goals. Employees in such organizations have the opportunity to contribute to the organization’s goals, as they can provide value for existing customers while simultaneously being on the lookout for new organizational opportunities (Gibson & Birkinshaw, 2004). Thus, contextual ambidexterity directs all behaviors within the organization toward the overarching organizational goals of exploration (e.g., new products, new markets, etc.) and exploitation (efficiency related issues), which in turn fosters performance (Gibson & Birkinshaw, 2004). I decided to investigate contextual ambidexterity for different reasons. Although this relation has been theoretically argued, the focus of Gibson and Birkinshaw’s (2004) study was on whether the management systems have the capacity to align and adapt the organization, rather than on the actual employees’ behaviors. Second, research on contextual ambidexterity is only in its infancy, such that further empirical support for its effects on strategic performance is necessary (Simsek et al., 2009). Moreover, most organizations are small to medium sized. For these kind of organizations, contextual ambidexterity is especially relevant because they might experience difficulties in achieving ambidexterity through separate structures for exploration and exploitation (structural ambidexterity; Tushman & O’Reilly, 1996) due to a lack of slack resources and costly installation (Lubatkin et al., 2006).

I investigate productive organizational energy (POE) as a potential mediator of the contextual ambidexterity-firm performance relation. Figure 4.1 depicts the research model. POE is defined as the collective activation and direction of employees’ affect, cognition, and behaviors towards organizational-salient goals (Cole et al., 2005). It captures what prior research (Gibson & Birkinshaw, 2004) suggested as the mechanism that might link contextual ambidexterity to performance.

The main argument for the relations proposed in this study is based on Hackman and Oldham’s (1980) Job-Characteristics theory that theorized specific context conditions to impact specific employee behaviors. I propose that contextual ambidexterity facilitates productive organizational energy due to its context characteristics. I further contribute to research by clarifying the contextual ambidexterity-performance relation. Moreover, I investigate contextual ambidexterity’s influence on strategic organizational performance outcomes, including various financial and non-financial indicators. In doing so, this study directly answers to calls that eagerly demanded to investigate less visible intermediate steps in the contextual ambidexterity-performance
relation and to research strategically relevant performance aspects (Simsek et al., 2009). To my best knowledge, no prior study analyzed such a less visible mediator of this relation. The main aim of this study is to clarify the influence of contextual ambidexterity on firm performance and hence shed more light on the ambidexterity-performance relation, which has been until now only poorly researched (Raisch & Birkinshaw, 2008; Simsek et al., 2009).

The paper follows a classical structure. I provide a theoretical basis from which I deduce the hypothesis. Then I apply hierarchical regression analysis, the Sobel test, and bootstrapping to analyze the data collected from a German sample containing answers from 2766 employees, 205 top management team members, and 71 HR executives from 71 SMEs. In the last part of this study, I discuss the results and limitations and give practical implications.

4.2 Theoretical Background

4.2.1 Contextual Ambidexterity

Contextual ambidexterity differs from other conceptualizations of ambidexterity like structural ambidexterity (e.g., Tushman & O’Reilly, 1996). Whereas structural ambidexterity is achieved at the organizational level through the integration of two separate organizational units for exploration and exploitation, contextual ambidexterity is achieved within one unit. Contextual ambidexterity is defined as the capacity to achieve alignment and adaptability at the same time (Gibson & Birkinshaw, 2004). Alignment suggests that all patterns of activities within the organization are directed towards the organization’s goals, whereas adaptability reflects the capacity to respond quickly to changing environmental demands. In turn, contextual ambidexterity fosters both alignment- and adaptation-oriented activities (Gibson & Birkinshaw, 2004).
When "contextual ambidexterity has been achieved, every individual in a unit can deliver value to existing customers in his or her own functional area, but at the same time every individual is on the lookout for changes in the task environment, and acts accordingly" (Gibson & Birkinshaw, 2004, p. 211). Thus, contextual ambidexterity directs all actions within the organization towards these overarching goals.

### 4.2.2 Productive Organizational Energy

Research on energy in organizations is a relatively new topic (Dutton, 2003; Quinn & Dutton, 2005), although energy has been described as "the level of spirit, morale, enthusiasm, motivation, pace, and volume of performance" already more than 20 years ago (Levy & Merry, 1986, p. 113). Research on energy, for example, has focused on energy’s role in coordination processes (Quinn & Dutton, 2005) and strategic change (Jansen, 2004).

POE is defined as "the joint experience and demonstration of positive affect, cognitive activation, and agentic behavior among members of a collective in their shared pursuit of organizationally-salient objectives" (Cole, Bruch, & Vogel, 2008, p. 9) and has three specific characteristics. First, POE is a collective phenomenon, a shared unit property (Kozlowski & Klein, 2000) that emerges from the individual level but materializes at a higher level of analysis (e.g., organizational level; Morgeson & Hofmann, 1999). Second, POE is a three-dimensional construct consisting of affective, cognitive, and behavioral energy. The affective dimension describes the collective positive emotions, enthusiasm, and inspiration toward work-related tasks and the organization’s goals (Cole et al., 2005). Cognitive energy refers to the collective ability to think productively and proactively about activities and solutions regarding the work (Cole et al., 2005). Behavioral energy reflects the collective agentic behavior towards the organization’s common goals (Cole et al., 2005). Finally, POE is defined as a collective emergent state (Marks, Mathieu, & Zaccaro, 2001).

In the following section, I will argue that POE, due to its multidimensional and collective attributes, might function as an underlying mechanism in the contextual ambidexterity-performance relation.
4.3 Hypotheses Development

4.3.1 Contextual Ambidexterity and Firm Performance
Based on March’s (1991) groundbreaking article on explorative and exploitative learning, research continually proposes that ambidexterity relates to performance. March (1991; see also Levinthal & March, 1993) argued that a trade-off between conflicting demands (e.g., alignment and adaptability) is evident because the activities directed at these demands are competing for scarce resources. They emphasized organizations that heavily invest in exploration activities without considering exploitation activities to suffer from not gaining from the costs of exploration. On the other hand, organizations who engage in exploitation to the exclusion of exploration will be "trapped in suboptimal stable equilibria" (March, 1991, p. 72) in the end. Thus, conducting one activity at the expense of the other will lead to suboptimal results. Ambidexterity is a concept that was proposed to overcome this dilemma. Generally, ambidextrous organizations are able to engage heavily in activities regarding two opposing demands and are therefore considered more successful. Some of the prior research on ambidextrous organizations supports a positive relation between organizational ambidexterity and firm performance (e.g., Gibson & Birkinshaw, 2004; He & Wong, 2004; Lubatkin et al., 2006). Contextual ambidexterity, as a special type of ambidexterity, might influence firm performance through the creation of a competitive advantage. It is considered difficult and time-consuming to achieve contextual ambidexterity, as it is a complex phenomenon with ambiguous and widely dispersed roots (Gibson & Birkinshaw, 2004). From a resource-based view of the firm (e.g., Barney, 1991), contextual ambidexterity might be considered a resource that is valuable, rare, and costly to imitate and has the potential to be a source of competitive advantage. Empirical research underlines my argumentation and points to the strategic benefits of contextual ambidexterity. Gibson and Birkinshaw (2004) have observed its positive influence on subjective performance ratings of the business-unit. Others (Hill & Birkinshaw, 2005) have reported the ability to simultaneously use existing and build new capabilities in the context of venture capital units to be positively related to higher levels of venture strategic performance. Due to the above evidence, I state the following hypothesis:

Hypothesis 1: Contextual ambidexterity relates positively to firm performance.
4.3.2 Contextual Ambidexterity and Productive Organizational Energy

Contextual ambidexterity activates and directs all actions within the organization towards its overarching goals (Gibson & Birkinshaw, 2004). Therefore, I propose that contextual ambidexterity facilitates POE. The main argument for this reasoning is contextual ambidexterity’s underlying context, which has characteristics that are able to energize the organization.

Kahn (1990) developed a theory of people’s psychological presence and absence at work, which proposed that the work context is crucial for the emotional, cognitive, and behavioral engagement of the employees. This theory states that people engage in their task when they feel their work meaningful. I argue that contextual ambidexterity provides meaningfulness to the employees. Nevertheless, how does contextual ambidexterity contribute to employees feeling their work meaningful? Employees in contextual ambidextrous organizations are able to invest their resources in current tasks while simultaneously looking out for opportunities. They are autonomous in how to divide their time between different demands (Gibson & Birkinshaw, 2004). Thus, their tasks are challenging, varied, creative, and autonomous, and the employees will feel a need to contribute to the greater organizational good. These task characteristics, based on Hackman and Oldham’s (1980) Job Characteristics Theory, contribute to meaningfulness, as skill variety, task significance, and autonomy are drivers. In his qualitative study Kahn (1990) revealed these relations. Moreover, Kahn (1990) found that meaningful jobs demand both routine and new skills, which are prevalent in contextual ambidextrous organizations where employees need to exploit and explore. This individually fostered behavioral, cognitive, and emotional energy will translate in the organizational phenomenon of POE through social interaction and contagion processes (Barsade, 2002).

More specifically, contextual ambidexterity facilitates the three different POE dimensions. Affective energy is defined as "the collective experience of positive feelings and emotional arousal due to members’ enthusiastic assessments of work-related issues" (Cole et al. 2008, p. 10). In contextual ambidextrous organizations, employees are described as having the autonomy to decide how to contribute to the overarching organizational goals (Gibson & Birkinshaw, 2004). Relating to Job Characteristics Theory (Hackman & Oldham, 1980), this might foster affective energy. Hackman and Oldham (1980) have suggested that autonomy causes intense emotions.
Others (Parker, Wall, & Jackson, 1997) have argued that job autonomy might positively relate to feelings of responsibility for constructive change.

A second argument is grounded in affective events theory (Weiss & Cropanzano, 1996), which states that events cause affective reactions. A work environment that provides challenging and diverse jobs, as in contextual ambidextrous organizations (Gibson & Birkinshaw, 2004), may create positive events that facilitate emotional energy. Moreover, the work context in contextual ambidextrous organizations "does not dictate specific types of action; rather, it creates a supportive environment that inspires an individual to do ‘whatever it takes’ to deliver results" (Gibson & Birkinshaw 2004, p. 213). This inspiration might result in intense affective reactions of employees. Therefore, contextual ambidexterity might positively impact the affective energy dimension.

**Cognitive energy** "reflects the joint experience of cognitive activation and thus represents members’ collective ability to persist in thinking productively about work-related activities and in searching for their solutions" (Cole et al., 2008, p. 11). Contextual ambidextrous organizations provide a context that enables the employees to decide about how to divide their time between activities directed at alignment and adaptability (Gibson & Birkinshaw, 2004). This strongly encourages the employees to think proactively about their work activities. Employees in contextual ambidextrous organizations have decision authority on how to perform their tasks under the conflicting demands of alignment and adaptability, which in turn fosters cognitive energy. Prior research supports this argument. Raisch and colleagues (2009) concluded that decision-making authority stimulates "richer sense-making and cognitive processes" (p. 688). In their review, Fuller and colleagues (Fuller, Marler, & Hester, 2006) inferred that high involvement work systems – such as contextual ambidextrous organizations incorporate – create opportunities for proactive cognition and behaviors (see: Blau, 1987; Mowday & Sutton, 1993; Spreitzer, 1996). Hence, contextual ambidexterity might facilitate cognitive processes and direct them at the organizational goals.

**Behavioral energy** "reflects normative behavior that exceeds the call of duty as unit members collectively bring to bear extraordinary effort to benefit the organization. To the extent unit members engage in active, focused, and purposeful behavior to realize
organizational objectives, the work unit is acting agentically" (Cole et al., 2008, p. 11). In contextual ambidextrous organizations, a set of management systems and processes define the behavioral context for the employees (Simsek et al., 2009). This ambidextrous context enables and encourages the employees to act towards the overall organizational goals (Gibson & Birkinshaw, 2004). Hence, contextual ambidexterity should foster behavioral energy throughout the organization. Prior research supports this argument, as a supportive context might shape individual behaviors (Burgelman, 1983; Ghoshal & Bartlett, 1994). Simsek et al. (2009) have claimed that without such an ambidextrous context, the employees’ behaviors might be critically hampered. Im and Rai (2008) have noted that "elements that focus on alignment promote coherence among goals and activities and the efficient utilization of resources, whereas elements that focus on adaptability promote responsiveness to opportunities through innovation and reconfiguration." (p. 1284). Consequently, contextual ambidexterity facilitates employees’ agentic behaviors, which support the organizational goals.

In addition to the above-discussed reasoning from Hackman and Oldham’s (1980) Job Characteristics Theory, two other mechanisms might foster agentic behaviors. First, relational connections with others that frequently happen in contextual ambidextrous organizations due to exploration and exploitation activities of the employees (Güttel & Konlechner, 2009) are important drivers of individual’s energy at work (Dutton & Heaphy, 2003; Reis & Gable, 2003). In similar vein, Spreitzer and colleagues (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) claimed that broad information sharing and interactions positively influence agentic behaviors in their socially embedded model of thriving. Second, specific employee behaviors that are directed at organizational goals require not only motivation and capability, but also the opportunity to perform them is crucial (Blumberg & Pringle, 1982; Kane, 1997; Stewart & Nandkeolyar, 2006; van Riel, Berens, & Dijkstra, 2009). Empirical evidence supports this, as studies were able to show the positive influence that this opportunity has on employee behavior and performance (Kane, 1997; Stewart & Nandkeolyar, 2006). Contextual ambidextrous organizations do provide opportunities to the employees to exert the intended behaviors (Gibson & Birkinshaw, 2004).

Research on the paradox of innovation further supports my reasoning (Andriopoulos & Lewis, 2009). This research has claimed an "energizing potential" of the exploration-exploitation tensions (Andriopoulos & Lewis, 2009, p. 702) that according to Gibson
and Birkinshaw (2004) exist in contextual ambidextrous organizations. "The need to exploit and the opportunity to explore may foster the discipline and passion that energize individual knowledge workers" (Andriopoulos & Lewis, 2009, p. 708). Prior empirical research supports these considerations. Ingram and colleagues (Ingram, Lewis, Andriopoulos, & Gotsi, 2008) conducted a qualitative case study with five leading product design companies. Their results show that firms that are able to deal with the paradoxes of innovation foster energy potentials, as the employees within these organizations "seemed to embrace the nested tensions of innovation (...) as synergistic and energizing" (p. 3-4).

Based on the above evidence, I propose that contextual ambidexterity, also described as a high performance context (Simsek, 2009), has a positive relationship with POE (Cole et al., 2008).

Hypothesis 2: Contextual ambidexterity relates positively to productive organizational energy.

4.3.3 Productive Organizational Energy’s Impact on Firm Performance

Energy is described as "the fuel that makes great organizations run" (Dutton, 2003, p. 7). Thus, I expect a positive relationship between POE and firm performance. POE is characterized by high levels of positive emotional arousal (affective energy), engaged intellectual capabilities (cognitive energy), and decisive action taking (behavioral energy) in the shared pursuit of organizational-salient goals (Bruch & Ghoshal, 2003, 2004). Bruch and Ghoshal (2003; 2004) theorized that these different energy dimensions collectively contribute to create an overall level of POE. In the following sections, I will discuss how POE and its different dimensions might foster firm performance.

The rationale for linking POE to performance is grounded in the resource-based view (e.g., Barney, 1991). This theoretical perspective proposes long-term organizational success, which depends on resources that are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991) and on the exploitation of these resources (Barney, 1997). I suggest that POE heavily contributes to the exploitation of such resources and to the development of new resources.
Affective energy may influence the exploitation of resources with collective inspiration, excitement, and enthusiasm for the work, as some degree of mobilization of the employees to use the resources is crucial. Huy (2002) in his theory on emotional balancing, for example, has argued that the experience of positive and intense emotions enables employees to pursue continuity and change. James and colleagues (James, Brodersen, & Jacob, 2004), in their theoretical model on workplace affect, reasoned that positive emotions directed at the task are significantly related to task performance. Moreover, affective energy might help build new valuable resources. Barsade and Gibson (2007), for instance, have concluded in their review article that, overall, prior research supports a positive relation between employees’ positive affectivity and (a) creativity, which might lead to new products, new customer solutions, and new valuable processes; thus, contributing to performance and (b) prosocial behaviors like superior customer support. In similar vein, George (1995) found that positive collective affect relates positively to higher levels of customer service.

Besides, positive affect contributes to commitment, engagement, and motivation (Ozcelik, Langton, & Aldrich, 2008), which in turn positively influence job satisfaction. Similarly, affective events theory (Weiss & Cropanzano, 1996) proposes that mood and emotions at work influence the affective dimension of job satisfaction positively. Prior empirical research supports this relation. For example, George (1995) also found that positive collective affect relates positively to lower absenteeism. Barsade and Gibson (2007) concluded in their review article on affect that prior research supports the proposition that positive affect is related to reduced absence and intention to turnover (cf. George & Jones, 1996; Pelled & Xin, 1999; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003).

When cognitive energy is activated, employees collectively think about work related issues to find solutions (Cole et al., 2008). On the one hand, cognitive energy is thus focused on current tasks and the exploitation of resources. On the other hand, it has a pro-active notion as collective cognitive processes may lead to the creation of new processes and resources. Research on shared cognition (Cannon-Bowers & Salas, 2001) substantiates my reasoning that cognitive energy affects performance. These researchers theorized that information sharing, which exists when cognitive energy is high, relates positively to better task performance, team processes, organizational outcomes, and motivational outcomes such as job satisfaction.
Behavioral energy reflects the extent to which organizational members engage in agentic activities (Cole et al., 2005). In line with prior research, I suggest that behavioral energy relates positively to performance, as employees extensively engage in their task activities; therefore, are strongly connected to other employees. This facilitates communication, cooperation, and resource sharing between employees, which in turn are positively associated with overall productivity and financial performance (Evans & Davis, 2005; Huselid, 1995). As at the collective level, this results in complex processes of action, communication, and behavioral integration. These behaviors may exploit the firm’s resources, as the activities are agentic. Moreover, new resources may evolve through complex organizational behaviors, for example, new knowledge might be created through collective communication, knowledge sharing, and behavioral integration. Prior research supports my argumentation. Huy (2002) conducted a qualitative empirical study and found that collective actions facilitate the development of new skills and operational continuity. Bruch and colleagues (Bruch, Vogel, & Raes, 2009) suggested, in a conceptual study, that POE might create value through the exchange and new combination of resources.

Employees in organizations with high behavioral energy collectively focus their efforts on the organization’s goals. Thus, collaboration will be facilitated. Employees that highly cooperate will avoid unnecessary risks and actions against the overall organizational goals and seize opportunities in pursuit of the organizational goals (Miller & Lee, 2001). Research at the group level also supports a positive relation between behavioral energy and organizational performance. Scholars (e.g. Hackman & Oldham, 1980; Manz & Sims, 1993) have extensively showed that group effort relates to productivity.

Moreover, behavioral energy might facilitate satisfaction through its complex actions of communication and behavioral integration. Hackman and Oldham (1980) support this notion as they have found that high effort on group task relates positively to job satisfaction. Moreover, high levels of POE may inspire even more employees to activate their potentials, which might reduce turnover and lower absenteeism. Prior research supports this reasoning. Bowen and Ostroff (2004), reflecting on the work of earlier research, concluded that employees who perceive their work environments as
meaningful and positive tend to be more satisfied with their jobs and show higher committed to the organizational goals.

In sum, I propose that POE relates positively to organizational performance. I suggest that all three energy dimensions are causal mechanisms that partially explain this relation. However, the overall impact of POE results from the interplay of these three dimensions. The rationale for this stems from Kahn’s (1990) theory on employees’ psychological presence and absence at work. He has theorized that a positive emotional climate will create physically, cognitively, and emotionally engaged employees. Organizations with high levels of POE will show high performance. Vice versa, organizations with low levels of POE will perform worse.

\[ H3: \text{Productive organizational energy relates positively to firm performance.} \]

### 4.3.4 Contextual Ambidexterity, Firm Performance, and the Mediation Effect of Productive Organizational Energy

The above reasoning reflects a model in which POE mediates the positive relation between contextual ambidexterity and performance. Contextual ambidexterity suggests that behaviors, which are directed at exploration and exploitation, are the overarching organizational goal (Gibson & Birkinshaw, 2004) and, thus, orients the employees to achieve these goals. Moreover, the underlying context enables employees to engage in the overarching goals, causing them to mobilize and heavily invest their emotional, cognitive, and behavioral resources to achieve these goals, which in turn enhances firm performance. Prior research supports this argumentation. For instance, Ozcelik et al. (2008) theorized that a context, which mobilizes employees’ affective resources, could be important for determining organizational level performance. A context that facilitates agentic behaviors and interaction with others increases overall productivity and financial performance through better communication, coordination, and resource sharing (Evans & Davis, 2005; Huselid, 1995).

From a resource-based view (Barney, 1991; 1997), success is determined by valuable, rare, imperfectly imitable, and non-substitutable resources, and by their exploitation. Contextual ambidexterity might comprise and create resources that are exploited and
further developed through POE. Based on the above evidence, I propose the following hypothesis:

*Hypothesis 4: Productive organizational energy mediates the positive relationship between ambidexterity and firm performance.*

### 4.4 Method

#### 4.4.1 Research Setting and Data Collection

I collected the data for the current study between April and June 2009 as part of a larger study in cooperation with an agency located in Germany that specializes in benchmarking small-to-medium sized organizations. Initially, the agency solicited participation from 93 organizations. To participate in this study, organizations had to fulfill two basic preconditions. First, the participating organizations had to be located in Germany and second, could not exceed 5,000 employees. The participating organizations were promised a detailed benchmarking report to enhance the willingness to participate. Overall, 22 of these 93 did not participate, withheld relevant data (e.g., no member of the top management team assessed the performance measures), or failed to exceed the minimum number of participants within the organization (at least 4 per employee survey version). This resulted in an organizational level response rate of 76% (n = 71). Participating organizations represented companies from various industries, including services (56%), manufacturing (26%), trade (13%), and finance and insurance (7%), and ranged in size from 12 to 3,650 employees (median = 130). As in prior research (e.g. Ambrose & Schminke, 2003; Schminke, Cropanzano, & Rupp, 2002), participating organizations therefore represented a heterogeneous sample from diverse industries and with different sizes, increasing the likelihood of finding substantial variation between organizations in employees’ feelings, perceptions, and behaviors.

I opted for a sample including SMEs for two reasons. First, 99.7 percent of German companies belong to this class (BMWi, 2009). Therefore, the sample represents ‘typical’ German companies. The second reason is a conceptual one. Small and medium sized companies might have difficulties achieving ambidexterity through structural separation (Lubatkin et al., 2006). Lubatkin et al. (2006) have argued that a
leadership-based approach might be more appropriate for smaller companies. In similar vein, Gibson and Birkinshaw (2004) suggested that a contextual approach to ambidexterity is more fruitful to small firms or at the business unit level. As I investigate contextual ambidexterity’s performance consequences, a sample of SMEs seems to fit perfectly.

In order to improve equivalence of data collection, standardized procedures were employed across all organizations. Data were collected in three steps. First, general information on the participating organizations (including organizations’ size, industry affiliation, etc.) as well as the data on HR and organizational procedures and systems was gathered using a key informant survey completed by the organizations’ HR executive or a member of their top management team. This survey version collected information on contextual ambidexterity.

Second, employee survey data were collected to obtain information on the focal study variable POE. Participating organizations sent a standardized email invitation to all employees through their HR department (if applicable) or through a top management team member’s email address, describing the study’s purpose and providing a link to a web-based survey hosted by an independent third company. Because the survey was part of a larger research project, four different versions of the employee questionnaire were used implementing a split-sample design (Rousseau, 1985) (for similar approaches see: Dickson et al., 2006; Erdogan et al., 2006) to alleviate concerns about common source bias ( Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Based on an algorithm programmed into the survey web site, respondents were randomly directed to one out of four survey versions. For employees with no web access, a paper version of the questionnaire was provided and randomly distributed. One of these versions of the employee questionnaire measured POE. Professional translators translated all versions of the questionnaire to German following a double-blind back-translation procedure to ensure semantic equivalence with the original English items (Schaffer & Riordan, 2003). Respondents were assured full anonymity.

In sum, 11,280 employees chose to participate in the survey voluntarily. The average within-organization response rate was 71% (standard deviation = 40%). The algorithm described above effectively distributed participating employees between the versions of the survey, yielding in total 2,766 respondents who completed the survey version
that included POE because this study variable was included only in the first version of the questionnaire. In each organization, a minimum of four respondents had to complete this survey version (median = 17). The sample at the individual level consisted of 45 percent of males and 45 percent of females. Ten percent of the participants decided not to indicate their gender. Respondents belonged to different age groups with most participants belonging to the middle age group (20% = 16-30, 39% = 31-50, 11% >50, 30% no answer). Participants came from all major functions of their organizations and represented different hierarchical levels (2% top management; 8% middle management; 11% first-line supervisors; 77% employees without leadership responsibility; 2% no answer).

In a third step, members of the top management team had to complete a specific questionnaire, which mainly targeted company performance questions. This procedure was applied based on the idea that executive members should be the best informants regarding company performance issues. A total of 205 top management team members participated with a within company participation ranging from 1 to 15 members and an average within company response rate of 71%.

4.4.2 Measurements and Validation

In this section, I will describe the variable’s measurements and validate them. A complete item list for each measure is available in the appendix.

4.4.2.1 Contextual Ambidexterity

Gibson and Birkinshaw (2004) developed the measure for contextual ambidexterity used in this study. It consisted of two separate scales for alignment (sample item: "The management systems in this organization work coherently to support the overall objectives of this organization") and adaptability (sample item: "The management systems in this organization encourage people to challenge outmoded traditions/practices/sacred cows"). Each scale was assessed with three items, which were measured on a seven-point response format (1 = strongly disagree; 7 = strongly agree). To calculate a company’s contextual ambidexterity, I applied the same procedure as Gibson and Birkinshaw (2004). I calculated the measure for alignment
and adaptability separately. Since these two capacities are seen as nonsubstitutable and interdependent, contextual ambidexterity was computed as a multiplicative interaction between alignment and adaptability, in line with prior work (Gibson & Birkinshaw, 2004; He & Wong, 2004; Nemanich & Vera, 2009). To confirm the factor structure proposed by Gibson and Birkinshaw, I conducted a confirmatory factor analysis (CFA) with two separate factors. Here I need to point out that RMSEA and TLI tend to over-reject true population models when sample size is smaller than 200 (Chen, Curran, Bolle, Kirby, & Paxton, 2008; Hu & Bentler, 1998; Sharma et al., 2005); therefore, I consider RMSEA values of <.10 acceptable (e.g., Browne & Cudeck, 1993). The CFA shows sufficient results. (CMIN/DF=1.6; CFI=.97; TLI=.95; RMSEA=.09).

4.4.2.2 *Productive Organizational Energy*

Cole and colleagues (Cole et al., 2005) developed the POE measure, which was adopted by several other studies (Kunze & Bruch, 2010; Walter & Bruch, 2010). It consists of 14 items covering the three dimensions (emotional: 5 items; cognitive: 5 items; behavioral: 4 items) of POE. Three separate studies validated the POE construct, showing acceptable psychometric properties (Cole et al., 2005). Moreover, these studies showed its cross-cultural and cross-language measurement equivalence across five national cultures. For the cognitive (sample item: "People in my organization are always on the lookout for new opportunities") and behavioral (sample item: "People in my organization will go out of their way to ensure the company succeeds") dimension, I applied a five point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The emotional dimension (sample item: "People in my organization feel inspired in their job") was measured with a five point frequency scale ranging from 1 (never) to 5 (frequently, if not always). As done in prior studies, I calculated the mean values for POE at the individual level and then aggregated them to the organizational level. To justify the aggregation, I calculated intraclass correlation coefficients (ICC[1] and ICC[2]; Bliese, 2000) and the inter-rater agreement statistics $r_{wg}$ (James, Demaree, & Wolf, 1984). The achieved values were adequate (ICC[1] = .11.; p <.001; ICC[2] = .82; and mean $r_{wg} = .85$). For cut-off criteria see prior research (Bliese, 2000; Chen, Bliese, & Mathieu, 2005; George & James, 1993; James, 1982).
The internal consistency estimate, Cronbach’s alpha, for POE at the organizational level was .95.

4.4.2.3 Firm Performance

Firm performance is considered a multidimensional construct (Richard et al., 2009). Therefore, I considered two aspects based on prior research (Khatri & Ng, 2000), financial and non-financial performance. The measure consisted of five items, including financial position, total firm growth, employee fluctuation, employee productivity, and business processes efficiency.

Based on Richard and colleagues’ (Richard et al., 2009) suggestion, I decided to use subjective performance measures. These authors claimed that "researchers should not view the choice of subjective measures as a second-best alternative but, instead, weight the tradeoffs between subjective and objective performance measures against the research context to determine which is more favorable under the circumstances" (Richard et al., 2009, p. 737). For this research, subjective performance measures fit well for two reasons. First, I investigate a sample of small to medium sized companies. Most of these companies are private; therefore, no objective performance data is publicly available. Second, the sample consists of companies from various industries. Thus, objective performance might not be comparable because the type of industry the organization is affiliated with might heavily influence differences in performance.

As suggested (Richard et al., 2009) and conducted in prior studies (Delaney & Huselid, 1996; Wall et al., 2004), I asked the respondents to benchmark their firm’s performance relative to the performance of their industry rivals on a scale ranging from 1 (far below average) to 7 (far above average). Members of the top management team completed the performance questionnaire. I choose these informants because the quality of self-reports increases with the selection of well-informed respondents (Winter, 2003). Moreover, empirical findings show high correlations between subjective and objective performance measures (Guthrie, 2001; Wall et al., 2004). To confirm the structure of my performance measure, I conducted a confirmatory factor analysis that yielded acceptable model fit results (CMIN/DF=1.6; CFI= .99; TLI=.99;
The internal consistency estimate, Cronbach’s alpha, for firm performance was .88.

**4.4.2.4 Control Variables**

In this study, I controlled for organization size, age, and industry affiliation. First, scholars found that organization size relates to various employee attitudes and behaviors (Pierce & Gardner, 2004; Ragins et al., 2000; Schminke et al., 2002). Hence, organization size might bias the results. In line with prior work (e.g., Schminke et al., 2000; Schminke et al., 2002), I log-transformed the number of employees to reduce the distribution’s skewness when calculating the measure for organization size.

Second, I controlled for organization age because this variable is associated with norms and institutional routines, which are referred to as inertial behaviors (Tushman & Romanelli, 1985). Hence, company age might hinder contextual ambidexterity or POE. I measured company age as the number of years the company has existed (e.g., Lubatkin et al., 2006) and log-transformed it to reduce skewness of the distribution.

Finally, I considered industry affiliation as a variable that may bias the findings (cf., Dickson et al., 2006; Sine, Mitshuhashi, & Kirsch, 2006). I opted for four broad categories in order to not having to include a large set of industry controls in my model. These categories include manufacturing, services, finance and insurance, and trade. Organizations were assigned dummy-coded variables, indicating their industry affiliation (1 = belongs to this industry, 0 = does not belong to this industry).

**4.4.2.5 Discriminant and Convergent Validity**

To test for the discriminant and convergent validity of the measures, I conducted a confirmatory factor analysis. I applied a partial disaggregation technique (e.g., Williams & O'Boyle, 2008). This was done by prior research, and it is recommended when sample size is small and the numbers of parameters are high as in my case. I This procedure keeps the ratio between parameters and cases acceptable. Conducte it, because this ratio influences the standard errors and the stability of the measures (Brown et al., 2006).
For this partial disaggregation, I reduced the parameters by averaging the items for each of the three POE dimensions. Thus, I included three items for POE, three each for alignment and adaptability, and five for firm performance. I loaded all items on their proposed latent constructs in the first model. This four-factor model had good model fit ($\chi^2 = 87.998$, $df=71$, $p<.001$, TLI = .96, CFI = .97, RMSEA = .06). To validate this model, I developed three alternative models and compared them to the base model. First, the base-model was compared to a three factor model in which I loaded the items for alignment and adaptability on one latent construct while everything else remained the same ($\Delta \chi^2 = 34.391$, $\Delta df = 3$, $p<.001$). The second alternative model included two latent constructs. I loaded the POE items as well as the three items for alignment and the three items for adaptability on the same latent variable ($\Delta \chi^2= 137.388$, $\Delta df = 5$, $p<.001$). In a last step, I loaded all items on one latent variable ($\Delta \chi^2= 261.006$; $\Delta df = 6$, $p<.001$). To reveal whether the base model had significantly better fit, I conducted a chi-square difference test, which showed that the four-factor model had significantly better fit compared to all other models. These results show that the applied constructs are not only theoretically but also empirically distinct (Bagozzi & Phillips, 1982).

### 4.4.3 Data Analysis

To investigate Hypothesis 1, 2, and 3, I conducted three independent hierarchical regression analyses (Cohen & Cohen, 1983). Hypothesis 4 was tested in three different but complimentary ways. I first utilized the causal-steps-approach in order to establish mediation (Baron & Kenny, 1986), and afterwards I conducted the Sobel-test to control for the mediation’s significance. Furthermore, I opted for bootstrapping as an additional procedure because it is considered more advantageous when compared with the Sobel test (Efron & Tibshirani, 1993; Mooney & Duval, 1993; Preacher & Hayes, 2004).

### 4.5 Results

#### 4.5.1 Descriptive Statistics

Table 4.1 presents means, standard deviations, and bivariate correlations for all study variables. The results indicate that, as expected, contextual ambidexterity correlates
positively with firm performance \( (r = .24; \ p < .05) \) and POE \( (r = .30; \ p < .05) \), and that POE relates positively to firm performance \( (r = .44; \ p < .01) \). Additional correlations between the control variables and POE were also found. The results indicate that POE relates to company size \( (r = -.40; \ p < .01) \) and company age \( (r = -.30; \ p < .05) \) negatively.

### Table 4.1. Means, Standard Deviations, and Correlations of the Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Contextual Ambidexterity</td>
<td>39.60</td>
<td>6.94</td>
<td>.30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Productive Organizational Energy</td>
<td>3.70</td>
<td>.27</td>
<td>.30*</td>
<td>.44**</td>
<td></td>
</tr>
<tr>
<td>3. Firm Performance</td>
<td>5.62</td>
<td>.88</td>
<td>.24*</td>
<td>.44**</td>
<td>-.21</td>
</tr>
<tr>
<td>4. Company Size</td>
<td>4.99</td>
<td>1.23</td>
<td>-.00</td>
<td>-.40**</td>
<td>-.21</td>
</tr>
<tr>
<td>5. Company Age</td>
<td>3.14</td>
<td>.93</td>
<td>-.10</td>
<td>-.30*</td>
<td>-.18</td>
</tr>
<tr>
<td>6. Manufacturing Industry</td>
<td>.25</td>
<td>.44</td>
<td>.08</td>
<td>-.16</td>
<td>-.22</td>
</tr>
<tr>
<td>7. Service Industry</td>
<td>.56</td>
<td>.50</td>
<td>-.16</td>
<td>.13</td>
<td>.04</td>
</tr>
<tr>
<td>8. Finance Industry</td>
<td>.07</td>
<td>.26</td>
<td>.04</td>
<td>-.08</td>
<td>.11</td>
</tr>
<tr>
<td>9. Trade Industry</td>
<td>.11</td>
<td>.32</td>
<td>.11</td>
<td>.09</td>
<td>.15</td>
</tr>
</tbody>
</table>

*Note. n = 71 organizations; ** = p < .01; * = p < .05 (two-tailed).*

The industry dummy control variables did not significantly correlate with the focal study variables. Therefore, I have removed these four industry dummy control variables from further analyses, as the inclusion of unnecessary controls diminishes the statistical power (Bedeian, 2007) and may lead to biased parameter estimates (Becker, 2005).

#### 4.5.2 Hypotheses Testing

Table 4.2 displays the results of my analyses, supporting all four hypotheses. As suggested in Hypothesis 1, my results indicate that contextual ambidexterity affects firm performance positively \( (\beta = .23, \ p < .05) \). In addition, the data supports Hypothesis 2 that proposed a positive relation between contextual ambidexterity and POE by showing a positive and significant regression coefficient \( (\beta = .28, \ p < .01) \).
Corroborating Hypothesis 3, POE relates to firm performance positively ($\beta = .41; p<.01$).

### Table 4.2. Hierarchical Regression Analyses for Hypothesis 1, 2, and 3

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Dependent variable</th>
<th>Firm Performance</th>
<th>Productive Organizational Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H1</td>
<td>H4</td>
</tr>
<tr>
<td>Company size</td>
<td>-.17</td>
<td>-.18</td>
<td>-.05</td>
</tr>
<tr>
<td>Company age</td>
<td>-.12</td>
<td>-.10</td>
<td>-.03</td>
</tr>
<tr>
<td>Contextual Ambidexterity</td>
<td>.23*</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>Productive Organizational Energy</td>
<td>.37**</td>
<td>.41**</td>
<td></td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.05*</td>
<td>.10**</td>
<td>.13**</td>
</tr>
<tr>
<td>$R^2$ (adjusted $R^2$)</td>
<td>.06 (.03)</td>
<td>.11* (.04)</td>
<td>.21** (.16)</td>
</tr>
</tbody>
</table>

*Note. $n = 71$ organizations. Standardized regression weights are shown. **$ = p<.001$; *$ = p<.01$; *$ = p<.05$ (two-tailed). H = Hypothesis*

Moreover, the regression results support Hypothesis 4 by showing a full mediation for this model. The results fulfilled the criteria established by Baron and Kenny (1986), showing that the independent variable (contextual ambidexterity) positively affects the mediator (POE; Hypothesis 2), and the mediator (POE) in turn positively affects firm performance (Hypothesis 3). Moreover, the results showed that the independent variable (contextual ambidexterity) relates positively to firm performance (Hypothesis 1). When entering POE into this equation, contextual ambidexterity’s effect became insignificant, indicating full mediation (Baron & Kenny, 1986). The Sobel test showed a positive significant indirect effect (.01; $p<.05$), which the bootstrap procedure (see Table 4.3) also supported by showing a positive indirect effect (.01) with a bootstrapped 99% confidence interval (lower limit: .00; upper limit .04) around the indirect effect, not containing zero. I included the same controls in the bootstrap procedure as I have included in the hierarchical regression analyses. These results
provide empirical evidence for a full mediation model in which POE mediates the relationship between contextual ambidexterity and firm performance. As shown, the data supports all hypotheses.

Table 4.3. Bootstrap Results for the Indirect Effect

<table>
<thead>
<tr>
<th>Effects</th>
<th>Standard Error</th>
<th>LL 99% CI</th>
<th>UL 99% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>.01</td>
<td>.01</td>
<td>.00</td>
<td>.04</td>
</tr>
</tbody>
</table>

Note: n = 71 companies; Bootstrap sample size = 5000; LL = Lower limit; UL = Upper limit; CI = Confidence interval.

4.6 Discussion

4.6.1 Summary of Findings and Theoretical Contributions

The main aim of this study was to gain a deeper understanding of the relation between contextual ambidexterity and firm performance. The results support all my hypotheses by showing that POE fully mediates the positive relation between contextual ambidexterity and firm performance. With this study, I contribute to theory and practice by corroborating and extending prior research in several ways.

First, I contribute to the research on the ambidexterity-performance link. This link has been empirically under-researched (Raisch & Birkinshaw, 2008) and prior studies have emphasized the need to analyze it more thoroughly by investigating less visible mechanisms that mediate the ambidexterity-performance relation (Simsek et al., 2009). This study offers further theoretical developments and empirically sheds light on this relationship. Specifically, I contribute to the research on contextual ambidexterity, as I have investigated the simultaneous alignment and adaptability of the organization as a performance driver. With this study, I clarify the relation between contextual ambidexterity and firm performance. Gibson and Birkinshaw (2004) proposed that contextual ambidexterity provides the opportunity for every individual employee to engage in behaviors to accomplish the salient organizational goals, which in turn leads to superior organizational performance. I have directly addressed this proposition by further developing and empirically investigating whether contextual ambidexterity releases the affective, cognitive, and behavioral potentials of the organization, and if
this in turn leads to superior performance. The results showed that firms, which have achieved contextual ambidexterity, are not only able to activate their behavioral resources toward the overarching firm goals, as proposed by Gibson and Birkinshaw (2004), but also to facilitate the emotional and cognitive resources. These three dimensions collectively form POE (Cole et al., 2005). Moreover, this research analyzed the strategic performance indicators (financial and non-financial) as called for by prior research (Simsek et al., 2009) and indicated that contextual ambidexterity influences such strategic outcomes.

Second, this study contributes to the upcoming research area in positive organizational scholarship (e.g., Cameron et al., 2003). I investigated contextual ambidexterity as a pivotal driver for POE, and how the collective activation of affective, cognitive, and behavioral potentials towards organizational salient goals drives the performance in organizations. With this, I extended prior research, which has focused heavily on antecedents of POE (e.g., Kunze & Bruch, 2010; Walter and Bruch, 2010).

Third, contextual ambidexterity was established as a unit level phenomenon within organizations (Gibson & Birkinshaw, 2004). This study further developed contextual ambidexterity and argued that in small to medium sized organizations, contextual ambidexterity can be achieved even at the organizational level. This is an important contribution to theory and practice, as a large amount of existing organizations belong to small and medium sized companies for which structural solutions to achieve ambidexterity are difficult to install because separate structures for exploration and exploitation are costly and absorb many resources, which SMEs might not have (e.g., Raisch & Birkinshaw, 2008).

Finally, these findings contribute to the research on paradox of innovation. I quantitatively showed that dealing with exploration/exploitation tensions successfully has energizing potentials for the firm, as suggested and qualitatively investigated by Andriopoulos and Lewis (2008).

### 4.6.2 Practical Implications

This study has relevant implications for practice, as its results may be used to enhance companies’ performance. The results show that contextual ambidexterity facilitates
firm performance. Thus, companies should be aware of contextual ambidexterity’s performance consequences. Firms will prosper if they are able to simultaneously align and adapt the organization. However, the causes of contextual ambidexterity are ambiguous, widely dispersed, and time consuming to develop (Gibson & Birkinshaw, 2004). Therefore, organizations might want to facilitate contextual ambidexterity strategically through the development of its antecedents. Moreover, this study shows that contextual ambidexterity is linked to performance through POE. Hence, organizations might also foster POE in ways other than contextual ambidexterity. Scholars (Walter & Bruch, 2010) have found that TFL climate and decentralized decision-making relate positively to POE. Therefore, organizations might foster POE and ultimately firm performance by establishing such practices.

4.6.3 Limitations and Future Research Directions
This research has several methodological strengths (e.g., different sources for each variable). However, when interpreting the results, some limitation should be taken into account.

First, central to this study is the sample that consists of small and medium sized companies from Germany. I deliberately excluded large enterprises due to representative and conceptual considerations. A sample like this reflects the composition of the German industry environment because 99.7 percent of German companies are small to medium sized (BMWi, 2009). Conceptually, contextual ambidexterity at the organizational level seems to be especially relevant for SMEs. As suggested by Lubatkin et al. (2005), these companies might have difficulties with the installation of separate units for exploration and exploitation to achieve ambidexterity, as this is costly and might require slack resources, which these SMEs don’t have (Raisch & Birkinshaw, 2008). They might not even have enough employees for separate structures. Nevertheless, the decision to research small and medium sized companies limits the generalizability of the results.

Moreover, all organizations in this sample are located in Germany. The specific German culture, characterized by relatively low levels of power distance, medium levels of uncertainty avoidance and long-term orientation, and relatively high levels of masculinity and individualism (Hofstede, 2001), might have influenced the results. For
instance, contextual ambidexterity might not foster POE in cultures that have high levels of uncertainty avoidance and low levels of long-term orientation. Thus, a sample with cross-cultural data and the inclusion even of larger companies might contribute to the research on contextual ambidexterity.

Second, I designed a cross-sectional study to analyze the effect of contextual ambidexterity on firm performance. Such studies apply correlation-based procedures and base the proposed relations on theoretical reasoning. Nevertheless, it is impossible to infer causality with such studies. Therefore, I recommend to replicate my study with a longitudinal study, which from a methodological perspective seems more adequate. Moreover, such longitudinal studies would provide the opportunity to investigate the effects of alignment and adaptability separately, as adaptability might be more relevant for long-term success of the organization alignment more for short-term performance. This might contribute to the proposition that alignment drives factors like efficiency, while adaptability secures success in the end (e.g., March, 1991).

Third, I used subjective performance data. I have good reason for doing so as the sample consisted largely of privately held companies where objective performance data is not publically accessible. This procedure is in line with prior research, which advised that the decision for subjective or objective performance measures should be based on the sample (Richard et al., 2009). Nevertheless, I encourage future research to corroborate my findings by investigating contextual ambidexterity’s influence on performance in a sample where objective performance measures are available and comparable.

Finally, considering POE as the organizational level ‘fuel that makes companies run’ is a rather new concept. As I was able to show its effect on firm performance, future research should investigate other antecedents of POE at the organizational level as well as boundary conditions influencing these relationships.

4.6.4 Conclusion
This study aimed at clarifying the contextual ambidexterity-performance link. In this research, I moved beyond prior work that investigated the direct link between contextual ambidexterity and performance at the business unit level. I addressed the
eager call (Simsek et al., 2009) to identify a mechanism that links contextual ambidexterity to performance. Based on my theoretical reasoning and my empirical findings, I concluded that productive organizational energy is such a mechanism. Moreover, I extended prior work by investigating the contextual ambidexterity-performance relationship at the organizational level. The empirical results support my notion that contextual ambidexterity at the organizational level is linked to firm performance through productive organizational energy. Hence, my study provides a clearer understanding of how contextual ambidexterity contributes to firm performance, which is helpful to scholars and practitioners who are interested in understanding this link more thoroughly.
5 Overall Discussion

5.1 Summary and Integration of the Research Findings

With this dissertation, I intended to shed more light on the complex phenomenon of ambidexterity. More specifically, I aimed at gaining knowledge on the antecedents and consequences of organization level contextual ambidexterity. Based on an extensive literature review, I identified several gaps in the research on ambidexterity and distilled three specific research questions, which I answered in this dissertation.

Although the contextual type of ambidexterity seems to be a viable way to become ambidextrous for a large number of organizations, even for small and medium sized, (see Lubatkin et al. (2006) for a discussion on what difficulties SMEs face when trying to implement structural ambidexterity), it has been almost neglected by prior research. Therefore, I decided to delve into research on this specific ambidexterity type. I focused on contextual ambidexterity and investigated its antecedents and consequences. When researching antecedents, I took two different – almost opposing – perspectives. In the first study, I adopted a leadership perspective and investigated whether specific leadership (TFL) behaviors that are conducted throughout the organization (TFL climate) are able to create a context for ambidexterity in which all employees are able to engage in alignment- and adaptation-oriented activities. In the second study, I took another point of view and examined the topic from a workforce perspective. Prior research (Gibson & Birkinshaw, 2004) suggested that the entire workforce (all employees) contributes to organizations becoming contextually ambidextrous. The main aim of this second study was to gain knowledge on whether a workforce comprised of individuals with specific personality fosters contextual ambidexterity. I investigated the five factors of personality at a collective level as antecedents of contextual ambidexterity. In the third study, I set the focus on contextual ambidexterity’s performance consequences. I examined productive organizational energy as a mediator in the contextual ambidexterity-firm performance relation.

My dissertation provides interesting and encouraging results for research and practice. The first and maybe the most important finding of my dissertation is that contextual
ambidexterity influences firm performance positively. All three studies showed that contextual ambidexterity relates positively to different facets of firm performance (financial, customer, employee, operational, and various other performance aspects). Moreover, study three revealed that productive organizational energy mediates this relation. This means that simultaneously aligned and adaptable organizations encourage all employees to activate the affective, cognitive, and behavioral potentials in pursuit of the organizational goals, which ultimately lead to superior firm performance.

The second finding likewise is important for research and practice, that is, organizations can become contextually ambidextrous. My dissertation contributes to research by providing two vital antecedents. Leadership and the employees’ personalities play a crucial role in achieving contextual ambidexterity. Study 1 showed that TFL climate facilitates contextual ambidexterity through creating a context in which the employees are able to behave in favor of both alignment and adaptability. This TFL climate construct – a collective construct - is a new concept (to my knowledge only one study exists, which mainly focused on TFL climate’s antecedents; see Walter & Bruch, 2010) – and its firm performance consequences have been unexplored. As contextual ambidexterity emerges from every individual employee, all leaders within the organization are in charge to provide a context where employees can do so.

As the results from Study 2 show, organizations need not only leaders that provide the context for ambidexterity, but also employees who are able to act in favor of alignment and adaption. Behaviors seem to be rooted in personality traits, which are relatively stable across time and situations (Hogan, 1991; James & Mazerole, 2002; Zhao & Seibert, 2006). Therefore, I argued in Study 2 that organizations might achieve contextual ambidexterity when their workforce consists of employees whose personalities are associated with behavioral patterns directed at alignment and adaptability. The second study revealed that the five factors of collective personality have behavioral regularities directed at alignment and adaptability, and thus impact contextual ambidexterity positively. Hence, organizations with high levels of collective extraversion, agreeableness, conscientiousness, openness to experience, and emotional stability are more likely to become contextually ambidextrous.
In sum, this dissertation investigated an often-neglected type of ambidexterity, namely contextual ambidexterity. It clearly showed contextual ambidexterity’s performance influence via productive organizational energy, which is encouraging for research and practice, as the dissertation revealed ways in which contextual ambidexterity might be achieved. When investigating the antecedents, I integrated two different perspectives, a leadership and personality perspective. The results showed that TFL climate, as well as the five facets of collective personality drive simultaneous alignment and adaptability. Figure 5.1 depicts the integrated model of my studies’ findings.

Figure 5.1. Integrated Research Findings

5.2 Overall Limitations and Directions for Future Research

Although my study has various methodological strengths, it has some limitations. As already McGrath (1981) mentioned, no method is without flaws. Thus, I report the overall limitations that need to be taken into account when interpreting the results. Moreover, I recommend ways in which future research might address these problems. In a second part of this section, I provide general ideas for how research could further increase the understanding of the complex phenomenon of ambidexterity.

5.2.1 Limitations and Ways to Address Them in Future Research

I already outlined the specific limitations of each study in detail (see sections 2.6.2, 3.6.3, and 4.6.3); however, some limitations apply to the entire dissertation. First, all
my hypothesis imply causal relations between the independent and the dependent variable. However, from a methodological perspective it is not possible to infer causality utilizing the applied cross-sectional study designs. For instance, it might not be contextual ambidexterity that positively influences firm performance but vice versa, successful companies may influence ambidexterity, for instance because they have the resources for doing so. Furthermore, it might be that not an extraverted, agreeable, conscientious, open to new experiences, and emotionally stable workforce facilitates contextual ambidexterity but that contextual ambidextrous organizations attract employees with such personalities. I tried to circumvent the possibility of reverse causality by diligent theoretical reasoning. Nevertheless, empirically these limitations can be ruled out only with time-lagged data collection for the independent, mediator, and dependent variable. Therefore, I recommend that future research replicate my studies with a longitudinal study design.

Second, the organizations contained in the samples are from various industries and have a wide array of employees, thus the results are more generalizable compared to using samples that are more restricted. Nevertheless, I collected the data for all three studies from SMEs. Although I had good reasons to do so, this is a limitation. Rigorously speaking, the generalizability of the findings is limited to small and medium sized organizations located in Germany where the data was collected. Therefore, I recommend that future research replicate my results with a sample that incorporates even larger organizations from different countries.

Third, I investigated firm performance in all three studies. As my samples consisted of many privately held companies, it was not possible to assess objective performance data. Therefore, I decided to take a subjective approach. Although empirical findings show high correlations between subjective and objective performance measures (see Guthrie, 2001; Wall et al., 2004), there are concerns about using subjective performance measures (e.g., Starbuck, 2004). Moreover, research that extensively analyzed the measurement of firm performance suggested that subjective performance measurement is a viable choice in some research contexts (e.g., where no objective data is available; when large difference of the profitability of industries exist within a sample, and so on) (Richard et al., 2009). I believe that subjective performance assessment fits the samples I assessed perfectly, as no objective performance data was publically available and as the participating companies are from different industries.
which might influence the profits due to different margins). Nevertheless, I recommend conducting future research to substantiate my findings with a sample for which objective performance data is publically available.

Finally, common method variance is always an issue when conducting empirical work. I tried to avoid this by collecting all variables from different sources. For example, in the first study, TFL climate and contextual ambidexterity were assessed in different groups of employees, while the top management team rated the firm’s performance. Across the studies, all variables were assessed by different group. With this procedure, I tried to rule out common method variance. Moreover, no data was used twice for the same variable in the different studies. Therefore, I collected data in 2008 and in 2009 (for an overview of variables and sources see Figure 1.3).

### 5.2.2 General Ideas for Future Research

Prior research depicted different ways with which organizations are able to achieve exploration and exploitation. Ambidexterity might be achieved within one unit (contextual ambidexterity) and organizations might have separate units for exploration and exploitation, which are integrated by the top management (structural ambidexterity), and this structural separation might be applied across organizations (alliance ambidexterity). That means, for instance, that when two organizations build an alliance where one of these organizations exploits, the other explores. According to prior research, different antecedents drive the various types of ambidexterity (see Chapter 1).

For future research, I could imagine numerous avenues to gain new insights on ambidexterity. First, knowledge seems to play a vital role for organizational ambidexterity. Organizations that explore might be good at innovation, but this innovation per se is not valuable if the organization is not able to market it. Exploration and exploitation thus seem to be somehow linked and in some degree dependent on shared knowledge. Nevertheless, what mechanisms foster this knowledge transfer in ambidextrous organizations? Prior work has proposed that the top management plays the function of an integrator in structural ambidextrous organizations (Tushman & O’Reilly, 1996). Jansen et al. (2006) discussed that
connectedness acts in favor of knowledge exchange within ambidextrous organizations. Others (Hill & Birkimshaw, 2005; Mom et al., 2009; Taylor & Helfat, 2009; Tiwana, 2008) also investigated this topic from various perspectives (see section 1.2.2.4). Several questions can be derived from this research. For instance, are there other ‘integrators’ than the top management in structural ambidextrous organizations? Are there knowledge flows at lower levels of the hierarchy? Moreover, how can these knowledge flows be fostered in an ambidexterity salient manner? Similarly, it seems worth investigating what mechanisms drive the knowledge flows in contextual ambidexterity. For instance, do the employees exchange their knowledge on how to best divide their time between activities directed at alignment and at adaptability? It seems even more difficult to exchange the knowledge in ambidextrous alliances when two very different organizations need to exchange knowledge.

A second direction, which seems fruitful to me, is to investigate what kind of human resource practices might foster ambidexterity. In structurally ambidextrous organizations, employees need to have competencies that support them in conducting either exploration or exploitation. In contextually ambidextrous organizations, employees should be good at both and need to know how to best divide their time between these conflicting demands. From the literature, questions such as the following arise. Do the human resource practices differ markedly in structurally and contextually ambidextrous organizations? Do the human resources apply different practices for units, which are supposed to conduct exploration and respectively exploitation? What kind of HR systems and practices can facilitate structural ambidexterity and how can HR best support employees to succeed in activities directed at alignment and adaptability, thus contributing to mastering the challenges of contextual ambidexterity? For alliance ambidexterity, the question arises whether both units have shared or aligned HR practices, and what practices are best for fostering the integration of these activities.

Third, prior research has suggested that the behavioral context (a driver of contextual ambidexterity) and organizational structure (an antecedent of structural ambidexterity) complement each other in shaping organizational ambidexterity (Gibson & Birkimshaw, 2004; Simsek, 2009). This suggestion leads to questions like how structural and contextual ambidexterity might be best integrated to achieve organizational ambidexterity. A first step towards this direction was done only
recently. Andriopoulos and Lewis (2009) tried to integrate structural (they call it architectural) and contextual ambidexterity and investigate how differentiation and integration (of exploration and exploitation) takes place on several levels within the organization. Based on this idea, they conducted a qualitative study with six leading design agencies. Based on their results, they concluded that the tensions between exploration and exploitation are managed at different levels within these companies. Thus, leaders from diverse levels influence ambidexterity through their actions. The senior management facilitates ambidexterity through the creation of the context, strategic leadership, and resource allocation, while directors and project leaders (middle management of the design agencies) are in charge of adhering to clear development processes and encouraging improvisations. Moreover, individual knowledge workers decide how to deal with the tensions in their specific work context. Andriopoulos and Lewis (2009) theorized that processes from different levels reinforce each other, resulting in ambidexterity. However, this is only a first step, which requires further work. The theories derived from these findings can now be tested empirically using quantitative studies and in broader samples, as the applied sample included only one very specific industry (design agencies). Moreover, it might be interesting to understand how to best govern the organizations that integrate structural and contextual ambidexterity. A special challenge for governance exists in ambidextrous alliances where governance from different organizations needs to be coordinated and integrated.

Fourth, to me, it seems worthwhile to include the aspect of time more thoroughly into research on ambidexterity. This might provide a more comprehensive understanding of the ambidexterity phenomenon. Most of the studies have applied a cross-sectional design. However, as ambidexterity seems to influence sustained performance (e.g., Raisch et al., 2009), longitudinal studies need to be conducted to show these sustained effects empirically. Moreover, it seems interesting to investigate ambidextrous organizations over longer periods to gain knowledge on how they emerge and unfold. Ambidexterity was linked to dynamic capabilities only recently (O'Reilly & Tushman, 2008), which offers new avenues for research. Moreover, when including the aspect of time, it might be also interesting to investigate how organizations balance exploration and exploitation over time, how the combination of both changes over time, and what drives these shifts (e.g., strategies).
Fifth, future research might not only investigate what drives ambidexterity, but also take a more thorough look at its consequences. As I described in the literature review, prior research has shown mixed results regarding ambidexterity’s performance consequences. Therefore, different types of ambidexterity (contextual, structural, and alliance ambidexterity) should be taken into account when investigating the performance consequences (Simsek et al., 2009). I investigated a mediator of the contextual ambidexterity-performance relation. Nevertheless, it would be fruitful to reveal other mechanisms linking other types of ambidexterity to performance. One venue to follow could for instance be the creation and exchange of knowledge in ambidextrous alliances. In ambidextrous alliances, the knowledge creation and exchange within and between units might be fostered and thus function as an integration mechanism of explorative and exploitative learning that finally might facilitate alliance performance. Moreover, prior research has reasoned some contingencies for ambidexterity’s influence on performance. For example, Simsek (2009) argued for a moderating effect of environmental complexity and dynamism. However, various other internal and external variables might be contingent upon this relation. The identification of such mediators and moderators might contribute to gaining a deeper understanding of ambidexterity and building a more complete theory.

Finally, when investigating ambidexterity’s consequences, prior research has highlighted ambidexterity as a performance driver. However, it might also be possible that ambidexterity has downsides. For instance, the employees in contextual ambidextrous organizations are able to act towards alignment and adaptability simultaneously. To succeed in managing these tensions requires hard work, and some situations might be stressful for the employees. Conducting such hard work over a longer period thus might lead to fast-paced actions if the organization does not provide interventions. Bruch and Menges (2010) suggest that organizations, which continuously accelerate the pace, are likely to end up in a downward spiral, and they called this the ‘acceleration trap.’ Future research would contribute to a more diverse picture of ambidexterity by investigating also such unwanted but possible results and by providing viable interventions. Other forms of ambidexterity might also lead to undesired results, which have not been in the center of attention yet.

Overall, within the last years, research has boosted the knowledge on ambidexterity through several theoretical and empirical articles (e.g., see the special issue on
ambidexterity; Organization Science, 2009, No. 4). However, until now, several gaps in research require careful investigation.

5.3 Main Practical Implications
Due to the applied nature of organizational science, my dissertation’s first and foremost goal is twofold. In addition to contributing to research by further developing and empirically testing theory, I eagerly strive for giving valuable implications to practitioners. As I have already summarized above, my studies showed contextual ambidexterity’s crucial influence on firm performance. They further revealed two drivers of contextual ambidexterity, which are based on two groups within the organization, first, the leaders and their behaviors and, second, the entire workforce, and its collective personality. In the following, I will integrate the practical implications of these findings to form an overall agenda for practitioners. I will offer some strategies that practitioners could use when developing drivers of contextual ambidexterity that would allow organizations to become contextually ambidextrous.

Overall, the practical implications are multi-faceted. This dissertation contributes to practice by sensitizing organizational leaders and entire organizations to contextual ambidexterity’s performance impact. Moreover, it reveals drivers of contextual ambidexterity. At the heart of these practical implications, I intensely offer strategies on how the upper management as well as the human resource management can facilitate contextual ambidexterity within their company. This overall framework for practitioners, which is depicted in Figure 5.2 will go far beyond the implications that I have given within each individual study.
5.3.1 Becoming More Aware of Contextual Ambidexterity’s Performance Implications

The so-called ambidexterity hypothesis states that ambidexterity facilitates firm performance. However, empirical studies have gathered inconsistent results (e.g., Raisch & Birkinshaw, 2008). This might have been due to different conceptualizations of ambidexterity and performance in the prior studies. All three studies of my dissertation support the ambidexterity hypothesis for the specific type of ambidexterity under investigation (contextual ambidexterity) and for a diverse set of performance indicators. The results showed that it is crucial for organizations to align all activities within the organization while simultaneously being adaptive to changes in the focal organizational environment. Being contextually ambidextrous provides strategic performance advantages, including various performance facets such as financial, customer, employee, and operational performance (see Study 1, 2, and 3). Based on these findings, my dissertation recommends that practitioners be aware of this vital driver of organizational performance. It is not enough to effectively engage in the current activities, it is equally important for organizations to strive to adapt to changes in the task environment simultaneously. This has vital performance implications for organizations, which are able to do this within one unit (i.e. contextual ambidexterity), as my three studies have shown.
Overall Discussion

5.3.2 Gaining Knowledge on Drivers of Contextual Ambidexterity

The awareness of contextual ambidexterity’s impact on firm performance is only a first step in the pursuit of superior firm performance. However, without knowing how contextual ambidexterity might be facilitated, organizations would struggle to simultaneously become aligned and adaptable and to achieve superior firm performance. My dissertation’s second contribution to practice is to provide knowledge on drivers of contextual ambidexterity. The dissertation provides two critical antecedents. As pointed out in Study 1 and 2, my studies revealed certain aspects of leadership as well as leaders’ collective behavioral patterns that foster a context for ambidexterity, and, on the other hand, collective personality that facilitates alignment and adaptability.

First, my results suggest that organizations are able to develop contextual ambidexterity through a transformational leadership climate. When all leaders within the organization articulate a captivating vision, act as charismatic role models, foster the acceptance of common goals, set high performance expectations, and provide individualized support and intellectual stimulation for followers (Podsakoff et al., 1990; see also Bass, 1985), they encourage the employees to conduct activities that align and adapt the organization.

Second, my dissertation’s results suggest that the five factors of collective personality relate positively to contextual ambidexterity. Organizations with employees who act in an extraverted, agreeable, conscientious manner, who are open to experience and are emotionally stable, have high potential to become simultaneously aligned and adaptable through specific actions conducted by its employees.

To sum up, my dissertation contributes to practice by revealing two vital aspects, which contribute to fostering contextual ambidexterity, TFL climate, and collective personality. In the following sections, I will provide practical suggestions on how organizations might positively influence contextual ambidexterity through the strategic development of these antecedents. These practical implications include strategies for the upper management as well as human resource managers.
5.3.3 Upper Management Strategies to Foster Drivers of Contextual Ambidexterity

The upper management takes a decisive role in organizational life (Cannella, 2001; Carpenter, Geletkanycz, & Sanders, 2004). Due to its clear influence on decisions regarding the organization and the organizational development, it is crucial for the upper management to be cognizant of the potentials that contextual ambidexterity offers for organizational success. Contextual ambidexterity is causally ambiguous and difficult to accomplish (Gibson & Birkinshaw, 2004), but its drivers can – with much effort - be implement in the organization. The upper management can support this in various ways.

First, it can set strategic direction for developing these drivers. For instance, TFL behaviors might be integrated in leadership principles. Such a public commitment of the upper management to these drivers of contextual ambidexterity constitutes the foundation for its strategic development that, for instance, might be pushed by various HR systems and practices, which I will describe more detailed in the next sections. Similarly, the five discussed facets of personality might be fostered by assigning them a strategic role, for example, through integrating the behavioral patterns associated with these personality facets into the organizational values.

Second, the upper management can encourage the leaders and employees to act according to the leadership principles and organizational values. This might be done by allocating significance to these principles and values. The upper management can demand supporting systems and processes (e.g., promotion and recruiting strategies; see the next sections). The HR department might play a key role in developing such systems.

Third, the CEO and the top management function as catalysts for a culture that values TFL and the behavioral patterns associated with the five facets of collective personality. These actors take a decisive part in fostering such behaviors, as they are the organization’s key role models. The upper management signals what behaviors are valued, expected, and acceptable (Dutton, 2003) and how activities should be carried out (Tyler & Lind, 1992). The behaviors the upper management conducts are likely to spread throughout the organization and to cascade to lower hierarchical levels (Tyler & Lind, 1992). Thus, the CEO and the top management should lead in a
transformational way and display the behavioral patterns associated with the five facets of collective personality.

Finally, the upper management can foster TFL climate through structural mechanisms. Prior research (Walter & Bruch, 2010) has found that a strong TFL climate is more likely to occur in organizations that facilitate decentralized decision making and adopt formalized processes. Thus, the upper management might want to foster TFL climate through restructuring the organization and giving more responsibilities to lower levels within the organization. Moreover, organizations should define and formalize ‘ideal’ processes.

5.3.4 Human Resource Management Strategies to Facilitate Drivers of Contextual Ambidexterity

5.3.4.1 Detection Strategies

My results show that the collective TFL behaviors (i.e., TFL climate) and the collective facets of personality are drivers of contextual ambidexterity. This implies that not only the individuals are important, but also the aggregate level, which has to be high. Nevertheless, individuals with extreme values that differ much from the mean can easily harm this aggregate level. For instance, a leader who does not exercise any kind of TFL behavior might not only hinder the success of his specific work group, but also sustainably harm the organization through various processes. Employees in this work group might notice that their direct supervisor acts in different ways compared to other supervisors. They might feel an unfair treatment and become jealous of other organizational members who, for example, are better coached by their leader. This might negatively influence employee’s behaviors. The employees might show up late, steal, or even abuse coworkers (e.g., Ferris, Brown, Lian, & Keeping, 2009). Moreover, inconsistencies in the behaviors of different leaders might facilitate stress and increase the amount of process losses (e.g., Steiner, 1972), as these inconsistent leader behaviors might lead to unclear goals, which in turn cause employees to coordinate excessively with other leaders and with their coworkers. Similarly, research reports that a single person with a low level of, for instance, agreeableness, conscientiousness, or extraversion may strain internal processes and decrease
performance (Barrick et al., 1998). Due to this potential harm to the organization caused by ‘outliers’, it is inevitable to identify them and to foster TFL and the five factors of personality throughout the organization.

The first step to prevent the possible harms described above is to obtain an overall picture of the TFL climate and the five factors of collective personality within the organization. It is important to receive fine-grained results in order to know where human resources need to intervene (e.g., with trainings or job rotation). TFL might be assessed using surveys that are completed by the leaders’ subordinates. Moreover, it is also possible to assess TFL behaviors of the respective leader based on the reports of the peers and the direct supervisor in a 360-degree manner. In a similar way, the values for the five factors of collective personality might be achieved, for instance, through the integration of these aspects in an employee survey or in the performance evaluation given to the employees on yearly basis. It is again important to identify these personality facets at the individual and work group levels to be able to develop them within an organization in a salient manner.

To sum up, a first step organizations need to take to develop contextual ambidexterity is to identify, which leaders conduct TFL with what magnitude, and which of the five facets of personality exist within the organization and where. This can be measured via surveys. This information constitutes the basis for intentionally managing the organizational change through several practices, such as training programs, promotion strategies, or even dismissal.

5.3.4.2 Training Programs

Organizations might foster contextual ambidexterity through training programs that would enable leaders to behave in transformational manner and foster extraversion, agreeableness, conscientiousness, openness to experience, and emotional stability throughout the organization. Besides, the assessment of TFL and of the five facets of personality, should provide a basis for individualized training programs.

Prior research has revealed that organizations often tend to emphasize technical skills for lower-level leaders and interpersonal and strategic skills for higher-level leaders (e.g., Lowe et al., 1996). This training pattern might be based on the results of studies
that tried to reveal managerial practices (Luthans, Hodgetts, & Rosenkrantz, 1988; Mintzberg, 1975). However, as my results have shown, it is equally important to foster TFL at lower levels of the hierarchy. Trainings might be tailored to leaders not through different content (e.g., technical skills vs. interpersonal skills) but through different foci. This means, lower level leaders might enhance their TFL through, for instance, situational and interactional trainings. Higher-level leaders might be supported in conducting TFL through training focused on clear written communication, speech making, and alike, as they need to stimulate masses of employees. Prior research (Barling, Weber, & Kelloway, 1996), which has shown that TFL training programs have a positive effect on the leaders’ TFL behaviors, supports my suggestion to conduct trainings.

Moreover, trainings might be designed to foster the five facets of collective personality. Although the five factors of individual personality are seen as relatively stable over time (e.g., Zhao & Seibert, 2006), a large amount of the behaviors associated with these personality facets can be achieved with practice and effort (Zhao & Seibert, 2006). Moreover, research (Li et al., 2008, p. 369) has argued that trainings can "engender certain types of organizational climate on what collective knowledge, skills and personality traits are essential. " However, due to the personality’s stable nature at the individual level, I will describe in more detail how to foster collective personality with recruitment strategies (section 5.3.4.4).

5.3.4.3 Feedback and Promotion Strategies

Organizations might foster TFL as well as the five facets of collective personality through structured feedback systems and promotion strategies. When strategically developing TFL climate, an evaluation of every leaders’ TFL behaviors (preferably 360-degree) is the key. This evaluation is not only the basis for further HR practices, but the results should also be given to and discussed with the respective leaders. This offers them a holistic picture of how others perceive their behaviors, hence, providing a basis for their future development. Internal benchmarks might further contribute to estimating the relative performance based on these behaviors.
In addition, the leaders can be stimulated with specific strategies to conduct the desired behaviors. For instance, leaders can be challenged to conduct the desired behaviors and to receive good evaluations based on the inclusion of these evaluations in their yearly agreement on objectives. The organization can promote transformational leaders to substantiate the importance of and the organization’s commitment to this kind of leadership. This might foster TFL climate in two ways. First, the transformational leaders would remain in the organization and have even more important roles, which would sustain TFL climate. On the other hand, such promotions dictate what behaviors are expected and demanded. This would further strengthen the TFL climate within the organization.

In a similar way, the organization would be able to urge the employees to show behavioral patterns related to the five facets of collective personality throughout the organization. Such behaviors might as well be assessed (on the individual and/or on the work group level) in a yearly survey. In this case, it is also vital to give feedback to the employees and work groups on the results of such surveys, and to base promotions on these evaluations to ensure continuous improvements.

### 5.3.4.4 Recruitment Strategies

For both, TFL climate and collective personality, recruiting and the recruiting strategy is a matter of extreme importance. Prior work has revealed that during hiring of lower level leaders, much attention is paid to technical skills (Lowe et al., 1996) with the downside of almost neglecting interpersonal skills, which are vital for TFL. Based on my dissertation’s findings, I recommend including such interpersonal skills in recruitment processes for leaders at all hierarchical levels. This means to assess not only whether the candidate is capable of doing the job (e.g., technical skills and competencies), but also whether he or she is able to motivate and coach employees (interpersonal competencies). This strategy might be explicitly formulated and accommodated through situational questions or assessment center tasks, which should reveal interpersonal competencies of the leader candidates.

Recruitment is also a vital mechanism, which can foster the facets of collective personality within the organization in various ways. During the recruiting process, the organization should emphasize the desired personality traits, as this would attract and
retain employees with similar personalities. Prior research has proposed that job candidates ascribe personality traits to organizations and that these ‘symbolic’ factors are at least equally important for assessing organizational attractiveness as instrumental factors, such as pay and location (Lievens & Highhouse, 2003). Therefore, the organization should present the organizational personality not only internally, but also externally (e.g., on the webpage, in the vision/mission, through testimonials). Moreover, organizations might employ recruiters with the desired personalities, as these recruiters are able to represent the organization ‘authentically’. In addition, they might attract candidates with similar personalities.

To foster the five facets of personality even further, the organizations should not only emphasize the competencies of the applicant, but also the personality traits. Prior work has revealed that competent employees who do not fit to the organization based on their personality traits are able to harm the organization and as such, destroy performance and satisfaction of other employees (Stewart, 2003). Therefore, not only job specific competencies, but also the applicants’ personality should be taken into account during recruitment processes. In addition, the personality traits should be one of the recruiting criteria not only for the employees but also for the leaders, as the leaders act as role models for the other employees.

5.3.5 Conclusion for the Practical Implications
Overall, the dissertation contributes to practice in many ways. This research draws the attention to contextual ambidexterity’s performance consequences and reveals two vital drivers. It develops strategies that can positively influence contextual ambidexterity through fostering TFL climate and the five facets of collective personality. The dissertation separately develops strategies for the upper management and the HR department, although these strategies are interdependent. For instance, it might be very difficult for the HR department to select applicants based on their TFL competencies, especially if the CEO or the upper management has a different understanding of leadership.

Organizations can facilitate the antecedents of contextual ambidexterity in various ways. The CEO and the top management can support TFL climate and collective
personality through role modeling and through the initialization of processes, procedures, and structures. It is crucial for the organization to know where it stands regarding TFL climate and collective personality. This is the basis for subsequent HR practices that are supposed to facilitate TFL climate and the five facets of collective personality through internal development (e.g., training, feedback, and promotions strategies) and external sourcing (e.g., recruiting strategies).

However, even more important, organizations need to be cognizant that the upper management and the HR department are able to develop TFL climate and the five facets of collective personality in various ways. Therefore, organizations should consider this potential in strategic decision making, as competitors might not easily imitate collective leadership and collective personality and hence the source of a competitive advantage.

5.4 Reflections and Overall Conclusion

5.4.1 Reflections on the Dissertation

Before I started to write this dissertation, my goal was to conduct high-quality research. Now, after I have finished my studies, I ask myself, whether I have achieved what I aimed for. However, what constitutes ‘quality’ in empirical research? Bartunek, Rynes, and Ireland (2006) asked exactly the same question to the board of the Academy of Management Journal. The answers included "well-crafted theory; good technical or methods job; good fit of data and theory; sophisticated methodology; great sample; making the complex look simple and elegant" (Bartunek et al., 2006, p. 13).

I did my best to achieve the mentioned criteria. I have conducted an extensive literature review to develop a foundation for my research based on prior theory and empirical work. From this literature review, I have extracted the gaps, which were the foundation for the research questions. I aimed at integrating theory and developing it further with my theoretical reasoning and empirical findings. Thus, I hope that my dissertation incorporated ‘well-crafted theory.’ I also tried to do a good technical and methods job by carefully applying the statistical methods such as hierarchical regression analyses, Sobel test, and bootstrap procedures. As already outlined in section 1.3, I analyzed the developmental state of the theories that I applied in my
research (emergent vs. mature). Based on this analysis, I have chosen to conduct a
survey study design, which prior research suggested fits well for mature theories
(Edmonson & McManus, 2007). Moreover, I extensively tested for significance,
rigorously validated the measures, and heavily tested the assumptions that underlie the
data-analytic procedures. The sample included - depending on the study - between 71
and 121 companies that largely differ in size and operate in various industries.
Therefore, my studies incorporated samples that are well suited for empirical research,
as the variance in the constructs under investigation is likely to be high, and the results
might be more generalizable due to the diverse sample. I had difficulties formulating
conclusion concerning the last criteria mentioned by Bartunek et al. (2006) that is,
‘making the complex look simple and elegant.’ I tried to depict the complex topic of
ambidexterity in my dissertation in a way that makes it accessible to a broad audience.
However, after almost three years of extensive work on this project, it is not easy to
know whether I have achieved this, as I know the topic really well. In addition to the
above-mentioned criteria, I aimed at extracting relevant information for practice from
my research and giving concrete guidance to practitioners.

To summarize, I have worked hard in order to conduct high-quality research.
Nevertheless, I leave it to the - as I hope - interested reader to judge my research and
the degree to which I have reached the above-mentioned high-quality research criteria.

5.4.2 Conclusion

Being good and effective on the current tasks while also being responsive to
environmental changes is a major challenge for organizations. As outlined in the
introduction of my dissertation, many organizations have poor performance or even
fail to survive. My dissertation hints to the foundation of this, that is, organizations
struggle to become ambidextrous. However, in the end, organizations can only be
successful when they master this challenge.

Despite the proposition that ambidexterity facilitates performance, research on
ambidexterity is only emerging and yet has a clear focus on how to achieve
ambidexterity through structural separation. Nevertheless, the knowledge on how to
achieve ambidexterity through structural separation is limited, and even less is known
about how to become contextually ambidextrous. Furthermore, ambidexterity’s theorized positive influence on performance has only been tested empirically in a restricted number of studies that gathered mixed results.

I therefore addressed these issues and aimed at gaining knowledge on drivers of contextual ambidexterity and its performance consequences. Based on the exhaustive literature review, I proposed that leaders throughout the organization and the workforce itself might play a crucial role in contextual ambidexterity. The empirical studies substantiate these notions by showing that both TFL climate and the five facets of collective personality drive contextual ambidexterity. Moreover, the empirical results from all three studies corroborate the positive contextual ambidexterity-performance link. In addition, Study 3 revealed this link to be an indirect one, mediated by productive organizational energy.

Overall, this dissertation has taken important steps towards the better understanding of ambidexterity. I desired to contribute to theory and practice by answering the three research questions and by giving practical guidance to organizations. I hope that my work inspires scholars to investigate further the complex phenomenon of ambidexterity, as my findings offer interesting and new directions for future research. Ultimately, I hope that my dissertation and the future research based on my findings might enable organizations to prosper and be more successful in the end.
6 Appendix

6.1 Survey Items Study 1

Table 6.1. Survey Items for Transformational Leadership Climate

<table>
<thead>
<tr>
<th>Transformational Leadership Measure</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instruction:</strong> In this survey we are interested</td>
<td>In this survey we are interested in how you perceive the leadership style of</td>
<td>In this survey we are interested in how you perceive the leadership style of</td>
</tr>
<tr>
<td>in how you perceive the leadership style of</td>
<td>this organization’s supervisors.</td>
<td>this organization’s supervisors.</td>
</tr>
<tr>
<td>This organization’s supervisors...</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Performance Expectations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ... show us that they expect a lot from us.</td>
<td>... zeigen uns, dass sie viel von uns erwartet.</td>
<td></td>
</tr>
<tr>
<td>2. ... insist on only the best performance.</td>
<td>... bestehen ausschließlich auf Bestleistungen.</td>
<td></td>
</tr>
<tr>
<td>3. ... will not settle for second best.</td>
<td>... werden sich mit einem zweiten Platz nicht zufrieden geben.</td>
<td></td>
</tr>
<tr>
<td><strong>Vision Articulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ... are always seeking new opportunities for our</td>
<td>... suchen stets nach neuen Chancen für das Unternehmen</td>
<td></td>
</tr>
<tr>
<td>company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ... paint an interesting picture of the future</td>
<td>... zeichnen für unser Unternehmen ein interessantes Bild von der Zukunft.</td>
<td></td>
</tr>
<tr>
<td>for our enterprise.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ... have a clear understanding of where we are</td>
<td>... haben ein klares Verständnis davon, wohin wir gehen.</td>
<td></td>
</tr>
<tr>
<td>going.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ... inspire others with their plans for the</td>
<td>... inspirieren andere mit ihren Plänen für die Zukunft.</td>
<td></td>
</tr>
<tr>
<td>future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ... are able to get others committed to their</td>
<td>... bringen andere dazu, sich für ihre Träume von der Zukunft voll einzusetzen.</td>
<td></td>
</tr>
<tr>
<td>dream of the future.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Intellectual Stimulation

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... have stimulated me to think about old problems in new ways.</td>
<td>... regen mich dazu an, auf neue Weise über alte Probleme nachzudenken.</td>
</tr>
<tr>
<td>2.</td>
<td>... have ideas that have forced me to rethink some of my own ideas I have never questioned before.</td>
<td>... haben mich durch ihre Ideen dazu gebracht, einige meiner eigenen Vorstellungen zu überdenken, die ich vorher nie hinterfragt hatte.</td>
</tr>
<tr>
<td>3.</td>
<td>... have provided me with new ways of looking at things which used to be a puzzle for me.</td>
<td>...haben mir neue Sichtweisen auf Dinge nahe gebracht, die mir vorher nicht klar waren.</td>
</tr>
</tbody>
</table>

### Individualized Support

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... are thoughtful of my personal needs.</td>
<td>... beachten meine persönlichen Bedürfnisse.</td>
</tr>
<tr>
<td>2.</td>
<td>... act without considering my feelings (reverse coded).</td>
<td>... handeln, ohne meine Gefühle zu berücksichtigen. (reverse coded)</td>
</tr>
<tr>
<td>3.</td>
<td>... show respect for my personal feelings.</td>
<td>... zeigen Respekt für meine persönlichen Gefühle.</td>
</tr>
<tr>
<td>4.</td>
<td>... treat me without considering my personal feelings (reverse coded).</td>
<td>... behandeln mich, ohne meine persönlichen Gefühle zu berücksichtigen (reverse coded).</td>
</tr>
</tbody>
</table>

### Fostering Group Goals

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... foster collaboration among work groups.</td>
<td>... fördern die Zusammenarbeit zwischen den Arbeitsgruppen.</td>
</tr>
<tr>
<td>2.</td>
<td>... encourage employees to be &quot;team players&quot;.</td>
<td>... ermuntern Mitarbeiter, „Teamspieler“ zu sein.</td>
</tr>
<tr>
<td>3.</td>
<td>... get the groups to work together for the same goal.</td>
<td>... schaffen es, dass die Arbeitsgruppen gemeinsam für das gleiche Ziel arbeiten.</td>
</tr>
<tr>
<td>4.</td>
<td>... develop a team attitude and spirit among his/her employees</td>
<td>... entwickeln einen Gemeinschaftssinn und Teamgeist unter den Mitarbeitern.</td>
</tr>
</tbody>
</table>


### Role Model Behavior

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... provide a good model to follow.</td>
<td>... sind gute Vorbilder.</td>
</tr>
<tr>
<td>2.</td>
<td>… lead by &quot;doing&quot; rather than simply by &quot;telling&quot;</td>
<td>... führen durch „Handeln“ und nicht einfach durch „Anweisen“.</td>
</tr>
<tr>
<td>3.</td>
<td>… lead by example</td>
<td>... führen als Vorbilder.</td>
</tr>
</tbody>
</table>

*Note:*

All items are taken from Podsakoff et al. (1996; 1990).

In addition, I conducted a referent shift from "My direct supervisor…" to "This organization’s supervisors…"

---

### Table 6.2. Survey Items for Contextual Ambidexterity

#### Contextual Ambidexterity Measure

*Instruction:* Please indicate the degree to which you agree with the following statements.

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The management systems in this organization work coherently to support the overall objectives of this organization</td>
<td>Die Managementsysteme dieses Unternehmens sind aufeinander abgestimmt, um die übergreifenden Ziele des Unternehmens zu unterstützen.</td>
</tr>
<tr>
<td>2.</td>
<td>The management systems in this organization cause us to waste resources on unproductive activities (reverse coded).</td>
<td>Die Managementsysteme dieses Unternehmens veranlassen uns, Ressourcen für unproduktive Tätigkeiten zu verschwenden (reverse coded).</td>
</tr>
<tr>
<td>3.</td>
<td>People in this organization often end up working at cross-purposes because our management systems give them conflicting objectives (reverse coded).</td>
<td>Die Managementsysteme dieses Unternehmens geben widersprüchliche Zielsetzungen vor, weshalb die Mitarbeiter oft gegeneinander arbeiten (reverse coded).</td>
</tr>
</tbody>
</table>
### Adaptable

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The management systems in this organization encourage people to challenge outmoded traditions/practices/sacred cows.</td>
<td>Die Managementsysteme dieses Unternehmens motivieren die Mitarbeiter dazu, veraltete Traditionen/Methoden/heilige Kühe zu hinterfragen.</td>
</tr>
<tr>
<td>2.</td>
<td>The management systems in this organization are flexible enough to allow us to respond quickly to changes in our markets.</td>
<td>Die Managementsysteme dieses Unternehmens sind flexibel genug, um schnell auf Marktveränderungen reagieren zu können.</td>
</tr>
<tr>
<td>3.</td>
<td>The management systems in this organization evolve rapidly in response to shifts in our business priorities.</td>
<td>Die Managementsysteme dieses Unternehmens passen sich nach Veränderungen unserer Geschäftsrioritäten schnell an.</td>
</tr>
</tbody>
</table>

*Note:* All items are taken from Gibson & Birkinshaw (2004).

### Table 6.3. Survey Items for Firm Performance (Study 1)

**Firm Performance Measure**

*Instruction:* Compared to your competitors, how did your company perform since the beginning of 2008 on… ?’

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Total firm growth</td>
<td>Wachstum</td>
</tr>
<tr>
<td>2.</td>
<td>Financial position</td>
<td>Finanzlage</td>
</tr>
<tr>
<td>3.</td>
<td>Return on investments</td>
<td>Gesamtkapitalrendite</td>
</tr>
<tr>
<td><strong>Operational Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Employee retention</td>
<td>Mitarbeiterbindung und -fluktuation</td>
</tr>
<tr>
<td>2.</td>
<td>Employee productivity</td>
<td>Mitarbeiterproduktivität</td>
</tr>
<tr>
<td>3.</td>
<td>Business process efficiency</td>
<td>Effizienz der Geschäftsabläufe</td>
</tr>
</tbody>
</table>

*Note:* All items are developed based on Combs et al. (2006).
## 6.2 Survey Items Study 2

### Table 6.4. Survey Items for Five Factors of Collective Personality Measure

<table>
<thead>
<tr>
<th>Collective Personality Measure</th>
<th>Instruction: Please indicate the degree to which you agree with the following statements.</th>
<th>The members of my organization...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
<td><strong>English Original</strong></td>
<td><strong>German Translation</strong></td>
</tr>
<tr>
<td><strong>Extraversion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>… are outgoing, sociable.</td>
<td>… gehen aus sich heraus, sind gesellig.</td>
</tr>
<tr>
<td>2.</td>
<td>… are reserved (reverse coded).</td>
<td>… sind eher zurückhaltend, reserviert (reverse coded).</td>
</tr>
<tr>
<td><strong>Agreeableness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>… are generally trusting.</td>
<td>… schenken anderen leicht Vertrauen, glauben an das Gute im Menschen.</td>
</tr>
<tr>
<td>2.</td>
<td>… tend to find fault with others (reverse coded).</td>
<td>… neigen dazu, andere zu kritisieren (reverse coded).</td>
</tr>
<tr>
<td><strong>Conscientiousness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>… do a thorough job.</td>
<td>… erledigen Aufgaben gründlich.</td>
</tr>
<tr>
<td>2.</td>
<td>… tend to be lazy (reverse coded).</td>
<td>… sind bequem, neigen zur Faulheit (reverse coded).</td>
</tr>
<tr>
<td><strong>Emotional Stability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>… are relaxed, handle stress well.</td>
<td>… sind entspannt, lassen sich durch Stress nicht aus der Ruhe bringen.</td>
</tr>
<tr>
<td>2.</td>
<td>… get nervous easily (reverse coded).</td>
<td>… werden leicht nervös und unsicher (reverse coded).</td>
</tr>
<tr>
<td><strong>Openness to Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>… have an active imagination.</td>
<td>… haben eine aktive Vorstellungskraft, sind phantasievoll.</td>
</tr>
<tr>
<td>2.</td>
<td>… have few artistic interests (reverse coded).</td>
<td>… haben nur wenig künstlerisches Interesse (reverse coded).</td>
</tr>
</tbody>
</table>

*Note:* All items are taken from Rammstedt & John (2007). In addition, I conducted a referent shift.
Table 6.5. Survey Items for Firm Performance (Study 2)

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>There has been a noticeable improvement in financial results</td>
<td>Es gab eine merkliche Verbesserung der finanziellen Resultate.</td>
</tr>
<tr>
<td>2.</td>
<td>Sales per employee have increased</td>
<td>Die Erträge pro Mitarbeiter sind angestiegen.</td>
</tr>
<tr>
<td>3.</td>
<td><em>Market share has improved.</em></td>
<td><em>Der Marktanteil wurde vergrößert.</em></td>
</tr>
<tr>
<td><strong>Customer Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Customer management has improved.</td>
<td>Das Kundenmanagement hat sich verbessert.</td>
</tr>
<tr>
<td>2.</td>
<td>Customer consolidation has improved.</td>
<td>Die Kundenbindung hat sich verbessert.</td>
</tr>
<tr>
<td>3.</td>
<td><em>Customer complaints have decreased.</em></td>
<td><em>Es gibt weniger Reklamationen von Kunden.</em></td>
</tr>
<tr>
<td><strong>Employee Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Employee absenteeism has decreased.</td>
<td>Fehlzeiten von Mitarbeitern haben abgenommen.</td>
</tr>
<tr>
<td>2.</td>
<td>Employee satisfaction has improved.</td>
<td>Die Zufriedenheit der Mitarbeiter hat sich verbessert.</td>
</tr>
<tr>
<td>3.</td>
<td>Employee turnover has decreased.</td>
<td>Fluktuation hat abgenommen.</td>
</tr>
</tbody>
</table>

*Note: All items are taken from Roca-Puig et al. (2007)*

*Items have been deleted due to bad model fit.*

**NOTE:** The survey items for contextual ambidexterity are listed in Table 6.2
6.3 Survey Items Study 3

Table 6.6. Survey Items for Productive Organizational Energy

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>...feel excited in their job.</td>
<td>...empfinden ihre Arbeit als spannend.</td>
</tr>
<tr>
<td>2.</td>
<td>...feel enthusiastic in their job.</td>
<td>...sind begeistert von ihrer Arbeit.</td>
</tr>
<tr>
<td>3.</td>
<td>...feel energetic in their job.</td>
<td>...fühlen sich energiegeladen bei Ihrer Arbeit.</td>
</tr>
<tr>
<td>4.</td>
<td>...feel inspired in their job.</td>
<td>...empfinden Ihre Arbeit als inspirierend.</td>
</tr>
<tr>
<td>5.</td>
<td>...feel ecstatic in their job.</td>
<td>...sind euphorisch bei Ihrer Arbeit.</td>
</tr>
</tbody>
</table>

Affective Energy Dimension

Please indicate how often the members of your organization feel the following emotions at work.

The members of this organization...

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>...are ready to act at any given time.</td>
<td>...sind jederzeit zum Handeln bereit.</td>
</tr>
<tr>
<td>2.</td>
<td>...are mentally alert at the present time.</td>
<td>...sind derzeit geistig rege.</td>
</tr>
<tr>
<td>3.</td>
<td>...have a collective desire to make something happen.</td>
<td>...haben den gemeinsamen Wunsch, etwas zu bewegen.</td>
</tr>
<tr>
<td>4.</td>
<td>...really care about the fate of this company.</td>
<td>...interessieren sich wirklich für das Schicksal dieses Unternehmens.</td>
</tr>
<tr>
<td>5.</td>
<td>...are always on the lookout for new opportunities.</td>
<td>...suchen ständig nach neuen Chancen für das Unternehmen.</td>
</tr>
</tbody>
</table>

Cognitive Energy Dimension

Please indicate the degree to which you agree with the following statements.

The members of this organization...
### Behavioral Energy Dimension

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>… will go out of their way to ensure the company succeeds.</td>
<td>… gehen an ihre Grenzen, um den Erfolg des Unternehmens zu sichern.</td>
</tr>
<tr>
<td>2.</td>
<td>… often work extremely long hours without complaining.</td>
<td>… arbeiten oft extrem lange, ohne sich zu beschweren.</td>
</tr>
<tr>
<td>3.</td>
<td>There has been a great deal of activity in this organization.</td>
<td>… waren in letzter Zeit sehr aktiv</td>
</tr>
<tr>
<td>4.</td>
<td>… are currently working at a very fast pace.</td>
<td>… arbeiten momentan mit einer sehr hohen Geschwindigkeit.</td>
</tr>
</tbody>
</table>

**Note:** All items are taken from Cole et al. (2005). In addition, I conducted a referent shift from "People in my team…” to "The members of this organization…”

### Table 6.7. Survey Items for Firm Performance (Study 3)

**Firm Performance Measure**

*Instruction:* Compared to your competitors, how did your company perform since the beginning of 2009 on…”

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Total firm growth</td>
<td>Wachstum</td>
</tr>
<tr>
<td>2.</td>
<td>Financial performance</td>
<td>Finanzlage</td>
</tr>
<tr>
<td>3.</td>
<td>Employee retention</td>
<td>Mitarbeiterbindung und -fluktuation</td>
</tr>
<tr>
<td>4.</td>
<td>Employee productivity</td>
<td>Mitarbeiterproduktivität</td>
</tr>
<tr>
<td>5.</td>
<td>Business process efficiency</td>
<td>Effizienz der Geschäftsabläufe</td>
</tr>
</tbody>
</table>

**Note:** All items are developed based on Combs et al. (2006).

**NOTE:** The survey items for contextual ambidexterity are listed in Table 6.2
References


Costa, P. T., Jr., & McCrae, R. R. 1992. *Revised Neo Personality Inventory (Neo-Pi-R) and Neo Five-Factor (Neo-Ffi) Inventory Professional Manual*. Odessa, FL: PAR.


Howell, J. M., & Avolio, B. J. 1993. Transformational Leadership, Transactional Leadership, Locus of Control, and Support for Innovation: Key Predictors of


Effects of Formal Structural and Personal Coordination Mechanisms. 
*Organization Science*, 20(4).


Curriculum Vitae

Christian A. J. Schudy, born on August 3 in Stuttgart, Germany

EDUCATION

2007-2011  University of St. Gallen, Switzerland
            Doctoral Studies in Management (Dr. oec.)
2009       University of Lugano, Switzerland
            Summer School in Social Science and Data Analysis
2001-2007  University of Konstanz, Germany
            M.A. in Public Policy and Management (Dipl.-Verw.Wiss.)
2002-2003  University of Pavia, Italy
            Visiting Student at the Department of Political Science
1986-1999  Freie Waldorfschule Uhlandshöhe Stuttgart, Germany
            German Abitur (equivalent to high school diploma)

WORK EXPERIENCE

2007-2010  University of St. Gallen, Switzerland
            Research Associate, Institute for Leadership and HR Management
2005-2006  Dr. Ing. h.c. Porsche AG, Germany
            Intern, Department for Strategic Marketing Planning
2004-2007  University of Konstanz, Germany
            Student Assistant and Teaching Assistant, Department of Politics and Management
2004      Stadtwerke Konstanz GmbH, Germany
            Student Consultant, HR Department
2003-2004  Bosch Packaging Technology, Germany
            Intern, Marketing Department
1999-2000  German Red Cross Stuttgart, Germany
            Emergency Paramedic (Community Service)