Authentic Leadership Climate

Impacts, Antecedents and Boundary Conditions

Dissertation of the University of St. Gallen, School of Management, Economics, Law, Social Sciences and International Affairs to obtain the title of Doctor of Philosophy in Management

submitted by

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St. Gallen, October 4, 2015

Sławomir Jan Skwarek
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AL</td>
<td>Authentic Leadership</td>
</tr>
<tr>
<td>ALQ</td>
<td>Authentic Leadership Questionnaire</td>
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<tr>
<td>AT</td>
<td>Acceleration Trap</td>
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<tr>
<td>$\beta$</td>
<td>beta (standardized regression/path coefficient)</td>
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<tr>
<td>BC</td>
<td>bias corrected</td>
</tr>
<tr>
<td>CEO</td>
<td>chief executive officer</td>
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<tr>
<td>CFA</td>
<td>confirmatory factor analysis</td>
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<td>CFI</td>
<td>comparative fit index</td>
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<tr>
<td>CI</td>
<td>confidence interval</td>
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<tr>
<td>CR</td>
<td>contingent reward</td>
</tr>
<tr>
<td>$\Delta$</td>
<td>delta (difference)</td>
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<tr>
<td>df</td>
<td>degrees of freedom</td>
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<tr>
<td>Ed./Eds.</td>
<td>editor/editors</td>
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<tr>
<td>e.g.</td>
<td>example gratia/for example</td>
</tr>
<tr>
<td>et al.</td>
<td>et alii</td>
</tr>
<tr>
<td>e.V.</td>
<td>eingetragener Verein</td>
</tr>
<tr>
<td>F</td>
<td>f-test value</td>
</tr>
<tr>
<td>GLI</td>
<td>Gallup Leadership Institute</td>
</tr>
<tr>
<td>$H$</td>
<td>Hypothesis</td>
</tr>
<tr>
<td>HR</td>
<td>human resources</td>
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<tr>
<td>i.e.</td>
<td>id est/that is</td>
</tr>
<tr>
<td>ICC</td>
<td>intraclass correlation coefficient</td>
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<tr>
<td>M</td>
<td>mean</td>
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<tr>
<td>OCB</td>
<td>organizational citizenship behaviour</td>
</tr>
<tr>
<td>Org.</td>
<td>organizational</td>
</tr>
<tr>
<td>$p$</td>
<td>level of significance</td>
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<tr>
<td>p.</td>
<td>page</td>
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<tr>
<td>POB</td>
<td>positive organizational behaviours</td>
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<td>POE</td>
<td>productive organizational energy</td>
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<tr>
<td>PsyCap</td>
<td>psychological capital</td>
</tr>
<tr>
<td>$R^2$</td>
<td>squared multiple relation coefficient</td>
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</table>
R&D    research and development
RBV    Ressource-Based View
R_{wg} index of interrater agreement
SE     standard error
SD     standard deviation
SCA    sustained competitive advantage
SRMR   standardized root mean square
TFL    transformational Leadership
TLI    Tucker-Lewis index
TMT    top management team
VIF    variance inflation factors
\chi^2 chi square value
Executive summary

Many different leadership theories as well as leadership styles have been developed, studied and modified in the past decades. Some of them seemed to be very promising while some of them failed, some matured, and others have been more or less successful to this date.

However, from reading, listening, and/or watching news, it seems that leadership and integrity is a relevant topic, especially in a dynamic fast moving global interdependent business world. Thus, it is no coincidence that the authentic leadership topic and theory entered the hall of leadership research. As authentic leadership is not even two decades old, crucial gaps in research and practice exist, e.g., at the organizational level. With the assumption that authentic leadership might also be an organizational level construct and might also offer companies a sustainable competitive advantage, studying authentic leadership at the organizational level appears to be meaningful, and it should have studied as such already a long time ago.

Consequently, this dissertation comprises three quantitative empirical studies conducted in the research area of authentic leadership at the organizational level. This doctoral thesis investigated the effects and potential antecedents of authentic leadership climate by contrasting it to transactional and transformational leadership climate. Study 1 demonstrated that authentic leadership climate has the strongest effect on organizational performance compared to transactional and transformational leadership climate. Study 2 investigated the mediating effects of productive organizational energy on the relationship between authentic leadership climate and organizational innovativeness. The results showed that positive effects of productive organizational energy on organizational innovation mediated and reinforced the positive relation between authentic leadership climate and organizational innovativeness. Study 3 discusses enablers and boundary conditions regarding the establishment of authentic leadership climate. The thesis ends with conclusions and future directions.
All investigations and findings within this thesis underlined the importance of authentic leadership climate by showing strong significant positive effects on several performance indicators. Hence, on the one hand, the results add to the expansion of the nomological network of authentic leadership and provide better insights about authentic leadership climate. On the other hand, the results suggest that practitioner’s need to consider the potential of authentic leadership climate to improve company outcomes. The findings have implications for practitioners on how to master a turbulent and dynamic environment as well on what has to be done to develop and support sustainable leaders and a sustainable leadership climate within a company.
Zusammenfassung

Viele unterschiedliche Führungstheorien und Führungsstile entstanden in den letzten Jahrzehnten. Sie wurden entwickelt, studiert und verbessert. Einige von ihnen schienen vielversprechend, einige sind gescheitert, andere gewachsen und wiederum andere sind bis heute mehr oder weniger erfolgreich.


Über alle Studien hinweg, demonstrieren die Ergebnisse sehr signifikante Effekte auf verschiedene Leistungsindikatoren und unterstreichen somit die Relevanz von authentischem Führungsklima. Des Weiteren tragen die Ergebnisse der Untersuchungen zur Erweiterung des nomologischen Netzwerkes bei und erlauben somit bessere Einblicke in das Konstrukt authentisches Führungsklima. Gleichzeitig bieten sie Managern und Führungskräften aus der Praxis potentielle Wege, um die Leistungen der Unternehmen, für welche sie arbeiten, zu steigern. Die Ergebnisse und Implikationen offerieren Ratschläge, wie Führungskräfte ein wettbewerbsorientiertes, turbulentes und dynamisches Umfeld meistern als auch was getan werden muss, um nachhaltige Führungskräfte und ein nachhaltiges Führungsklima innerhalb eines Unternehmens zu entwickeln, zu fördern und beizubehalten.
1 Introduction

The news is full of tremendous examples of leadership in small, midsize and big companies as well as institutions, non-profit, or non-governmental organisations and even in countries that could have been more successful as well as sustainable and avoid failure or disaster. When considering for example Europe’s biggest airport project in Berlin, one could say that after the ground-breaking ceremony in 2006, almost everything what could have gone wrong with this project went wrong. The officially called Berlin-Brandenburg International Airport should have started to operate in 2011. From 2010 till the end of 2014, the opening of the airport was postponed at least once a year. Even now it is not certain whether all involved responsible parties will be able to meet the opening date of the airport in 2017 (Bomboesch, 2015). One impressive consequence is the cost. Since the start of the construction until 2016, the costs have almost tripled from about € 2 billion to over € 5.5 billion. Moreover, Rainer Genilke (member of the parliament) informed the “Berliner Zeitung” (Berliner Newspaper) about further cost increase due to the “Imtech” insolvency. The additional cost increase is just based on the fact that the time of the existing construction area will be again prolonged. He explained that the management does not have the heart to share this fact with the community. Above all, it gets even more bizarre by taking a closer look on the “Imtech” case. The company’s homepage informs the reader about its core values and philosophy¹. A careful reader is informed that “Imtech” values their customers and employees, and it acts responsible and safely. Furthermore, all “Imtech” employees treat their environment with respect but most notably conduct their business with integrity while being accountable for fair and honest behaviour towards all of their stakeholders and acting with highest ethical standards.

¹ www.imtech.de/en/about-us
Introduction

Besides “Imtech’s” insolvency, the news report that several Public Prosecutor’s Departments are investigating “Imtech” and its former managers in the following crimes (Fuchs, Lebert & Müller, 2015):

- Corruption
- Price arrangements
- Betrayal of confidence
- Falsification of balance sheets

How does this fit together with the information on their homepage?

As we can see, circumstances are not always as they seem to be. However, living in the 21st century neither a principal nor an agent should be mistrustful in the face of his or her business partner all day long. One should be able to focus on tasks, businesses, and challenges. Considering challenges and the example given above, it seems that leadership is a big challenge for some managers and/or companies. On the other hand, one could expect such obstacles in a big and long-running project, like the Berlin-Brandenburg International Airport. However, the lack of transparency and information flow does not seem to depend on the size of a company or institution.

For that reason, I like to state another example. A small non-governmental organization in the classic music business located in Switzerland grew for over 30 years successfully until a fundamental change occurred in the managing committee in April 2014. In March 2015, after less than one year, this organisation, having only 12 members, had to face bankruptcy.² Facing this problem, all involved parties suddenly noticed inconsistencies, suboptimal processes, unfavourable communication channels, as well as insufficient conflict management, like blaming and antagonising one another. Moreover nobody believed in the integrity of anyone anymore. Thinking about this unflattering development, one could either assume that the involved parties did not recognize the situation and subsequently did not want to face the reality or all of them lacked leadership and communication skills as well as courage. It is also possible, that all described explanations could have played a role at the same time which would not have decreased the negative consequence. Simultaneously, all members of the managing committee showed inimitable avoidance behaviour. Again, it is difficult to believe that nobody was aware of or could have anticipated any of these issues.

² No sources nor names will be quoted for the purpose of anonymity.
A third example concerns the development of the financial crisis in Greece. News casts frequently reported about the non-existent trust, transparency and integrity as the crucial cause of why creditors have not been willing to reconsider long lasting options as possible solutions. If we take a closer look at the actual happenings, the situation does not seem to follow a favourable trend. As we were informed by the news, Alexis Tsipras won the parliamentary elections in January 2015 (“Wahl in Griechenland: Syriza büßt bei Umfragen empfindlich ein”, 2015). He went through challenging and energysapping negotiations with all involved money lenders, like the EU countries and the International Monetary Fund (IMF), during the last months. Furthermore, he replaced his minister of finance Yanis Varoufakis with Euklid Tsakalatos in July 2015 (Galitsatos, 2015). A few weeks later, all parties involved could agree on a new saving plan, i.e., bailout package. Even the Greek parliament agreed on this belt-tightening on August 15. The next unexpected incident that occurred not even one week later was the cancellation of this agreement by Alexis Tsipras, the same man who said that the actual bailout package is the best result that could have happened for Greece and the Greek debt crisis. The same man who demonstrated himself again gladiatorial face to face with the lenders for the parliamentary election on September 20th (“Syriza kündigt vor Griechen-Wahl Härte gegenüber Geldgebern an”, 2015) - gladiatorial by announcing the willingness to engage in critical discussions on all open questions of the already pitched saving plan. How could anyone trust someone else if one experiences such seesaw changes? How could anyone be willing to find a common sustainable denominator in such situations?

One could continue with further examples like the perky on-goings within the ADAC (Allgemeiner Deutscher Automobil-Club) in 2014. In addition to the disclosure of manipulated and falsified tests and rankings regarding cars or the performance of tires, the company’s miss-management contributed to the disappearance of its members. More than 300,000 paying members switched to other automobile associations (“ADAC verliert durch Skandalserie 320.000 Mitglieder”, 2014). This corresponds to a loss of more than 14.7 million Euros in membership fees, assuming every former member committed to the ordinary insurance policy. These depictions give the impression that a list of questionable management methods has no end.

In response to the abovementioned examples, several leaders of top and middle management teams of both small and midsize companies and consultancies, listed leadership, management, and integrity as serious issues and crucial causes of the suboptimal activities, performance, and achievements. Therefore, this dissertation tries
to answer crucial questions, like “What is the foundation of management?”; “What is a good and characterful leadership?”; “What kind of effects does a good and characterful leadership culture have?”; “What kind of processes foster those kind of effects?”; and “What kind of settings, e.g., preconditions, business structures and requirements, enhance or increase the probability of an incomparable positive peerless leadership?”.

Being less dramatic, it is not surprising that people in key leadership positions, such as former Medtronic CEO Bill George (2003) or the leadership consultant Kevin Cashman (1998, 2008), called for a new type of fair-minded, proper and value-based management style of leadership. Following these calls, the concept of authentic leadership (AL) stimulated leadership research as well as practice business literature. AL is defined by the four constructs of self-awareness, heightened moral perspective, high levels of transparency, and balanced information processing which should result in fair and sustainable decision-making (Avolio & Luthans, 2006; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). Furthermore, AL is based on authentic leaders as well as on followers who follow the leaders for authentic reasons (Shamir & Eilam, 2005). Crucial characteristics of authentic leaders are self-concept, self-concept clarity, self-concordance, and a behaviour consistent with their self-concept. A stable self-concept based on strong convictions and strongly held values is beneficial for organizations especially in highly challenging positions, uncertain times and dire straits (Shamir & Eilam, 2005). Theory and empirical studies have illustrated that in addition to the transformational leadership (TFL), AL is also positively associated with follower outcomes and performance (e.g. Gardner, Avolio, Luthans, May & Walumbwa, 2005; Shamir & Eilam, 2005; Walumbwa et al., 2008).

This dissertation aims to provide some answers to the questions stated before by investigating the effects and reinforcing working mechanisms of authentic leadership on outcomes (“What kind of effects does a good and characterful leadership culture have?”) and “What kind of processes foster those kind of effects?”) as well as by examining factors that determine and boost the development of authentic leadership at the organizational level (“What kind of settings, e.g., preconditions, business structures and requirements, enhance or increase the probability for a beyond comparison peerless leadership?”). Therefore, I specified the practical and theoretical relevance as well as the contribution of the current thesis. I descriptively summarized the authentic leadership literature as a second step. Subsequently, based on theoretical considerations regarding AL and the relations to other constructs, I conducted three investigations, which provide
valuable insights for future research and companies. This thesis concludes with the discussion of potential limitations and ideas for prospective research.

1.1 Practical relevance and contribution

Notwithstanding the fact that a considerable number of managers have already begun to pay attention to authentic leadership, too few companies, organizations as well as middle and top managers implement authentic leadership characteristics consciously. This is not surprising when one considers the evolvement of the first critical steps regarding authentic leadership research at the beginning of the new century (Luthans & Avolio, 2003). Hence, it is also not astonishing that for most professionals, authentic leadership, its properties and its sustainable benefits have to appear more comprehensible and definite to be integrated into day-to-day management (e.g. Avolio & Walumbwa, 2014). Consequently, this doctoral thesis strives to help practitioners understand the effects of authentic leadership by making it more tangible and apparent. In particular, all readers are provided with five hands-on explanations and arguments that describe the relevance of this doctoral thesis.

First, authentic leadership is relevant for practitioners because authentic leaders serve as role models to their followers. Through virtuous acts, followers get to know quickly what might be important and what not (Shamir & Elam, 2005). This leads to a more focused starting point to fulfil tasks.

Second, authentic leaders behave with integrity, which leads to more trustful and honest relationships between them and their employees. This additionally decreases the likelihood to produce blind followership. Followers will be encouraged to provide their leaders and colleagues with reasonable feedback and constructive criticism.

Third, authentic leaders have more stable self-concepts and a better sense of self-knowledge (Bennis, 2003; Luthans & Avolio, 2003), which provides such leaders with a critically important source for predicting future events and guiding social interactions (Swann & Schroeder, 1995; Swann, Rentfrow, & Quinn, 2003). Their clear and specific self-concepts and stable sense of self-knowledge allow them to save time by not seeking acknowledgement or trying to increase their degree of esteem. Rather, authentic leaders focus more on task and business relevant information or information regarding the leader-employee relationships. This might make the importance and significance of AL
for practitioners even more obvious as well as explain why authentic leaders can achieve more compared to other leaders (Chan, Hannah & Gardner, 2005; Shamir & Eilam, 2005).

Fourth, besides the benefits of bringing the concept of authentic leadership closer to the business world and making it understandable for practitioners, the existing theories and research have provided first evidence that “developing one’s level of authentic leadership, all other positive forms of leadership impact would be enhanced” (Avolio & Walumbwa, 2014; p. 352). In this regard, authentic leadership seems to be a foundation from which it is possible to develop and generate multiple desirable outcomes; thus, it is a construct with multiplier potential (Chan et al., 2005) on more than a few individual, team and organizational level outcomes.

In this case and as the fifth hands-on explanations, this work does not only demonstrate the effects of authentic leaders, but also allows practitioners to understand how the positive effects multiply when a company scores high on the authentic leadership climate scale. A high score indicates that most if not all leaders in such a company might be defined as authentic leaders. Each company with a high score on authentic leadership climate can achieve even more than individual authentic leaders or inauthentic organizations. These five different practical applications should advise practitioners to expand and enhance the use and practice of AL in organizations.

In summary, by discovering the effects of authentic leadership and the processes that foster the positive effects of authentic leadership climate as well as the processes that lead to authentic leadership and authentic leadership climate, organizations might be able to tackle their daily and future challenges. Thus, the understanding of the complex system of authentic leadership behaviour throughout organizations provides managers with solutions for coordination and prediction in a world of constant change and increasing complexity. Furthermore, the results of this thesis shall not only enable managers to reflect on their development profile as well as increase their development potentials, but also assist the intra-company human resource development with a state of the art picture of leadership based on the individual requirements of leaders from middle management to top management to C-level leaders.

Overall, this work intends to contribute to the establishment and enhancement of leadership effectiveness in the business world. To support this claim, I approached authentic leadership as an organizational-level construct, which may provide a foundation for managerial processes through an entire company.
1.2 Theoretical relevance and contribution

Even though researchers have begun to empirically establish a nomological network around authentic leadership (e.g. Walumbwa et al., 2008), Gardner, Cogliser, Davis, and Dickens (2010) demonstrated that theory development and research are in the first or the beginning of the second stage of the three-stage model (Reichers & Schnerder, 1990) depicting the evolution of constructs. First empirical results regarding authentic leadership outcomes were found at individual or team level. To the best knowledge of the author, no empirical study has focused on the organizational level or compared the effects of AL and other leadership styles, like TFL so far.

The fact that the AL construct is moving into the second stage of the three-stage model (Reichers & Schnerder, 1990) of the evolution of constructs is an indication of systematic investigations regarding the processes that foster the effects of authentic leadership on outcomes. Walumbwa, Wang, Wang, and Schaubroeck (2010) showed that follower empowerment strengthened the relationship between AL and OCB at individual level. Furthermore, Clapp-Smith, Vogelgesang, and Avey (2009) provided evidence for the mediating role of trust in leadership in the relationship between AL and firm financial performance. However, working mechanisms underlying the link between AL and outcome variables are still unknown. Thus, it is not surprising that researchers like Avolio (2010) or Gardner et al. (2011) called for more research on components that are most essential in specific situations and relationships. In this context, it seems to be beneficial to find moderators or other mediators that would explain the variance between AL and different outcome variables or the differences in AL scores at organizational level between companies.

Following the assumptions that AL scores differ across companies, it would to explore factors on which AL scores are based. In this regard, only Jensen and Luthans (2006) examined one antecedent, namely psychological capital, of AL. No empirically proven knowledge exist about other antecedents of the AL construct. Presumably, organizational structure may affect authentic leadership climate as its affects transformational leadership climate (Walter & Bruch 2008). In addition, focusing on the quality of top management team (TMT) processes, e.g., TMT behavioural integration in this context (Hambrick, 1994; Simsek, Veiga, Lubatkin & Dino, 2005), and their organizational consequences, it seems to be promising to theorize and investigate potential relations at the organizational level.

Furthermore, thinking about the life-story approach proposed by Shamir and Eilam (2005) who stated that self-knowledge, self-concept clarity, and person-role merger are
derived from a person's life-story, it seems likely that more experienced leader tend to be more authentic. Hence, such leader should be able to show a higher degree of AL. This leads to the assumption that older leaders with richer life-stories are on average more likely to show authentic leadership behaviour compared to young leaders.

This thesis intends to take a first step to address the abovementioned gaps while focusing on three research questions. First, “Does authentic leadership go beyond and above transactional and transformational leadership?” Finding answer to this question at the organizational level of analysis, would allow us to compare the effects of the three leadership styles on several outcomes and lead to the validation or falsification of authentic leadership as an organizational level construct. Second, “Which processes increase or foster the effects of authentic leadership climate on organizational outcomes?” Systematic investigations would allow us to find possible mediators. One aim is to investigate whether productive organizational energy (Bruch & Ghoshal, 2003; Cole, Bruch, & Vogel, 2005; Walter & Bruch, 2010) might be a possible mediator of the relationship between authentic leadership climate and organizational outcomes. Productive organizational energy, which is defined as a collective’s joint experience of positive affective arousal, cognitive activation, and behavioural efforts to achieve common goals (e.g., Bruch & Ghoshal, 2003), might play an important role in this constellation because of its collective nature. Lastly, “What kind of antecedents enhance an above average degree of authentic leadership climate”. Theoretical and empirical answers to this research question would allow us to know more about the roots of authentic leadership and authentic leadership climate. An additional aim is to find possible ways of accelerating the development of an above-average authentic leadership climate degree and identify potential limitations. This would lead to a deeper understanding of pathways that underlie the development of authentic leadership cultures within companies.

In sum, I like to demonstrate a) the importance and crucial relevance of authentic leadership at the organizational level by exploring its relationships with organizational outcomes, b) the existence of further possible mediators (e.g., productive organizational energy), which also extends the nomological network around authentic leadership and c) potential pathways and limitations that affect the progression to a higher level of authentic leadership climate.
1.3 Literature Review

This section starts with a definition of the authenticity construct. Afterwards, I summarize the characterization of authentic leadership. The section ends with descriptions of the existing authentic leadership nomological network. The primary goal of this brief literature review is to provide a tangible overview of the existing research on an important construct knowledge regarding AL. This review does not claim to include all published and unpublished work on AL theory.

The word authenticity can be traced back to the Greek word authento. A proper translation is "to have the full power" (Trilling, 1972), whereby an individual is "the master of his or her own domain" (Kernis & Goldman, 2006) which reflects the notion of authentic functioning. One of the first references to authentic functioning reflects Socrates' focus on self-inquiry, as he stated the argument that an “unexamined” life is not worth living. Aristotle added an ethical view and enhanced the meaning of authenticity with one's pursuit of the “higher good” (Gardner et al., 2011; p.1121). This "higher good" could be achieved through self-realization when processes of the soul are aligned with virtue to produce a complete life (Hutchinson, 1995).

In the past years authenticity was described as owning one's personal experiences, including one's emotions, thoughts, needs, desires and beliefs (Harter, 2002). Consequently, it involves being self-aware and behaving in line with one's true self by demonstrating what one really thinks, feels and beliefs (Luthans & Avolio, 2003). Authenticity should not be considered as an attitude (Erickson, 1995), since individuals or groups are never completely authentic or inauthentic. Hence, it more realistic to describe individuals and teams as being more or less authentic.

The existing conception of the authenticity construct developed only in the past decades (Erickson, 1995). Kernis and Goldman (2006) concluded in their historical literature review that authenticity can be described as a range of mental and behavioural processes that explain how individuals discover and build a core sense of self as well as how this core is maintained across situations and over time. Furthermore, Kernis and Goldman (2006) emphasized that this literature reflects four central themes: “authentic functioning of people's (1) self-understanding, (2) openness to objectively recognize their ontological realities (e.g., evaluating their desirable and undesirable self-aspects), (3) actions, and (4) orientation towards interpersonal relationships” (p. 284). These four central themes are in line with their conceptualization of authenticity, as it encompasses the following four key components: (1) awareness (i.e., understanding and trusting one’s
thoughts, feelings, motives and values); (2) unbiased processing (i.e., neutrality about and acceptance of one's positive and negative characteristics and attitudes); (3) behaviour (i.e., acting and performing regarding to one's true thoughts, feelings, preferences, motives, values, and needs rather than merely acting, secure rewards, avoid punishments, or to please others); and (4) relational orientation (i.e., achieving and valuing truthfulness and openness in one's close relationships; Kernis, 2003; Kernis & Goldman, 2006). This multi-component conceptualization provides the framework for several AL theories (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Ilies, Morgeson, & Nahrgang, 2005; Spitzmuller & Ilies, 2010; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). The next section will concentrate on central aspects of the several AL theories.

To identify the central aspects of several AL theories, I will quote three of the most cited definitions. Begley stated that "Authentic leadership may be thought of as a metaphor for professionally effective, ethically sound, and consciously reflective practices in educational administration. This leadership is knowledge based, values informed, and skillfully executed.” (2001, p.353). Luthans and Avolio extended the prior definition by adding the importance of the organizational context and a deeper description of behaviour in an authentic leadership context: “We define authentic leadership in organizations as a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviours on the part of leaders and associates, fostering positive self-development. The authentic leader is confident, hopeful, optimistic, resilient, transparent, moral/ethical future-oriented, and gives priority to developing associates into leaders themselves. The authentic leader does not try to coerce or even rationally persuade associates, but rather the leader's authentic values, beliefs, and behaviours serve to model the development of associates.” (2003, p.243). In line with the definition of Luthans and Avolio (2003), Walumbwa et al. (2008, p.94) defined AL as “… a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development.”. Both definitions stress the potential effects of AL and the potential of AL on the development of one's self, peers, as well as followers.

Luthans and Avolio’s (2003) definition of AL included aspects of TFL and positive organizational behaviour (POB), including being optimistic, future oriented or hopeful
As a result, early concerns were raised about the discriminant validity (Cooper et al. 2005) as well as the challenge to distinguish among AL, POB and TFL based on this definition. Through their research agenda, Gallup Leadership Institute (GLI) associates (e.g., Avolio, Gardner, Luthans, Walumbwa, et al., 2004) developed a more sophisticated definition of AL. The research agenda of the GLI associates led to the development of an AL model (Gardner, et al., 2005), which is grounded in Kernis and Goldman’s (2006) multi-component conception of authenticity. Walumbwa et al. (2008) defined AL based on the findings of the GLI research program. As the above definition illustrated indicates, their perspective identifies four primary aspects of AL, namely self-awareness, relational transparency, balanced processing, and an internalized moral perspective. These four aspects are congruent with Kernis and Goldman’s (2006) four components, i.e., awareness, unbiased processing, relational orientation, and behaviour/action, of the multi-component conception of authenticity. Based on this definition, Walumbwa and colleagues subsequently operationalized and validated the four-component model of AL and created the Authentic Leadership Questionnaire (ALQ). The German version of the ALQ is used to measure AL in this dissertation.

As mentioned in section 1.2, only two published studies have investigated possible antecedents of AL (Gardner et al. 2011). The first one described the significant relation between psychological capital (PsyCap) and AL. PsyCap was measured by combining the standardized scores for gained hope, optimism and resiliency values. The second one focused on the relation between self-monitoring and AL (Tate, 2008). No significant results emerged. In summary, empirical knowledge of possible antecedents of AL is lacking. To address this lack of knowledge organizational processes or structures, e.g., formalization, centralization or other possible organizational contexts, as the definition of AL of Avolio and Luthans (2003) suggests, should be investigated.

Although research on antecedents is rare, 25 significant relationships between AL and outcomes were found, whereby six relationships pertained to leader outcomes, thirteen to follower outcomes, and one to team outcome. For instance, AL leadership positively affects contingent self-esteem and psychological well-being (Toor & Ofori, 2009) as well as ethical leadership (Walumbwa et al., 2008) and TFL (Spitzmuller & Ilies, 2010; Walumbwa et al. 2008). The relationships between AL and ethical leadership as well as between AL and TFL should be seen tentative, as Chan et al. (2005) stated that AL is a leadership multiplier. Hence, these results have to be replicated and additional models that would include for instance AL as a mediator could be tested. Furthermore, AL is
for example positively related to the identification with the supervisor (Walumbwa et al., 2010), job performance, and organizational citizenship behaviours (OCB) (Walumbwa et al. 2008) and trust in leadership (Clapp-Smith et al., 2009) at the follower outcome level. It is also negatively related to burnout (Wong & Cummings, 2009), which means that the probability of follower burnout decreases with an increase in authentic leadership behaviour by the supervisor. Only one study has been conducted with AL at the team level, which supports a positive relationship between AL and firm financial performance (Clapp-Smith et al., 2009).

Latest quantitative studies also detected four mediators between AL and different outcomes. Follower empowerment mediates the relationship between AL and OCB (Walumbwa et al., 2010), identification with supervisor mediates the relationship between AL and work engagement (Walumbwa et al., 2010), personal identification mediates the relationship between AL and trust in manager (Wong et al., 2010), and trust in leadership mediates the relationship between AL and firm financial performance (Clapp-Smith et al., 2010).

In conclusion, I like to underline the perspective of Avolio and Walumbwa that the development of the construct is “… beyond the traditional and philosophical issues…” (2014, p.352). Simultaneously and as demonstrated before, I like to point out the insufficient amount of research beyond AL as an individual level construct. Therefore, I intend to focus on the organizational level aspects of AL as well as on the development of an AL culture with this thesis.
1.4 Methodical Approach

In my dissertation, I investigate authentic leadership, a construct developed relatively short time ago (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). Since authentic leadership is an individual construct and the leadership research has only begun to develop organizational level leadership constructs (e.g. Walter & Bruch; 2010) in the last few years, I expect to verify the authentic leadership construct as an organizational level construct.

It is essential for such a developmental process to prove the construct validity of the crucial constructs (Reichers & Schneider, 1990), in this case AL construct validity. To provide evidence of construct validity it is important to develop the nomological network for the used measures (Cronbach & Meehl, 1955). Such a network should include the theoretical framework that specifies the main constructs, the empirical framework that describes the operationalization of constructs of interests, and the design of the relationships between and among the constructs of interest. To illuminate the nomological network for AL, I like to focus on quantitative studies that refer to antecedents and outcomes of AL. I do not consider qualitative studies for the nomological network of AL because such studies usually adopt inductive processes that do not state a priori hypotheses or consider the strength of the identified relationships among the investigated constructs.

After providing evidence for the existence of an authentic leadership climate construct, I will relate authentic leadership climate to several organizational level outcomes, e.g., financial, customer, or employee performance, and compare its effect with the effect of other leadership climate constructs on these outcomes. Furthermore, I will consider possible mediators or moderators of authentic leadership climate. These should explain and strengthen the relationship between authentic leadership and the organizational outcomes. One possible mediator, as explained above, might be POE (Cole et al., 2005). POE attracts an increasing interest in business practice and research theory, and has been investigated more frequently in recent years (Cole et al., 2005; Kunze & Bruch, 2010; Walter & Bruch, 2010). Regarding the antecedents of authentic leadership climate, I will focus on organizational processes and structure, e.g. centralization, formalization (Jansen, Van Den Bosch, & Volberda, 2006), or organizational size, as well as on the implementation of strategies or educational programs to foster the development of authentic leadership climate, in response to the call of Avolio (2010) and Gardner et al. (2011). In addition, I will investigate quite new constructs that researchers have only
begun to explore in more depth recently, e.g., TFL climate (Sanders, Geurts, & van Riemsdijk, 2011; Walter & Bruch, 2010). Research on the authentic leadership construct is in an intermediate state of maturity. Hence, I hope to clarify some of the existing questions regarding the outcomes, processes, and antecedents in the authentic leadership literature by using quantitative methods in all three studies. All of the proposed main effects in the studies one, two, and three, were tested by computing various hierarchical regression analyses and the ordinary least square method to estimate the unknown parameters in a linear regression model. In doing so, control variables (e.g., organization size or industry) will be entered in the first step to partial out unknown parameters that could lead to overestimated significant results. To test a simple mediation, I will follow the causal steps approach introduced by Baron and Kenny (1986). Following this approach, three regression equations have to be estimated to test the mediation. First the dependent variable has to be regressed on the independent variable. Subsequently, the mediator has to be regressed on the independent variable and in the final step, the dependent variable has to be regressed on both the independent variable and the mediator. The data for study 1 was collected in 2010 by using survey methodology. The data for study 2 and 3 is based on a combination of the data that was collected in 2010 (Study 1 data set) and 2011. In total, this study will use data gathered from over 160 companies in Germany. The gathered data have been collected as a part of a larger study in cooperation with a German agency that is specialized in benchmarking small to medium-sized companies. By interpreting and summarizing the results of the three studies, I intend to develop the best practices in a clear and structured way to provide a foundation for their implementation in the business practice world.
1.5 Outline of the Dissertation

The present doctoral thesis is divided into five major chapters. The structure of this thesis is aligned with the above described sequence of questions and studies. This section summarizes the chapters to provide a better overview for the reader. In addition, Figure 1 on page 17 presents a quick overview of the investigated constructs and proposed hypotheses.

Chapter 1: Introduction

Chapter 1 addresses leadership issues, challenges, and the relevance of the current dissertation topic, including examples of various events within the business world. Central constructs are defined and relevant literature is reviewed. This chapter concludes with the presentation of the methodological approach and outline.

Chapter 2: Study 1 - Authentic Leadership: Beyond and above Transformational and Transactional Leadership

Chapter 2 aims to explore the effects of authentic leadership climate on organizational performance against effects of transactional (contingent reward) and transformational leadership climate. It presents a cross-sectional study to demonstrate the first results regarding the authentic leadership construct as an organizational-level variable. The validity of all used measurements as organizational level constructs has been confirmed. The data and results were based on a sample of 79 companies. Regression-analyses were used to analyse the proposed hypothesis. Contributions and potential limitations are discussed in the final section.

Chapter 3: Study 2- Authentic Leadership Climate: Explaining its Effects on Innovation through Productive Organizational Energy

Chapter 3 elaborates on the relation between authentic leadership climate and organizational innovation. The working mechanisms underlying this relation are explained by means of the capabilities of productive organizational energy, which is investigated as a mediator. Overall, 161 companies provided data for the analyses. The results rely on regressions analyses, a bootstrapping approach, and a Sobel-Test. All relevant findings will be presented and discussed followed by a description of contributions and potential limitations.
Chapter 4: Study 3 - Authentic Leadership Climate: Beefing up TMT Behavioural Integration and Dodging Acceleration Traps

Study 3 is presented in Chapter 4 of this thesis. The essential substance is the establishment of authentic leadership climate. Acceleration trap (AT) is considered as one of the biggest obstacles with regard to such an establishment, whereas top management team behavioural integration is believed to have an opposite influence on developing authentic leadership climate within companies. The data was gathered from 161 companies. The analyses are based on a moderation model. The final section explains the findings, possible limitations, and contributions.

Chapter 5: Overall Discussion and Conclusion

Chapter 5 summarizes and integrates the results as well as the limitations of the current thesis through an overall discussion and presents the most important conclusions to the reader. In a nutshell, the compiled findings from study 1 to 3, all results are underlining once again the significance of authentic leadership climate. This chapter closes with the author’s concluding remarks.
Figure 1. Overview of all postulated relations within this thesis

Note. All leadership constructs are approached on the organizational level. Therefore, figure presents transactional, transformational and authentic leadership climate constructs.

Note. Study 2 includes the hypothesis that assumes productive organizational energy as mediator which intercedes the impact of AL climate on Organizational Innovation.

Note. Study 3 includes the hypothesis that AT moderates negatively the relation between TMT behavioural integration and AL climate.
2 Study 1 – Authentic Leadership: Beyond and above Transformational and Transactional Leadership

2.1 Abstract

Recent research on authentic leadership has assumed that this leadership style goes above and beyond other leadership styles such as contingent reward and transformational leadership. Even though some scholars have shown the added value of transformational leadership and that it goes beyond transactional leadership, it is not clear if authentic leadership goes beyond contingent reward or transformational leadership or vice versa. Therefore, I investigated empirically the relationships of contingent reward, transformational and authentic leadership climate on organizational performance as an organizational level outcome. Hypotheses were tested using a sample of 79 small and medium-sized companies.

Results show that transformational leadership climate goes beyond and above contingent reward climate and that authentic leadership climate goes above and beyond transformational leadership regarding organizational performance. In summary, this study underpins the discussed potential of authentic leadership in the leadership literature.

Keywords: transactional leadership climate, transformational leadership climate, authentic leadership climate, organizational performance

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6 An earlier version of this paper has been presented at the Academy of Management Annual Meeting 2012.
2.2 Introduction, and Intended Contribution

The last decade shows an increasing interest and meaning of AL in leadership research as well as in practice business literature. AL leadership is defined by the four constructs of self-awareness, heightened moral perspective, high levels of transparency, and balanced and fair decision-making (Avolio & Luthans, 2006; Walumbwa et al., 2008). Furthermore, AL is based on authentic leaders as well as on followers who follow the leaders for authentic reasons (Shamir & Eilam, 2005). Crucial characteristics of authentic leaders are self-concept, self-concept clarity, self-concordant and a consistent behaviour with their self-concept. Self-concept clarity, including strong convictions and strongly held values, is beneficial for organizations especially in highly challenging positions, uncertain times and dire straits (Shamir & Eilam, 2005). Theory and empirical studies have illustrated that in addition to TFL, AL is also positively associated to follower outcomes and performance (e.g. Gardner, Avolio, Luthans, May & Walumbwa, 2005; Shamir & Eilam, 2005; Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008).

Although recent research has investigated the augmentation effect of transformational and transactional leadership (Wang, Oh, Courtright & Colbert, 2011), we do not know anything about a possible augmentation effect of AL or the impact of the coexisting effects of different kinds of leadership like contingent reward (CR), transformational and authentic leadership. Wang et al. (2011) showed that TFL had an augmentation effect on leadership in predicting individual-level contextual performance and team-level performance as well as transactional leadership explained unique variance in individual task-performance beyond that explained by transformational leadership. The augmentation effect and the explained unique variances of different leadership styles are caused by the underlying discriminative motivational mechanisms of each leadership construct. This has also been stated for AL. Walumbwa, Wang, Wang, Schaubroeck, and Avolio (2010) for example view AL as complementing other positive leadership styles by establishing a more transparent environment, where followers have a clear idea of the existing moral and ethical standards of their supervisors, where there is a higher likelihood to trust the leader making the most equitable decisions, and where followers can reckon that the leader will be aware of how she or he impacts on others in the team, unit, or company. Due to the different motivational mechanisms of the three different leadership constructs it seems to be obvious that contingent reward, transformational
and authentic leadership climate do explain unique variance regarding different outcomes.

The recent leadership research literature discussed AL as a higher level construct in terms of organizational values and managerial philosophy (Yammarino, Dionne, Schriesheim & Dansereau, 2007). The result would be an "authentic organization" with a common denominator of values and goals based on authentic unit leaders and/or authentic departments and an authentic CEO. In addition, Walumbwa, Christensen, and Hailey (2011) state that AL exists on every level of an organization. Hence, the authentic leadership, transformational leadership and contingent reward constructs are located at the organizational level of analysis in this study, as organizational-level climate variable (cf. Chen & Bliese, 2002; Ostroff & Bowen, 2000). Leadership constructs as organizational-level climate variables can be seen as the degree to which leaders throughout the organization direct the specific leadership behaviours toward their followers (Walter & Bruch, 2010).

In this context, I investigated AL climate, TFL climate (Walter & Bruch, 2010), and CR leadership climate as organizational level variables. I linked the investigated leadership constructs to the Resource-Based View (RBV) of a firm (Barney, 1991; 2001) by viewing them as resources of a company and arguing that the combination of AL, TFL and CR climate favours the positive influence of company outcomes. Moreover, I suggest that if a company owns an above average level of AL climate, TFL climate or CR leadership climate, it does have a sustained competitive advantage (SCA). Subsequently, this study makes four distinct contributions to the extent literature on AL, TFL and CR.

Firstly, this study follows the call of Ilies, Morgeson, and Nahrgang (2005) and Walumbwa et al. (2008) that one "may consider theoretically integrating authentic leadership with other related leadership literatures such as transformational leadership…". Thus, I investigated the supplementary effects of CR, TFL and AL climate as the leadership literature does suggest (e.g. Avolio & Gardner, 2005).

Secondly, by specifying and testing AL, TFL, and CR climate as organizational level climate variables, I came toward researchers' calls for more empirical investigations of leadership constructs on the organizational level (cf. Yammarino, Dionne, Schriesheim & Dansereau, 2007; Ostroff & Bowen, 2000).

Thirdly, I explored the potential impact and strength of each investigated leadership style as well as discussed over and above effects of AL climate across CR leadership.
climate and TFL climate by looking at one essential outcome variable: organizational performance.

Lastly, I showed with structural equation modeling that the German version of the ALQ (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008) has high reliability and predictive validity for important outputs.

In summary, this study investigates AL, CR and TFL on the organizational level climate as predictors for organizational performance (see figure 2, p. 26). Thus, it extends previous theorizing and puts such theory to an empirical test including the control of structural impacts. Hypotheses are tested in a sample of 79 independent organizations, supplementing earlier, lower-level work.
2.3 Theoretical Background and Hypotheses Development

More than two decades ago Avolio and Gibson (1988) and others (e.g., Bass & Steidlmeier, 1999; Howell & Avolio, 1992) recognized a crucial limitation of the transformational and charismatic leadership constructs and applied the authenticity concept to the leadership literature for the first time. They observed that a number of leaders misused transformational or charismatic leadership behaviours to influence followers in order to gain self-serving interests. Afterwards they sub-divided the class of transformational or charismatic leaders either into an authentic or pseudo transformational class. The last ones lacked authenticity and tended to manipulate with their leadership behaviour the followers for their own benefits. This was the beginning of the development of the AL construct. Authentic leaders show four styles of behaviours (e.g. Gardner et al., 2005; Ilies et al, 2005; Walumbwa et al., 2008), namely balanced processing, rational transparency, internalized moral perspectives, and self-awareness. Balanced processing is described as objectively taking all relevant information into account before making a decision. Rational transparency is described as openly sharing information and articulating true thoughts and feelings. Internalized moral perspective involves leader behaviour which is based on strong moral standards and values and excludes leader behaviours which might be forced through peers, organizational, and societal pressures (Gardner et al., 2005). Last but not least, self-awareness characterizes leaders as understanding their own motives, beliefs, desires, strengths and weaknesses as well as being aware of how their environment, e.g., followers, peers, supervisors, experiences their leadership. Hence, self-awareness includes self-knowledge and a reflected self-image (Walumbwa et al., 2010). Shamir and Eilam (2005) argued that authentic leaders are more effective than inauthentic leaders. One reason for that is that leaders are in an extremely challenging role, which requires an above-average amount of energy, determination and persistence. Leaders are confronted with organizational changes and resistance. They have to deal with frustration and setbacks. Sometimes they have to make personal sacrifices to secure support and energize their followers or peers. Managing with such challenges requires a source of inner strength. Thus leaders need to act from strong convictions and a high level of self-concept clarity (Shamir & Eilam, 2005). This is equivalent with the statement of Swann (1990, pp. 414-415) that “stable self-conceptions act like the rudder of a ship, bolstering people's confidence in their ability to navigate through the sometimes murky seas of everyday life”. Through the leaders' high self-clarity and strong believes no resources are wasted to havering. Leaders do not need to think of
tricky strategies, think about what they said to whom to reach their or the company's goals. They are able to use all their available resources and skills to achieve higher company goals like sustainability or follower development (Avolio & Gardner, 2005).

A summary of the empirical AL research shows that AL is positively related to several outcomes. Concerning outcomes on the leadership level, AL is for example positively associated to ethical leadership (Walumbwa et al., 2008), perceptions of leadership (Tate, 2008), contingent self-esteem (Toor & Ofori, 2009), transformational leadership (Spitzmuller & Ilies, 2010; Walumbwa et al., 2008). With reference to the employee level, AL does enhance job satisfaction (Jensen & Luthans, 2006), organizational commitment (Jensen & Luthans, 2006; Walumbwa et al., 2008), work happiness (Jensen & Luthans, 2006), job performance (Walumbwa et al., 2008), organizational citizenship behaviour and satisfaction with supervisor (Walumbwa et al., 2008), empowerment as well as identification (Walumbwa et al., 2010; Wong et al., 2010). Furthermore, AL is negatively correlated with burnout (Wong & Cummings, 2009). Clap-Smith, Vogelgesang, and Avey (2009) aggregated AL to the group level and showed that AL benefits firm financial performance mediated by trust in management. As far as we know, there is no study available on the organizational level.

Bass (1985) formulated four dimensions of transformational leadership. These are charisma or idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Podsakoff, MacKenzie, and Boomer (1996) developed a transformational leadership scale with six dimensions, namely articulating a vision, providing an appropriate model, fostering acceptance of group goals, high performance expectations, individualized support, and intellectual stimulation. Theory and empirical research has already shown ample evidence for the positive relationship between transformational leadership and performance outcomes (e.g., Bass 1985; Bass & Avolio, 1993; Judge & Piccolo, 2004; van Knippenberg & van Knippenberg, 2005; Podsakoff et al., 1990). Amongst others, reasons for that are motivating power, providing a vision, or setting high and clear goals. As stated for example by Bass (1985) or Howell and Avolio (1993) and shown by Judge and Piccolo (2004) transformational leadership appears to produce higher performance on the individual level as well as on the group and organizational or business unit levels. Having said this, transformational leaders at the top of a company may serve as role models for followers, leaders at lower levels (cascading down effect) or even peers and encourage positive behaviour throughout the whole company (Waldman & Yammarino, 2005). They are also able to facilitate higher levels of organizational performance by increasing team cohesion, motivation, and goal
congruence within the top management (Colbert, Kristof-Brown, Bradley, & Barrick, 2008) and within a team or business unit.

Transactional leadership is captured with three dimensions (e.g., Bass, 1997). The three dimensions are contingent reward, management by exception active and management by exception passive. Leaders who behave transactional, in particular those using contingent reward behaviours, unmistakably specify performance expectations and afford rewards if the expectations are met. Contingent reward was also positively associated to performance criteria (Judge & Piccolo, 2004). Due to this, outcomes should be higher if followers work with transactional leaders because of the motivational aspects of clear goals (Locke & Latham, 1990).

By viewing the different mechanisms of the above described leadership styles and their complementing potential, each leadership style should have a positive influence and added value on outcomes like organizational performance.

AL leads to motivational effects and might have beneficial impacts on different kind of organizational outcomes through several working mechanisms. On the one hand leaders who score high on AL behaviour, should have high levels of self- and other-awareness which allows them to approach more information about them self. The more information about the self is available or rather self-conscious the merrier a leader will be able to be adaptive (Chan, Hannah & Gardner, 2005). Furthermore, such a leader would reduce the probability of surprising happenings because of better anticipating due to holistic perspectives. Hence, this kind of leader should be able to manage and act more accurate to new situations. In addition, AL allows followers to spend more time to fulfil their daily tasks or sudden challenges because they do not need to pass their resources (e.g., attention or time) with anticipating what their leaders future steps might be (Chan, Hannah & Gardner, 2005). Such leaders provide their followers with the opportunity to build up shared mind-sets with supervisors. As Chan, Hannah, and Gardner (2005) explained, in such a leader-follower relationship followers tend to be more agreeable to interventions by the leader and they are capable to foresee the leader's manner. Feelings of stability and predictability are the result of the followers preferred transparency in each imaginable leader-follower relationship which leads to more precise judgments and evaluations (Gardner et al., 2005).
does have on them. Thus, they seem to be predestined to make substantial contributions on each possible level of outcome. Moreover, they might persuade peers and followers through actions and not just words. And as Walumbwa et al. (2010) and Wong et al. (2010) showed, identification as a follower outcome is the result of authentic leadership behaviour, followed by increased intrinsic motivation which is another mechanism that let colleagues and followers act beneficial.

The working mechanisms of TFL differ from the AL and CR ones as follows: Leaders achieve motivational and beneficial effects by being transformational due to e.g. enhanced meaningfulness of goal accomplishment or raising the level of positive emotions (Judge & Piccolo, 2004). Those working mechanisms lead to intrinsic motivation too. Nevertheless, they do not explicitly serve as a platform for trust or integrity, for example. They provide peers and followers with a valuable and great picture for their or company’s goals. Followers will feel positive emotions and aim at these goals if they understand, see and commit with the 'valuable and great picture'. Hence, they would be intrinsic motivated which would lead to higher performance.

In contrast to AL and TFL, CR is based on an extrinsic working mechanism. Beneficial effects of CR work due to a clear link between performance goals and rewards (Judge & Piccolo, 2004). The warranted reward payment or rather compensation is an external incentive and motivates the follower to reach the goal.

All three leadership styles address peers and followers in a different but as described above and empirically shown way and with positive consequences. Accordingly, an organization should benefit if all leaders within the company score high on authentic, transformational and contingent reward behaviour.
As described earlier in the leadership literature, leadership climate is defined as the degree to which leaders throughout a company direct leadership behaviours toward their employees (Walter & Bruch, 2010). Hence, leadership climate originates from the behaviours of the leaders existing in a company, but it emerges as a shared distinguishing mark of the organization as leaders in the organization act in a similar way. This similar way of leadership behaviour is then experienced by the followers in similar terms (Conger & Kanungo, 1987; Morgeson & Hofmann, 1999). As a result, leadership climate mirrors followers’ collective perceptions of their leaders’ behaviours throughout the firm (Chan, 1998; Klein & Kozlowski, 2000). This is concur with the perspective of James and colleagues, who defined organizational climate as the “typical” or “average” way an organization’s associates experience their job environments (James, 1982, p. 220; see also James, Choi, Ko, McNeil, Minton, Wright, & Kim, 2008).

A sufficient extent of similarity within, and of differences between organizations is required for leadership climate to arise from individual leaders’ behaviours and followers’ perceptions thereof (Bliese, Halverson, & Schriesheim, 2002; Chen, Mathieu, & Bliese, 2004). Only in such conditions it is justified to speak of leadership climate as a shared distinguishing mark of a company (Chan, 1998; James et al., 2008). Especially the following mechanisms can explain the appearance of such within-organization
homogeneity and between-organization heterogeneity. First and foremost, attraction-selection-attrition cycles should contribute to the similarity of individuals within a company and foster the differences between companies’ individuals (Schneider, 1987). This means that companies are able to attract, select, and retain specific types of individuals though their ongoing within processes. In addition socialization processes may be responsible for beginners in companies to adapt their behaviors to firms’ standards through interactions with present employees (Schneider & Reichers, 1983). Moreover, individuals within the same framework of a firm usually face common experiences and social influences which also may induce convergent behaviors and in addition the consequences homogeneity within an organization as well as differences to other organizations (Kotzloski & Hattrup, 1992). Furthermore, Avolio and Gardner (2005) as well as Ilies, Morgeson and Nahrgang (2005) refer to emotional contagion. Leaders' and followers' emotions and moods converge through the process of emotional contagion (e.g. Hatfield, Cacioppo, & Rapson, 1994). Those kinds of processes should be even stronger for charismatic leaders (Friedman, Prince, Riggio, & DeMatatteo, 1980).

Regarding to authentic, transformational, and contingent reward leadership, leaders’ behaviours within a company are supposed to show considerable similarity, whereas such behaviours are supposed to be dissimilar from leaders in other companies. Hence, followers AL, TFL, and CR perceptions should be reasonably homogeneous in the same company because of the exposition of similar levels of leadership throughout the organization (Conger & Kanungo, 1987; Kozlowski & Hattrup, 1992). Prior research indeed demonstrated that employees, concerning peers’ TFL behaviours, rated the degree of leadership characteristic similar (Bommer, Rubin, & Baldwin, 2004). Consequently, we believe that it is vindicated to view authentic, transformational, and contingent reward leadership as climate variables at the organizational level (Chan, 1998; James et al., 2008; Walumbwa et al., 2008). Besides the above mentioned mechanisms, Price (2003) argues that leadership behaviour does not originate from individual leaders. Instead, it should be viewed as part of a much larger moral and social framework which is tying the behaviour of all performers. To conclude and regarding to e.g. Finkelstein and Hambrick (1996) or to Canella and Monroe (1997), AL, CR and TFL leadership might operate like strategic leadership approaches with a focus on organizational values and philosophy. The philosophy as well as the values of AL, CR and TFL leadership may be drawn through the entire organization in equal measure, in all business units and within all subcultures (Yammarino et al., 2008). This may stand for the impact of authentic, transformational and or transactional leaders (e.g. CEO or
senior managers) as well as various authentic, transformational and or transactional departments.

Going one step further, AL, CR and TFL climate within a company could be described as organizational resources. Especially by considering the definition “Firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.” (Barney, 1991). This is consistent with Daft (1983) who says that firms’ resources include for instance assets, capabilities, and organizational processes which make the implementing of strategies that improve efficiency and effectiveness in firms possible. According to Barney (1991), this is warranted in case of valuable, rare, imperfect imitable and not substitutable resources. The first two attributes, valuable and rareness, lead to competitive advantage. Combining all four attributes leads to sustained competitive advantage (SCA). Regarding to the above mentioned definition and characterization of firms’ resources and considering the Resource-Based View (RBV) of the firm (Barney, 1991; 2001) on leadership climate, we argue that leadership climate (leadership behaviour throughout the firm) can be classified as an in a firm existing capability. By including the temporal aspect of behaviour one might view leadership climate as an organizational process. Whether one views leadership climate as a firm’s capability or an organizational process, both views would indicate that leadership climate falls into the above described definition of resources. Also, a certain degree of AL, TFL and CR leadership climate does not emerge from day to day. It costs years to develop a certain (above average) level of authentic, transformational, and contingent reward leadership behaviour throughout an organization, but it could cost only minutes to destroy such outstanding, beneficial and in particular sustainable perceived degree of leadership climate respectively its positive influence e.g. on performance and reputation (Gardner et al., 2005). Moreover, as prior research has shown (e.g., Bommer et al., 2004; Walter & Bruch, 2010), significant differences do exist regarding the degree of leadership climate between organizations. All in all, it seems to be justified to view a sufficient (above average) extent of AL, TFL and CR leadership behaviour within a whole organization as valuable, rare, imperfect imitable, and not substitutable resources as well as organizational level constructs. For these reasons a sufficient extent of AL, TFL CR leadership climate leads to sustained competitive advantages of a firm. As discussed before, the appearance of a certain extent of the three leadership behaviours throughout the organization is not naturally and in each company to find. Hence, it is rare. To underline the above argumentations, it is worthwhile to look at the sub-dimension of AL
and TFL leadership climate. TFL and AL leadership climate are valuable causes for example for articulating a vision, fostering the acceptance of shared goals, having high performance expectations in combination with heightened moral perspectives and high levels of transparency (sharing information), which enables a firm to reduce costs and/or react to opportunities and threats, internal and external ones (e.g., Judge & Piccolo, 2004; Gardner et al., 2005). This is in line with Newbert (2008), who describes a resource as valuable if it provides the firm the possibility to decrease costs and/or increase the chance of proper reactions to opportunities and threats. In addition, getting to the point of a certain degree of AL climate and TFL climate needs to evolve over time through social interaction and leads to the argument that there is no equivalent valuable resource that is common or imitable. Lastly, no other leadership behaviour throughout an organization, e.g. transactional leadership behaviour, is equal or shares common sub-dimensions with transformational or authentic leadership (Avolio & Gardner, 2005, Judge & Piccolo, 2004) which should lead to substitutability. All things considered, we suggest a certain level of authentic, transformational and contingent reward leadership climate to serve as organizational resources that fulfil the different criteria set by Barney (1991) and as such may lead to a sustained competitive advantage of the firm. For those reasons it is valid to observe leadership behaviour throughout an organization at the organizational level.

2.3.1 Effects of Transactional Leadership Climate on Organizational Performance

A high level of CR leadership climate would imply that leaders motivate their followers based on rational barter businesses or rather trade-offs. The working mechanism is based on the fact that followers will campaign for the goals of the leader respectively the company if they are convinced that the leader or the company are committed to act in favour of the employee. In case such common sense is established through a whole organization, it should be legitimate talk about CR leadership climate. Thus, each individual in the company operates towards the greater good because of the assumption of respectively experienced rational trade-offs. Due to this external motivation mechanism, I assume a positive association between CR leadership climate and organizational performance:

Hypothesis 1: Contingent reward leadership climate will be positively related to organizational performance.
2.3.2 Effects of Transformational Leadership Climate on Organizational Performance

Strong TFL climate may mobilize organization in a positive way of frequently expressed positive feelings by transformational leaders (Gardner & Avolio, 1998), which are likely to effect motivation in followers (Sy, Côté & Saavedra, 2005). Similar to this, Pirola-Merlo, Härtel, Mann, and Hirst (2002) have demonstrated that TFL enhances work groups’ positive affect. In addition, strong AL leadership climate may mobilize organization’s followers because it does include positive psychological capital in a form of positive moral perspective indicating high ethical standards which determine decision making and behaviour (Walumbwa et al., 2008). Furthermore, under conditions that authentic leaders experience more positive emotions (through self-awareness and relational orientation) than inauthentic leaders, their followers will experience more positive emotions (Ilies et al., 2005).

In the same way, strong TFL leadership climate may increase organization’s performance because by providing a role model and making visions available leaders may motivate followers to imitate their leaders’ efforts and dedication as well as to realize the demonstrated visions (Shamir et al., 1993). Furthermore, transformational leaders have been suggested to strengthen followers’ efforts and guiding followers’ behaviours to the pursuit of shared aspiration (Dvir et al., 2002; Sosik, 2005). In summary leadership climate should be positive related to organizational performance. Hence, I postulate that TFL climate will be positively related to organizational performance:

Hypothesis 2: Transformational Leadership climate will be positively related to organizational performance.

2.3.3 Effects of Authentic Leadership Climate on Organizational Performance

Besides, strong AL leadership climate may increase an organization’s performance because of a high level of relational transparency and a balanced processing of information (Walumbwa et al., 2008). Relational transparency requires information sharing. In combination with balanced processing, that is objectively analysing all relevant information before making a decision and acting, it is likely that employees are reinforced to act. Furthermore, social learning theory (Bandura, 1977) explains the
mechanism that individuals learn from observation (social learning). Future behaviours are consequently influenced by the consequences of past behaviour (experience) and social learning. Thus the social learning theory specifies an important mechanism through which authentic leadership climate can influence followers. Authentic leadership throughout an organization is likely to represent considerable behavioural role modelling for followers. In such a way leaders throughout the organization let their followers perceive how they process relevant information, place themselves in challenging situations or work extremely long hours without complaining and in doing so assuring success. In a while followers' social learning experiences will lead to an adaption of their behaviours (Ilies et al., 2005) and therefore, also to higher organizational performance.

On the whole, these argumentations and the fact that each leadership style works through different mechanisms lead to the propositions that TFL climate, CR leadership climate and AL climate are positive related to organizational performance.

Consequently we specify the following propositions:

Hypothesis 3: Authentic leadership climate will be positively related to organizational performance.

Hypothesis 4: Authentic leadership climate is stronger related to organizational performance than transformational leadership climate and contingent reward climate.
2.4 Methods

2.4.1 Data Collection and Sample Description

Data for this study were collected in cooperation with an agency located in Germany that specializes in benchmarking small-to-medium sized enterprises. 79 organizations were investigated. Each company was located in Germany as well as had fewer than 5,000 employees. A detailed benchmarking report was sent to each organization in return for their participation.

Data were collected from multiple sources. First, general information (the organization’s size, industry affiliation, etc.) were collected through a key informant survey which was completed by each organization’s top management team member or Human Resources executives. Second, employee survey data were collected to gather information on AL Climate (survey 1), CR leadership climate (survey 3), TFL climate (survey 3), and organizational performance (survey 5). Participating organizations sent a standardized e-mail to their employees through their Human Resources department or from a senior manager’s e-mail address, describing the study’s purpose and providing a link to a web-based survey hosted by an independent company (in a few instances, computer terminals were installed to enable the participation of employees without own company e-mail address). Based on an algorithm programmed into the survey web-site, respondents were randomly directed to one of the five survey versions, in order to alleviate concerns about common method bias (Dickson, Resick, & Hanges, 2006; Erdogan, Liden, & Kraimer, 2006; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Rousseau, 1985). Each investigated construct measure was translated to German through professional translators following a double-blind back-translation procedure (Schaffer & Riordan, 2003). For the AL climate measurement we used the developed German scales by Avolio, Gardner and Walumbwa (2008). Respondents were assured full anonymity.
2.4.2 Measures

**Authentic leadership climate.** AL climate was captured in employee survey version 1 using the measurement scales developed by Walumbwa et al. (2008). First research which employed this measure has provided evidence for its psychometrics accuracy (Walumbwa et al., 2008). We aggregated the responses of individual members to the organizational level to achieve an organizational level measure of authentic leadership, which was justified by the aggregation statistics (ICC$_1$ = .05; ICC$_2$ = .74; mean $R_{wg}$ = .66; median $R_{wg}$ = .64). Confirmatory factor analysis (CFA) provided support for the proposed structure authentic leadership climate dimensions as being indicators of the underlying latent construct of authentic leadership ($\chi^2[100] = 261,608$; Comparative Fit Index (CFI) = .923; Tucker-Lewis-Index (TLI) = .908; Standardized root mean square (SRMR) = .034).

**Transformational leadership climate.** TFL climate was captured in employee survey version 3 using the instrument developed by Podsakoff and colleagues (1990; 1996). Prior research has frequently employed this measure and has provided evidence for its psychometric precision (e.g., Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Bommer et al., 2004). The instrument consists of twenty-two items assessing six dimensions of TFL, namely providing a role model, articulating a vision, communicating high performance expectations, fostering the acceptance of common goals, providing intellectual stimulation, and providing individualized support. To measure an organization’s TFL climate, we adopted a direct consensus model, in line with the recommendations of Chan (1998) and James et al. (2008). As noted earlier, leaders across an organization characterized by TFL climate will direct similar TFL behaviors toward their followers, and followers should therefore perceive their immediate leaders’ TFL in similar terms (Conger & Kanungo, 1987). Further, Javidan and Dastmalchian (1993) noted that employees are in a particularly good position to provide accurate information about their direct leaders’ behaviors due to their social proximity. On this basis, employees were asked to assess the extent to which their direct leaders exhibited TFL behaviors on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree). We obtained support for aggregating this variable to the organizational level (ICC$_1$ = .06; ICC$_2$ = .77; mean $R_{wg}$ = .83; median $R_{wg}$ = .82). CFA provided support for the proposed structure of the transformational climate measure with the emotional, cognitive, and behavioural dimensions as being indicators of the underlying latent construct of productive energy ($\chi^2[203] = 531,345$; CFI = .887; TLI = .872; RMR = .086).
Contingent reward climate. We captured the contingent reward climate with the contingent reward items published by Rubin, Munz, and Bommer, (2005) in the employee survey version 3. Employees were asked to rate three items on a five-point scale from 1 (never) to 5 (frequently, if not always). We averaged all item responses to an overall transactional leadership score. Aggregation statistics showed satisfactory results ($\text{ICC}_1 = .06; \text{ICC}_2 = .76; \text{mean } R_{wg} = .55; \text{median } R_{wg} = .57$), indicating that aggregation to the organizational level was warranted. CFA provided support for the proposed structure of contingent reward latent variable as being an indicator of the underlying latent construct of transactional leadership ($\chi^2 [5] = 53.1; \text{CFI} = .935; \text{TLI} = .804$).

Control variables. To rule out some alternative explanations for our results, we controlled in our analyses for task interdependence, reward interdependence organizational, size (Org. size), industry differences by considering each organization's affiliations with the broad industry category services, production as well as finance as these variables have been linked to follower outcomes. All control variables were collected through the key informant survey which was completed by each organization’s Human Resources executives or another top management team member.

Organizational Performance. We measured organizational performance in survey four with six items using a 7-point Likert scale with scale anchors ranging from "very bad" to "very good". The items asked for the return on investment, efficiency of business processes, employee satisfaction, employee and customer commitment. Responses were given by the executive board.
2.5 Results

2.5.1 Descriptive Statistics and Correlation Values

In table 1, the variable means, standard deviations, and intercorrelations for all study variables are depicted. These results indicate that organizational performance is positively related to AL leadership climate ($r = .55, p < .01$), TFL leadership climate ($r = .56, p < .01$), and CR leadership climate ($r = .48, p < .01$). Furthermore, organizational performance is related positively to task interdependence ($r = .27, p < .05$). No other significant relationship appeared between the control variables and AL, TFL and CR leadership climate as well as the outcome variable.
| Variable                          | M    | SD    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
|----------------------------------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 1. Task interdependence          | 4.46 | .22   |      |      |      |      |      |      |      |      |      |      |
| 2. Reward interdependence        | 4.96 | 1.17  |      |      | .25* |      |      |      |      |      |      |      |
| 3. Industry 1 (Service)          | .01  | 1.00  | -.04 | .20* |      |      |      |      |      |      |      |      |
| 4. Industry 2 (Finance)          | .00  | 1.00  | -.14 | -.02 | -.27*|      |      |      |      |      |      |      |
| 5. Industry 3 (Production)       | .01  | 1.00  | .12  | -.06 | -.40*| -.15 |      |      |      |      |      |      |
| 6. Org. Size                     | 433.82 | 741.91 | -.02 | -.01 | .06* | .06  | .13  |      |      |      |      |      |
| 7. CR leadership climate         | 3.44 | .43   | .08  | .23* | .27* | .02  | -.27*| -.14 |      |      |      |      |
| 8. TFL climate                   | 3.33 | .30   | .33**| .26* | .18  | .04  | -.25*| -.16 | .76**|      |      |      |
| 9. AL climate                    | 3.73 | .40   | .16  | .23* | .17  | -.02 | -.11 | -.20 | .74**| .75**|      |      |
| 10. Org. Performance             | 5.58 | .61   | .27* | .07  | .06  | .08  | -.12 | -.13 | .48**| .56**| .55**|

CR = Contingent Reward; TFL = Transformational Leadership; AL = Authentic Leadership; Org. Performance = Organizational Performance, * p < .05, ** p < .01
2.5.2 Predicting Organizational Performance

To see if AL, TFL and CR leadership climate were related to higher organizational performance, I performed a four step regression analyses. The results are summarized in Table 2. Step 1 shows no evidence for a positive relationship between the control variables and organizational performance.

Step 2 of the results shows that CR leadership climate had a significant and positive effect on both company performance ($\beta = .22, p < .001$), supporting the hypothesis 3. In addition CR leadership climate increased the explanatory power regarding the organizational performance model ($\Delta R^2 = .12, p < .001$).

Above and beyond, adding TFL leadership climate in step 3 shows that it is also positively related to organizational performance ($\beta = .29, p < .01$). The positive influence of CR leadership climate on organizational performance ($\beta = .00, p > .10$) disappeared. The explanatory power increased by adding TFL leadership climate regarding the organizational performance model ($\Delta R^2 = .10, p < .01$). These results confirmed hypothesis 2.

After including AL leadership climate in step 4 the positive influence of TFL leadership climate disappeared as well ($\beta = .10, p > .10$), but AL leadership climate had a positive significant effect on organizational performance ($\beta = .33, p < .001$). Adding AL climate increased the explanatory power of the organizational performance model ($\Delta R^2 = .14, p < .001$). This result supports hypothesis 3. The fact that the strong significant relationship between CR leadership climate and organizational performance as well as TFL climate and organisational performance disappeared supports hypothesis 4. These results increase the likelihood that AL climate is stronger related to organizational performance than CR leadership climate and TFL climate.

In addition, I executed the regression analysis without the control variables. The results were almost similar without the control variables which indicates stable effects. Moreover, variance inflation factors (VIF) for the analysed models were all well below 4. Hence, in these analyses multicollinearity was not a problem (e.g., Miles & Shevlin, 2001).
Table 2: Results of Regression Analysis on Organizational Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Control variables</td>
<td>Task interdependence</td>
<td>.11</td>
<td>.09</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>Reward interdependence</td>
<td>.08</td>
<td>.05</td>
<td>.05</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Industry 1 (Service)</td>
<td>.07</td>
<td>.01</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Industry 2 (Finance)</td>
<td>-.02</td>
<td>-.03</td>
<td>-.04</td>
<td>-.03</td>
</tr>
<tr>
<td></td>
<td>Industry 3 (Production)</td>
<td>.06</td>
<td>.11</td>
<td>.12</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>Org. Size</td>
<td>-.08</td>
<td>.05</td>
<td>-.04</td>
<td>-.01</td>
</tr>
<tr>
<td>2. Main effect</td>
<td>CR leadership climate</td>
<td></td>
<td>.22***</td>
<td>.00</td>
<td>-.09</td>
</tr>
<tr>
<td>3. Main effect</td>
<td>TFL climate</td>
<td></td>
<td>.29**</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>4. Main effect</td>
<td>AL climate</td>
<td></td>
<td></td>
<td>.33***</td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 \]
\[ \Delta R^2 \]

Note: Reported are standardized beta's; CR = Contingent Reward; TFL = Transformational Leadership; AL = Authentic Leadership

† p < .10
* p < .05
** p < .01
*** p < .001
2.6 Discussion

2.6.1 Limitations

As with all research, the present study should be considered in light of its strengths and limitations. A first limitation may be the use of a cross-sectional research design to measure the investigated constructs. Due to these type of data, one may argue that there could be a common method variance issue, because respondents could have been motivated by biases of consistency or have applied their own implicit theories in responding to the questionnaires, which would artificially boost the relationships under study (Doty & Glick, 1998; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Therefore, causality cannot unambiguously be inferred. However, since prior research has shown that the single source bias might be overestimated and our results show very strong effects between the independent and dependent variables, we suggest that the effects could be smaller but would not disappear (Spector, 2006). In addition, based on the theoretical arguments outlined earlier, we believe that the directions of causality proposed in this paper are more likely than the reverse. It should be noted, however, that we used a multiple data source design and aggregated to the mean to reduce the probability of common method variance (Podsakoff et al., 2003). Following e.g. Walumbwa et al. (2010) we conducted several confirmatory factor analysis to investigate the construct validity of our measures. Discriminant validity is supported by the results which reduces the probability of common method source variance. Nevertheless, it would be interesting for future researchers to use measures at different points in time or (quasi) experimental designs before claims of causality are defensible.

A second limitation may be the focused view on AL climate, TFL climate and CR leadership climate as leadership behaviours throughout a company. One could also consider e.g. ethical leadership or servant leadership behaviours which were perceived by all employees throughout a company. However, since the paper discussed three different leadership styles which capture theory wise a wide range of leadership behaviour, e.g., high performance expectations, individualized support, intellectual stimulation, providing an appropriate model, fostering the acceptance of shared goals, heightened moral perspective, balanced processing, self-awareness and/or high levels of transparency, one may consider if other leadership behaviours would have a similar significant impact, e.g. servant leadership (Reed, Vidaver-Cohen, & Colwell, 2011). On the other hand, future research might investigate the potential of servant leadership...
climate as well as possible relationships and added values of coexistence between those or more leadership climates.

Luthans and Avolio (2003) underlined the importance of developing authentic leaders from the very first. Since the development of authentic leadership was not a focus of our investigation, following Avolio (2010) we like to draw attention to the need for more attention on the antecedents and possible key components in the development of authenticity once again.

Last but not least, future research should also put more emphasis on authentic followership (Gardner et al., 2005; George, 2003; Shamir & Eilam, 2005). Authentic followership could be a key component of the AL process. As the literature suggests positive effects through authentic followership and that authenticity of followers is possibly as important as authenticity of leaders across a company, it might be interesting to investigate what kind of role it plays in developing leaders within a company or in relationship with other leadership styles as TFL, for example.

### 2.6.2 Implications

First, our study approximated the call of Ilies, Morgeson, and Nahrgang (2005) and Walumbwa et al. (2008) that one "may consider theoretically integrating authentic leadership with other related leadership literatures such as transformational leadership…". We investigated and showed the relationship between AL climate, TFL climate and CR leadership climate and their supplementary effects on the outcome variable organizational performance as the leadership literature did suggest (e.g., Avolio & Gardner, 2005; Walter & Bruch, 2010).

Second, this study was located at the organizational level of analysis, conceptualizing AL, TFL and CR as organization-level climate variables (cf. Avolio & Gardner, 2005; Chen & Bliese, 2002; Ilies, Morgeson & Nahrgang (2005); Ostroff & Bowen, 2000). Thus, we confirm the evidence of the TFL climate construct (Walter & Bruch, 2010) and I show support of an AL climate as well as CR leadership climate construct.

Third, we investigated the effectiveness of AL climate, TFL climate and CR leadership climate on organizational performance and delivered first support that the impact of AL is over and above the effects of TLF and CR.
To conclude, this study confirmed the value of the German version of the ALQ as the results demonstrate high reliability and predictive validity in this investigation.

2.6.3 Summary

In summary, this study investigated the potential influence and strength of AL, TFL as well as CR leadership climate. All hypotheses were supported. Hence, the results indicate that it is beneficial to go above and beyond TFL. With other words, it is important to strengthen, TFL leadership climate and CR leadership climate and in the first instance AL leadership climate in organizations. Furthermore, taken the study results into account and viewing AL climate, TFL climate and CR leadership climate as valuable, rare, imperfect imitable and not substitutable in regard to the RBV of a firm, as well as being able to develop above average levels of these leadership climates across a company, indicates a sustained competitive advantage.
3 Study 2 – Authentic Leadership Climate: Explaining its Effects on Innovation through Productive Organizational Energy

3.1 Abstract

Past research has already shown positive effects of AL at the individual level, team level and a few at the organizational level outcomes. Even though, effects and working mechanisms of AL are not fully investigated. This study explores AL climate effects on the organizational level and clarifies if AL climate is linked to productive organizational energy (POE) and innovation. Using an organizational level approach, this is the first study, to my knowledge, which quantitatively examines the relationship between AL climate and innovation mediated by POE as well as investigating effects of POE on innovation as an organizational performance indicator. The mediation model was tested based on a sample size of 161 small and medium-sized companies located in Germany. The results show that AL climate is positively related to POE and innovation as well as a strong positive effect between POE on innovation. The positive direct impact of AL climate is underlined by a significant indirect effect through POE. In summary, this study underpins the discussed potential of authentic leadership in the leadership literature.

Keywords: Authentic leadership climate, productive organizational energy, innovation and mediation
3.2 Introduction, and Intended Contribution

As in the perceive chapter demonstrated, the over and above predictive validity of authentic leadership compared to transactional and transformational leadership (Avolio & Walumbwa, 2014) should raise more interest. Especially the interest of practitioners who benefit in several ways if leadership is authentic. Ample studies provide proof for this beneficial relationship between leader behaviour and performances indicator as dependent variables, e.g. authentic leadership and psychological capital (Walumbwa, Luthans, Avey & Oke, 2011), authentic leadership and empowerment (Walumbwa et al., 2010), authentic leadership and work engagement (Giallonardo, Wong & Iwasiw, 2010) or authentic leadership and supportive group behaviour (Wong & Cummings, 2009). Nevertheless, research on working mechanisms which may explain those positive impacts between authentic leadership and outcomes variables is in the fledging stages. A review by Gardner and colleagues (2011) illustrates that only four studies have been published on mediating processes between AL and outcomes. These studies investigated the following mediators and outcomes: follower empowerment and organizational citizenship behaviour (Walumbwa et al, 2010), identification with the supervisor and work engagement (Walumbwa et al, 2010), personal identification as well as social identification and trust in managers (Wong et al., 2010), trust in leadership and firm financial performance (Clapp-Smith et al., 2009), and work engagement and job satisfaction (Giallonardo et al., 2010). The publication of Walumbwa and colleagues (2010) got retracted in 2014 due to concerns about possible problems of reporting. Consequently, only three published studies remain and no one of them investigated organizational-level constructs. Furthermore, not even one study considers to investigate a construct which captures cognition, affection and behaviour in one construct to explain multiple pathways of mediating mechanisms. Therefore, the following investigation will focus on productive organizational energy (Bruch & Ghosal, 2003; Bruch & Vogel, 2009, 2010) to discover a little bit more about the ongoings in the “...ubiquitous ‘black box’ of leadership (Avolio & Walumbwa, 2014; p 341), which includes ‘things’ that happen between leader’s behaviour and follower’s actions. In doing so, it is indented to pick up the calls of Gardner et al. (2011) to extend the exploration of relationships between AL and outcomes as well as of Avolio and Walumbwa (2014) to enlarge especially the link between AL and affect due to the fact of only five published articles focusing on tying affective constructs to leadership. As I am aware of, none of them was approached on the organizational level. Additionally,
this course of action intends to find supplementary legitimation and understanding for the nomological network of AL.

After a short outline of the indented contribution, I describe the implemented methods, and analysed results. A discussion section constitutes the end of this chapter.

First, this study follows the call of Avolio and Walumbwa (2014) that one may extant the link between AL and affect. This is in line with the call of Gardner et al. (2011) who encourage to investigate the working mechanism of potential mediators, supplementing and underlining the work of e.g. Giallonardo et al. (2010) who demonstrated positive links between AL, work engagement and job satisfaction.

Second, by testing AL climate and POE as organizational level variables and linking them to organizational innovation, I come toward researchers' calls for more empirical investigations of leadership constructs on the macro-level of firms (cf. Yammarino, Dionne, Schriesheim & Dansereau, 2007; Ostroff & Bowen, 2000). In fact, this study goes to the explicit call of Mazutis and Slawinski (2008) who underline the needed research on authentic leadership as strategic leadership shared though a whole company respectively authentic leadership of the organization and organizational learning which is described as implementation of firm’s innovativeness.

Third, this study investigates POE as a mediator and is thus one of the first investigation which demonstrates a strong positive link between POE and innovation as an organizational level outcome. By doing so, this study expands the knowledge about POE enablers (Walter & Bruch 2010) as well as confirms the work of Cole, Bruch and Vogel (2011) who presented first insights between positive relations of productive energy of firms and their overall efficiency.

In summary, this study investigates AL and POE as organizational level constructs which were considered to be valuable predictors for innovation within companies (see Figure 3. Thus, the study extends previous theorizing and puts such theory to an empirical test including the control of structural impacts like organizational size, centralization, and formalisation. Hypotheses are surveyed in a sample of 160 independent organizations, supplementing earlier, lower-level research investigations.
3.3 Theoretical Background and Hypotheses Development

3.3.1 Authentic Leadership Climate, Productive Organizational Energy and Innovation

The nomological network of AL is capable of being extended by constructs which increase, facilitate and foster the processes between AL and organizational outcomes (Yammarino et al., 2008). Thus, researchers like Avolio (2010) and Walumbwa et al. (2009) called to examine what components are most crucial in specific situations and relationships to control for dynamic interplay between the components of AL and outcomes. This would develop a deeper understanding of leader-follower relationships. Walumbwa and colleagues (2009) suggest to investigate constructs like group cohesion or goal orientation as mediators, in order to develop a richer comprehension of AL. To close the above described gaps, I like to focus on AL climate and the POE construct implemented by Bruch and Ghoshal (2003) and extended by Cole, Bruch, and Vogel (2012) as well as Kunze, and Bruch (2010).

POE describes the positive force with which a team works and consists of an emotional, a cognitive, and a behavioural dimension (Bruch & Vogel, 2011; Kunze & Bruch, 2010). The construct is conceptualized as a multi-dimensional emergent state. The affective dimension describes the shared experience of positive feelings and emotional arousal as well as records enthusiastic assessments of work-related issues of members in an organization (e.g., Quinn & Dutton, 2005). The cognitive dimension describes the shared intellectual processes that drive the members of an organization to think constructively and to persist in search of solutions to work-related problems (Lykken, 2005). The behavioural dimension mirrors the joint efforts designed to benefit the organization and covers the pace, intensity, and volume with which members purposefully invest physical resources toward achieving the organizational goals (Bruch & Ghoshal, 2003). Hence, the construct of organizational productive energy captures not only the extent to which organizations use their collective resources, but also whether these mobilized resources are directed toward the company's goals. Prior research has demonstrated that the three dimensions of POE are conceptually and empirically distinct and that they together reflect the organizational level of collective energy (Cole et al., in press; Kunze & Bruch, 2010; Walter & Bruch, 2010). I like to follow the above mentioned calls to investigate multiple dimensions, processes or rather specific situations (e.g. Walumbwa et al., 2009) by using the integrative, multi-
dimensional construct of POE because these dimensions have been argued to capture particularly well the complex reality of how people work together in an organization.

The probability that AL climate is positively related to POE may be quite high, since both constructs share emotional, behavioural, and cognitive processes or rather dimensions. Greater self-awareness and relational transparency may be directly linked to the affective dimension of POE due to the fact that uncertainties are reduced, while positive feelings and emotional arousal are boosted, since transparency in any leader-follower relationship leads to feelings of stability and predictability (Chan et al., 2005). The cognitive dimension might be positively impacted by a high degree of AL climate due to the fact that the leaders throughout an organization are transparent, aware of the current events and business unit’s situation. Leaders in such organizations display a balanced processing of information and ensure a valuable idea and information flow throughout the organization. In addition, ethical and moral leadership behaviour, clear pictures of organizational aims as well as clarified responsibilities should motivate employees to act and increase the probability of valuable pace and intensity with which employees selectively spend physical resources (e.g., Spreitzer et al., 2005). The underlying mechanism is that followers respond more positively to interventions by authentic leadership behaviour because they are more likely to identify with and to trust leaders who are themselves (Chan et al., 2005; Clapp-Smith et al., 2009). They should be more able to predict leader's point of views and make their own adjustment for mutual benefits (Chan et al., 2005). In addition, the contagion effect of leader's positive feelings throughout an organization due to reduced uncertainties and relationship barriers will probably cause a disposition for positive behavioural responses (Ilies et al., 2005). To conclude, I like to formulate the following hypothesis:

Hypothesis 1: Authentic Leadership Climate will be positively related to Productive Organizational Energy.

Next to many streams of the leadership literature, AL climate has a high potential to explain organizational outcomes like organizational learning (Mazutis & Slawinski, 2008) through shaping a culture of authentic dialogue. Members within a company which scores highly on AL climate may actively work towards creating and implementing new ideas, solutions and thus reflecting on existing norms and processes. I agree with Mazutis and Slawinski (2008) who stated that authentic leaders motivate
dialogues on potentially challenging or demanding topics in order to strengthen openness and transparency. In such cases, differences are not tackled through power conflicts. They may be instead tackled as an opportuneness to establish understanding. In addition, an open, transparent and deliberant climate, established and fostered through AL climate (Chan et al., 2005), provides place for negotiating adjustments through interactions like sharing as well as arguing about information, ideas and perspectives (Crossan, Lane & White, 1999). Building on the work of Crossan and colleagues – organizational learning as a shared dynamic process - Mazutis and Slawinski (2008) postulate that knowledge sharing across a whole company will be more likely because all company members might be less defensive. They argue that interactions within a company with a high score on AL climate are more likely, even if it is about more “... sensitive issues” (p. 447) because of no negative consequences as well as the encouraging atmosphere to point to those. Moreover, they view a higher likelihood for a “…flow of newly uncovered knowledge up to the organizational level” (p.447). Consequently, a high level of AL climate which implicates an explicit focus on transparency, integrity and information exchange, should encourage everybody within such a company to challenge ideas and provide a supportive environment. These are conditions which are needed to exploit organizational learning respectively organizational innovation (Mazutis & Slawinski, 2008). Following this argumentation, I postulate a positive relationship between AL climate and organizational innovation.

Hypothesis 2: Authentic Leadership Climate will be positively related to organizational innovation.

### 3.3.2 Productive Organizational Energy and Innovation

Productive organizational energy can also be expected to be positively related to organizational outcomes, e.g. firm financial performance, because people being in a state of high energy act in a fast pace, think constructively and are enthusiastic about work-related issues (Cole et al., 2011). This relationship is also supported on individual level outcomes in the literature. Atwater and Carmeli (2009) have shown that emotional energy can positively affect people's creativity at work. Furthermore, Fredrickson (2001) has shown that people's emotional energy boosts the efficiency of their thinking (Fredrickson, 2001). Researchers have also argued that cognitive energy permits people
to think constructively about work-related challenges and to concentrate on current tasks (Lykken, 2005). As a final point, behavioural energy enables employees to use their physical resources for their work, thereby contributing to achieving their goals and company’s objectives (Spreitzer et al., 2005). Consequently, if members of an organization experience high emotional, cognitive, and behavioural energy, I expect that these employees work collectively towards the company’s objectives, like improving processes, generating ideas and solutions as well as implementing organizational innovations. This is in line with Berson, Nemanich, Waldman, Galvin, and Keller (2006), who argue that participation, openness and psychological safety count as broad characteristics which determine a cultural learning structure. Linking their definition to POE, one may compare participation with the behavioural dimension, psychological safety with the affective dimension and openness with the cognitive dimension (e.g., sharing and experiencing mental alertness). Based on this argumentation, I like to point out a strong and positive association between POE and organizational innovation:

Hypothesis 3: Productive organizational energy will be positively related to organizational innovation.

3.3.3 The Mediating Role of Productive Organizational Energy. Explaining the positive Relation between Authentic Leadership Climate and organizational innovation through POE.

POE may be interpreted as an indicator for perceptible action dialogued through behaviour, e.g. verbal interactions between company members or a high degree of goal oriented activity, through affect, e.g. sharing jointly enthusiasm, and through cognition, e.g. mentally alertness or a high degree of lookout for new opportunities. Those mechanisms are a highly favourable fundament (Mazutis & Slawinski, 2008) to capture all shared information, transparent emotions and actions which derive from AL climate. But not only to capture them, but also to spread them in order to achieve organizational innovations. Hence, I ascribe a mediated character to POE between AL climate and organizational innovation.

Hypothesis 4: The relation between AL Climate and innovation is mediated by POE.
Figure 3 shows all postulated hypotheses within the second study of this thesis. It is visualizing a positive relation between AL climate and POE, AL climate and organizational innovation as well as POE and organizational innovation. As it is explained by Hayes (2012), such a model equals to his PROCESS model 4 and implicates that the relation between AL climate and organizational innovation is mediated, in this case by POE.
3.4 Method

3.4.1 Data Collection and Sample Description

As in Study 1, data for study 2 were collected in cooperation with an agency located in Germany that specializes in benchmarking small-to-medium sized enterprises. 161 organizations were investigated in the year 2010 and 2011. All companies were located in Germany and employed fewer than 5,000 employees. Each company got a detailed benchmarking report in return for their participation.

Just like in study 1, data were collected from multiple sources. First, a key informant survey which was completed by each organization’s top management team member or Human Resources executives to gather general information (the organization’s size, industry affiliation, etc.). Second, employee survey data were collected to gather information on AL Climate (survey 1), POE (survey 1), and organizational innovation (survey 4). As described in section 2.4.1, participating organizations sent a standardized e-mail to their employees through their Human Resources department or from a senior manager’s e-mail address, informing about the study’s purpose and providing a link to a web-based survey hosted by an independent company (in a few instances, computer terminals were installed to enable the participation of employees without own company e-mail address). Due to an algorithm programmed into the survey web-site, respondents were randomly directed to one of the used survey versions, in order to alleviate concerns about common method bias (Dickson, Resick, & Hanges, 2006; Erdogan, Liden, & Kraimer, 2006; Podsakoff, MacKenzie, Lee & Podsakoff, 2003; Rousseau, 1985). The investigated construct measures were translated to German through professional translators following a double-blind back-translation procedure (Schaffer & Riordan, 2003). I used the developed German scales by Avolio, Gardner and Walumbwa (2008) for the AL climate measurement. Full anonymity was assured to the respondents.

3.4.2 Measures

*Authentic leadership climate.* As in study 1, AL climate was captured in employee survey version 1 using the item scales developed by Walumbwa et al. (2008). Walumbwa et al. (2008) provided first research which disclosed evidence for psychometric accuracy of this measure (Walumbwa et al., 2008). The psychometric accuracy evidence for the German version was confirmed within Study 1 too. To achieve
an organizational construct measure of authentic leadership, responses of individual members have been aggregated. Aggregation statistics justified this approach (ICC<sub>1</sub> = .25; ICC<sub>2</sub> = .74; mean R<sub>wg</sub> = .87, for data collected in the year 2010; ICC<sub>1</sub> = .27; ICC<sub>2</sub> = .76; mean R<sub>wg</sub> = .85, for data collected in the year 2011).

**Productive organizational energy.** POE was captured in employee survey version 1 using the instrument developed by Cole, Bruch and Vogel (2011). Their developed measurement scales are covering three dimensions – one behavioural (e.g. “People in my company go out of their way to ensure the company succeeds”), one affective (e.g. “People in my company feel enthusiastic in their job”) and one cognitive dimension (e.g. “People in my company are mentally alert”). The behavioural dimension encompasses four items, the affective dimension as well as the affective dimension five items. Responses of all individuals have been aggregated to achieve an organizational level measure (ICC<sub>1</sub> = .40; ICC<sub>2</sub> = .85; mean R<sub>wg</sub> = .96, for data collected in year 2010, ICC<sub>1</sub> = .37; ICC<sub>2</sub> = .84; mean R<sub>wg</sub> = .96 for data collected in year 2011).

Table 3 summarises the aggregations statistics for AL climate and POE. All interclass correlation coefficients (ICC) exceeded the conventional cut-off value, which is 0.12 for ICC<sub>1</sub> and 0.70 for ICC<sub>2</sub> (Glick, 1985). Consequently, all assessed F-tests have been highly significant, p < .001. On the basis of this results, it is valid to assume that AL climate and POE explain variance between companies. R<sub>wg</sub> values have been calculated to determine within-group agreement for AL climate and POE as a final step. Those exceeded the conventional cut-off value of 0.70 (James, Demaree, & Wolf, 1993) too.

Table 3: Aggregation statistics for AL Climate and POE

<table>
<thead>
<tr>
<th>Data Constructs</th>
<th>AL Climate</th>
<th>POE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TopJob</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICC&lt;sub&gt;1&lt;/sub&gt;</td>
<td>0.25</td>
<td>0.40</td>
</tr>
<tr>
<td>ICC&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.74</td>
<td>0.85</td>
</tr>
<tr>
<td>r&lt;sub&gt;wg&lt;/sub&gt;</td>
<td>0.87</td>
<td>0.96</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICC&lt;sub&gt;1&lt;/sub&gt;</td>
<td>0.27</td>
<td>0.37</td>
</tr>
<tr>
<td>ICC&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.76</td>
<td>0.84</td>
</tr>
<tr>
<td>r&lt;sub&gt;wg&lt;/sub&gt;</td>
<td>0.85</td>
<td>0.96</td>
</tr>
</tbody>
</table>

F-tests for analysing between company variance resulted in a significance level of $p < .001$.
Control variables. I controlled for organizational size, centralization and formalization in this analyses to rule out alternative explanations for and test the stability of the results. Control variables were collected through the key informant survey which was completed by a top management team member or each organization’s Human Resources executives.

Organizational innovation. Organizational innovation was measured in survey four with four items using a 7-point Likert scale with scale anchors ranging from "very bad" to "very good". Items asked for the advertising for the appreciation of new ideas, convincing relevant company members of innovative ideas, implementing innovative ideas into useful applications and systematic implementation of innovative ideas into the working environment. The executive board provided these responses.
3.5 Results

3.5.1 Descriptive Statistics and Correlation Values

Table 4 illustrates the means, standard deviation and intercorrelations for control and study variables. The control variable organizational size correlates negatively with AL climate \((r = -.18, p < .05)\), the control variable centralization correlates significantly and negatively with AL climate \((r = -.65, p < .01)\), and POE \((r = -.34, p < .01)\) as well as with the outcome variable organizational innovation \((r = -.36, p < .01)\). Furthermore, this results indicate that AL climate \((r = .40, p < .01)\) and POE \((r = .38**, p < .01)\) are positively related to the outcome variable organizational innovation. AL climate and POE intercorrelate with each too \((r = .43, p < .01)\).

Table 4: Descriptive Statistics and Correlations of Study 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Org. Size</td>
<td>401.37</td>
<td>693.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Centralization</td>
<td>3.16</td>
<td>0.74</td>
<td></td>
<td></td>
<td>.26**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Formalization</td>
<td>4.21</td>
<td>0.76</td>
<td></td>
<td>.23**</td>
<td></td>
<td>.27**</td>
<td></td>
</tr>
<tr>
<td>4. AL climate</td>
<td>3.71</td>
<td>0.41</td>
<td>-.18*</td>
<td>-.65**</td>
<td></td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>5. POE</td>
<td>4.00</td>
<td>0.50</td>
<td>-.04</td>
<td>-.34**</td>
<td>.09</td>
<td></td>
<td>.43**</td>
</tr>
<tr>
<td>6. Org. Innovation</td>
<td>5.63</td>
<td>0.74</td>
<td>-.12</td>
<td>-.36**</td>
<td>-.02</td>
<td>.40**</td>
<td>.38**</td>
</tr>
</tbody>
</table>

Org. = Organizational; AL = Authentic Leadership; POE = Productive Organizational Energy; * \(p < .05\), ** \(p < .01\)
3.5.2 Predicting Productive Organizational Energy

To analyse if AL climate is related to higher values of productive organizational Energy, I executed a two-step regression analyses. The results are presented in table 5. Step 1 shows evidence for a negative relationship between the control variable centralization and POE.

Step 2 of the regression analyses reveals that the significant relation between centralization and POE disappears as well as AL climate had a significant and positive effect POE ($\beta = .32$, $p < .001$), supporting hypothesis 1. Moreover, AL climate increase the explanatory power regarding the POE model ($\Delta R^2 = .06$, $p < .001$). Running the regression analysis without the control variables led to almost same results which indicates stable effects. Moreover, VIF for the analysed models were all far below 4. Hence, in these analyses multicollinearity was not a problem (e.g., Miles & Shevlin, 2001).

Table 5: Results of Regression Analysis on POE

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Productive Organizational Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Step 1</td>
</tr>
<tr>
<td>1. Control variables</td>
<td>Org. Size</td>
<td>-.03</td>
</tr>
<tr>
<td></td>
<td>Centralization</td>
<td>-.40***</td>
</tr>
<tr>
<td></td>
<td>Formalization</td>
<td>.19*</td>
</tr>
<tr>
<td>2. Main effect</td>
<td>AL Climate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>$\Delta R^2$</td>
<td>.13***</td>
</tr>
</tbody>
</table>

Note: Reported are standardized beta's; AL Climate = Authentic Leadership Climate  
† $p < .10$  
* $p < .05$  
** $p < .01$  
*** $p < .001$
3.5.3 Predicting Organizational Innovation

To identify if AL climate and POE are related to a higher level of organizational innovations, I repeated the steps described in 3.5.2 and added a third step to include POE.

Step 1 of the regression analyses presents that centralization is significant and negatively related to organizational innovation ($\beta = -.32$, $p < .001$). In addition, step 1 demonstrates no evidence for a significant relation between the control variables organizational size as well as formalization and organizational innovation.

Step 2 shows that the significant effect of centralization on organizational innovation disappears after including the independent variable AL climate. This is significantly related to organizational innovation ($\beta = .30$, $p < .01$). The explanation power increases after step 2 significantly ($\Delta R^2 = .06$, $p < .01$).

Adding POE in step 3 reveals that even the effect of AL climate on organizational innovation decreased, it is still significantly related to organizational innovation ($\beta = .05$, $p < .05$). Moreover, as table 6 on page 56 demonstrates, POE is positively and highly significant related to organizational innovation. Following the argumentation of Baron and Kenny (1986), this change in effects indicates a mediation. Furthermore, subjoining POE increased the explanatory power of the organizational innovation model ($\Delta R^2 = .06$, $p < .05$). These results confirm hypotheses 2 and 3.

Besides, conducting the regression analysis without the control variables led to even stronger effects of AL climate and POE on organizational innovation which indicates stable effects. Last but not least, VIF for the investigated model variable have been all far below 4. Hence, in there no multicollinearity issue in this analyses (e.g., Miles & Shevlin, 2001).
Table 6: Results of Regression Analysis on Organizational Innovation

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Org. Size</td>
<td>-0.05</td>
<td>-0.03</td>
<td>-0.04</td>
</tr>
<tr>
<td>1. Control variables</td>
<td>Centralization</td>
<td>-0.37***</td>
<td>-0.17</td>
<td>-0.12</td>
</tr>
<tr>
<td></td>
<td>Formulation</td>
<td>0.09</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Main effect</td>
<td>AL Climate</td>
<td>0.30**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Main effect</td>
<td>POE</td>
<td></td>
<td>0.25**</td>
<td></td>
</tr>
</tbody>
</table>

$R^2$ .14 .19 .25

$\Delta R^2$ .14*** .05** .06**

Note: Reported are standardized beta's;
AL Climate = Authentic Leadership Climate; POE = Productive Organizational Energy
† $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$

3.5.4 Predicting Mediation of Productive Organizational Energy between AL Climate and Organizational Innovation

As the regression analyses indicate, several bootstrapping procedures, Sobel-Test and the mediation modelling test with PROCESS (Hayes, 2012) reveal a partial mediation. The PROCESS mediation modelling procedure results are demonstrated in table 7 on page 57. Results reveal a positive significant effect of AL climate ($\beta = .16, p < .05$) and POE ($\beta = .19, p < .01$) on organizational innovation as well as a significant indirect effect of AL climate on organizational innovation through productive organizational energy, $ab = 0.06$, BCa CI $[0.02, 0.14]$. The results of the mediation model are summarized in figure 4 on page 57. Consequently, the mediation modelling results support hypothesis 3.7

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7 I controlled for stability of the effects by including TFL climate as a covariate. The indirect effect of AL climate mediated by POE got stronger after including TFL climate. Direct effect $c = .12, p = .29$; indirect effect $ab = 0.10$, 95% CI $[0.04, 0.20]$, $Z = 2,30$. Results demonstrated a full mediation after this step.
Table 7: Direct and indirect effects of AL Climate on Organizational Innovation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Direct effect</th>
<th>Bootstrapped point estimates</th>
<th>t-value</th>
<th>Sobel Z</th>
<th>Indirect effect</th>
<th>Bootstrapped confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL Climate</td>
<td>0.16</td>
<td>0.10</td>
<td>2.18*</td>
<td>-</td>
<td></td>
<td>LLCI</td>
</tr>
<tr>
<td>POE</td>
<td>0.19</td>
<td>0.04</td>
<td>3.20**</td>
<td>2.23</td>
<td>0.08</td>
<td>0.03 0.18</td>
</tr>
</tbody>
</table>

Notes: 10000 bootstrap samples; BC = bias corrected; CI = confidence interval; * p < .05; ** p < .01; R² = .24

Figure 4. Direct and indirect effects of AL climate on Organizational Innovation

Direct effect: c = 0.16, p = .047
Indirect effect: ab = 0.06, 95% CI [0.03, 0.18]
Sobel Z = 2.23
3.6 Discussion

3.6.1 Limitations

Before getting to the theoretical and practical implication section, some possible limitations must be mentioned. First, it is challenging to substantiate causal conclusions with this investigation’s cross-sectional data. Nevertheless, it is doubtable that organizational innovativeness should cause AL climate. A positive outcome such as organizational innovation could at best reinforce POE or AL climate due to experiencing it as a reinforcement in the framework of operant conditioning. Hence, organizational innovation as an outcome variable seems to be more likely than vice versa.

Albeit constructs have been investigated in several survey versions, e.g. organizational innovation was measured in survey 4, a second potential limitation concerns common method bias due to the fact that AL climate and POE data was gathered in survey version 1. However, it should be noted that results are based on multiple estimations which resulted in the mediation model effects. Even when additionally controlling for TFL climate, effects did not disappear. This fact strengthens the confirmation of the postulated mediation model. On the contrary, the direct effect c disappeared and significant full mediation emerged. Nevertheless, it would be useful if future researchers used measures from different sources or different time points in order to ensure the absence of common method bias (Podsakoff et al., 2003; Spector, 2006).

Fourth, extending statistical analyses after controlling for TFL climate let me recognize an alternative model which takes TFL climate as a moderator into account. Results presented that the impacts of AL climate (IV) on POE (M) at values of TFL climate (M) and organizational innovation (DV) led to two deductions. First, just like controlling for TFL climate (C), full mediation emerged. Second, this significant indirect effect of AL climate on organizational innovation at values of TFL climate mediated through POE increased in case TFL climate values rose. Consequently, it is reasonable to assume that coexisting high levels of AL climate and TFL climate lead to synergies. In this case to higher levels of organizational innovation mediated through POE. In this regard, it is worthwhile to mention that using TFL climate as an independent model and AL climate as a potential moderator as a further alternative postulated model resulted in no significant moderation. Based on these primal steps, future research may focus on
investigating postulated models which enhance the explanation of interaction and synergies of different leadership climates.

A third potential limitation concerns generalizability of the findings. The sample is gathered from multiple companies but all those companies were located in Germany. The follower’s judgement about the authenticity of their direct leaders is based in and reinforced by the German culture with its own social values and norms. Consequently, one should be carefully to not over-generalize from these findings (Wang et al., 2014). Further thoughts regarding this issue will be presented in section 5.4.2 Authentic Leadership Climate and Culture. None the less, prospective research should consider to conduct in different cultural setups to support generalization.

### 3.6.2 Implications

By investigating the relation between AL climate and POE, this study took a closer look on the impact of AL on a behavioural, cognitive and more important affective dimension. These are the first-order factors which constitute POE (e.g. Cole et al., 2012). Hence, this study does not only respond to the call for further exploration of AL impacts towards affective outcomes, it extends the research by demonstrating that in addition to TFL (Kunze & Bruch, 2010; Walter & Bruch, 2010) also AL may be good at generating POE. Due to the fact that this is the first study which links AL to POE, future research should be interested in confirming these results.

Moreover, the significant partial mediation explains working mechanisms between AL and organizational innovation. Authentic leaders act transparent in line with their beliefs, demonstrate their feelings and thoughts which activates POE. Transparent behaviour as well as acting as somebody who has nothing to hide reduces uncertainties which results in more space for an enthusiastic and inspired working atmosphere (Chan et al., 2005). Balanced information processing and transparently sharing information - even if it seems to be the plain truth – offers an informative basis for inspiration while looking for new opportunities. Hence, testing and verifying how AL and POE exert influence on organizational innovation demonstrated both, a knowledge enlargement regarding working mechanisms between AL and organizational outcomes as well as underlines the valuable impacts of POE. By doing so, this study aggrandises the knowledge about POE as a desirable resource for firms (Walter & Bruch 2010) as well
as underlines the work of Cole, Bruch and Vogel (2011) who presented first insights on positive relations of productive energy of firms and their overall efficiency.

Last but not least, this study provides responses to the explicit call of Mazutis and Slawinski (2008) who underline the need for more research on AL as strategic leadership, shared and lived through a whole company. Results underline the existence of AL climate as well as the circumstance that some companies are more genuine as others.

### 3.6.3 Summary

This study confirms that authenticity and energy can be measured on the organizational level. Empirical examination of AL, POE and organizational innovation as macro level constructs, reveals that high AL climate has beneficial consequences for POE and organizational outcomes, e.g., organizational innovation. In addition, POE facilitates conducive effects on organizational innovation. Besides, POE explains the routes between AL climate and organizational innovation. Based on this, companies are well advised when they try to enhance their levels of authenticity, which would strengthen POE and lead to significantly more organizational innovativeness.
4 Study 3 – Authentic Leadership Climate: Beefing up TMT Behavioural Integration and Dodging Acceleration Traps

4.1 Abstract

Prior chapters of this thesis underlined the invaluable potency of authentic leadership climate. Hence, it is time to find answers regarding possibilities and limitations of designing and developing a desirable level of authentic leadership climate. Study 3 investigated the influence of TMT behavioural integration as well as of acceleration trap (AT) on authentic leadership climate. A company is deemed in an AT if it seems to tackle its daily business at cyber speed. The amount of tasks seems to control the company and not vice versa. The results demonstrated that TMT behavioural integration is positively and AT is strongly negatively linked to AL climate. Furthermore, AT does moderate the effects of TMT behavioural integration on AL climate. Even in such a strong character that the positive link between TMT behavioural integration and AL climate diminishes. This study investigated data from over 161 German small and midsize companies and approached each construct at the organizational level.

Keywords: Acceleration trap, TMT behavioural integration, authentic leadership climate
4.2 Introduction and Intended Contributions

It is becoming increasingly difficult to ignore the theme authentic leadership development especially because theory and research have demonstrated a lot of positive effects on positive outcomes e.g. follower performance (Wang et al., 2014), trust (Fox et al., 2015; Zamahani et al., 2011), followers ethical decision-making (Cianci et al., 2014), psychological well-being (Nelson et al., 2014; Toor & Ofori, 2009) or even return on investment (Skwarek, 2012). Howbeit a lot of impressive positive authentic leadership impacts have been investigated and proven, only little theoretical research and few studies exist which provide answers and results in regard to authentic leadership development. As a result it is not surprising that authentic leadership development is an emergent theme and researchers like Luthans and Avolio (2003). Avolio (2010) summarizes the present situation of knowledge in regard to authentic leadership development with the comparison of discovering the New World. He argues that this journey has just started. Researchers have begun to look for constitutions which might form genuine leadership but they still see the land where the ship cast off. The need to close the gap as soon as possible gets even more obvious by accentuating “…the considerable promise of AL construct, and the leverage it provides for producing veritable and sustained improvements in individual, group, and organizational performance.” (Gardner et al., 2011; p. 1142). These calls are underlined by the work of Algera and Lips-Wiersma (2012) who highlight the complexity of leadership development and assert that there is still insufficient data and research as well as more attention has to be paid to determine factors which support the development of authentic and genuine managers. To close those gaps more research has to focus on exploring potential enablers and barriers on the individual, group and organizational level.

The aim of this study is to focus on two organizational level factors. The Acceleration Trap (Bruch & Menges, 2010; v. Braun, 1991) is investigated as a potential boundary condition of the development of authentic leadership climate on the one hand and Top Management Team Behavioural Integration (Hambrick & Mason, 1984; Simsek, Veiga, Lubatkin, & Dino, 2005) as a potential enabler on the other hand. Hence, the next sections will determine the influences of two organizational states respectively processes which might enhance or diminish authentic leadership climate. Specifically, I like to close the above described gap by providing three contributions. First, I will investigate Acceleration Trap as a barrier for the emergence of authentic leadership climate and show how important it is to know not only what organizations should do but also what organizations should not do. Secondly, I will explore the importance of
positive organizational processes by determining the link between TMT Behavioural Integration and Authentic Leadership. With that it will get understandable how important organizational encouragement of open and honest interaction is as well as why each organization should integrate such encouragement as a serious strategy. Last but not least, I strengthen this importance by showing the effect of TMT Behavioural Integration in case an organization is running towards an organizational burnout (Bruch & Vogel, 2009).

First, this study follows the call of Avolio and Walumbwa (2014) and Gardner et al (2011) that research has to focus to a greater extent on creating authentic leadership cultures within entire companies.

Second, by examining AT as a potential boundary condition to establish AL climate, this study underlines the results of Bruch and Vogel (2011) while mirroring their explanation of AT’s harmful aspects as well as some daily news reports about the fast moving dynamics in the business world and its affairs, e.g., the exhaust affair of VW (Skapinker, 2015).

Third, this study investigates AT not only a boundary condition but also as a moderator which decreases the positive impacts of TMT behavioural integration. This is in line with the existing AL theory (e.g. Avolio & Gardner, 2005 or Chan et al., 2005) and the proposed model of Mazutis and Slawinski (2008) who described the importance of interactions at the TMT-level to establish an authentic dialogue within firms. Moreover, as far as I know, this is the first empirical test in this regard.

In summary, this study test the influences of TMT behavioural integration and AT on AL climate. All constructs are approached at the organizational level. Accordingly, the study extends previous theorizing on relevant mechanism which lead to and prohibit AL climate. Furthermore, it puts such theory to an empirical test including the control of business sector, tenure of the existing TMT composition and TMT member’s average education level.
4.3 Theoretical Background and Hypotheses Development

Knowing about the impacts of AL as well as how those impacts foster the positive effects of TFL climate on different outcomes, the value of an above average authentic leadership degree should be clear, even more if one considers the possibility of a high authentic leadership behaviour throughout the whole organization. Hence, one should raise the question “How does a firm achieve an above average leadership climate?” Possible responses might be found if one investigates possible antecedents of authentic leadership on the individual level and possible antecedents on the organizational level. In this context, I will enhance the nomological network of authentic leadership with the focus on enablers. To fill this research gap, I like to mention the life-story approach (Shamir & Eilam, 2005). I will continue with presenting the idea of developing authentic leaders on the basis of coaching (Fusco, O’Riordan & Palmer, 2015; Kinsler, 2014). After that I like to focus on the organizational aspect of the AL definition of Luthans & Avolio (2003) and argue why the organizational processes might be more important for the AI and AL climate development.

Shamir and Eilam (2005) considered the Life-stories approach as the theoretical foundation of the conceptual AL model. They argue that authentic leadership rests heavily on the self-relevant meanings which the leader attaches to his or her life experiences. These meanings are captured in the leader’s life-story. Hence, they suggest, that self-knowledge, self-concept clarity, and person-role merger are derived from the life-story. Therefore, the construction of a life-story is a considerable element in the development of authentic leaders. Self-knowledge, self-concept clarity and strong convictions are the three components of the life-story approach.

Self-knowledge consists, first of all, of one person's answers to the question “Who am I?” According to the “narrative mode of knowing” (Bruner, 1986), these answers are often organized in the form of life-stories. Life-stories express the storytellers’ identities, which are products of the relationship between life experiences and the organized stories of these experiences. However, life-stories are not testimonies to the objective events that happened. They are the manifestation and expression of the events as perceived and interpreted by the individual that experienced them (Widdershoven, 1993, p. 2). For instance, Bennis and Thomas (2002) explicitly refer to the crucibles and defining moments in leaders’ lives as places or experiences from which one extracts meanings that lead to new definitions of self. According to Bennis and Thomas, crucibles are places where essential questions are asked: “Who am I?”, "Who could I
be?”, “Who should I be?” and “How should I relate to the world outside myself?” For self-development and self-concept clarity the events or experiences themselves are less important than the meaning the leader conferred on those experiences. The same principles apply not only to crucibles but also to other, more mundane experiences, for instance to role-model learning. According to Shamir and Eilam (2005), many leaders’ life-stories emphasize learning from role models of various types: historical or public figures, literary figures, parents, siblings and other family members, teachers, mentors, superiors and peers. In the case of authentic leaders, these models are not imitated. Rather the leader constructs his or her self-concept with reference to these models which can be described as a gradual process of self-clarification. In other words, highly developed self-knowledge in terms of a life-story provides the authentic leader with self-concept clarity because it organizes life events into a gestalt structure that establishes connections between those events so that the person’s life is experienced as a coherent unfolding process.

Fusco et al. (2015) and Kinsler (2014) are dedicating their attention to the link between coaching and AL in dependence on the life-story approach (Shamir & Eilam, 2005). They describe that evidence-based coaching based on contextually relevant methodologies and mindfulness provide opportunities enhance both self-awareness and self-regulation which are two key aspects of the AL construct (e.g. Avolio et al., 2004). Elaborating the past to build a better understanding of who the coachee might be, should lead to a better picture of him (Fusco et al., 2015; Kinsler, 2014). Evaluating alternatives of choices and potential outcomes during coaching sessions should provide the coachee with a broader perspective of opportunities which, as a consequence should enable to act in a significant higher autonomous way. Kinsler (2014) goes even one step further and recommends that a company-wide commitment is needed to build an ‘authentic organisation’ to realign “… what a company claims they value with what followers and customers experience” (Kinsler, 2014; p.92). Her recommendation leads to the debate development of leaders vs. leadership development (Day, 2002).

Consistent with Kinsler’s intimation and the call of Day and Harrison (2007) to evolve and investigate ideas about leadership development, I like to meet the necessity of authentic leadership development and to provide reasonable thoughts on building more ‘authentic organisations’. This is in line with extending the nomological network of AL regarding potential enablers while operating it as an organizational construct.

Walter and Bruch (2010) illustrated first results which prove the impact of organizational structures and processes on leadership. They investigated the facets
formalization, centralization and organizational size which represent key constructs in what is called a "traditional view" on organizational structure (Brass, 1984, p. 519). Their results demonstrate that both the size of an organization and centralization are negatively related to its TFL climate, while formalization is positively related to TFL climate. They correspond to the definition of organizational structure as “the enduring characteristics of an organization reflected by the distribution of units and positions within the organization and their systematic relationships to each other” (James & Jones, 1976, p. 76).

Moreover, Hambrick (1994) describes top management leaders as a group and underlines the relevance of organizational processes. He adds that groups of TMTs can be understood as all leaders within a company. Hence, just as Hambrick (1984) argues that all strategies, processes and effectiveness can be understood as reflections of powerful actors in the organization, I claim that each leader occupies a specific amount of power to the purpose which might have been cascading down from the top level. Hambrick goes even one step further and describes that “TMT leaders are like other managers…” (1995; p.110). Calling to mind attraction-selection cycles (Schneider, 1987) as well as that individuals within the same framework usually face common experiences and social influences (Kotlowski & Hattrup, 1992) - both topics characterized in Chapter 2.3 and 3.3 of this thesis - I suppose that it is legitimate to view TMT behavioural integration as an indicator for all ongoing processes between all powerful actors respectively leaders within a company which visualises organizational processes and shared guidelines. For those reasons, it is reasonable to assume that processes within the most powerful actors in a company serve as a valuable indicator to reflect processes of all powerful actors in a company. Therefore, I examine TMT behavioural integration as an organizational construct which reflects organizational processes.

Considering that equal leadership values and behaviour might apply through a whole firm, one should be aware of the fact that leadership on the organizational level can be equalized to strategic decision making and strategic leadership (Hunt, 1991; Yammarino et al., 2008) which influences a company’s path and future for a long period. In addition, one has to bear a multiplier effect in mind. It is definitely beneficial to have one or a few authentic leaders in a company regarding the positive effects on the individual or group level. But if we thing about authentic leadership climate and take into account all possible positive effects and synergies, all superior advantages of authentic leadership as an organizational in opposite to an individual construct it will get intelligible.
Summing up, it is high time to zero in on investigate organisational processes which might count as further leadership climate enablers as well as being potential obstacles, in the case of this thesis in conjunction with authentic leadership climate.

4.3.1 Top Management Team Behavioural Integration as a Source for Authentic Leadership Climate

Based on the work of Hambrick (1994), Simsek and colleagues (2005) developed the TMT behavioural integration construct and measuring scale. They have conceptualized and improved behavioural integration as meta-construct which intends to capture three interrelated and supporting elements of management task processes through a company as a whole. Level of collaborative behaviour is the first element, quantity and quality of information exchange the second, and emphasis on joint decision making the third. Hambrick (1994) is emphatic on the perspective that behavioural integration as a relatively comprehensive attribute of a team’s integral embedding ability. The interrelated task and social related processes capture “the degree to which the group engages in mutual and collective interaction” (Hambrick, 1994; p. 188). Bruch and Menges (2010) and Hambrick (1995) get straight to the point when describing unfortunate circumstances of management team’s interactions. During their investigations, they frequently observed rare cohesive and collaborative actions and they did not seldom observe that executives meet as frequently as they would need to. It does not need a lot to explain why no constructive or even genuine leadership climate appears, if organizational processes do not support a overcoming of ‘once in a moon get-togethers’ of executives. Those kind of situations allow a TMT an elusive balanced information process in a best case scenario. Katzenbach and Smith (1993) pointed up the indispensability of leaders doing ‘real work’. What do they mean with ‘real work’? They define it fact-finding, crucial and actual analyses to compare notes with each other on relevant facts as well as being able to do solid decision making instead of letting do the work by others, scanning and acknowledging it (Hambrick, 1995). TMT behavioural integration implies rules of engagement, like encouraging open give-and-take, overcoming power differences or insisting of becoming and staying factual and not personal.

To summarize, TMT behavioural integration (Hambrick, 1994; Simsek et al., 2005) is defined by constructive behavioural processes, focusing on a TMT integrative ability to interact with each other in a vein of challenging, regardful - transparent, active as well
as interactive - supportive exchange of information, ideas and approaches to solving business challenges. In doing so, the probability of e.g. destructive and harmful rivalries, group-think, or problem orientation and fragmentation should decrease as a first advantage. The second advantage is the increased probability of connectivity between executive, information sharing, fast shared awareness, willingness to improve and support, and virtuousness. Last but not least, those positive, invaluable as well as everything else than easy to counterfeit processes within a TMT build the fundament of impactful beneficial leadership climate, in this case authentic leadership climate. Specifically, behaviours and characteristics of processes of top groups and top individuals count as one of the most influencing ones (Finkelstein & Hambrick, 1996). While living and exemplifying them, e.g., supporting each other, sharing information and decision making, developing awareness by informing about influences and impacts of actions, building clarity about working relevant expectations and challenges, executives will spread these behavioural values and standards due to their function as virtuous ideals. Sticking to these standards, values and processes, leadership climate will develop through the consistent presenting and role modelling within business and between business units in a company. Regarding to TMT behavioural integration, I postulate that authentic leadership climate will develop. Particular reasons for this postulation are following now.

TMT behaviour has a major impact on organizational processes. If a TMT designs effective group processes, interacts with one another and builds commitment, they will utilize many information, engage in reciprocal and collaborative interactions. The exchange of information, the collaborative behaviour and joint decision-making which is specified by TMT behavioural integration should consequently increase the degree of balanced information processing, transparency as well as self-awareness by experiencing a friendly environment for feedback seeking within a TMT as well as other leaders in a company. Sharing and spreading these behavioural processes through role modelling develops definition of standards. The phenomena of described attraction-selection cycles and common experiences and social influences in chapter 3.3 of this thesis will increase the probability of similarity within business units and in the end within the company. Therefore, I postulate a positive influence of TMT behavioural integration on AL climate:

Hypothesis 1: Top management team behavioural integration will be positively associated with Authentic Leadership Climate.
4.3.2 Acceleration Trap as a Boundary Condition of Authentic Leadership Climate

From the beginning of its existence humanity has consistently demonstrated the will of development. This development applied and applies to e.g. language, knowledge, culture and in the end to the business world. Viewing the dynamics and the constantly faster developing business world for example through technology (v. Braun, 1991), the desire for shorter product life cycles, growth and sales increase, the increasing number of change processes (Körner, 2014), reminds me of the Old Testament in which Salomo stated already several thousand years ago: “Pride goes before destruction, and haughtiness before a fall” (Proverbs 16:18, NLT). Schiller (1801) brought the inconvenient consequences of haughtiness to mind with his prologue of Joan of Arc. He pointed out that haughtiness is the reason for falling angels. Making the link to our business world, companies exaggerated goals and processes could be seen in the light of haughtiness. Hence, pace within companies and short term thinking might let companies stumble and fail in many performance facets. Organizations might overextend themselves and become victims of their own. Haughtiness will not allow them to set well-balanced targets. Their obsession to reach short term objective will earlier or later backfire as they were trapped in acceleration. In line with this argumentation, it is time to take a detailed view on the work of Bruch and Vogel (2009) and Bruch and Menges (2010).

Bruch & Vogel (2009) observe that long time periods of permanent intensive commitment, constant rising process velocities and increased intensity of organizational actions do result in everything else than organizational success. Quite the contrary might be the case. These aspects are crucial characteristics of the AT (Zaug & Thom, 2003). Thus, long time periods of permanent intensive commitment increase the probability of phenomenon like shortage of energy for change (Buchanan, Claydon & Doyle, 1999), ineffectiveness (Sull, 1999; Tushman & O’Reilly, 1996) and cynicism (e.g. Dean, Brandes & Dharwadkar, 1998). At the end this might even lead towards organizational burnout (Greenwood & Greenwood, 1979; Maslach & Leiter (1997). A large number of firms is confronted with the AT (Bruch & Vogel, 2009) because they thoughtlessly run one initiative after the other and spend to less time on consolidation and reflection. Employees and individual leaders and the whole organization in its entirety loses focus. Effects are superficiality and moderate outcomes in the short run and resignation as well as organizational burnout in the long run.

Linking the AT to authentic leadership climate we will notice that there is incongruity. The incongruity gets plausible by comparing the two constructs. Being caught in the AT
involves the fact of an inadequate level of resources spend for elaborating the situation, processes and alternative choices and possible decision paths for a sustainable future of a company. On the other side, authentic leadership climate is based by definition on e.g. gathering and evaluating information to increase balanced information processing, communicating and soliciting views which challenge own deeply held positions or encouraging and seeking critical feedback to improve interactions (Walumbwa et al, 2008). Rudiments for better and sustainable decision making are not existing, not to mention resources to put those into practice. Furthermore, most developed and successful companies are the ones in which leaders care about the development of others in an equal way to the caring about getting projects and tasks succeeded (Bass & Avolio, 1994). And as we all know, development makes demands on resources (e.g. time and money), both on the individual and organizational level.

Thus, TMTs, the majority of leaders and employees within a company which is resided in the AT are not provided with sufficient resources to get their work done. They face a frequent change in priorities and are working continuously under pressure. This means that individuals within such companies neither have any resources left to fulfil an adequate level of balanced processing nor pay regard to self-awareness respectively developmental processes. One could argue that a company which is caught in the AT might be autistic which means that insufficient appreciation of the circumstances is a result due to the more or less other-directed ongoing. Such companies are steadily fire-fighting, show a deficit of gathering valuable information. Drawing an integrated big picture to initiate sustainable behaviour through the whole organization will not be possible anymore. It is also doubtful that policy maker are not aware anymore of the on-goings of their peers and that enough time exists to pay attention to knowledge management regarding leadership decision making. Increased probability of a lack in transparency is the consequence. This causes make it highly probable that the AT reduces the level of authentic leadership climate within a firm. Therefore, I postulate a negative influence of AT on AL climate:

Hypothesis 2: Acceleration Trap will be negatively related to Authentic Leadership Climate.
4.3.3 The Influence of Acceleration Trap on the Relation between and Top Management Behavioural Integration on Authentic leadership climate

The valuable processes within top management teams are desirable and indispensable during challenging and tempestuous periods. But does this mean that the effects of behavioural integration at the top level overlap the effects of AT. Considering the results of Bruch and Menges (2010a; 2010b) as well as Bruch and Vogel (2011) which demonstrate a tremendous amount of companies which are caught in the AT as well as the AT’s disastrous effects, I postulate that a high level of AT will diminish the positive effects of TMT behavioural integration in regard to AL climate and weakening the positive association between those two constructs.

Hypothesis 3: AT will negatively moderate the relation between Top Management Team behavioural integration and Authentic Leadership Climate.

All postulated relations of Study 3 are presented in figure 5 on page 72.
Figure 5. Overall conceptual model of postulated relations within study 3

Study 3 ........................
4.4 Method

4.4.1 Data Collection and Sample Description

Just like in Study 1 and 2, data for study 3 were collected in cooperation with an agency located in Germany which is specialized in benchmarking small-to-medium sized enterprises. Study 3 uses the same sample size as study 2. Hence, the sample includes data of 161 organizations which have been gathered in the year 2010 and 2011. All companies had fewer than 5,000 employees and were located in Germany. Each company got a detailed benchmarking report in return for their participation.

As in study 1 and 2, data were gathered from multiple sources. First, a key informant survey which was completed by each organization’s TMT member or Human Resources executives to secure general information (the organization’s size, industry affiliation, etc.). Second, employee survey data were collected to obtain information on AL Climate (survey 1), AT (survey 4), and TMT behavioural integration (survey 5). As described in section 2.4.1, participating organizations sent a standardized e-mail to their associates through their Human Resources department or from a senior manager’s e-mail address, depicting the study’s purpose and providing a link to a web-based survey hosted by an independent company (in a few instances, computer terminals were installed to enable the participation of employees without own company e-mail address). A programmed algorithm implemented into the survey web-site directed respondents randomly to one of the used survey versions, in order to alleviate concerns about common method bias (Dickson, Resick, & Hanges, 2006; Erdogan, Liden, & Kraimer, 2006; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Rousseau, 1985). Examined construct measures were translated to German through professional translators following a double-blind back-translation procedure (Schaffer & Riordan, 2003). The developed German scales by Avolio, Gardner and Walumbwa (2008) were used to measure for the AL climate. Full anonymity was assured to the respondents.
4.4.2 Measures

**Authentic leadership climate.** Precisely like in study 1 and 2, AL climate was captured in employee survey version 1 using the item scales developed by Walumbwa et al. (2008). Walumbwa et al. (2008) illustrated first empirical results which illustrate that this measure has evidence for its psychometric accuracy (Walumbwa et al., 2008). I have aggregated all responses of individual members to realise an organizational level measure of authentic leadership. This method was justified due to the results of aggregation statistics ($\text{ICC}_1 = .25; \text{ICC}_2 = .74; \text{mean R}_{wg} = .87$, for data collected in the year 2010; $\text{ICC}_1 = .27; \text{ICC}_2 = .76; \text{mean R}_{wg} = .85$, for data collected in the year 2011).

**Acceleration Trap.** The AT measurement scale has been developed by Bruch and Menges (2010). The scale includes three dimensions, multiloading, overloading and perpetual loading (Bruch & Vogel, 2011). Each dimension consists of three items. Each item focuses on the collective within the company. Example items are “In our company, priorities often change”, “People in our company often reach their limit because of too much work”, and “People in our company work under constantly elevated time pressure”. AT was captured in employee survey version 4. As for all other measures, responses of all individuals have been aggregated to achieve an organizational level measure ($\text{ICC}_1 = .39; \text{ICC}_2 = .85; \text{mean R}_{wg} = .89$, for data collected in year 2010, $\text{ICC}_1 = .46; \text{ICC}_2 = .88; \text{mean R}_{wg} = .89$, for data collected in year 2011).

**TMT behavioural integration.** TMT behavioural integration as defined by Simsek and colleagues (2005) in the survey version 5. The used measure consist of nine items, e.g. “The members of the executive board discuss usually their expectations towards each other”. All individual responses of the TMT behavioural integration scale have been aggregated to achieve an organizational construct scale. ($\text{ICC}_1 = .12; \text{ICC}_2 = .54; \text{mean R}_{wg} = .87$, for data collected in year 2010, $\text{ICC}_1 = .20; \text{ICC}_2 = .69; \text{mean R}_{wg} = .95$, for data collected in year 2011). The ICC₂ value of the 2010 data did not exceed the cut-off value of .70. Nevertheless, the F-test results show a strong variance difference between companies, $F[78,226] = 2.18$ (p < .001). Moreover, TMT of investigated small and midsize companies consisted frequently of three to five members. Especially ICC₂ values depend on the number of respondents within respectively group or team size. This issue is discussed by Bliese (2000; p. 356). Kunze and Bruch (2010; p. 604) argue that ICC₂-values over .050 indicate justifiable aggregation statistics. Greer, Homan, De Hoogh, and Hartog (2012; p. 207) go even further and state a conventional cut-off level of 0.40 for ICC₂-values to legitimate aggregation statistics. Hence, aggregation statistics calculated within this study are acceptable and explain enough variance between
surveyed TMTs. Table 8 summarises the aggregations statistics for AL climate, AT and TMT behavioural integration. $r_{wg}$ values have been assessed to determine within-group agreement for AT, TMT behavioural integration and AL climate. Those passed over the conventional cut-off value of 0.70 (James, Demaree, & Wolf, 1993) as well.

Table 8: Aggregation statistics for TMT behavioural integration, AT, and AL Climate

<table>
<thead>
<tr>
<th>Top Job Data Constructs</th>
<th>AT</th>
<th>TMT Beh. Int.</th>
<th>AL Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICC1</td>
<td>0.39</td>
<td>0.12</td>
<td>0.25</td>
</tr>
<tr>
<td>ICC2</td>
<td>0.85</td>
<td>0.54</td>
<td>0.74</td>
</tr>
<tr>
<td>$r_{wg}$</td>
<td>0.89</td>
<td>0.87</td>
<td>0.87</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICC1</td>
<td>0.46</td>
<td>0.20</td>
<td>0.27</td>
</tr>
<tr>
<td>ICC2</td>
<td>0.88</td>
<td>0.69</td>
<td>0.76</td>
</tr>
<tr>
<td>$r_{wg}$</td>
<td>0.89</td>
<td>0.95</td>
<td>0.85</td>
</tr>
</tbody>
</table>

F-tests for analysing between company variance resulted in a significance level of $p < .001$

Control variables. I controlled in our analyses for business sector, tenure of current existing TMT, and average of TMT educational level, to rule out some alternative explanations for the results. Control variables were gathered through the key informant survey which was completed by TMT members or an executive of the Human Resources department of each organization.
4.5 Results

4.5.1 Descriptive Statistics and Correlation Values

Table 9 on page 77 presents’ means, standard deviations and intercorrelations of all included variables within study 3. The control variable business sector correlates negatively with AT ($r = -0.22, p < 0.01$) and positively with AL climate ($r = 0.22, p < 0.01$). Presented values show in addition that the control variable TMT’ average education level intercorrelates with AL climate ($r = 0.16, p < 0.05$). Intercorrelations are also demonstrated between TMT behavioural integration and AT ($r = -0.28, p < 0.01$), TMT behavioural integration and AL climate ($r = 0.43, p < 0.01$) as well as AT and AL climate ($r = -0.65, p < 0.01$).
### Table 9: Descriptive Statistics and Correlations of Study 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Business sector</td>
<td>2.94</td>
<td>1.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. TMT tenure</td>
<td>4.26</td>
<td>1.41</td>
<td>.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. TMT’s average education level</td>
<td>3.34</td>
<td>0.89</td>
<td>.23**</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. TMT behavioural integration</td>
<td>4.18</td>
<td>0.56</td>
<td>.12*</td>
<td>.11</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acceleration Trap</td>
<td>2.96</td>
<td>0.20</td>
<td>-.22*</td>
<td>-.12</td>
<td>-.01</td>
<td>-.28**</td>
<td></td>
</tr>
<tr>
<td>6. AL climate</td>
<td>3.70</td>
<td>0.40</td>
<td>.22**</td>
<td>.07</td>
<td>.16*</td>
<td>.43**</td>
<td>-.63**</td>
</tr>
</tbody>
</table>

TMT = Top Management Team; AL = Authentic Leadership; * p < .05, ** p < .01
4.5.2 Predicting AL Climate

To ascertain if TMT behavioural integration and AT are related to AL climate, I carried into execution a four step linear regression analyses. Effects of all studied constructs are reproduced in table 10 on page 80. A weak significant relation between the control variable business sector and AL climate ($\beta = .18, p < .05$) is demonstrated within step 1. Step 2 of the results reflects that this relation disappears after including TMT behavioural integration. In return the relation between TMT’s average education level and AL climate increases and becomes significant ($\beta = .16, p < .05$). Furthermore, the examination of TMT behavioural integration in regard to AL climate results in a highly positive association ($\beta = .41, p < .001$). Based on this fact, the explanatory power of the model increases highly ($\Delta R^2 = .16, p < .001$). This result supports hypothesis 1.

Including AT in step 3, both the positive relation between TMT’s average tenure education level ($\beta = .14, p < .05$) as well as TMT behavioural integration ($\beta = .26, p < .001$) and AL climate maintain. Table XY presents construct in addition that the added variable AT relates negatively to AL climate ($\beta = -.57, p < .001$). The explanation power increase also significantly ($\Delta R^2 = .21, p < .001$) after including AT in step 3. Hence, step 3 of the linear regression analyses supports hypothesis 1 and 2.

Step 4 describes the results of the postulated moderation. On that account, the changing and additional effects after including the moderation term will be described in the next section, section 4.5.3.

4.5.3 Predicting Moderation: Effects of Acceleration Trap on AL Climate at values of TMT Behavioural Integration

PROCESS modelling within SPSS (Hayes, 2012) and step 4 of the already mentioned linear regression analyses was run, to test a significant moderation effect of AT on the impacts of TMT behavioural integration towards AL climate. Both procedure demonstrate the same results.

Step 4 of the linear regression analyses included the moderation term TMT behavioural integration x AT. This step displays a stable positive relation between TMT’s average tenure education level ($\beta = .14, p < .05$) as well as TMT behavioural integration ($\beta = .29, p < .001$) and AL climate on the one side and a stable negative relation between AT and AL climate
on the other side ($\beta = -0.50, p < .001$). Moreover, a negatively significant effect of the moderation term ($\beta = -0.16, p < .05$) on AL climate is presented in step 4. Such a coefficient signifies that AT moderates the relation between TMT behavioural integration and AL climate. The explanation power increased also significantly ($\Delta R^2 = 0.02, p < .05$). The depicted results support hypothesis 1, 2 and 3. Moreover, the complete model seems to explain 54 percent of variance.

As in study 1 and 2, I run the linear regression analysis without the control variables. The results were stronger but have had the same direction without the control variables. This indicates stable effects. Moreover, variance inflation factors (VIF) for the investigated model were all far under 4. Hence, these analyses indicate no evidence for multicollinearity (e.g., Miles & Shevlin, 2001).

Examining the postulated model with PROCESS moderation modelling led to the same results. The estimated values are represented in table 11 and table 12 on page 81. Table 10 on page 80 demonstrates a negatively significant effect of AT on the impact of TMT behavioural integration towards AL climate ($\beta = -0.08, p = 0.01$) based on a linear regression analysis. The moderation effect of AT is further specified in table 12 on page 81. It describes the dwindling effect of TMT behavioural integration in case AT values increase. Figure 6 on page 82 displays one more time the positive significant relation between TMT behavioural integration and AL climate. AL climate values increase in case TMT behavioural integration values rise. AL climate values decline in case AT values increase as well as that the positive association between TMT behavioural integration and AL climate disappears in case AT values rise above $+1 SD$ (Table 12, p. 81).

Summarizing, all analyses and results underline the confirmation of hypothesis 1, 2 and 3.\(^8\)

---

\(^8\) All effects persist if analyses were run with organizational size, centralization and formalization as covariates. Moreover, the supplemental analyses present a highly significant association between the covariate centralization and AL climate ($\beta = -0.34, p < .001$). The moderation effect maintains significant at $p = .05$. 79
Table 10: Results of Regression analysis on AL Climate

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>AL Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Step 1</td>
</tr>
<tr>
<td>1. Control variables</td>
<td>Business sector</td>
<td>.18*</td>
</tr>
<tr>
<td></td>
<td>TMT tenure</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>TMT’s average education level</td>
<td>.12</td>
</tr>
<tr>
<td>2. Main effect</td>
<td>TMT behavioural integration</td>
<td>.41***</td>
</tr>
<tr>
<td>3. Main effect</td>
<td>Acceleration Trap</td>
<td></td>
</tr>
<tr>
<td>4. Moderation effect</td>
<td>TMT behavioural integration x AT</td>
<td></td>
</tr>
</tbody>
</table>

|                          | R²                                    | .05        | .21        | .52        | .54        |
|                          | ΔR²                                   | .05*       | .16***     | .21***     | .02**      |

Note: Reported are standardized bet's; AT = Acceleration Trap; TMT = Top Management Team; AL = Authentic Leadership

† p < .10
* p < .05
** p < .01
*** p < .001
### Table 11: Model Summary of Effects on AL Climate

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>UPCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business sector</td>
<td>.01</td>
<td>.02</td>
<td>.99</td>
<td>p &gt; .05</td>
<td>-.02</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>TMT tenure</td>
<td>-.01</td>
<td>.02</td>
<td>-.50</td>
<td>p &gt; .05</td>
<td>-.04</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>TMT’s average educational level</td>
<td>.07</td>
<td>.03</td>
<td>2.6</td>
<td>p &lt; .05</td>
<td>.02</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>TMT be. in</td>
<td>0.12</td>
<td>.03</td>
<td>3.90</td>
<td>p &lt; .001</td>
<td>.06</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Acceleration trap</td>
<td>-0.22</td>
<td>.03</td>
<td>-7.07</td>
<td>p &lt; .001</td>
<td>-.28</td>
<td>-.16</td>
<td></td>
</tr>
<tr>
<td>TMT be. in. x</td>
<td>-0.08</td>
<td>.03</td>
<td>-2.87</td>
<td>p &lt; .01</td>
<td>-.13</td>
<td>-.02</td>
<td></td>
</tr>
</tbody>
</table>

*Note: TMT be. in. = TMT behavioural integration; R² = .56*

### Table 12: Conditional effects of TMT behavioural integration on AL climate at values of AT

<table>
<thead>
<tr>
<th>AT</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low AT, -1SD (-.94)</td>
<td>.19</td>
<td>.04</td>
<td>4.51</td>
<td>p &lt; .001</td>
<td>.11</td>
<td>.28</td>
</tr>
<tr>
<td>Average AT, (0.00)</td>
<td>.12</td>
<td>.03</td>
<td>3.9</td>
<td>p &lt; .001</td>
<td>.06</td>
<td>.19</td>
</tr>
<tr>
<td>High AT, 1SD (.94)</td>
<td>.05</td>
<td>.04</td>
<td>1.38</td>
<td>p &gt; .05</td>
<td>-.02</td>
<td>.13</td>
</tr>
</tbody>
</table>
Figure 6. Effects of TMT behavioural integration and AT on AL Climate
4.6 Discussion

4.6.1 Limitations

As with all investigations and studies, the present is not without potential limitations. First, it is not easy to argue causal relations in the current study due to cross sectional data. Hence, it is not unjustified that TMT behavioural integration might be the cause of AL climate and not vice versa. However, respecting the fact that followers rated their direct peers and not TMTs as well as Hambrick’s (1984) theorizing on upper echelon effects that organizations are a reflection of its managers and the deliberations of Luthans and Avolio (2003) and Mazutis and Slawinski (2008) about cascading effects from the very top of organizations down to middle and direct managers respectively leaders it seems reasonable to view TMT behavioural integration on the top of a company as a source to develop AL climate.

Second, as results demonstrate a significant relation between TMT’s average educational level and AL climate and as results show that this relation decreases after including TMT behavioural integration, the model could be extended. Especially because Hambrick (1984) discusses the relation of TMT’s members education and Simsek et al. (2005) report about negative impacts of educational diversity on TMT behavioural integration. Current results indicate a mediational process of TMT behavioural integration and education. Future research may strengthen those findings by investigating the role of education and educational diversity for the establishment of AL climate.

Last but not least, after controlling the stability of the results with different covariates, results also indicate a highly significant relation between organizational structure and AL climate. In this regard, a negative relation between centralization and AL climate was found which incidentally did not affect the main effects. Nevertheless, future research may more intensely bring into focus organizational structure as well as compare impacts of organizational processes and structures to several leadership climates. The next step might be to take the current study and the results in regard to relations between organizational structure and TFL climate of Walter and Bruch (2008) as a starting point.
4.6.2 Implications

The main objective of this study was to identify potential antecedents which enable the development of AL climate. The results demonstrate first insights in establishing AL climate by fostering positive organizational processes at the top level of companies. In this case TMT behavioural integration (Simsek et al., 2005) processes which seem to cascade down (Mazutis & Slawinski, 2008) through entire small and midsize organizations.

In addition, this study went beyond several calls (Avolio & Walumbwa, 2014; Gardner et al., 2011; Luthans and Avolio 2003) which encouraged looking for potential enablers in regard to the evolvement of AL climate. This study verified high organizational levels of AT (e.g. Bruch & Vogel, 2011) as a boundary condition to establish AL climate. This is not a surprise if we consider that AT describes and measures the amount of multiloading, overloading and perpetual loading within a company. Thus, it is easy to imagine that leaders spend less time on balanced information processing or reflecting about the on-goings despite the issue that resources may be strongly limited to hearten peers and followers in order to share opinions and exchange information. The surprising fact was indeed the heavy impact of AT on AL climate. This strong impact is punctuated by the outcome that high degrees of AT devastate the valuable impacts of TMT behavioural integration on AL climate. Those results reflect the harmful aspects of AT and underlines the findings of Bruch and Menges (2010a) as well as the pertinence to expedite the research on AT.

Taking the practitioner’s perspective into account, the results should encourage HR departments to beef up TMT processes to become a ‘genuine’ organization. This could happen through the implementation of norms and guidelines which trigger preferable interaction processes at the top level of a company. Referring to that, it may be valuable if companies rethink their incentive systems and implement assessment criteria which consider the evaluation of organizational processes and interactions between TMT members. In addition, companies may also increase their focus on advanced trainings and further education of their TMT team. This implication is supported by the result that TMT’ average level of education matters in the context of establishing AL climate. Particularly if further education or advanced training includes facets regarding communication and interaction. By doing so, companies could kill two birds with one stone. They could shape awareness for the relevance of the TMT’ behavioural integration quality and possibly enhance this quality which would go along with a high probability of establishing AL climate.
Last but not least, keeping the strong impact of AT on AL climate in mind as well as the incredible amount of companies which seem to be deemed in the acceleration trap (Bruch & Menges, 2010b), managers need to react. By reacting I do not mean that they should close down their businesses and projects by half. In fact, I agree with Bruch and Vogel (2009) who remark that the loophole out of the acceleration trap is not to resign intensive efforts, but rather break through the narrow minded focus to dodge the risk of getting trapped. This is underlined by the high significant moderating effect of AT on TMT behavioural integration towards the establishment of an AL climate. Companies need to take care of not losing their middle management or followers by falling into the acceleration trap. Especially because of the fact that being caught in means that, it does not matter anymore if the quality of processes at the top level of a company is high. Being trapped means that the valuable impact of the TMT behavioural integration processes gets lost, probably through a disconnection between the top and middle management as well as their employees.

4.6.3 Summary

By responding to several calls of extending research on antecedents of AL, this study demonstrates the significance of TMT behavioural integration as an indicator for organizational processes. Based on the results, it is justified to point to the interacting working mechanisms of TMT behavioural integration and AT which bring a little bit of light into the darkness regarding the research on the establishment of favourable leadership climates. Constructs have been approached at the organizational level. As a result, the study extends previous theorizing on relevant mechanism which may lead to or prohibit AL climate.
5 Overall Discussion and Conclusion

5.1 Abstract

The closing chapter of this dissertation provides an outline of the research motivation (i.e., to determine how authentic leadership climate increases tangible company outcomes). Continuing with a summary of the most important research findings based on the three realized studies, the section summary of key practical implications introduces the summary of the overall key research findings. Discussions about methodological limitations and possible solutions, relations between cultural conditions and authentic leadership climate, and general future directions are discussed in the penultimate section. Finally, this thesis concludes by emphasizing the relevance of leadership development.
5.2 Summary of Key Research Findings

5.2.1 Impacts of authentic leadership climate

The tested hypothesis of study 1 and hypotheses 1 and 2 of study 2 support the positive impact of AL, in this case as an organizational-level construct. All results of the tested hypotheses are presented in Figure 7 on page 90. Study 1 revealed the over and above effect of AL climate compared to transactional and transformational leadership climate on organizational performance. Organizational performance was conducted with the six following items: return on investment, efficiency of business processes, employee satisfaction, and employee and customer commitment. TMT rated these items based on the data which they had at one’s disposal. The data for the innovation outcome variable for study 2 was collected in the same way and highlighted a strong positive effect of AL climate as well. Used items included a rating of advertising acceptance for innovation, convincing relevant company members on innovative ideas, transferring innovative ideas into useful applications and systematic implementation of innovative ideas in the working environment. These results confirm the positive pathways of the AL nomological network (e.g. Walumbwa et al., 2008; e.g. Ilies, et al., 2005; e.g. Clapp-Smith et al., 2009) and extend it by demonstrating incremental validity at the organizational level. In addition, proofed explanations have been demonstrated regarding the ‘black box’, which masks working and process mechanism elucidated in regard to relationships between AL and innovation as organizational-level measurements. In the case of this thesis, POE explains a part of the relationship between AL climate and organizational innovation by illustrating how AL Climate increases affective, cognitive, and behavioural actions of all members within a company. These company member’s actions strengthen positively the impact on organizational innovation.

In summary, the results indicate that it is beneficial to go above and beyond transactional (CR leadership) and transformational leadership. Furthermore, following the results of study 2 and 3 and presenting AL, TFL, and CR leadership as organizational-level constructs, this research answers the call for extended research on the macro-level of organizations (e.g., Gardner et al., 2011; Yammarino et al., 2008).
5.2.2 Developing authentic leadership climate

The current focus of AL development is based on the individual level (Gardner et al., 2011; Fusco et al., 2015). Therefore, it is understandable that researchers emphasize the need for studies which observe organizational structures and processes or even encourage to invest in multilevel approaches (Avolio & Walumbwa, 2014; Mazutis & Slawinski, 2008).

To the best of my knowledge, this thesis presents the first results on AL climate at different levels of TMT behavioural integration and AT (Figure XY). Higher values of TMT behavioural integration serve as a spring for the establishment of AL climate. Nevertheless, the most striking result is that future research must look not only to reinforce AL climate or more general leadership climate factors, but also beyond this question and seek potential boundaries. Such boundaries, including AT, which not only decrease the probability of AL climate establishment, but also annihilates the verified positive effects of TMT behavioural integration on AL climate, as it is the case if AT scores increase. Other constructs like centralization might affect the relations with leadership climates in the same way. Due to these noteworthy results, the complexity of working mechanisms and potential interactive back and forth loops have to be respected. Thus, earlier or later researchers as well as practitioners will not be able to pass more complex models.

While approaching the question, “Is authentic leadership born or made?” (Avolio & Walumbwa, 2014), this thesis contributes a major finding to the existing leadership literature. Leadership literature states that around 30 per cent of variation in leadership style and development can be explained by genetics (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006; Ilies, Gerhardt, & Le, 2004). Hence, 70 per cent remain for explanations that arise from varying environmental factors, e.g., chances for leadership, first step leadership experiences, or opportunities to model oneself after an ideal leader. Avolio and Walumbwa (2008) argue that AL development comprises not only self-awareness, and self-regulation or an individual’s personality, but also interactions with contexts, peers, and followers. Thus, research on the individual level proposes to shape the first leadership tasks in the context of leadership development (McCauley, 2001). In this context, Dragoni, Tesluck, and Russel (2009) investigated the relation between job assignments which have been linked to distinguishable leadership development and leaders’ achievements. Their core conclusion was that managers who were confronted with a higher emphasis on developmental tasks reached higher levels of leadership capabilities. The investigated relation between TMT behavioural integration and AL
climate confirms this conclusion, but extends it to the organizational level. TMT members demonstrate behavioural support and constructive interactions that involve their peers and followers at business’s events, share information, and enable them to play a crucial role in the big picture, which in addition to the role model and cascading down effects may lead to developmental assignments for, e.g., junior managers, to strengthen the expansion of AL climate through the whole firm. Hence, the results within study three may be one piece of the 70 per cent explanation regarding a mosaic of the born vs. made controversy.

Focusing on the positive effects of the results, it is remarkable that organizational processes may influence a company’s leadership culture through cascading down effects (e.g. Hambrick, 1984). It is reassuring that a genuine leadership culture like AL climate may grow and spread through a whole company in the case that top management teams take their role seriously and act as role models in accomplishing company’s higher goals.

In summary and considering the multiple impacts of AL on the individual, team as well as specifically at the organizational level, as demonstrated in study 1 and 2, the need for further understanding of structural influences and potential boundaries becomes apparent. Hence, I hope that this thesis inspires others to consider these results to extend and extant research on the development of AL climate.
Overall Discussion and Conclusion

Figure 7. Results of tested hypotheses across all studies

Figure 7 presents all tested relations based on linear regression analysis.\(^9,10,11,12\)

\(^9\) Note. Reported are standardized beta's; * \(p < .05\); ** \(p < .01\); *** \(p < .001\)

\(^{10}\) Note. The results of the investigated indirect effect of AL climate within study 2 indicate partial mediation, \(ab = 0.08, 95\% \text{ CI} [0.03, 0.18]\)

\(^{11}\) Note. The results of study 3 indicate significant negative moderation (\(\beta = -0.08, p = 0.01; \text{ CI} [-0.14; -0.02]\))

\(^{12}\) Note. Return on investment, efficiency of the executive board, customer management, customer loyalty, absenteeism, employee satisfaction
5.3 **Practical implications and recommendation for the business environment**

The first study provides practitioners with a comparison between three different leadership climates. The goal behind this approach was not to show that these leadership climates may exclude each other, but to focus on the individual properties of each. It is true that a company may achieve profitability by just focusing on CR climate (transactional leadership climate) and ignoring the potential of TFL and AL climate. It is also true that a company may achieve even higher profitability by focusing on TFL climate and ignoring authenticity. But it is not possible to deny that a company is likely to achieve the highest profitability by implementing an AL climate as the results demonstrate. With regard to this case, increasing levels of AL climate not only had a strong influence on the increase of financial aspects like return on investment and efficiency, but also rising levels in companies’ authenticity led to improved customer management and growing customer loyalty as well as decreasing absenteeism and increasing follower job satisfaction. Taking a closer look at the results, there’s more to it than that. Results demonstrated that an AL climate is not only good to improve and increase the mentioned organizational performance indicators, results also present that its effectiveness is extends beyond the positive effects of CR and TFL climate. Therefore, it is definitely valuable for companies or their executives and HR departments to focus on improving their company’s authenticity. It might be their key factor in regard to being both competitive and sustainable in a dynamic and challenging business environment.

In addition, the strong positive association of AL climate and POE points to profitable boost effects, inasmuch as AL climate allows values of POE to increase. Consequently, all company members through an entire company experience more passion, mental agility, and purposeful activity. Thus, companies are enabled to maximize their potential organizational energy. Maximized productive organizational energy decreases the probability of destructive or corrosive energy. Hence, strengthening POE by increasing the level of AL climate decreases the likelihood of pitfalls like unnoticed opportunities or unfavourable interactions (Bruch & Vogel, 2010) and increases organizational achievements, like organizational innovativeness by using the full energy potential to track evolution and goals.

Last but not least, executive boards should recognize their role regarding the establishment of AL climates through their total company. Their impellent force to
enable and sustain AL climate should not be minimized. An appreciative, constructive, reflective, and adjuvant form of behavioural interactions between peers in key positions at the top level of a company leads through the conformance of being an ideal key person in a firm and the corresponding behaviour as well as cascading effects to a higher level of AL climate. Nevertheless, CEOs, executives, and leaders have to pay attention, even if they score high in TMT behavioural integration they might disconnect from their middle management and followers. This is demonstrated in the result that although TMT members may interact in a remarkably constructive and supportive manner, being caught in the acceleration trap by facing overloading, multiloading, and perpetual respectively everlasting loading extinguishes their valuable potential towards accomplishing AL climate. In such a situation, it seems that executives might be satisfied with their interactions, achievements, and their road map for future projects but at the same time could be blind to the on goings at lower levels of their company. On goings that, e.g., indicate tremendous consequences as a company’s burn out (Bruch & Menges, 2010a). Hence, as Bruch and Menges (2010a) suggest, companies are well advised to avoid the trap in the future, second to change the company’s accelerated culture, and finally, in the case that the company is already trapped, to break free by stopping less promising projects or actions, clarifying focus and strategies, and deciding how to make decisions. In doing so, managers will dodge the acceleration trap and get closer to the starting point of the AL climate establishment.

Summing up, executives, upper-level managers, or HR departments that create a river of reinforcing action processes, specifically high quality TMT behavioural integration, strengthen their company’s authentic leadership culture. In view of the AL climate, this thesis offers an adequate answer to the question, “What is a foundation of management?” The answer is authentic leadership implemented as a leadership culture, deep seated as a leadership climate and carried out through the whole company. In doing so, above-average AL climate levels across an entire company would then represent a valuable, rare, imperfect imitable and not a substitutable asset. Thus, in regard to the RBV of a firm, AL climate represents a potential sustained competitive advantage, especially when the results of study 1 and 2 are reconsidered.
5.4 Overall Limitations and Directions for Future Research

In addition to the methodological strengths as well as the specific limitations of each study (Chapters 2.6.1, 3.6.1, and 4.6.1), some limitations are more general and may affect the entire design of this dissertation. The next section (Chapter 5.4.1) reconsiders those general limitations plus aims to indicate possible solutions as suggestions for future research.

5.4.1 Methodological Limitations and Possible Solutions

Data for the studies 1, 2 and 3 have been collected in 2010 and 2011 as part of a larger study in cooperation with a German agency that is specialized in benchmarking small to medium-sized companies. Study 1 is based on the data collected in 2010. Study 2 and 3 are based on the data collected in 2010 and 2011. Due to the fact that the results are based on the investigation of small and medium-sized companies, it is not possible to generalize them in application to larger organizations. Hence, it might be advisable that future research replicates those results with samples that include larger companies.

The use of longitudinal versus cross-sectional data involves distinct advantages and disadvantages, as mentioned before. All three studies within this thesis use data based on a cross-sectional research design. Thus, causality cannot unambiguously be inferred, because respondents could have been driven by biases of consistency or have answered while exerting their own implicit conventional models in responding to the questionnaires. This might have artificially boosted the relationships under each study (Doty & Glick, 1998; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Nevertheless, since Spector (2006) has shown that the single-source bias might be overrated, and each significant result from all studies within this thesis shows very robust effects between the independent and dependent variables, I suggest that the effects could be reduced but would not evaporate. Additionally, the use of a multiple data source design and aggregation to the mean reduces the chance of common method variance (Podsakoff et al., 2003). Furthermore, it is no secret that the ALQ (Walumbwa et. al, 2008) consists of 16 items which are integrated in four separated sub dimensions (e.g. self-awareness-balanced information processing) which again define AL. This AL measurement tool is not the shortest and consequently not the most user-friendly one in the business world. The alternative AL measurement tool of Neider and Schriesheim (2011) also comprises 16 items. The circumstance of the four first-order factors within the ALQ (Walumbwa et al., 2008) does not independently add incremental validity across the second-order
factor (Li et al., 2014; Walumbwa et al., 2008) and could be interpreted as an valid indicator to pare down the amount of items and develop and validate something like a quick authentic leadership questionnaire (QALQ).

Hence, researchers might follow the call of Neider and Schriesheim (2011) and refine and strengthen the existing authentic leadership measurement tools. While doing so, they should respect the needs of businesses, especially their restricted resources. It should then be worthy to develop a measurement tool with, for example, eight items, or at least a significant shorter scale for the sake of usability and commercial application. This could encourage companies to place more on the evaluation of their status-quo leadership attitudes as well as increase the likelihood to identify potential, strengthen their human resource development regarding their executives, and maximize future outcomes. A further advantage might be an increased likelihood of winning companies for longitudinal investigations due to the fact that it would take half of the time to measure AL climate in the case of an eight-item scale. Such a scale could be interesting for future researchers and companies to use for measures at different points in time and inferentially underline claims of causality.

One of the first steps in developing a QALQ could be to investigate the validity and predictability of the used measurements and outcomes of the data used in this thesis. A comparison to the clarified variances in studies 1 and 2 would provide first insides. The thesis neglected this additional testing due to focus on impacts, boundaries, and potential enablers of authentic leadership as an organizational construct.

### 5.4.2 Authentic Leadership Climate and Culture

Increasing globalization involves dynamic, strong cross-linked, and interdependent boundary points within global acting companies. Leadership research has to face cultural differences as leaders are confronted with e.g. different values, language issues, history of society between countries, and different political systems (House, Wright & Aditya, 1997). Employees within the same company but located at the other end of the world (e.g., at a place of the globe culture cluster Confucian China) may experience the same behaviour of a leader (e.g., at a place of the globe culture Western respectively Germanic Europe) in a different way. A consequence might be a difference in performance outcomes through diverse standards of working mechanisms within social interactions.
As described in Section 1.4 methodological approach all data was collected in Germany. Germany belongs to Germanic Europe regarding the globe culture clusters (Dorfman, Hanges & Brodbeck, 2004). Therefore, a global generalization of the findings within this thesis leads to loss of perspective on cultural differences. Concerning this matter, one has to be aware of differences regarding for example power distance (Adsit, London, Crom & Jones, 1997) or collectivism versus individualism (Kirkman & Shapiro, 2000; Jung & Avolio, 1999).

Adsit and colleagues (1997) verified that the relationship between leaders and employees in companies located within low power distance cultures (e.g. Western Europe) are defined by significantly higher interdependence. Moreover, employees tend to prefer more consultations, which implicates a significantly higher amount of interaction cycles, whereas employees in high power distance cultures tend to prefer autocratic treatment from their supervisors. Reflecting AL theory in this connection - especially the first-level factors balanced information processing and self-awareness of the ALQ - a new perspective will appear. How should employees judge the level of a leader’s demand of to challenge his own perspectives or feedback-seeking behaviour if they, the employees as well as the leader, are not willing to be active in consultations or used to a participative style of decision making? Are those employees provided with the amount of information which could enable them to evaluate if and how a leader is gathering information and making decisions while expecting a directive and autocratic leadership style regardless of the circumstances? Another question would be how leaders are viewed if they admit mistakes (example item of the relational transparency dimension). Would authentic leaders or an AL climate have the same impact on outcomes if they were demonstrated in cultures, which interpret mistakes as weaknesses? Probably not. Does this mean that a leader who might not be relationally transparent because he does not admit mistakes or show emotions is considered as non-authentic? To answers those kinds of questions, AL theory must be considerably enlarged with several findings regarding cultural differences and again tested between cultures.

Kirkman and Shapiro (2000) as well as Jung and Avolio (1999) revealed a basic phenomenon regarding differences between collectivistic and individualistic cultures. It seems to be more difficult to develop a strong culture of shared values involving for example ethical behaviour when a culture attaches great importance to autonomy and individual rights. Therefore, it should be remarkable to bring to light potential differences in processes which enable and develop leadership climates, e.g., an AL
climate. In doing so, research could find answers to questions like “Is AL climate easier to develop or sustain in collectivistic cultures?” or “Does the impact of AL climate differ dependant on collectivism versus individualism?” Answering thus questions may provide valuable recommendation for the foci of human resource development.
5.4.3 General Future Directions

Research on AL has provided ample results in reference to impacts on followership and individual, team-level, and organizational-level outcomes since the foundational theoretical models were published one decade previous. Nevertheless, there remains a noteworthy gap filled with research topics and questions on AL as well as AL climate. This section illuminates three research topics that should determine future research directions.

First, future research should focus on cultural differences as stated in the previous chapter. In addition to the earlier explanation, it should be added that cultural differences have to be illuminated from both perspectives, the subordinate’s perception of AL and its evolvement as well as the emergence of AL and AL climate. It is important to focus on the subordinate’s perception because of the differences in cultural values like power. There is no published study available on power differences between cultures and perception of authentic leaders. Such research may provide information about aspects of potential differences developing training programmes and learning opportunities to become an authentic leader in the specific culture. As mentioned before, cultural differences may also demand varying organizational processes to establish AL climate.

Secondly, to respond the call of e.g. Avolio and Walumbwa (2014), research should focus on the organizational structure and its effects on determining AL climate. Fundamental work on organizational structure and TFL was already done by Walter & Bruch (2010). They investigated the structural impacts of centralization, formalization and organizational size on TFL. This work could be used as a basis for investigating the potential impacts of those structures on AL climate. A high level of centralization within an organization increases the probability that such companies tend to challenge their members with limited autonomy as well as limited control over resources, which may constrain initiation and testing of new ideas (Russel & Russel, 1992). Thus, it is questionable if a centralized structure allows enough room for meaningful interaction and balanced information processing through the whole company. In addition, a leader or a manager might be authentic, having self-awareness and knowing about all business relevant circumstances, being able to enable change, for example, due to the awareness of the situation and thereby having the ability of predicting a future scenario more adequate than an inauthentic leader could, nevertheless be constrained due to a centralized structure that does not allow one to implement one's competence, at least not as quickly possible. Besides, the strong formal authority in highly centralized organizations may motivate leaders to refer to their "position, reward sanction power"
Overall Discussion and Conclusion

(Howell, 1997, p. 11). Hence, transparency and a transparent communication flow could be constricted. Leaders would not see the need or opportunities to share information or their thoughts. Hence, a negative relation between centralization and AL climate can be supposed. Two reasons exist why formalization may be related to AL climate. The first one is stated by Organ and Greene (1981). They say that a formalized structure "might even facilitate the work of professionals if it improves coordination and communication" (Organ & Greene, 1981, p. 238). Hence, existent clear-cut guidelines, procedures, and policies may increase the probability of AL climate by specifying organizational requirements (Michaels, Cron, Dubinsky, & Joachimsthaler, 1988). In this context, formalization advances clarity about who is responsible for what kind of tasks in a firm. It helps to define what peers or employees are allowed to decide in a multiple set of situations as well as empower individuals. As a result, formalized settings should provide leaders with a clear picture of what is expected of them, what kind of behaviours are adequate, and how to deal with inconclusive situations. Formalizations may even include genuine leadership guidelines. Leaders in formalized structural organizations should be in a better position to act more self-aware and self-regulated, which helps to be consistent and to develop genuine connections to others. The second reason is that formalized structures enhance organizational efficiency due to the provision of written regulations, rules, and procedures (Hetherington, 1991). Those structures may relieve leaders from constraints as well as demands which might in less formalized companies distract them from AL activities and thus reduce the degree of the organization's AL climate. Moreover, formalized structures can be a substitute for operational leadership like contingent reward leadership. Hence, leaders might be able to focus their efforts on AL actions. Consequently, I assume that a formalized structure is positively associated with AL climate. Last but not least, there are several facts that point towards a negative relationship between organizational size and AL climate. Huge companies are usually characterized by greater complexity than small ones, because a greater number of employees and specialized business units have to be managed (Tushman & Romanelli, 1985). In addition, Tushman and Romanelli noted that huge companies have to deal with more diverse contacts within their environments. Therefore, it might be difficult for leaders to be completely aware of the organization's goals and their full range of contributions to these goals (Ghobodian & Galler, 1997). Another reason is given by the existence of growing coordination requirements. These are associated with increasing organizational size. They go along with cording resources, e.g., time of leaders, which could be used for balanced processing of information and relational transparency during the work with peers and followers. Subsequently, I suggest a negative relation between
organizational size and AL climate. Future works might build on these arguments and test the previous described postulation.

Verifying the several positive impacts of AL climate on outcomes like return on investment, POE, or innovation, as this thesis does, may encourage to investigation of further potential moderators, which reinforce the working mechanisms of AL climate. For example, Li, Yu, Yang, Qi, and Fu (2014) operationalized authentic leadership as a work-unit construct and revealed that Chinese traditionality moderates positively the influence of AL on organizational citizenship behaviour in Chinese high technology companies. They underline both the interaction of leader behaviour and cultural values - comparing employees with low and high Chinese traditionality - and the relevance of cultural differences.
5.5 Conclusion

The intention of this thesis was to address what kind of effects AL climate has and how AL climate may evolve and be sustained as well as what kind of boundaries may prohibit the positive influence and development of AL climate. The highly significant results, even if controlled for TFL, authorize the conclusion that authentic leadership climate may be interpreted as a foundation of management.

The results demonstrate that companies benefit if their leaders carry characteristics that are consistent with several leadership climates. Additionally, based on these findings, companies are provided with responses to questions like how they may build, elevate, and sustain a genuine leadership climate.

Finding new, solid, and meaningful results while providing answers to questions mentioned at the beginning of the thesis, closing research gaps, and simultaneously extending the nomological network of genuine leadership as well as providing pathways to implement those results into the business world should cohesively encourage companies to invest in leadership research cooperation and the development of their own authentic leadership climate. Naturally, first of all, in the development of individual leaders, managers and executives. Afterwards, in a continuous development building authentic leadership climate, which would even nurture the probability of successfully maximizing organizational outcomes.

For the benefit of top management teams, executives and companies located in the Germanic culture, I like to point out that, when asked, what might be the more important, AL at the individual or organizational level, I would always give the same response: one cannot ideally exist without the other. Notwithstanding, we should always keep in mind the statement of Aristotle (384 BC in Stagira; 322 BC in Chalcidice): “The whole is greater than the sum of all parts.”
# 6 Appendix

## 6.1 Survey Items for Study 1

Table 13: Transformational Leadership Items

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>…has provided me with new ways of looking at things which used to be a puzzle for me.</td>
<td>…hat mir neue Sichtweisen auf Dinge nahe gebracht, die mich vorher verwirrten.</td>
</tr>
<tr>
<td>2.</td>
<td>…has ideas that have forced me to rethink some of my own ideas I have never questioned before.</td>
<td>…hat Ideen, die mich dazu gezwungen haben, einige meiner eigenen Vorstellungen zu überdenken, die ich vorher nie hinterfragt hatte.</td>
</tr>
<tr>
<td>3.</td>
<td>…has stimulated me to think about problems in new ways.</td>
<td>…regt mich dazu an, auf neue Weise über Probleme nachzudenken.</td>
</tr>
<tr>
<td>4.</td>
<td>…is always seeking new opportunities for our company.</td>
<td>…sucht stets nach neuen Chancen für das Unternehmen.</td>
</tr>
<tr>
<td>5.</td>
<td>…paints an interesting picture of the future for our company.</td>
<td>…zeichnet für unser Unternehmen ein interessantes Bild von der Zukunft.</td>
</tr>
<tr>
<td>6.</td>
<td>…inspires others with his/her plans for the future.</td>
<td>…inspiriert andere mit seinen/ihren Plänen für die Zukunft.</td>
</tr>
<tr>
<td>7.</td>
<td>…is able to get others committed to his/her dream of the future.</td>
<td>…bringt andere dazu, sich für seine/ihre Träume von der Zukunft voll einzusetzen.</td>
</tr>
<tr>
<td>8.</td>
<td>…has a clear understanding of where we are going.</td>
<td>…hat ein klares Verständnis davon, wohin wir gehen.</td>
</tr>
<tr>
<td>9.</td>
<td>…shows us that he/she expects a lot from us.</td>
<td>…zeigt uns, dass er/sie viel von uns erwartet.</td>
</tr>
<tr>
<td>10.</td>
<td>…insists on only the best performance.</td>
<td>…besteht ausschließlich auf Bestleistungen.</td>
</tr>
<tr>
<td>11.</td>
<td>…will not settle for second best.</td>
<td>…wird sich mit einem zweiten Platz nicht zufrieden geben.</td>
</tr>
<tr>
<td>Item</td>
<td>English</td>
<td>German</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>12.</td>
<td>fosters collaboration among work groups.</td>
<td>fördert die Zusammenarbeit zwischen den Arbeitsgruppen.</td>
</tr>
<tr>
<td>13.</td>
<td>encourage employees to be “team players.”</td>
<td>ermuntert die Mitarbeiter, „Teamspieler“ zu sein.</td>
</tr>
<tr>
<td>14.</td>
<td>gets the group to work together for the same goal.</td>
<td>schafft es, dass die Mitarbeiter gemeinsam für das gleiche Ziel arbeiten.</td>
</tr>
<tr>
<td>15.</td>
<td>develops a team attitude and spirit among his/her employees.</td>
<td>entwickelt einen Gemeinschaftssinn und Teamgeist unter seinen/ihren Mitarbeitern.</td>
</tr>
<tr>
<td>16.</td>
<td>leads by “doing” rather than simply by “telling.”</td>
<td>führt durch „Handeln“ und nicht einfach durch „Anweisen“.</td>
</tr>
<tr>
<td>17.</td>
<td>provides a good model to follow.</td>
<td>ist ein gutes Vorbild.</td>
</tr>
<tr>
<td>18.</td>
<td>leads by example.</td>
<td>führt als Vorbild.</td>
</tr>
<tr>
<td>19.</td>
<td>acts without considering my feelings.</td>
<td>handelt, ohne meine Gefühle zu berücksichtigen. (rI)</td>
</tr>
<tr>
<td>20.</td>
<td>behaves in a manner that is thoughtful of my personal needs.</td>
<td>beachtet meine persönlichen Bedürfnisse.</td>
</tr>
<tr>
<td>21.</td>
<td>treats me without considering my personal feelings.</td>
<td>behandelt mich, ohne meine persönlichen Gefühle zu berücksichtigen. (rI)</td>
</tr>
<tr>
<td>22.</td>
<td>shows respect for my personal feelings.</td>
<td>zeigt Respekt für meine persönlichen Gefühle.</td>
</tr>
</tbody>
</table>

*Note. All Items are taken from Podsakoff et al. (1996; 1990)*
Table 14: Transactional Leadership Items

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>… gives me positive feedback, when I do good work.</td>
<td>… gibt mir immer positive Rückmeldung, wenn ich meine Arbeit gut mache.</td>
</tr>
<tr>
<td>2.</td>
<td>… dignifies me personally, when I do excellent work.</td>
<td>… würdigt mich persönlich, wenn ich hervorragende Arbeit mache.</td>
</tr>
<tr>
<td>3.</td>
<td>… often does not acknowledge my performance.</td>
<td>… erkennt meine gute Leistung häufig nicht an. (rI)</td>
</tr>
<tr>
<td>4.</td>
<td>… acknowledges my work especially, when I do very good work.</td>
<td>… erkennt es ganz besonders an, wenn ich meine Arbeit sehr gut mache.</td>
</tr>
<tr>
<td>5.</td>
<td>… praises me, when I do my work above the ordinary.</td>
<td>… lobt mich, wenn ich meine Arbeit überdurchschnittlich gut mache.</td>
</tr>
</tbody>
</table>

Table 15: Organizational Performance Items

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>market returns (Return on Investment)</td>
<td>Gesamtkapitalrendite (Return on Investment)</td>
</tr>
<tr>
<td>2.</td>
<td>efficiency of business processes</td>
<td>Effizienz der Geschäftsabläufe</td>
</tr>
<tr>
<td>3.</td>
<td>The customer management has improved</td>
<td>Das Kundenmanagement hat sich verbessert</td>
</tr>
<tr>
<td>4.</td>
<td>The customer loyalty has improved</td>
<td>Die Kundenbindung hat sich verbessert</td>
</tr>
<tr>
<td>5.</td>
<td>The absenteeism has decreased</td>
<td>Die Fehlzeiten von Mitarbeitern haben abgenommen</td>
</tr>
<tr>
<td>6.</td>
<td>The satisfaction of employees has improved</td>
<td>Die Zufriedenheit der Mitarbeiter hat sich verbessert</td>
</tr>
</tbody>
</table>

*Note. Items are generated based on Combs. et al. (2006)*
### 6.2 Survey Items for Study 2

Table 16: Productive Organizational Energy Items

<table>
<thead>
<tr>
<th>In survey version 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POE Measure: Affective Dimension</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Introduction:** The following questions refer to recent times (about the last half a year). The term “employees” means all people working in your company including the executive level. How often have people in your company felt the following emotions in recent times? 

*The employees in our company...* |  |
| **Item** | **English Original** | **German Translation** |
| 1. | …feel excited in their job. | …empfinden ihre Arbeit als spannend. |
| 2. | …feel enthusiastic in their job. | …sind begeistert von ihrer Arbeit. |
| 3. | …feel energetic in their job. | …fühlen sich energiegeladen bei der Arbeit. |
| 4. | …feel inspired in their job. | …empfinden ihre Arbeit als inspirierend. |
| 5. | …feel ecstatic in their job. | …sind euphorisch bei der Arbeit. |

| **POE Measure: Cognitive Dimension** |  |
| **Introduction:** The following questions refer to recent times (about the last half a year). The term “employees” means all people working in your company including the executive level. For recent times, how much do you agree with the following statements? 

*The employees in our company...* |  |
| **Item** | **English Original** | **German Translation** |
| 1. | …are already to act at any given time. | … sind jederzeit zum Handeln bereit. |
| 2. | …are mentally alert. | … sind derzeit sehr aufmerksam. |
| 3. | …share a collective desire to make something happen. | … haben den gemeinsamen Wunsch, etwas zu bewegen. |
| 4. | …really care about the fate of this company. | … interessieren sich wirklich für das Schicksal dieses Unternehmens. |
| 5. | …are always on the lookout for new opportunities. | … suchen ständig nach neuen Chancen für das Unternehmen. |

| **POE Measure: Behavioural Dimension** |  |
| **Introduction:** The following questions refer to recent times (about the last half a year). The term “employees” means all people working in your company including the executive level. For recent times, how much do you agree with the following statements? 

*The employees in our company...* |  |
<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>…showed a great deal of activity.</td>
<td>… waren in der letzten Zeit sehr aktiv.</td>
</tr>
<tr>
<td>4.</td>
<td>…are 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)*

### Table 17: Organizational Innovativeness Items

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Promotion for the appreciation of innovative ideas.</td>
<td>Werben für die Anerkennung innovativer Ideen.</td>
</tr>
<tr>
<td>2.</td>
<td>Convincing important organization members of innovative ideas.</td>
<td>Überzeugen wichtiger Organisationsmitglieder von innovativen Ideen.</td>
</tr>
<tr>
<td>3.</td>
<td>Transfer of innovative ideas to useful applications.</td>
<td>Überführen innovativer Ideen in nützliche Anwendungen.</td>
</tr>
</tbody>
</table>
# 6.3 Survey Items for Study 3

Table 18: Acceleration Trap Items

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>People in this company often reach their limit because of too much work.</td>
<td>Die Mitarbeiter in unserem Unternehmen stoßen wegen zu viel Arbeit häufig an ihre Grenzen.</td>
</tr>
<tr>
<td>2.</td>
<td>People in this company have so much work to do that they are overloaded.</td>
<td>Die Mitarbeiter in unserem Unternehmen haben so viel zu tun, dass sie oft überfordert sind.</td>
</tr>
<tr>
<td>3.</td>
<td>People in this company work under constantly elevated time pressure.</td>
<td>Die Mitarbeiter in unserem Unternehmen arbeiten durchgehend unter erhöhtem Zeitdruck.</td>
</tr>
<tr>
<td>4.</td>
<td>Task priorities are not clear for the people in our company.</td>
<td>Den Mitarbeitern in unserem Unternehmen sind die Prioritäten der Arbeitsaufgaben häufig unklar.</td>
</tr>
<tr>
<td>5.</td>
<td>In our company, priorities often change.</td>
<td>In unserem Unternehmen wechseln die Prioritäten häufig.</td>
</tr>
<tr>
<td>6.</td>
<td>Intensive and smooth working phases alternate within our company. (inverse)</td>
<td>In unserem Unternehmen wechseln sich intensive Arbeitsphasen immer wieder mit ruhigeren Phasen ab. (rI)</td>
</tr>
<tr>
<td>7.</td>
<td>In our company, in high intense work phases we see light at the end of the tunnel. (inverse)</td>
<td>In unserem Unternehmen sieht man auch bei intensiven Arbeitsphasen immer das Licht am Ende des Tunnels. (rI)</td>
</tr>
<tr>
<td>8.</td>
<td>In our company, there are regular opportunities to refuel. (inverse)</td>
<td>In unserem Unternehmen gibt es regelmäßig die Möglichkeit, Kraft zu tanken. (rI)</td>
</tr>
<tr>
<td>9.</td>
<td>It is not recognizable for the people in our company which tasks are the most important ones.</td>
<td>Für die Mitarbeiter in unserem Unternehmen ist häufig nicht erkennbar, welche Aufgaben am wichtigsten sind.</td>
</tr>
</tbody>
</table>

Note. All items are taken from Bruch & Menges (2010) and Bruch & Vogel (2011)
**Table 19: TMT behavioural integration Items**

<table>
<thead>
<tr>
<th>Item</th>
<th>English Original</th>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The ideas, that are discussed by the executives, are very good.</td>
<td>Die Ideen, die die Mitglieder der Geschäftsführung diskutieren, sind sehr gut.</td>
</tr>
<tr>
<td>2.</td>
<td>The solutions, that are discussed by the executives, are very good.</td>
<td>Die Lösungen, die die Mitglieder der Geschäftsführung diskutieren, sind sehr gut.</td>
</tr>
<tr>
<td>3.</td>
<td>The dialogue between the executives leads to creativity and innovation.</td>
<td>Der Dialog zwischen den Mitgliedern der Geschäftsführung führt zu einem hohen Mass an Kreativität und Innovativität.</td>
</tr>
<tr>
<td>4.</td>
<td>When a member of the executives has to do a lot of work, the other members commonly help him.</td>
<td>Wenn ein Teammitglied der Geschäftsführung viel zu tun hat, helfen die anderen Teammitglieder ihm häufig bei der Bewältigung seiner Arbeit.</td>
</tr>
<tr>
<td>5.</td>
<td>The fact that the executives can act for each other helps them a lot.</td>
<td>Dass die Mitglieder der Geschäftsführung sich in ihren Verantwortungsbereichen gegenseitig vertreten können, erleichtert vieles für sie.</td>
</tr>
<tr>
<td>6.</td>
<td>The executives help each other with complex tasks and the meeting of deadlines.</td>
<td>Die Mitglieder der Geschäftsführung helfen sich gegenseitig bei komplexen Aufgaben und der Einhaltung von Abgabeterminen.</td>
</tr>
<tr>
<td>7.</td>
<td>The executives usually inform each other when their action influences the work of other team members.</td>
<td>Die Mitglieder der Geschäftsführung informieren sich für gewöhnlich gegenseitig, wenn ihre Handlung die Arbeit anderer Teammitglieder beeinflussen.</td>
</tr>
<tr>
<td>8.</td>
<td>The executives understand the work related problems and needs of other executives very well.</td>
<td>Die Mitglieder der Geschäftsführung verstehen die arbeitsbezogenen Probleme und Bedürfnisse der anderen Mitglieder sehr gut.</td>
</tr>
<tr>
<td>9.</td>
<td>The executives usually discuss the expectations they raise on each other.</td>
<td>Die Mitglieder der Geschäftsführung diskutieren für gewöhnlich die Erwartungen, die sie aneinander Stellen.</td>
</tr>
</tbody>
</table>

Note. All items are generated based on Simsek, Veiga, Lubatkin, & Dino, (2005).
7 References

7.1.1 Literature References


7.1.2 Online References


Curriculum Vitae

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EDUCATION

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1999 - 2002 Berufskolleg am Haspel, Germany
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PROFESSIONAL EXPERIENCE

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