Vitalizing management systems in organizations:
The role of culture, leadership and human resource management

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St Gallen, May 11, 2012

The President:

Prof. Dr. Thomas Bieger
„Ist nicht das Tun wichtiger als das fertig werden,
sind nicht die Wünsche wichtiger als die Erfüllung,
ist nicht das Gehen wichtiger als das Ankommen?“ (unbekannter Autor)

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List of Abbreviations

ß   beta-coefficient

*   example gratia / for example

et al.    et alii

etc.      et cetera

H    hypothesis

HPWS   high-performance work systems

HR    human resource

HRM   human resource management

ICC   intraclass correlation coefficient

i.e.  id est / that is

M    mean

N    number of observations

n.s. not significant

p    level of significance

p.   page

POE   productive organizational energy

R²    squared multiple correlation coefficient

r_wg index of interrater agreement

SD   standard deviation

TFL   transformational leadership

vs.   versus
Abstract

The phenomenon of productive organizational energy encompasses a collective positive drive in organizations and is characterized by employees that collectively demonstrate positive emotions with regard to their work, high mental alertness and a concentrated effort to pursue organizationally-salient objectives. Up to now, we know that this phenomenon is highly relevant for organizations’ ability to change and for their overall performance. However, past studies did not focus on how it can be fostered over a longer period of time. This dissertation addresses this gap and explores which intra-organizational stable conditions in the fields of organizational culture and leadership can help to foster and maintain productive organizational energy.

In study 1, I draw on a sample of 118 organizations to investigate the influence of cultural aspects on productive organizational energy. The analyses reveal that certain behavioral patterns in organizations – e.g. extraverted or agreeable behaviors – positively influence the level of productive organizational energy and, subsequently, organizational performance.

Study 2 concentrates on leadership behaviors in organizations and is based on 76 companies. I reveal that a climate of transformational leadership is helpful in maintaining productive organizational energy and that this can be further supported by a human resource management approach that is based on long-term commitment.

The main goal of study 3 is to develop ideas for potential boundary conditions in the sustainment of productive organizational energy. In a single case study design I closely investigate the phenomenon of productive organizational energy at Phoenix Contact, a German manufacturer of industrial electric and electronic technology. The analyses reveal that uncertainty and trust might strengthen the effects that human resource practices and leadership exert on productive organizational energy.

Besides the presentation of the different studies, this dissertation also includes practical recommendations for human resource managers, leaders, and senior executives on how to sustain productive organizational energy and therewith ensure long-term organizational success.
Zusammenfassung


In Studie 1, die auf einer Stichprobe von 118 Organisationen basiert, untersuche ich den Einfluss kultureller Aspekte auf produktive Energie. Die Analysen zeigen, dass bestimmte Verhaltensmuster in Organisationen – zum Beispiel extravertiertes oder verträgliches Verhalten – produktive Energie und, in Folge, organisationale Leistung positiv beeinflussen.

Studie 2 untersucht Führungsverhalten in Organisationen und basiert auf 76 Unternehmen. In dieser Studie zeige ich, dass ein inspirierendes Führungsklima dazu beiträgt, produktive Energie aufrecht zu erhalten und dass dies weiter gefördert werden kann über einen Personalmanagementansatz der auf langfristiger Bindung zu den Mitarbeitenden basiert.


1 Introduction

“This can be either a great opportunity to sail to new horizons or we all will be drowned by this wave”.\(^1\) With these words Vic Gundotra, project leader at Google, described the challenges that social networks and competitors like Facebook impose on the most successful internet company ever which today employs in total 29,000 people. With a turnover of $ 29.3 billion, 24% turnover growth and $ 8.5 billion of profit in 2010, Google is continuing its history of constant success. For years, the company served as a positive example for a motivating and thrilling working environment where employees collectively worked together to achieve a common goal and to increase Google’s success on the market. However, strong competitors and an internet that is becoming increasingly social and mobile pose external threats on the market leader. Confronted with this severe situation, another big threat can be located within Google: Long-term success has led to a high level of comfort in the workforce. Employees are seemingly not anymore highly involved and demonstrate less and less of this collective euphoria that had become so typical for Google. Besides the lack of a positive drive, even destructive tendencies emerged within the company, like employees hanging up Dilbert cartoons in their offices. Larry Page, founder of Google and – against the background of these developments - again CEO since April 2011, initiated restructuring activities and a cultural change within the company to deal with the problems of internal complacency and negative tendencies. It will be thrilling to observe the further development of this highly-successful, but currently very vulnerable internet company.

1.1 Practical Challenges and the Relevance of the Research Problem

The challenge that Google is facing is a common problem among highly successful companies. How can a need for change be convincingly conveyed if everything works out just fine? Maintaining a positive drive and a collective desire to make something happen among the workforce is especially difficult if the performance level of companies is higher than average. This thesis deals with a concept that represents the dynamic and collective positive force that Google is

\(^1\) Vic Gundotra in: Revolution bei Google (Maier, A. & Rickens, C.), retrieved from www.manager-magazin.de on September 23, 2011
Introduction

Currently missing – productive organizational energy (POE). POE is defined as a collective’s joint experience of positive affective arousal, cognitive activation, and behavioral efforts to achieve common goals (Bruch & Ghoshal, 2003; Cole, Bruch, & Vogel, 2011; Walter & Bruch, 2010). As will be explained in greater detail in the upcoming chapters, the central question to be answered in this thesis is how this positive collective phenomenon can be fostered and maintained over a period of time.

Understanding the emergence and sustainment of POE is highly relevant for organizations. It has been empirically demonstrated that the phenomenon of POE has a measurable impact on organizationally-relevant criteria such as collective attitudes of goal commitment, organizational commitment, job satisfaction, and organizational performance (Cole et al., 2011). Previous studies have linked POE to higher levels of company functioning in qualitative research (Bruch & Ghoshal, 2003, 2004) and scholars have argued that it is an important driver of organizations’ ability to deal with change (Bruch & Ghoshal, 2003; Cross, Baker, & Parker, 2003).

Whereas enhancing organizational performance is of utmost interest for practitioners, companies’ ability to constantly adapt to changes is becoming more and more important due to increasing globalization and fast technological advancement (Piderit, 2000; Tushman & O’Reilly, 1996). Therefore, companies that are able to manage collective processes in their workforce effectively will be better prepared for current and upcoming challenges. Due to its collective nature and multidimensionality, POE has the potential to explain a large degree of variance in complex phenomena like organizational functioning (Arrow, McGrath, & Berdahl, 2000; Hambrick, 1994; McGrath, Arrow, & Berdahl, 2000) and exert an influence over and above the effect of aggregated individual-level or one-dimensional phenomena (Bruch & Ghoshal, 2003).

Intentionally influencing POE implies a systematic management of employees’ collective emotions, cognitions, and behaviors. Managing human resources effectively and aligning employees’ goals is gaining in importance because it potentially represents a competitive advantage for organizations: Traditional sources of competitive advantage such as natural resources, technology, or access to financial resources have become more imitable whereas human resources and the way organizations manage them are less imitable and thus, of greater importance for
an organization’s competitive advantage (Barney, 1991; Pfeffer, 1994). Therefore, practitioners can benefit from knowledge on how to effectively manage and align collective emotions, cognitions, and behaviors in their workforce.

Consequently, we need to understand the mechanisms and conditions that foster and maintain POE in the organizational setting. The general aim of this thesis is to investigate beneficial, stable conditions and underlying mechanisms on the organizational level that foster POE, thereby identifying means to effectively enhance the performance of companies and deal with constant change pressures. Based on frameworks that distinguish strategy, culture, and structure / leadership as primary managerial fields of action (Bruch & Vogel, 2011; Nohria, Joyce, & Roberson, 2003; Ulrich & Krieg, 1972), this thesis concentrates on specific cultural (research question 1) and leadership (research question 2) aspects that can potentially contribute to a high level of POE in organizations. Research question 3 refers to the overall interplay of the different managerial activities to achieve high levels of POE and aims at identifying potential boundary conditions in maintaining POE.

Moreover, the deduction of practical recommendations is a central aim of this dissertation. These recommendations should assist practitioners in keeping up the energy in their companies and thereby (1) ensuring long term higher-than-average organizational performance, (2) coping with frequent and long-lasting change situations, and (3) converting their human resources into a competitive advantage.

1.2 Literature Review and Development of Research Questions

In the course of the following chapter, I will lay the theoretical ground for the development of the research questions. After positioning POE in the broader research field of positive organizational scholarship (POS) I will present the research gap and derive the different research questions that are to be answered by this dissertation.

1.2.1 Moving Beyond Normalcy to Enable Extraordinary States and Performance

Against the background of an increasing globalization, fast technological advancement and steady confrontation with change pressures, the workplace is becoming a place where survival and success depend more and more on higher-
than-average performance (cf. Luthans & Youssef, 2007). If organizations want to succeed today, they constantly need to be a step ahead of their competitors. However, researchers have noted that while there exists broad and profound knowledge on how to deal with negative states and improve them to a normal level, relatively little is known on how to enable human functioning – in people, groups and organizations – from normalcy to an extraordinary level (Gable & Haidt, 2005; Roberts, 2006). While positive aspects in organizations (e.g. commitment, organizational citizenship behavior or transformational leadership) have been studied for decades, these studies have not been the norm (e.g. Heath & Sitkin, 2001). As Luthans (2002:698) stated “more attention has been given to negative as opposed to positive affectivity, stress and burnout as opposed to eustress, resistance to change as opposed to acceptance of change (...).” A similar trend can be observed in practice: Negatively biased words clearly outweigh positively biased words in the business press (Walsh, 1999; cf. Cameron & Caza, 2004).

The implication is that not only positive deviance of performance has been neglected in past research, but also positive aspects that can potentially lead to this positive deviance. This is problematic because it can be assumed that the mere absence of something negative is not sufficient to bring about something positive and thus boost performance (Luthans & Avolio, 2009). Consequently, scholars may have to take into account positive phenomena to a greater extent to completely understand how organizations manage to perform well (e.g. Cameron, Mora, Leutscher, & Calarco, 2011).

The fact that we seem to be – theoretically and practically – preoccupied with negative aspects might even be functional in an evolutionary sense because performance gaps threaten individual and organizational survival (Roberts, 2006). Thus, it makes sense to focus on aspects that prevent organizations from functioning on a normal level. However, this tendency bears the risk of eventually impeding us from learning what organizations can do on the positive side to uplift their performance beyond what is considered average. Whereas there also exists opposing evidence (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), recent controlled experiments suggest that while the negative has stronger effects on emotions and cognitions, the positive has stronger effects on behavior (Wang, Galinsky, & Murnighan, 2009). Consequently, a stronger concentration on positive
phenomena and how they relate to organizational performance should also be worthwhile from this perspective.

As a reaction to the stronger focus on negative aspects, a new trend emerged recently within organizational research. Positive organizational scholarship (POS) studies positive dynamics in the workplace that lead to positive effects like exceptional individual and organizational performance (Cameron & Caza, 2004). Studied phenomena are explicitly on the organizational level of analysis and – more implicitly – have an impact on performance (Luthans & Avolio, 2009). POS focuses on positive states, outcomes and mechanisms and strives to identify collective strengths that enable organizational flourishing (cf. Roberts, 2006). Within the field of POS, there has been a vast amount of studies linking positivity (e.g. positive practices as development) and individual outcomes (e.g. positive individual-level emotions and behavior) (Cameron et al., 2011). However, organizational outcomes (e.g. organizational-level performance) have not been in the focus of past studies. Hackman (2009: 316) pointed out that there was a need for positive organizational scholars to “move beyond their present focus on individual persons and explicitly explore ways to develop and exploit the positive structural features of the social systems within which people live and work”. In a similar vein, Gable and Haidt (2005) differentiated between positive characteristics of people, groups and institutions and noted that positive psychology has neglected to study positivity in institutions. Cameron and Caza (2004) attributed the neglect of the organizational level in past studies partly to a lack of measurement devices that can help to quantify positive organizational phenomena.

This dissertation addresses these obvious gaps within the broader field of POS by investigating the positive organizational-level phenomenon of POE. Besides lifting research within POS on the organizational level, the existence of a valid and reliable measurement device for POE (Cole et al., 2011) makes it possible to quantify this phenomenon and thus fulfill certain quality criteria in research. Importantly, and as will be explained in greater detail below, POE is conceptualized as a state that is open to learning and development. Being open to development has been acknowledged an important characteristic of constructs by POS researchers (Luthans, 2002). Moreover, POS scholars stated that “it [POS] is about structures, cultures, processes, leadership, and other organizational conditions that foster positive states and positive dynamics in human communities” (Bernstein, Cameron,
Dutton, & Quinn, 2003: 267). By investigating conditions within organizations that can foster POE in the long term, I thus fulfill another central criterion of the POS research agenda. In the following, I will provide an overview on the phenomenon of POE and on research on energy at the workplace in general.

### 1.2.2 Productive Organizational Energy within the Broader Field of Positive Organizational Scholarship

The aim of this chapter is to present the central concept of POE in greater detail and to embed it in so far conducted research and theorizing about energy in the organizational and work context. I will try to demonstrate in which regards POE differs from related constructs and discuss its incremental value and contribution.

POE is defined as a temporary state of a collective characterized by the simultaneous experience of positive affect, cognitive activation, and agentic behavior in the shared pursuit of organizationally-salient objectives (Cole et al., 2011; Walter & Bruch, 2010). As such, the construct of POE is characterized by various specific aspects – being a temporary state, comprising multiple dimensions, and having a collective nature. Contrary to trait-like and very stable constructs as for example organizational culture (Schein, 1990), POE is an emergent state which can vary in short periods of time and depends on the contexts, inputs, processes, and outcomes of a collective (Marks, Mathieu, & Zaccaro, 2001). Consequently, rather stable aspects of organizational life can serve as antecedents of POE and determine if an organization generally has the potential to switch into this dynamic and highly productive state.

Next, POE is a multidimensional construct that is comprised of an affective, a cognitive, and a behavioral dimension (Bruch & Ghoshal, 2003; Cole et al., 2011). The emotional dimension is the degree of positive affective arousal as it relates to issues involving work. Cognitively, POE is a shared mental state and manifests in cognitive liveliness, a shared understanding of joint goals, a sense of shared alertness, and a proactive interest to question the status quo. The behavioral dimension comprises an organizations’ activity level, its elevated social interactions, and a high degree of focused effort. The three dimensions conjointly reflect a collective’s energy, yet they are conceptually and empirically distinct (Cole et al., 2011).
Finally, POE is a collective construct (Bruch & Ghoshal, 2003; Cole et al., 2011) that differs from individual energy through its interactive and coordinative dynamics (Morgeson & Hofmann, 1999). As a property of a collective it describes characteristics that are shared by members of this collective (Kozlowski & Klein, 2000). POE emerges through social interaction and cognitive, emotional, and behavioral contagion processes (Barsade, 2002; Thompson & Fine, 1999). As a collective-level construct, POE is more than the sum of energy of individuals and has the potential to be a much stronger force (Bruch & Ghoshal, 2003; Cole et al., 2011).

Although energy in organizations is still a relatively new topic of inquiry, scholarly interest in this construct has increased over the past years (e.g. Quinn & Dutton, 2005; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). In most contributions, energy has been conceptualized as an individual-level, affective construct. Dutton (2005), by referring to such early works as Collins (1981), Marks (1977), and Thayer (1989) defined energy as an affective experience and energetic arousal (see also Quinn & Dutton, 2005). Spreitzer et al. (2005) referred to the concept of thriving as “a psychological state in which individuals experience both a sense of vitality and a sense of learning at work” (p. 538), vitality being encompassed by the feeling of having energy available. In contrasting to the concept of inertia, Jansen (2004) studied the phenomenon of momentum in strategic change as “the force of energy associated with a moving body” (p. 277), thereby differentiating between stasis-based momentum (existing behaviors in pursuit of current goals) and change-based momentum (new behaviors in pursuit of change). Kark and Carmeli (2009), who studied the relationship between psychological safety climate and creative work involvement, investigated vitality – the subjective affective experience of having energy – as mediating mechanism in this relationship.

Whereas most researchers conceptualize energy in the organizational context on the individual level, Quinn and Dutton (2005) acknowledged that it is also a collective experience since affect converges easily when people interact with each other (see also Kark & Carmeli, 2009). Other scholars have studied collective-level phenomena that are similar to certain dimensions of POE. Quinn and Worline (2008) investigated collective action (i.e., the collective emergence of a certain behavior) which is comparable to the behavioral dimension of POE. Positive affect – or positive affective tone - has been studied on the collective level before (e.g. George, 1990) and researchers have developed conceptual models on the emergence of positive
affect on the group level (Walter & Bruch, 2008). With regard to its dynamic nature, most scholars agree that energy is rather an emerging state than a stable trait (Atwater & Carmeli, 2009; Jansen, 2004; Quinn & Dutton, 2005). However, this can very well be due to the fact that energy has most often been conceptualized as affective experience, and emotions – as short responses or as longer-lasting moods – are generally depicted as states (Quinn & Dutton, 2005).

So far, POE is the only concept that integrates various dimensions of energy states, namely affective, cognitive, and behavioral aspects, on the collective level (Cole et al., 2011). Since most researchers agreed on the state-like nature of energy, the question is: What is the added value of applying energy as a collective construct that comprises multiple dimensions? First of all, it lies in the very nature of organizational research to study outcomes on the group or organizational level, one of the most prominent collective outcomes being organizational performance (Richard, Devinney, Yip, & Johnson, 2009). Multi-level theorists have repeatedly advocated the use of collective-level constructs for the investigation of collective-level outcomes (Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999). This does not imply that lower-level constructs are useless, but in order to develop an exhaustive nomological network, researchers need to take relationships on different levels into consideration. In studying for example organizational performance, collective phenomena have a greater potential to exert an effect than the aggregated sum of individual-level phenomena (Bruch & Ghoshal, 2003).

Concerning the multidimensionality of POE, scholars have noted that the sole investigation of cognitive phenomena, while ignoring the role of affective experiences, is insufficient for a complete understanding of processes in organizations (cf. Quinn & Dutton, 2005). In a similar vein, opposed to studying one-dimensional variables, researchers have suggested to study multiple aspects of collective interaction simultaneously, because they better capture the complex reality of how groups of people collectively work towards shared goals (Arrow et al., 2000; Hambrick, 1994; McGrath et al., 2000). As such, POE as an integrated measure of various aspects of collective energy should be able to capture a more complex and complete picture of organizational phenomena than one-dimensional concepts.
Having provided detailed information for a solid understanding of POE, I will, in the upcoming chapter, develop the research questions that should be answered by my dissertation and that revolve around this phenomenon.

1.2.3 Fostering Productive Organizational Energy in Different Managerial Fields of Action

Scholars claimed that much research on energy at work remains speculative and prescriptive (Cameron, Dutton, & Quinn, 2003). Therefore, researchers have begun to empirically establish a nomological network around POE (Cole et al., 2011; Kunze & Bruch, 2010; Walter & Bruch, 2010). However, research is in an early stage and the question of how this phenomenon can be fostered in the long-term has not been systematically investigated. Already in 2005, Quinn and Dutton advocated investigating the conditions of the work context under which vitality among employees may arise and be sustained over a longer period of time (Quinn & Dutton, 2005). How can organizations manage to keep up POE, thereby constantly possessing the ability to switch into this mentally, emotionally, and behaviorally alert and positive collective state? Which possibilities do organizations have to foster the collective energy among their workforce in the face of constant success, but also during difficult times?

**Vitalizing management systems.** Bruch and Vogel (2011) have stressed the importance of *vitalizing management systems* for a long term sustainment of POE. They describe how the three elements of *strategy, leadership, and culture* should be managed in order to vitalize the organization and therewith foster POE. Other authors have developed comparable frameworks for the organization of managerial fields of action, an example being the St. Gallen management model which has been established at the University of St. Gallen (Ulrich & Krieg, 1972) and has since then gained great popularity among German-speaking managerial scholars and practitioners (for a similar framework see also Nohria et al., 2003). Besides culture and strategy, these frameworks suggest *structure* – as opposed to leadership – as managerial field of action.

With regard to strategy, which incorporates the long-term goal of an organization as well as concrete ways of achieving this goal, Bruch and Vogel (2011) suggested that companies should involve employees in identifying trends or a need
for change and that the strategy should be shared in the entire organization. Companies should regularly review their strategy and include different perspectives in its development. Concerning organizational culture, the authors stressed the importance of vitalizing values and a culture of innovation so that POE can be sustained. In the field of leadership, Bruch and Vogel (2011) argued that leaders should be developed across all hierarchical levels by fostering a general leadership climate in the entire organization. They stress the importance of aligning management structures, as for example incentive practices, with leadership principles. All in all, there exist ideas and theoretical reasoning with regard to the role that strategic, cultural and leadership aspects play in sustaining POE. However, the central assumption that the proper management of these aspects contributes to the sustainment of POE in the long term has not yet been subject of profound empirical testing. This thesis aims at taking a first step in closing this gap by examining stable cultural and leadership aspects within organizations that potentially foster POE in the long term. In the next sections, I will provide an overview of the different research questions and associated research gaps.

1.2.3.1 Research Question 1: Which Cultural Aspects Foster and Sustain Productive Organizational Energy?

Research question 1 asks which organizational cultural elements foster and maintain POE and therewith high organizational performance. Culture has oftentimes been described as an organization’s tendency to process certain situations in a specific way (e.g. Schein, 1996). Organizational cultures determine “how to feel and behave” (O’Reilly & Chatman, 1996: 160) and a strong organizational culture is one where most organizational members share common ways of behaving or doing business (Kotter & Heskett, 1992). Consequently, common behaviors in organizations are an integral part of organizational culture.

Behavior is built on and partly results from underlying assumptions (Schein, 1990). However, there is ample agreement among scholars that while behavior can be changed, values and especially basic assumptions are rather taken for granted and not questioned or discussed (Schein, 1990; Winett, 1974). Since the goal of this dissertation is to identify cultural elements that foster POE and that are open to management and change, it should, from a practical standpoint, be more fruitful to investigate behaviors as cultural determinants of POE than to examine deeply held
assumptions in this regard. I will thus conceptualize culture as certain recurring behavioral patterns on the organizational level that are observable and open to change. These behavioral patterns are based on assumptions about the correct way to behave and they manifest on the surface of culture, thereby belonging to the first cultural layer of artifacts (Schein, 1990).

Researchers have argued that organizations, like people, can be characterized by traits that predict attitudes and behaviors of the people within these organizations (cf. Robbins & Judge, 2012). Thus, a rather new, but promising way of assessing behavioral patterns in organizations is by relying on the construct of personality and applying it to the collective level (e.g. Hofmann & Jones, 2005), thereby using the widely accepted taxonomy of the big five factors of personality (Anderson, Flynn, & Spataro, 2008; McCrae & Costa, 1990). Research question 1 picks out behavioral patterns in organizations as central theme and asks which recurring behaviors on the organizational level can foster POE and therewith performance over longer periods of time. The first research question thus is: How does organizational personality – as an element of organizational culture – relate to POE and how is this linked to organizational performance?

The investigation of research question 1 mainly contributes to the literature of personality and organizational culture as well as to the research fields of POE and POS. In the content field of POE, researchers suggested taking into account intra-organizational factors that predict POE (Bruch, Vogel, & Raes, 2009b). This is achieved by investigating which organizational behavioral patterns serve as intra-organizational antecedents of POE.

Another important contribution of this study lies in the further exploration of the concept of collective personality. Gaining a deeper understanding of this concept has been called for by various researchers (Schneider & Smith, 2004; Stewart, 2003). After first studies on organizational personality have been conducted (e.g. Hofmann & Jones, 2005), open questions remain regarding mediating mechanisms in the relationship between organizational personality and firm performance and theoretical explanations for this relationship. I address this gap by identifying POE as an underlying mechanism between organizational personality and organizational performance and by providing theoretical explanations for this mediation. Consequently, the underlying mechanisms in this link can be better understood.
By linking the two concepts of organizational personality and POE, this study also contributes to the emerging field of POS (Cameron & Caza, 2004; Luthans & Youssef, 2007). Finally, it illuminates new antecedents and underlying processes of organizational-level performance which is one of the key interests in management and organizational behavior research (Richard et al., 2009).

1.2.3.2 Research Question 2: How Can Leadership Foster and Sustain Productive Organizational Energy?

Research question 2 asks how leadership can contribute to sustaining POE. Besides strategy and culture, reference frameworks have defined structure (Nohria et al., 2003; Rüegg-Stürm, 2005) or leadership (Bruch & Vogel, 2011) as central managerial fields of action.

A promising way to foster POE by means of leadership seems to be the establishment of a transformational leadership (TFL) climate in the organization – meaning that all or most leaders within the organization direct TFL behaviors toward their followers (Walter & Bruch, 2010). In their recent study, Walter and Bruch demonstrated that TFL climate serves as an antecedent of POE. Furthermore, they found that this relationship is influenced by structural components: Whereas high centralization diminished it, the link was strengthened under conditions of high formalization. Additionally, centralization and organization size were related negatively to TFL climate and formalization was related positively to TFL climate.

What we know from Walter and Bruch’s study is that leading employees collectively in a transformational manner has positive effects on POE. Furthermore, we know that this is influenced by certain structural elements. However, structural elements like organization size, formalization or centralization depend on many different factors and cannot be changed or influenced easily.

Thus, the question arises which other factors can support leaders in carrying out TFL behaviors effectively to foster POE? Put differently, how can managers and leaders establish a TFL climate through an effective use of management systems – as for example human resource management (HRM)? In a previous study, Bruch and colleagues (Bruch, Menges, Cole, & Vogel, 2009a) have linked high-performance work systems (HPWS) – human resource (HR) activities that aim at enhancing employees’ productivity and commitment (Datta, Guthrie, & Wright, 2005) - to POE and subsequent performance and have therewith demonstrated a positive effect of
these kind of HR systems on POE. Besides positively influencing POE, these HR systems might also be beneficial for TFL climate and support leaders in leading in an inspirational manner. To find out about these interrelations is the central motivation behind the second research question: *What is the relationship between HPWS, TFL climate and POE? Can certain bundles of HR practices enhance a climate of TFL in the organization that can foster POE?*

By broaching the simultaneous investigation of HR practices and leadership, I continue the integration of two literature streams that have been mainly developed in isolation. Only recently scholars have begun to reveal some remarkable similarities in the conceptual developments within these literature streams (Zhu, Chew, & Spangler, 2005). Zhu and colleagues state that, “at the risk of oversimplifying, we may say that the difference between traditional and more recent leadership research is the difference between management and leadership” (p. 40), thereby hinting at the shift from transaction-based leadership research that focused on command and delegation to a TFL research based on phenomena such as inspiration and charisma. A similar development has taken place within HRM research: Whereas older research focused more on administrative aspects, newer studies and theorizing focus on how HRM can serve the strategic interests of the entire organization and enhance the capacity of employees (cf. Ferris, Hochwarter, Buckley, Harrell-Cook, & Frink, 1999). Although the linkage between HRM and leadership is of high theoretical and practical relevance, Zhu et al. (2005) notice that it has to date not been a field of extensive research (for an exception, see e.g. Whittington, Goodwin, & Murray, 2004). In the second study I aim at bringing these concepts together and therewith take a first step towards integrating these – so far separately followed - topics.

It should be noted that the term “high-performance work systems” has been criticized because it automatically implies that a bundle of HR practices is performance-enhancing. Instead of generally making the assumption that randomly combined practices are beneficial for performance, authors have advocated to describe HR systems in meaningful terms by identifying the major philosophies that management is trying to pursue with these practices (Boxall & Macky, 2009). Following this notion, I will concentrate on commitment-based HR practices as one type of HPWS. High-commitment HRM has the specific aim to shape employee behaviors and attitudes by developing psychological links between organizational
and individual goals which in turn should increase effectiveness and productivity (cf. Farndale, Hope-Hailey, & Kelliher, 2011).

Besides the combination of two so-far separately investigated phenomena, my second study contributes to the literature on HPWS and TFL as well as to research on organizational social climates. It adds to research on HPWS by broadening the scope of potentially relevant outcome variables and mediating mechanisms (Katou & Budhwar, 2006; Paauwe, 2009; Takeuchi, Lepak, Wang, & Takeuchi, 2007). Recently, researchers have pleaded for the use of more proximal outcome measures of HR practices and the investigation of subsequent changes on the organizational level (Paauwe, 2009). Moreover, this study follows the call of various researchers to assess employees’ and not managers’ perceptions regarding these systems, thereby overcoming deficiencies in the conceptualization of HPWS in this research field (Liao, Toya, Lepak, & Hong, 2009; Qiao, Khilji, & Wang, 2009).

Next, it contributes to research on climates by broadening our understanding of how organizational climates, especially leadership climates, emerge. Researchers have remarked that our understanding of how organizational climates develop is still limited (Bowen & Ostroff, 2004; Schneider, 2000). By taking into account HR systems as an antecedent of leadership climates, my study can enhance the understanding of the development of social climates further.

With regard to the TFL literature, authors have called for an investigation of more distant antecedents of TFL behavior (Bommer, Rubin, & Baldwin, 2004; Shamir & Howell, 1999). By investigating commitment-based HR practices as an antecedent of TFL climate, I add further knowledge to relevant determinants of this leadership style besides personal characteristics and behaviors. Within leadership research, identifying contextual variables that enhance or hamper leadership behavior within organizations has long been acknowledged a necessary next step in the research process (Boal & Hooijberg, 2000; Porter & McLaughlin, 2006; Shamir & Howell, 1999). Furthermore, researchers have recently noted that group processes remain a surprisingly underemphasized phenomenon in leadership research (Hiller, DeChurch, Murase, & Doty, 2011). This gap is astonishing in consideration of the fact that it is a central aim of leadership to join people together toward a common goal. By further investigating the relationship between TFL climate and the group-level phenomenon of POE I aim to address this gap.
Adding to the still recent literature on POE in organizations, two essential, yet so far independently analyzed and discussed antecedents of POE are simultaneously investigated, thereby contributing to a synthesis of so-far conducted studies in this field (Bruch et al., 2009a; Walter & Bruch, 2010).

1.2.3.3 Research Question 3: What are Boundary Conditions in Fostering Productive Organizational Energy and how do Cultural, Leadership and HRM Aspects Interrelate?

Research question 3 deals with the identification of potential boundary conditions in the sustainment of POE. Moreover, it focuses on the interplay between organizational personality, HRM and leadership as intra-organizational antecedents of POE. Whereas studies 1 and 2 focus on selected variables, respectively, in study 3 I aim to investigate these phenomena altogether. The central motivation behind study 3 can be summarized in the following questions: Are the investigated stable, intra-organizational conditions that help to foster POE in the long term equally effective in all settings or are there certain situations that increase or decrease their effectiveness? How do the studied variables interrelate in an overall model? How, to be more specific, do collective behavioral patterns relate to HR practices and TFL climate? How do commitment-based HR practices and TFL climate affect organizational performance? Based on these research questions, aims of study 3 are (a) deriving ideas for potential moderator variables in the sustainment of POE, (b) deriving an overall conceptual model that can serve as a summary of findings and in which the relationships between all study variables are depicted, and (c) investigating the sustainment of POE from a different angle, thereby triangulating so-far collected evidence and gaining a fresh perspective on this phenomenon. These aims should be achieved by the investigation of a practical company case.

1.2.4 Summary and Integration of Research Questions

To sum up, all of my research questions are aimed at identifying stable aspects within organizations that can help to foster the phenomenon of POE over longer periods of time. I am particularly interested in the managerial fields of culture and leadership. The three studies that I conducted aim at providing answers to the following questions:
(1) Which cultural artifacts in organizations positively influence POE and performance? More specifically, how do behavioral patterns of multiple organizational members that can be described in terms of the big five factors of personality relate to POE and organizational performance?

(2) How can HRM support the development of a TFL climate in organizations to increase POE?

(3) What are potential moderator variables in fostering POE in the long term and how do organizational personality, commitment-based HR practices, TFL climate and POE interrelate in an overall model?

In answering these questions, I intend to provide practitioners with insights and recommendations on how to sustain a high level of POE in their companies, thereby enabling them to move from normalcy to extraordinary performance and to uphold this performance level over periods of time without risking a too high level of complacency in the workforce.

In sum, the different studies of my dissertation address the following main research gaps:

(1) Investigation of intra-organizational, stable antecedents of POE and boundary conditions in fostering POE (Bruch et al., 2009b; Cameron et al., 2003; Quinn & Dutton, 2005)

(2) Exploration of organizational-level, positive phenomena that are open to management and change and that relate to extraordinary performance (Cameron & Caza, 2004)

(3) Development of theoretical explanations and underlying mechanisms for the positive link between organizational personality and performance (cf. Hofmann & Jones, 2005)

(4) Exploration of the “black box” between HR practices and outcome variables (Katou & Budhwar, 2006; Paauwe, 2009), thereby investigation of HRM from a specific theoretical angle (Boxall & Macky, 2009)

(5) Investigation of contextual antecedents of TFL (Bommer et al., 2004) and its effect on group processes (Hiller et al., 2011); further exploration of the concept of TFL climate

(6) Combination of leadership and HR literatures (Zhu et al., 2005)
An overview of the different research questions and studies with regard to the underlying reference framework is depicted in figure 1.

**Figure 1. Overview of Different Research Questions and Studies**

<table>
<thead>
<tr>
<th>Leadership</th>
<th>Culture</th>
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<tbody>
<tr>
<td>Research question 1 / Study 1</td>
<td></td>
</tr>
<tr>
<td>How does organizational personality, depicted as organizational behavioral patterns, relate to POE and performance?</td>
<td></td>
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<tr>
<td>Research question 2 / Study 2</td>
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<tr>
<td>How can HRM support leaders in establishing a TFL climate in the organization to sustain POE?</td>
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</tr>
<tr>
<td>Research question 3 / Study 3</td>
<td></td>
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<tr>
<td>How do the study variables interrelate in an overall model and what are potential boundary conditions for sustaining POE?</td>
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</table>

How can productive organizational energy be fostered in the long term?

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### 1.3 Methodological Approach

In their paper on methodological fit in management field research Edmondson and McManus (2007) refer to “intermediate research” when relationships are proposed between new and established constructs. In my dissertation, I combine the construct of HPWS (e.g. Evans & Davis, 2005) which is quite established in the literature with POE that is being investigated more extensively since several years (Cole et al., 2011; Kunze & Bruch, 2010; Walter & Bruch, 2010). Moreover, I also investigate quite new constructs that researchers have only begun to explore in more depth recently: Organizational personality (e.g. Hofmann & Jones, 2005) and TFL climate (Sanders, Geurts, & van Riemsdijk, 2011; Walter & Bruch, 2010). Thus, research on these constructs is in an intermediate state of maturity. Edmondson and McManus (2007) advocated the use of hybrid data and methods for these kind of research questions. Against this background, I will use a combination of quantitative (studies 1 and 2) and qualitative (study 3) types of data and methods.

Whereas the data for studies 1 and 2 are generated using survey methodology, the research questions of study 3 should be answered by the use of a single case study design. Studies 1 and 2 build strongly on existing theoretical knowledge and
so-far conducted empirical research. I will generate and test hypotheses based on existing literature and established quantitative measurement devices.

Study 3 follows a different, more inductive approach. According to Eisenhardt (1989), case studies focus on understanding the dynamics that are present in a single setting. They are especially suited for answering “how” and “why” questions in rather unexplored research areas (Edmondson & McManus, 2007). The detailed study of a case should enable me to identify general conditions that were present within the investigated company setting and that potentially limited or enhanced the effects of HRM or leadership on POE. Moreover, a case study makes it possible to triangulate so-far gained insights about relationships between the study variables in a different, qualitative manner. The cross-sectional nature of the quantitative data in studies 1 and 2 put certain limits to building causal arguments. By identifying relationships in the case setting, confidence in derived causal arguments can be increased and an overall conceptual model derived. Additionally, case studies can be used to make a conceptual contribution by identifying the theoretical constructs in a natural setting and illustrating them with concrete examples (Siggelkow, 2007). This makes it possible to investigate the sustainment of POE from a different perspective. As Flyvbjerg (2006: 228) recently stated “formal generalization is overvalued as a source of scientific development, whereas “the force of the example” is underestimated”. All in all, the above reasons lead me to believe that a case study approach is appropriate for achieving the aims of study 3, while research questions 1 and 2 can be best answered by the use of quantitative data and methods.

1.4 Dissertation Outline

This dissertation is structured along the different research questions and corresponding studies. In chapter 1 I presented the overall aim of the dissertation, its practical and scientific relevance, the different research questions and corresponding gaps and the overall methodological approach.

Chapters 2, 3, and 4 will focus on the respective studies. In chapter 2, I will present a cross-sectional study that was conducted in 118 small- and medium-sized German companies to find out about the relationship between collective behavioral patterns, POE and organizational performance.
Chapter 3 deals with the second study in which I investigated the complementing effects of HR practices and leadership on POE. 76 small- and medium sized German companies participated in the investigation.

In chapter 4 of this dissertation I will present the case study. This will include a detailed description of the data collection and analysis process as well as a presentation of the findings. The specific context at the company Phoenix Contact allowed me to develop ideas for potential boundary conditions for the sustainment of POE. Moreover, the study concepts are illustrated by typical quotations from the interviews.

The aim of the final chapter 5 is to integrate prior findings in an overall discussion and conclusion. The contributions of the different studies and the overall contributions are summarized. Practical implications are discussed and recommendations targeted at senior and HR managers and leaders are provided. Finally, I discuss my research in light of its limitations and propose potential directions for future research.
2 Study 1 – Organizational Personality as Cultural Antecedent of Productive Organizational Energy

My first research question aims at investigating how the personality of an organization affects company performance and how this relates to POE.\(^2\) The purpose of study 1 is to investigate the underlying mechanisms in the relationship between organizational personality and organizational performance. I argue that the big five factors of personality of organizations are related to their performance and that this relationship is mediated by POE. The hypotheses were tested in a sample of 118 small- and medium-sized German companies. Mediation was found for collective extraversion, agreeableness, emotional stability and openness to experience. For collective conscientiousness, no mediation was shown.

2.1 Theoretical Background and Hypotheses Development

In the following paragraphs I will explain how organizational personality can be conceptualized as recurring behavioral patterns on the organizational level. I will then develop the argument that POE serves as a linking mechanism between organizational personality and organizational performance and that a specific organizational personality – as a cultural artifact – can thus help to foster POE.

2.1.1 Organizational Personality and Corresponding Behavioral Patterns as Cultural Artifacts

Behavioral routines that stem from a certain organizational personality can be conceptualized as cultural artifacts. According to Schein (1990), cultural artifacts are a surface manifestation of culture that is grounded in underlying values and beliefs on what is the correct way of reacting and behaving. The following section aims at explaining the relatively new concept of organizational personality in greater detail, thereby establishing a theoretical basis for the development of specific hypotheses regarding its relationship to organizational performance and POE.

Research has shown that individuals have the tendency to behave in a relatively consistent manner over time and across situations (Hogan, 1991; James &

\(^2\) This chapter is based on: Dolle, D. (2010). “Organizational personality and organizational performance: The mediating role of productive organizational energy.” Paper accepted for presentation at the 2010 Academy of Management Conference; Montréal, Canada.
Mazerole, 2002). These tendencies stem from individual attributes and underlying structures that can be labeled “personality” (Paunonen, 1998, 2003; Paunonen & Ashton, 2001; Piedmont, 1998; Schneider & Smith, 2004). In the literature, it has long been acknowledged that there are behavioral regularities within a collective of individuals as well. These regularities have been referred to as organizational routines, norms, and path dependencies (e.g. Cyert & March, 1963; Gersick & Hackman, 1990; Levitt & March, 1988; Nelson & Winter, 1982) or as “recurring patterns of behavior of multiple organizational members involved in performing organizational tasks” (Feldman & Rafaeli, 2002:311).

Although this research topic is still relatively recent, some studies have been able to demonstrate that it is possible to describe collective behavioral patterns in teams and organizations in terms that are derived from the big five factors of personality (e.g. Bettenhausen & Murnighan, 1991; Davis-Sacks, 1990; Saavreda, 1990; van Oudenhoven, Prins, Bakker, Schipper, & Tromp, 2003). The increasing interest in a conceptualization of personality on the collective level of analysis (Schneider & Smith, 2004; Smith & Schneider, 2004; Stewart, 2003) stems from the assumption that collective personality is qualitatively different from individual personality and that investigating variables across multiple levels of analysis can add explanatory value to the understanding of organizational phenomena (cf. Morgeson & Hofmann, 1999). Already in 1991, researchers advocated using micro-level psychological theories for explaining macro-level organizational action (Staw, 1991). Combining the framework of the big five factors of personality with research on behavioral routines in organizations also adds to recent trends in the latter research field to adopt a more complex view on routines by focusing on their social meaning and on social interaction that is embedded in them (cf. Okhuysen & Bechky, 2009).

The big five factors of personality (i.e. extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience, McCrae & Costa, 1990) are viewed as “the most comprehensive and widely accepted taxonomy of personality traits” by many scholars (Anderson et al., 2008:704). Numerous studies have demonstrated that they relate to various relevant outcomes in organizational settings (e.g. performance, job satisfaction, leadership, self-efficacy, Barrick, Mount, & Judge, 2001b; Judge, Klinger, Simon, & Wen Fen Yang, 2008). Extraversion includes traits such as sociability, activity, and positive emotionality. Consequently, organizations that score high on extraversion have employees that act in a sociable,
talkative, and active way. Agreeableness comprises a pro-social and communal orientation towards others and includes traits such as tender-mindedness, trust, and modesty. Firms with high values in organizational agreeableness would mainly employ individuals that collectively act in a pro-social, trustful, and cooperative manner. Conscientiousness implies organized, reliable, hard-working, and ambitious behaviors. High levels of organizational conscientiousness would thus result in behaviors that for example contain efficiency and attention to detail. Emotional stability is characterized by a lack of anxiety, hostility, and personal insecurity. Thus, an emotionally stable workforce would act in a secure and anxiety-free way. Openness to experience implies intellectuality, creativity, unconventionality, and broad-mindedness. An organization scoring high on openness to experience would consequently show creative, untraditional, and curious ways of interacting and working (cf. Anderson et al., 2008; Barrick et al., 2001b; John & Srivastava, 1999).

Besides relying on the big five factors of personality, authors have developed other, differing frameworks for describing the personalities of organizations (Slaughter, Zickar, Highhouse, & Mohr, 2004; Tom, 1971). However, these authors aimed at investigating an organization’s social reputation or the manner in which it is perceived by people outside the organization (see also Lievens & Highhouse, 2003). Drawing on the differentiation made by Hogan (1991), the aim of my study is to primarily infer the personality of an organization that is determined by internal properties and that results in behavior within the organization (and not, like Slaughter et al. (2004), the personality that is public and results in a social reputation).

Scholars assume that collective personality differs structurally, but not functionally from individual personality (Chen, Bliese, & Mathieu, 2005; Morgeson & Hofmann, 1999). Thus, the consequences of collective personality are similar to those on the individual level, but the constructs emerge differently. In contrast to individual personality, collective personality only emerges when individuals start interacting and it remains consistent even if certain individuals leave the organization. Whereas individual personality is shaped by an interaction of genetic dispositions, experience, and learning, organizational personality is developed over time through processes of social interaction (Morgeson & Hofmann, 1999). Drawing on Klein and Kozlowski (2000), the higher-level construct of organizational personality is a shared property, meaning that it stems from experiences, attitudes, perceptions, values, and cognitions held in common by organizational members. As individuals with certain
(similar) individual personalities work together, they develop shared expectations and norms, and this leads to the emergence of collective behavioral regularities.

The process of developing shared norms and behaviors is facilitated by homogenization and derogation of individual differences over time through organization-specific attraction, selection, attrition (Schneider, 1987) and socialization (Schneider & Reichers, 1983). Researchers suggested that certain “types” of employees become attracted and are selected by an organization, then become socialized, and finally leave the organization if they do not fit in or cannot identify with prevailing norms and routines. It has been shown that personality characteristics can be inferred from observable behavior (Hogan, 1991); consequently, applicants can, purposefully or not, be selected according to their individual personalities. As a result of learning and sense making activity (Schneider & Reichers, 1983), individuals become socialized and carry out multiply observed behaviors within a group themselves. All in all, these processes should reinforce homogenization and lead to the development of collective behavioral regularities within an organization. According to Schein (1990), these commonly held automatic patterns of behaving provide meaning, stability, and comfort to organizational members, which are key functions of organizational culture.

First studies have demonstrated a link between organizational personality, conceptualized as collective behavioral patterns, and organizational performance. Particularly, Hofmann and Jones (2005) investigated the relationships between leadership and organizational personality and organizational personality and performance. However, their study was limited to a very specific organizational context (i.e. fast food industry). The present study analyzes the relationship between organizational personality and organizational performance in a sample that includes organizations from diverse industries and contexts, thus aiming to contribute to a generalization of prior findings and advancing knowledge on personality on the organizational level further. Hofmann and Jones (2005), who tested the relationship between collective personality and firm performance, did not focus on underlying mechanisms nor did they classify the proposed relationships in a broader theoretical framework that can provide explanations for the propositions. Thus, open questions remain regarding the mediating mechanisms between organizational personality and firm performance and theoretical explanations for these relationships. To address these questions is the central aim of my first study.
2.1.2 The Relationship between Organizational Personality and Organizational Performance

The relationship between the big five factors of personality and performance has been extensively studied on the individual level of analysis (e.g. Barrick & Mount, 1991; Barrick et al., 2001b; Bell, 2007; Ones, Dilchert, Viswesvaran, & Judge, 2007). Scholars have acknowledged that all big five traits relate to performance, with varying consistency and strength (Barrick & Mount, 2005). While conscientiousness has the strongest and most consistent impact, extraversion and agreeableness are good predictors of rather specific performance measures. Emotional stability is a stable predictor of more general performance measures and openness to experience shows the weakest and less consistent relationships. Until now, the relationship between organizational personality and firm performance has not been a field of extensive research. An exception is Hofmann and Jones (2005) who found support for a relationship between organizational conscientiousness and agreeableness (which were merged into one variable because of high intercorrelations, $r = .90$) and firm performance consistency and, contrary to expectations, between organizational extraversion and firm performance variability. Although the authors also hypothesized performance effects for organizational openness and emotional stability, no relationships to performance were shown for these personality dimensions. This might have been due to the high specificity of the research setting (fast food stores) where efficiency might be more important than creative processes and teamwork. This setting might as well explain the negative performance effect of extraversion: Sociable and talkative behaviors might have a rather distractive than productive effect.

In the present study, I suggest that behaviors resulting from a high level of organizational extraversion foster more frequent contacts among the employees and a more active and effective way of approaching colleagues and clients. This in turn should positively affect teamwork and organizational performance (e.g. Barrick, Mount, & Judge, 2001a; Ones et al., 2007). Moreover, organizational extraversion, agreeableness, and emotional stability have the potential to foster a high quality of social relations (e.g. Barrick et al., 2001b; Barrick, Stewart, Neubert, & Mount, 1998). Coleman (1988) notes that information is an important basis for action. Stable social relations may provide ideal preconditions for the constitution of information channels.
and thus, provide a basis for action and lead to better organizational performance. Consequently, I hypothesize the following:  

**H1a. Organizational extraversion positively affects organizational performance.**

Organizational agreeableness fosters norms and behaviors like helping and cooperation. Research on organizational citizenship behavior (Podsakoff, Ahearne, & MacKenzie, 1997) has found positive effects of cooperative and helping behavior on performance. Consequently, organizational agreeableness should have positive performance effects (e.g. on employee retention or productivity).

**H1b. Organizational agreeableness positively affects organizational performance.**

Moreover, I suggest that organizational conscientiousness reinforces diligent role performance within groups and a high focus on tasks and goal-directed behavior (cf. Hofmann & Jones, 2005). This, in turn, should have a positive effect on employee productivity, efficiency of business processes, and financial indicators since cost-intensive errors are avoided and processes run smoother (Guzzo & Shea, 1992).

**H1c. Organizational conscientiousness positively affects organizational performance.**

Organizational emotional stability may prevent interpersonal difficulties and enhance effective group functioning. Research has shown that this is important for successful teamwork (Barrick et al., 2001b), consequently, I believe it to positively affect organizational performance.

**H1d. Organizational emotional stability positively affects organizational performance.**

Organizational openness possibly leads to norms and behaviors that challenge the status quo and thus foster innovation, creativity, and organizational learning and improvement. This could positively influence the ability of an organization to deal with change, and therewith organizational-level performance (Pettigrew & Whipp, 1991). Moreover, the importance of norms like openness has been noted for the performance of knowledge-intensive firms (Starbuck, 1992). Being open-minded and willing to question prevailing opinions may furthermore offset tendencies like ‘groupthink’ (Janis, 1982) which are negatively related to the quality of decisions.

Based on this reasoning, I hypothesize the following relationship:  

**H1e. Organizational openness to experience positively affects organizational performance.**
2.1.3 The Effect of Organizational Personality on Productive Organizational Energy

Little research has been conducted on the performance effects of organizational personality and so far, nothing is known about the mechanisms that account for this linkage. I assume that a certain organizational personality positively affects firm performance because it fosters an intra-organizational state of POE. In arguing that a certain organizational personality positively affects POE, I draw on research on intra-group and contagion processes, social categorization theory, organizational routines, and research on affectivity. While some of the stated arguments and proposed mechanisms are unique to single personality traits, other mechanisms apply to the relationship between various traits and POE. I will account for this by explaining the proposed mechanism in more detail once, but referring to it in a briefer manner when it occurs repeatedly within other hypotheses.

Organizational extraversion and POE. Extraversion has been described as intrinsically interpersonal in nature (McCrae & Costa, 1989) and has been shown to relate to teamwork success (Barrick et al., 2001a; Heslin, 1964) and team viability (mediated via social cohesion; Barrick et al., 1998). Hypothesized processes in these relationships are benefiting interpersonal interactions and seeking help from others when needed (Bell, 2007). A study by Barrett and Pietromonaco (1997) demonstrated that extraversion predicts perceptions of daily social interactions. Thus, it is likely that daily social interactions are perceived and evaluated more positively when extraversion is high. Assuming that the structure, but not the function of organizational personality differs from individual personality (Chen et al., 2005), these relationships should be convertible to the collective level. Consequently, the prevalence of collective extraverted behaviors should facilitate social interaction through intra-group processes like social cohesion. Intense social interactions facilitate processes like cognitive and emotional contagion (Barsade, 2002), which in turn foster POE (Bruch et al., 2009b). Social interaction is a prerequisite for the transfer of ideas and emotions (Barsade, 2002) and thus, for POE where shared cognition and emotion are key elements. Moreover, a strong social network is important for the generation of collective action, and thus, for collective behavioral energy (Lin & Shih, 2008).

Research has shown that identification with a group enhances concern for collective processes and outcomes (Kramer, Brewer, & Hanna, 1996) and salient
group identification may enhance the frequency of cooperation (cf. Lewicki & Bunker, 1996). This in turn may positively affect POE. Social categorization (as a precondition for identification) could be positively influenced by the existence of an organizational personality because individuals perceive the collective behavioral patterns as a common characteristic (Hogg & Abrams, 1988; Tajfel, 1981). However, it should be easier to collectively identify with common characteristics and behavioral patterns that foster a good interpersonal climate than with characteristics that lead to a tensed interpersonal climate. Therefore, organizational extraversion, which facilitates interpersonal processes (e.g. Barrick et al., 2001b), should foster a stronger identification with the collective and thus, increase POE (Kramer et al., 1996).

Certain behavioral routines might foster POE by economizing cognitive resources which are then free for cognitive and emotional contagion processes. While emotional contagion also occurs at a less conscious level, purposeful processing is involved in both cognitive and emotional contagion (Barsade, 2002; Salancik & Pfeffer, 1978). Research has shown that routines economize information-processing capacity (cf. Becker, 2004). As such, an organizational personality - that manifests in behavioral routines (e.g. extraverted behaviors) - would lead to a saving of cognitive resources. These economized cognitive resources are then free for processes like emotional and cognitive contagion which in turn foster POE. With regard to the nature of behavioral routines, one can imagine that not every sort of routine is equally economizing. It can for example be assumed that routines which foster a sociable, cooperative, and relaxed interpersonal climate are less cognitive demanding than routines which lead to an aggressive, competitive, and tensed interpersonal climate. The reason for this is that less cognitive resources need to be invested in activities like conflict solving when the interpersonal climate is good. Since extraversion fosters the quality of interpersonal relationships (Barrick et al., 1998), groups with prevailing extraverted behaviors should have more information-processing capacities than groups with rather introverted collective patterns. Thus, the potential for POE to spread throughout the organization is higher when organizational extraversion is more pronounced (Barsade, 2002).

Finally, a vast body of research has shown that extraversion is positively related to positive affectivity. This leads to a biased recall of positive emotions (such that positive emotions can be remembered more easily than negative emotions, Barrett, 1997) and to a more frequent experience of positive emotions (Gross, Sutton, &
Ketelaar, 1998; Larsen & Ketelaar, 1991; Rusting & Larsen, 1997; Suls, Green, & Hills, 1998). Scholars have concluded that extraversion has a strong temperamental basis and that this positively relates to the level of social activity (Watson & Clark, 1992; Watson, Clark, McIntyre, & Hamaker, 1992). As such, organizational extraversion should foster collective positive emotions and elevated social interactions and therewith the emotional and behavioral dimensions of POE (Cole et al., 2011). If organizational extraversion is low, the experience of collective positive emotions is less likely and social activity is reduced. This has negative impacts on POE. All in all, the above arguments lead me to the following hypothesis:

**H2a. Organizational extraversion positively affects POE.**

Organizational agreeableness and POE. Just like extraversion, agreeableness is also an interpersonal trait (McCrae & Costa, 1989) that predicts teamwork success (Barrick et al., 2001b; Heslin, 1964). The processes that support this relationship are interpersonal facilitation, maintenance of social harmony, reduction of within-group competition, and cooperating with others (Bell, 2007; Hofmann & Jones, 2005). Consequently, collective agreeable behavioral patterns should facilitate and improve social interaction and thus, POE (Barsade, 2002).

Agreeableness fosters a good interpersonal climate and prevents interpersonal tensions and conflicts (e.g. Bell, 2007). As already argued for organizational extraversion, a good interpersonal climate could facilitate social categorization and identification with the collective and this in turn may positively affect POE. Moreover, scholars have shown that conflicts within teams predict team affective climate (Gamero, Gonzalez-Roma, & Peiro, 2008). Thus, agreeable behavioral patterns carried out by multiple organizational members should reduce conflict and potentially facilitate positive affective climates within the organization, therewith fostering the affective dimension of POE.

In a similar vein, it can be assumed that behavioral routines which lead to a good interpersonal climate are less cognitive demanding than routines which are connected to a difficult interpersonal climate. The reason for this is that less cognitive resources need to be invested in interpersonal tensions and conflicts. Consequently, these cognitive resources will be available for contagion processes which in turn foster POE (Barsade, 2002; Bruch et al., 2009b). In sum, I predict the following:

**H2b. Organizational agreeableness positively affects POE.**
Organizational conscientiousness and POE. Conscientiousness implies reliable, hard-working, and efficient behavior that should result in good outcomes (cf. Anderson et al., 2008; Barrick et al., 2001b; John & Srivastava, 1999). Generally, it can be assumed that people identify more easily and willingly with a group that produces good working results than with a group that shows careless behavior and produces low-quality work. Hence, POE may be fostered when organizational conscientiousness is more pronounced because concern for the group is higher (Kramer et al., 1996) which might make people more receptive to contagion processes (Barsade, 2002).

Moreover, a behavioral routine that fosters a way of working and interacting that is characterized by efficiency and reliability should be more economizing than a routine that comprises an unreliable way of working and interacting. Consequently, more information-processing capacity should be available for emotional and cognitive contagion processes if the existing organizational personality can be described as conscientious. This in turn could foster POE (Barsade, 2002; Bruch et al., 2009b). However, if the existing organizational personality can be described as rather careless, a high degree of cognitive resources needs to be invested in error-correcting activities and less emotional and cognitive contagion may take place. Hence, I propose the following:

H2c. Organizational conscientiousness positively affects POE.

Organizational emotional stability and POE. Similar to organizational extraversion and agreeableness, emotional stability also leads to a facilitation and improvement of social interaction in organizations: It relates to teamwork success (Barrick et al., 2001b; Heslin, 1964) and is a predictor of team viability (Barrick et al., 1998). Development of a relaxed atmosphere, engagement in less disruptive experiences, and more effective group functioning are proposed processes in these relationships (Bell, 2007; Hofmann & Jones, 2005). Furthermore, Barrett and Pietromonaco (1997) showed that the evaluations of daily social interactions are more positive when emotional stability is high. All in all, this should foster the frequency and quality of social interactions and therewith POE. On the contrary, low organizational emotional stability should negatively affect POE because it leads to a low interaction frequency and thus prevents contagion processes among employees (Barsade, 2002; Bruch et al., 2009b).
As demonstrated above, emotional stability fosters interpersonal relationships and prevents interpersonal tension and conflict. Consequently, organizational emotional stability should facilitate identification with the group, therewith enhancing the frequency of interpersonal contact (Lewicki & Bunker, 1996) and fostering POE.

In a similar vein, it can be assumed that if the existing organizational personality is emotionally stable, less resources need to be invested in conflict solving and more emotional and cognitive contagion can take place due to an economization effect (Barsade, 2002; Salancik & Pfeffer, 1978). Consequently, POE should be higher.

While organizational extraversion is positively related to positive affectivity (see argumentation above), neuroticism - the opposite end of emotional stability - is positively related to negative affectivity. Consequently, negative emotions can be remembered more easily than positive emotions (Barrett, 1997) and are more frequently experienced (Gross et al., 1998; Larsen & Ketelaar, 1991; Rusting & Larsen, 1997; Suls et al., 1998). Scholars have concluded that emotional stability, just like extraversion, has a strong temperamental basis and that this positively relates to the level of social activity (Watson & Clark, 1992; Watson et al., 1992). As such, organizational emotional stability should foster collective positive emotions and elevated social interactions and therewith the emotional and behavioral dimensions of POE (Cole et al., 2011). In sum, these arguments lead me to the following hypothesis:

\textit{H2d. Organizational emotional stability positively affects POE.}

\textbf{Organizational openness to experience and POE.} Above, I argued that organizational conscientiousness fosters a high quality of working results that lead to a stronger identification with the collective. However, high outcome quality can as well be achieved through creativity and open-mindedness (Janis, 1982) which are implied in organizational openness (cf. Anderson et al., 2008; Barrick et al., 2001b; John & Srivastava, 1999). Consequently, identification with the group should be more probable when openness is perceived as common characteristic by group members. This could enhance attention for collective processes and outcomes (Kramer et al., 1996) and the probability of emotional, cognitive, and behavioral contagion (Barsade, 2002). Therewith, the collective experience of positive emotions, cognitive activation, and proactive behavior could be fostered. Hence, I propose a positive linkage between organizational openness and POE:

\textit{H2e. Organizational openness to experience positively affects POE.}
2.1.4 Productive Organizational Energy and Organizational Performance

There are several reasons why I assume that POE enhances organizational-level performance (partly based on Bruch et al., 2009b). First, it has been shown that group drive relates positively to productivity (Stogdill, 1972) and the effort for a group task increases the group output (Hackman & Oldham, 1980). Previous research suggests that high POE leads to a greater effort in work and in the accomplishment of shared goals (Dutton, Worline, Frost, & Lilius, 2006; Kanov et al., 2004). This leads to the assumption that a high degree of collective focused effort (as an element of the behavioral POE dimension, Cole et al., 2011) has beneficial performance effects. On the contrary, low effort should have detrimental performance effects. Jansen (2004) observed that the probability of organizational goal attainment is higher when more energy is invested in organizational change.

On the emotional side, it has been shown that the affective tone within a group relates to outcomes such as pro-social and absence behavior (George, 1990) and an increase in positive group mood results in higher ratings of individual and group task performance (Barsade, 2002). A social network analysis study (Cross et al., 2003) showed that individuals’ energy relates to individual performance. Furthermore, positive affect increases creativity (Isen, 1999) and fosters cooperation (Barsade, 2002). I assume that the experience of collective positive emotions positively influences the affective tone and group mood and thus, performance-relevant outcome variables like employee productivity, efficiency of processes, and employee retention. Moreover, creativity and cooperation should foster knowledge exchange among employees and therefore, organizational-level performance.

It has been proposed that shared cognition leads to increased performance (Cannon-Bowers & Salas, 2001). Likewise, research has shown that the existence of a collective mind reduces organizational errors (Weick & Roberts, 1993). The shared pursuit of common goals as one key element of collective cognitive energy may render it possible to seize market opportunities more quickly and thus lead to organizational growth (e.g. Teece, Pisano, & Shuen, 1997).

In sum, these evidences lead to the proposition that the collective experience of positive emotions, cognitive activation, and proactive behavior of an organization in pursuit of common goals leads to an increase in organizational-level performance. Consequently, I derive the following hypothesis:
H3. POE positively affects organizational performance.

Thus far, I have developed the assumptions that organizational personality positively affects both organizational performance and POE and that POE positively relates to organizational performance. I now pull the strands together by hypothesizing that POE mediates the performance effects of organizational personality. Consequently, I developed the following hypotheses:

H4a. POE mediates the relationship between organizational extraversion and organizational performance.

H4b. POE mediates the relationship between organizational agreeableness and organizational performance.

H4c. POE mediates the relationship between organizational conscientiousness and organizational performance.

H4d. POE mediates the relationship between organizational emotional stability and organizational performance.

H4e. POE mediates the relationship between organizational openness to experience and organizational performance.

An overview of the entire conceptual model for study 1 is depicted in figure 2.
2.2 Method

In the subsequent chapters, the methodological approach underlying this study will be presented. This includes providing information on the data collection process and a sample description as well as describing the applied measures and data analyses procedures.

2.2.1 Data Collection and Sample Description

The data gathering for the present study was conducted in cooperation with a German agency specialized in benchmarking of small- and medium-sized companies. The data were collected in spring 2008 in a large employee survey that was either conducted online or in paper and pencil-format. Companies could take part in the study if they were a) located in Germany and b) had a company size of
between 20 and 5,000 employees. In sum, a total of 164 companies participated in 
the study, resulting in a total sample size of 24,148 employees. Of the 164 firms, 46
failed to provide sufficient data and were dropped from the study, resulting in an
organizational level response rate of 72% (n = 118). In line with the split-sample
design (Rousseau, 1985) respondents were randomly directed to one out of four
different surveys (out of which two have been used for the present study). To avoid
the problem of common source bias (Podsakoff, MacKenzie, Lee, & Podsakoff,
2003), the independent and dependent variables were incorporated in different
versions of the survey. The scales that were originally published in English were
translated into German following a double-blind back-translation procedure (Schaffer
& Riordan, 2003). Respondents were assured that their answers are treated
anonymously. Participating companies covered different industries, including
services, manufacturing, trade, and finance and insurance (in descending order).

Data were collected from four sources. First, 375 top management team
members provided information on the firms’ performance, with an average of 3
respondents per firm. Top managers were predominantly male (85%), on average 45
years old, and had been working in their current firm for on average of 11 years.

Next, general information (e.g. organizations’ size) was collected through a
key informant survey which was completed by the organizations’ HR executives or
another member of the top management team.

The samples of the two survey versions that were used for the present
analyses consisted of n = 4,196 employees (big five factors of personality) and n =
4,330 employees (POE). 53% of the respondents were male, 39% were female and
8% did not state their sex. Most respondents were 31-51 years of age (60%), as
opposed to 26% in the younger age group (16-30) and 11% with an age of over 50
years. The average tenure at the companies was 8 years and all major divisions and
hierarchy levels were covered.

2.2.2 Measures

The entire item sets are depicted in Appendix 6.1.

Organizational personality. The personality factors extraversion,
agreeableness, conscientiousness, emotional stability, and openness to experience
were assessed using the 10-Item Big Five Inventory (BFI-10) developed by
Rammstedt and John (2007). The BFI-10 is a short version of the BFI (John, Donahue, & Kentle, 1991) and was constructed for research settings with extreme time constraints. It assesses the personality factors with two items per dimension, one item coded in the positive and the other item coded in the negative direction of the scale (Rammstedt, 2007). The items are answered on a 5-point response scale (1 (strongly disagree) to 5 (strongly agree)). Reliability, construct validity, and external validity have been supported by so-far conducted studies (Rammstedt & John, 2007). To assess the personality factors on the organizational level, a referent-shift approach (Chan, 1998) has been applied. The focal referent is hereby shifted from the individual to the collective level. Sample items are “The employees in our organization are reserved” (extraversion reversed), “The employees in our organization tend to find fault with others“ (agreeableness reversed), “The employees in our organization do a thorough job” (conscientiousness), “The employees in our organization get nervous easily “ (emotional stability reversed) and “The employees in our organization have an active imagination” (openness to experience). The aggregation of the individual responses to the company level needs to be justified empirically. Therefore, intraclass correlation coefficients, ICC[1] and ICC[2] (Bliese, 2000), and interrater agreement statistics, r_wg (James, Demaree, & Wolf, 1984), have been calculated. Although there do not exist absolute standards for these values, James (1982) recommends a minimal value of .60 for the r_wg to justify an aggregation on the group level. The ICC[1] can be evaluated with a one-way analysis of variance where the group membership is the independent and the analyzed construct the dependent variable. If the F-value is significant, the differences between the groups are large enough to conceptualize the respective construct as a collective construct. Considering the ICC[2], a value > .70 should be achieved (Chen, Mathieu, & Bliese, 2004). Based on these recommendations, aggregation statistics justified the aggregation of individual responses to the organizational level (ICC[1] ranging from .07 to .10; all p < .001; ICC[2] ranging from .73 to .80; and r_wg ranging from .70 to .78). Cronbach’s alpha of the scale ranged from .71 to .86.

**Productive organizational energy.** POE was measured with a 14-item measure developed by Cole, Bruch, and Vogel (2011). A sample item for the emotional dimension (total of 5 items) is “The employees of my company are enthusiastic in their job”. Responses were given on a 5-point frequency scale ranging
from 1 (never) to 5 (extremely often / always). Exemplary items that tap the cognitive (5 items) and behavioral (4 items) dimension are “The employees in my company have a collective desire to make something happen” (cognitive) and “The employees in my company will go out of their way to ensure the company succeeds” (behavioral). These items were answered on a 5-point response scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Aggregation of the individual responses on the organizational level was justified for POE (ICC[1] = .08; p < .001; ICC[2] = .75; and $r_{wg} = .83$). Cronbach’s alpha was .96.

**Organizational performance.** Concerning organizational performance and effectiveness, researchers lack consensus as to which indicators can be considered as valid (Jobson & Schneck, 1982). Whereas some scholars dismissed subjective performance ratings as valid measures (e.g. Starbuck, 2004), others demonstrated subjective measures to be useful and to correlate well with objective measures of performance (Powell, 1992; Rowe & Morrow, 1999; Wall et al., 2004). In this study, I relied on several subjective performance indicators. Members of the top management team were asked to rate their firm’s performance relative to the performance of its industry rivals on a scale ranging from 1 (far below average) to 7 (far above average). Common performance measures can be divided into objective financial performance indicators, subjective financial performance indicators, and subjective nonfinancial performance indicators (cf. Newbert, 2008). The employed scale was comprised of subjective financial and nonfinancial performance measures. Based on Combs and colleagues (2005), I tapped operational performance with employee productivity, efficiency of business processes, and employee retention. Organizational performance was assessed with indicators for accounting returns, market returns, and company growth. As conducted in prior research (e.g. Delaney & Huselid, 1996; Newbert, 2008), the different indicators were averaged to form an overall performance index. Cronbach’s alpha of the scale was .92.

**Control variables.** In organization-level research organization size is frequently employed as a control variable to obtain results that are free from bias (e.g. Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006). In the present study, it was captured by the key informant survey by asking for the number of employees (converted to full-time equivalents). Furthermore, organization age, which was also depicted in the key informant survey, was used as a control variable to obtain effects that occur independently of the age of a company. Research has shown that
organization age is related to norms and institutional routines that associate with inertial behaviors (Tushman, Virany, & Romanelli, 1985). As done by other researchers, the variables were log-transformed to reduce skewness (Schminke, Cropanzano, & Rupp, 2002).

### 2.2.3 Data Analyses

Hypotheses 1, 2 and 3 were tested by various hierarchical regression analyses, entering organization size and age in the first step to control for these variables. To test for a mediation (hypothesis 4), I followed the causal steps approach introduced by Baron & Kenny (1986). According to this approach, three regression equations need to be estimated to test for mediation: The mediator has to be regressed on the independent variable, the dependent variable needs to be regressed on the independent variable, and, in a third step, on both the independent variable and the mediator. For a mediating influence to exist, the effect of the independent variable on the dependent variable must be weaker in the third equation than in the second. Importantly, the path between the independent and the dependent variable should be reduced significantly in equation three, when the effects of the mediating and the independent variables are taken into account simultaneously. If the influence of the independent variable is reduced to an influence of no significance in the third equation, then the mediation is perfect; otherwise, it is partial in nature.

There are various possibilities to test for a significant reduction in beta weights from the second to the third equation; the most common approach (which has also been recommended by Baron & Kenny, 1986) is the Sobel (1982) test. Scholars have repeatedly stated that the Sobel test only works well in large samples because it imposes distributional assumptions on the raw data (Preacher & Hayes, 2004, 2008). They recommend using the bootstrapping technique instead, because this technique does not impose a certain distribution on the data. Consequently, I used both the Sobel (1982) test as well as bootstrapping to test for the significance of the indirect effect.
2.3 Results

Table 1 presents the means, standard deviations, bivariate correlations, and reliabilities for the study and control variables. The control variables organization size and organization age correlate significantly and negatively with the study variables. As can be seen in table 1, the different organizational personality variables, POE and organizational performance are more pronounced in smaller organizations and in organizations with a shorter history.

Table 1. Means, Standard Deviations, Bivariate Correlations, and Reliabilities for Study and Control Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Extraversion</td>
<td>3.69</td>
<td>.38</td>
<td>(.86)</td>
<td></td>
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<td></td>
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<tr>
<td>2. Agreeableness</td>
<td>3.19</td>
<td>.37</td>
<td>.62**</td>
<td>(.71)</td>
<td></td>
<td></td>
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<tr>
<td>3. Conscientiousness</td>
<td>4.18</td>
<td>.31</td>
<td>.63**</td>
<td>.67**</td>
<td>(.81)</td>
<td></td>
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<tr>
<td>4. Emotional stability</td>
<td>3.52</td>
<td>.37</td>
<td>.65**</td>
<td>.80**</td>
<td>.77**</td>
<td>(.84)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5. Openness to experience</td>
<td>3.47</td>
<td>.37</td>
<td>.81**</td>
<td>.66**</td>
<td>.72**</td>
<td>.70**</td>
<td>(.79)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. POE</td>
<td>3.85</td>
<td>.26</td>
<td>.59**</td>
<td>.57**</td>
<td>.60**</td>
<td>.64**</td>
<td>.62**</td>
<td>(.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Firm performance</td>
<td>5.58</td>
<td>.95</td>
<td>.29**</td>
<td>.27**</td>
<td>.41**</td>
<td>.34**</td>
<td>.34**</td>
<td>.35**</td>
<td>(.92)</td>
<td></td>
</tr>
<tr>
<td>8. Organization size (log)</td>
<td>2.24</td>
<td>.53</td>
<td>-.36**</td>
<td>-.30**</td>
<td>-.38**</td>
<td>-.32**</td>
<td>-.38**</td>
<td>-.27**</td>
<td>-.24**</td>
<td></td>
</tr>
<tr>
<td>9. Organization age (log)</td>
<td>1.43</td>
<td>.43</td>
<td>-.45**</td>
<td>-.28**</td>
<td>-.31**</td>
<td>-.29**</td>
<td>-.44**</td>
<td>-.35**</td>
<td>-.14</td>
<td>.42**</td>
</tr>
</tbody>
</table>

Note. n = 118 organizations. Reliabilities are reported in the diagonal. *p < .05, ** p < .01, ***p < .001 (two-tailed). POE = productive organizational energy. log = common logarithm. All scales ranged from 1 to 5, except firm performance that ranged from 1 to 7.

Hypotheses 1a-e stated a positive effect of organizational personality on firm performance. As can be inferred from table 2, organizational extraversion significantly
and positively affects firm performance ($\beta = .26; p < .05$), even after controlling for organization size and age. The same can be shown for organizational agreeableness ($\beta = .22; p < .05$), conscientiousness ($\beta = .37; p < .001$), emotional stability ($\beta = .29; p < .01$), and openness to experience ($\beta = .31; p < .01$).
Table 2. Causal Steps Mediation Results with Organizational Performance as Dependent Variable

| Variables entered | Model 1 (extraversion) | | | | |
| | Step 1 | Step 2 | Step 1 | Step 2 | Step 3 |
| Organization size (log) | -.15 | -.04 | -.21* | -.16 | -.15 |
| Organization age (log) | -.29** | -.10 | -.05 | .04 | .07 |
| Extraversion | .53*** | | .26* | | .11 |
| Productive organizational energy | | | | | .27* |
| \(\Delta R^2\) | .22*** | | .05* | | .05* |
| \(R^2\) (adjusted \(R^2\)) | .14 (.13)** | .36 (.34)** | .06 (.04)* | .11 (.08)* | .15 (.12)* |

| Variables entered | Model 2 (agreeableness) | | | | |
| | Step 1 | Step 2 | Step 1 | Step 2 | Step 3 |
| Organization size (log) | -.15 | -.04 | -.21* | -.17 | -.15 |
| Organization age (log) | -.29** | -.19* | -.05 | -.01 | .04 |
| Agreeableness | .50*** | | .22* | | .08 |
| Productive organizational energy | | | | | .28* |
| \(\Delta R^2\) | .22*** | | .04* | | .05* |
| \(R^2\) (adjusted \(R^2\)) | .14 (.13)** | .37 (.35)** | .06 (.04)* | .10 (.08)* | .15 (.12)* |

| Variables entered | Model 3 (conscientiousness) | | | | |
| | Step 1 | Step 2 | Step 1 | Step 2 | Step 3 |
| Organization size (log) | -.15 | .01 | -.21* | -.10 | -.10 |
| Organization age (log) | -.29** | -.19* | -.05 | .02 | .05 |
| Conscientiousness | .55*** | | .37*** | | .28* |
| Productive organizational energy | | | | | .17 |
| \(\Delta R^2\) | .25*** | | .12*** | | .02 |
| \(R^2\) (adjusted \(R^2\)) | .14 (.13)** | .39 (.38)** | .06 (.04)* | .17 (.15)** | .19 (.16) |
Table 2. (continued)

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 4 (emotional stability)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization size (log)</td>
<td>-.15</td>
<td>-.01</td>
<td>-.21*</td>
<td>-.14</td>
<td>-.14</td>
</tr>
<tr>
<td>Organization age (log)</td>
<td>-.29**</td>
<td>-.18*</td>
<td>-.05</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>.58***</td>
<td>.29**</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productive organizational energy</td>
<td></td>
<td></td>
<td>.23 (p = .054)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.30***</td>
<td>.07***</td>
<td>.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R^2 (adjusted ( R^2 ))</td>
<td>.14 (.13)***</td>
<td>.44 (.43)***</td>
<td>.06 (.04)*</td>
<td>.13 (.11)***</td>
<td>.16 (.13)***</td>
</tr>
</tbody>
</table>

| Model 5 (openness to experience)   |        |        |        |        |        |
| Organization size (log)            | -.15   | -.02   | -.21*  | -.14   | -.14   |
| Organization age (log)             | -.29** | -.10   | -.05   | .05    | .08    |
| Openness to experience             | .57*** | .31**  | .18    |        |        |
| Productive organizational energy   |        |        | .23*   |        |        |
| \( \Delta R^2 \)                   | .24*** | .07**  | .03*   |        |        |
| R^2 (adjusted \( R^2 \))          | .14 (.13)*** | .39 (.37)*** | .06 (.04)* | .13 (.11)*** | .16 (.13)** |

Note. \( n = 118 \) organizations. *\( p < .05 \), **\( p < .01 \), ***\( p < .001 \) (two-tailed). log = common logarithm. Standardized beta weights are depicted.

Hypotheses 2a-e stated a positive effect of organizational personality on POE. The hierarchical regression results support this prediction (see table 2). After controlling for organization size and organization age, organizational extraversion is significantly and positively related to POE (\( \beta = .53; p < .001 \)) and the same holds true for the remaining four organizational personality factors (agreeableness: \( \beta = .50; p < .001 \); conscientiousness: \( \beta = .55; p < .001 \); emotional stability: \( \beta = .58; p < .001 \); openness to experience: \( \beta = .57; p < .001 \)).
Hypothesis 3 predicted a positive effect of POE on firm performance. A hierarchical regression analysis with organization size and organization age entered in step one as control variables supports this assumption ($\beta = .32; p < .01$).

Table 3 depicts the results of the regression analyses, Sobel (1982) tests, and bootstrapping technique (Preacher & Hayes, 2008) for testing the significance of the indirect effects of the different organizational personality factors on organizational performance.
<table>
<thead>
<tr>
<th>Variables</th>
<th>$b$ (s.e.)</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>E $\rightarrow$ POE</td>
<td>.36 (.06)</td>
<td>6.19</td>
<td>.000</td>
</tr>
<tr>
<td>POE $\rightarrow$ Performance</td>
<td>.97 (.39)</td>
<td>2.45</td>
<td>.016</td>
</tr>
<tr>
<td>E $\rightarrow$ Performance</td>
<td>.63 (.25)</td>
<td>2.52</td>
<td>.013</td>
</tr>
<tr>
<td>E $\rightarrow$ Performance (controlling for POE)</td>
<td>.28 (.28)</td>
<td>1.00</td>
<td>.321</td>
</tr>
<tr>
<td>Organizational size (log) $\rightarrow$ Performance</td>
<td>-.27 (.18)</td>
<td>-1.53</td>
<td>.130</td>
</tr>
<tr>
<td>Organizational age (log) $\rightarrow$ Performance</td>
<td>.15 (.23)</td>
<td>.65</td>
<td>.517</td>
</tr>
</tbody>
</table>

Bootstrap effect

<table>
<thead>
<tr>
<th>extraversion (s.e.)</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel $Z$</th>
</tr>
</thead>
<tbody>
<tr>
<td>.35 (.13)</td>
<td>.13</td>
<td>.65</td>
<td>2.41*</td>
</tr>
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<table>
<thead>
<tr>
<th>Variables</th>
<th>$b$ (s.e.)</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A $\rightarrow$ POE</td>
<td>.36 (.06)</td>
<td>6.31</td>
<td>.000</td>
</tr>
<tr>
<td>POE $\rightarrow$ Performance</td>
<td>1.02 (.40)</td>
<td>2.57</td>
<td>.011</td>
</tr>
<tr>
<td>A $\rightarrow$ Performance</td>
<td>.56 (.25)</td>
<td>2.28</td>
<td>.025</td>
</tr>
<tr>
<td>A $\rightarrow$ Performance (controlling for POE)</td>
<td>.20 (.28)</td>
<td>.70</td>
<td>.486</td>
</tr>
<tr>
<td>Organizational size (log) $\rightarrow$ Performance</td>
<td>-.28 (.18)</td>
<td>-1.58</td>
<td>.118</td>
</tr>
<tr>
<td>Organizational age (log) $\rightarrow$ Performance</td>
<td>.10 (.22)</td>
<td>.44</td>
<td>.659</td>
</tr>
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</table>

Bootstrap effect

<table>
<thead>
<tr>
<th>agreeableness (s.e.)</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel $Z$</th>
</tr>
</thead>
<tbody>
<tr>
<td>.37 (.13)</td>
<td>.14</td>
<td>.67</td>
<td>2.81**</td>
</tr>
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</table>
### Table 3. (continued)

#### Model 3 (conscientiousness)

<table>
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<th>b (s.e.)</th>
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<th>p</th>
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<tr>
<td>C $\rightarrow$ POE</td>
<td>.46 (.07)</td>
<td>6.87</td>
<td>.000</td>
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<tr>
<td>POE $\rightarrow$ Performance</td>
<td>.62 (.40)</td>
<td>1.56</td>
<td>.122</td>
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<tr>
<td>C $\rightarrow$ Performance</td>
<td>1.14 (.29)</td>
<td>4.00</td>
<td>.000</td>
</tr>
<tr>
<td>C $\rightarrow$ Performance (controlling for POE)</td>
<td>.86 (.34)</td>
<td>2.54</td>
<td>.012</td>
</tr>
<tr>
<td>Organizational size (log) $\rightarrow$ Performance</td>
<td>-.19 (.17)</td>
<td>-1.07</td>
<td>.287</td>
</tr>
<tr>
<td>Organizational age (log) $\rightarrow$ Performance</td>
<td>.11 (.21)</td>
<td>.52</td>
<td>.606</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bootstrap effect conscientiousness (s.e.)</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>.28 (.15)</td>
<td>-.02</td>
<td>.58</td>
<td>1.54</td>
</tr>
</tbody>
</table>

#### Model 4 (emotional stability)

<table>
<thead>
<tr>
<th>Variables</th>
<th>b (s.e.)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES $\rightarrow$ POE</td>
<td>.41 (.05)</td>
<td>7.76</td>
<td>.000</td>
</tr>
<tr>
<td>POE $\rightarrow$ Performance</td>
<td>.82 (.42)</td>
<td>1.95</td>
<td>.053</td>
</tr>
<tr>
<td>ES $\rightarrow$ Performance</td>
<td>.74 (.24)</td>
<td>3.10</td>
<td>.002</td>
</tr>
<tr>
<td>ES $\rightarrow$ Performance (controlling for POE)</td>
<td>.41 (.29)</td>
<td>1.39</td>
<td>.166</td>
</tr>
<tr>
<td>Organizational size (log) $\rightarrow$ Performance</td>
<td>-.25 (.17)</td>
<td>-1.44</td>
<td>.152</td>
</tr>
<tr>
<td>Organizational age (log) $\rightarrow$ Performance</td>
<td>.10 (.22)</td>
<td>.44</td>
<td>.662</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bootstrap effect emotional stability (s.e.)</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>.33 (.16)</td>
<td>.02</td>
<td>.66</td>
<td>2.01*</td>
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Table 3. (continued)

<table>
<thead>
<tr>
<th>Variables</th>
<th>b (s.e.)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>O → POE</td>
<td>.40 (.06)</td>
<td>6.74</td>
<td>.000</td>
</tr>
<tr>
<td>POE → Performance</td>
<td>.83 (.40)</td>
<td>2.08</td>
<td>.040</td>
</tr>
<tr>
<td>O → Performance</td>
<td>.80 (.26)</td>
<td>3.09</td>
<td>.002</td>
</tr>
<tr>
<td>O → Performance (controlling for POE)</td>
<td>.47 (.30)</td>
<td>1.54</td>
<td>.126</td>
</tr>
<tr>
<td>Organizational size (log) → Performance</td>
<td>-.24 (.18)</td>
<td>-1.39</td>
<td>.167</td>
</tr>
<tr>
<td>Organizational age (log) → Performance</td>
<td>.17 (.22)</td>
<td>.75</td>
<td>.456</td>
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</table>

<table>
<thead>
<tr>
<th>Bootstrap effect openness to experience (s.e.)</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>.34 (.14)</td>
<td>.10</td>
<td>.66</td>
<td>2.03*</td>
</tr>
</tbody>
</table>

Note. n = 118 organizations. *p < .05, **p < .01, ***p < .001 (two-tailed). LL = lower limit. UL = upper limit. CI = confidence interval. E = extraversion. POE = productive organizational energy. A = agreeableness. C = conscientiousness. ES = emotional stability. O = openness to experience. log = common logarithm. Reported total effects of the independent variables have been corrected for the effects of the covariates.

As can be inferred from table 3, the data lend support to hypotheses 4a, 4b, 4d and 4e and do not support hypothesis 4c. Concerning organizational extraversion, agreeableness, emotional stability, and openness to experience (4a, 4b, 4d, 4e), all conditions of the causal steps approach were met, the indirect effects proved to be significant, and bootstrapping demonstrated positive indirect effects with corresponding 95% confidence intervals not containing zero. Consequently, the relationships between these organizational personality traits and firm performance are mediated by POE. Hypothesis 4c could not be supported. The indirect effect failed to reach significance and the 95% interval that resulted from bootstrapping contained zero (-.02, .58), meaning that mediation of the relationship between
organizational conscientiousness and firm performance by POE could not be confirmed.

2.4 Discussion

2.4.1 Summary and Discussion of Findings

The purpose of this study was to examine the impact of organizational personality on organizational performance and to investigate the underlying mechanisms that help to establish this relationship. I hypothesized that collective behavioral patterns that can be described as extraverted, agreeable, conscientious, emotionally stable, and open-minded foster an intra-organizational state of POE and that this, in turn, positively affects firm performance. As such, emotional, cognitive, and behavioral organizational energy is the mediating link between collective behavioral patterns and firm performance. With regard to the overall research question of this dissertation, the present study demonstrates that certain collective behavioral patterns as cultural artifacts in organizations are important intra-organizational determinants of POE.

Based on prior research (e.g. Hofmann & Jones, 2005) and own reasoning, my first set of hypotheses predicted a certain organizational personality to positively relate to firm performance. This prediction could be supported for all organizational personality traits.

The second set of hypotheses predicted organizational personality to be positively related to POE. These predictions were based on research on intra-group and contagion processes, social categorization theory, and research on positive / negative affectivity and organizational routines. The relationships between the different organizational personality traits and POE proved to be substantial, and thus, the second set of hypotheses was supported.

My third hypothesis was based on so-far conducted studies on for example group drive, affective tone, and shared cognition and addressed the positive relationship between POE and firm performance. I found support for this hypothesis as well.

The fourth set of hypotheses stated a mediation of the relationship between organizational personality and firm performance by POE. This prediction could be
confirmed for the organizational personality traits of extraversion, agreeableness, emotional stability and openness to experience. For organizational conscientiousness, no mediation effect emerged.

The proposed mediation effect could be demonstrated most convincingly with agreeable and extraverted behavioral patterns as predictor variables. These traits have been labeled “interpersonal” in nature (McCrae & Costa, 1989), meaning that they influence the way interpersonal processes are carried out – how people react to and deal with each other. Thus, POE as a collective phenomenon transports the effects of organizational personality to performance most effectively when interaction patterns among employees can be described as extraverted and agreeable.

For conscientious behavioral patterns, no mediation effect was shown although I could demonstrate that reliable, hard-working and ambitious behavioral patterns relate positively to firm performance and the level of POE in the workforce. However, when the simultaneous effect of organizational conscientiousness and POE on performance was tested, the effect of conscientiousness on performance was not reduced significantly and the effect of POE on performance was insignificant. A tentative explanation for this unexpected finding could be the following: Conscientious behavioral patterns and POE relate to each other and thus seem to have something in common. Both have a positive effect on performance. However, different aspects of conscientiousness and POE seem to relate to performance. Possibly, behaving in an organized, hard-working and ambitious way has positive performance effects, but does not strongly relate to POE. Other aspects of conscientiousness that are more important in interpersonal settings (e.g. reliable behavior) potentially relate to POE more strongly. Thus, the facet of organizational performance that relates to both conscientiousness and POE eventually is too small. This could be a reason why POE does not mediate the effect of conscientiousness on performance, although both relate to performance and to each other. However, future research should further explore the exact relationship between these variables before inferences are drawn.

2.4.2 Contributions

This study contributes to the further development and exploration of the construct of organizational personality. Its relationship to firm performance was
replicated in a diverse sample that contained multiple industries (cf. Hofmann & Jones, 2005) and mechanisms underlying this relationship were investigated. This can produce new insights into organizational processes and render it possible to study organizational behavioral patterns (Feldman & Rafaeli, 2002) from another angle than they have been studied before. As Smith and Schneider (2004) pointed out, we will have to broaden our understanding of organizational-level phenomena by thinking about personality as something on which a group of people or people in general differ. By linking organizational personality to POE and to firm performance and by providing theoretical explanations for these relationships, I took research on collective personality one step further. Behavioral regularities that can be described in terms of the big five factors of personality contain multiple facets and thus have the potential to influence cognitive, behavioral, and emotional processes. Consequently, the consideration of POE as a multidimensional collective construct seemed a reasonable starting point for the investigation of mediating variables.

Another contribution of this study lies in the content field of POE where researchers suggested taking into account intra-organizational factors that predict POE (Bruch et al., 2009b). By establishing organizational personality as an antecedent of POE, conditions which are stable yet open to management and change have been identified for sustaining POE in the long term.

Finally, this study illuminates new antecedents and underlying processes of organizational-level performance which is one of the key interests in management and organizational behavior research (Richard et al., 2009). Importantly, soft factors like recurring behaviors in organizations or POE cannot be purchased or easily imitated and thus provide a competitive advantage for organizations (Barney, 1991).

2.4.3 Limitations and Future Research Directions

Although this study has been designed rigorously, its design brings about certain methodological limitations. The applied cross-sectional survey design implies that no causal inferences can be drawn, because all constructs have been measured at the same point in time (Cohen, Cohen, West, & Aiken, 2003). It could for instance also be logically conceivable that a high organizational performance increases the likelihood of POE to emerge, because employees who work for a successful company are generally more enthusiastic and thrilled than employees in abortive
environments. Thus, future studies could test the proposed model or also extensions of the model in a longitudinal research setting.

Another methodological drawback is that the sample consisted only of small- and medium-sized companies located in Germany. Since the German national culture systematically differs from other national cultures (Hofstede, 1983, 2001), the results might not be transferrable to organizations within other countries. With regard to the external validity of the study within Germany, however, it should be mentioned that small- and medium-sized companies are by far the largest group of organizations in Germany (99.5 % of all companies in 2009\(^3\)). Furthermore, the applied sample consisted of very diverse organizations that led to a large variance in size, industries, and employee characteristics (e.g. hierarchy, department, and age). Nevertheless, future studies should replicate the findings with different samples that for instance also contain multinational enterprises.

Next, I applied a subjective measure of organizational performance by asking top management team members to rate several performance dimensions for their companies. The reason for this is that objective performance indicators are oftentimes not available for private, family-run businesses that are not publicly listed. Although research has demonstrated that subjective performance ratings are valid (Wall et al., 2004), some scholars have raised concerns with regard to key informants as valid sources. Consequently, it would be interesting to test the proposed interrelations using objective performance criteria.

One of the main goals of this study was to investigate cultural antecedents of POE that can be influenced and steered by leaders and managers. Since behaviors can be more easily influenced than attitudes or deeply held assumptions (Winett, 1974), I chose to investigate organizational behavioral patterns, conceptualized as organizational personality. Consequently, one limitation of this study lies in the sole concentration on behavioral patterns in organizations within the broad field of organizational culture. Thus, future studies could focus on other cultural antecedents of POE, as for example values and assumptions. It would also be interesting to explore which values and assumptions correspond with which organizational personalities and how that relates to POE.

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\(^3\) Statistic retrieved from [www.ifm-bonn.org](http://www.ifm-bonn.org) on February 1, 2012
Next, unexpected findings always raise possible avenues for future research. The missing mediating effect of POE in the relation between organizational conscientiousness and performance calls for further attention in future research. These studies could explore why the mediation by POE worked out better for some organizational personality traits than for other traits and which theoretical explanations can account for this.

The basic model I introduced in this study depicts one-to-one relationships. Individual-level research suggests that a possible extension of the model could be the investigation of the interplay between the different organizational personality traits. Individual-level studies have for example analyzed the interaction between extraversion and conscientiousness (Witt, 2002) or between agreeableness and conscientiousness (Witt, Burke, Barrick, & Mount, 2002). Hofmann & Jones (2005) have also analyzed interaction effects between different organizational personality traits in their effect on performance. The reasoning behind these investigations often stems from the assumption that extraversion, and maybe also agreeableness, relate to performance in a curvilinear shape (Smith & Schneider, 2004). As such, high levels of extraversion and/or agreeableness are only beneficial when they are combined with a high level of conscientiousness. Based on this prior research, I tested for interaction effects between extraversion and conscientiousness and between agreeableness and conscientiousness on organizational performance. No interaction effects emerged. The scatterplots did not reveal curvilinear relationships between extraversion or agreeableness and performance. Consequently, the different organizational personality traits do not interact as they have been shown to on the individual level. A possible explanation lies in the collective nature of organizational personality. If people collectively act in a highly extraverted or agreeable way, they beforehand have somehow agreed upon acting like this and established corresponding norms and values. This might then be more beneficial than if only some individuals in a group act like this, which could lead to dominance and interpersonal aggression (in the case of extraversion) or to exploitation (in the case of agreeableness). However, more studies need to be conducted to investigate the exact nature and consequences of the different factors of organizational personality on POE and performance.

Another interesting avenue for future research might be to investigate the effects of lower-level facets of organizational personality on narrower organizational
performance criteria. In the present study, I explored the effects of the big five factors of personality on the broad construct of organizational performance which seemed to be a reasonable starting point. When studying more specific aspects of organizational performance, e.g. customer orientation or innovation, it might make sense to consider the predictive validity of organizational personality at the subordinate level, e.g. sociability and unrestraint instead of global extraversion (Barrick et al., 2001b; Saucier & Ostendorf, 1999). However, researchers would have to demonstrate beforehand that the subcomponents of personality proposed in individual-level research are also meaningful and valid on the organizational level.

Other possible extensions of the basic model are the investigation of antecedents of the organizational personality construct and boundary conditions for the tested relationships (e.g. social identity, cf. Bagozzi, 2000; or cultural preconditions, cf. O’Reilly, Chatman, & Caldwell, 1991). Finally, future studies could identify other mediating variables in the relationship between organizational personality and performance besides POE.

To sum up, this study has shown that certain collective behavioral regularities positively influence firm performance by facilitating a state of POE. This could be demonstrated for the organizational personality traits extraversion, agreeableness, emotional stability and openness. I hope that this study provides a fruitful starting point for future research.
3 Study 2: Commitment-Based HR Practices and Transformational Leadership Climate as Complementing Antecedents of Productive Organizational Energy

In my second study, I investigate the joint effect of commitment-based HR practices and TFL climate on POE.\(^4\) I argue that TFL climate can be fostered by an HR system that is designed to enhance employees’ commitment to the organization. Moreover, I hypothesize that TFL climate is a linking mechanism between HRM and POE. The hypotheses were tested in a sample of 76 small- and medium-sized German companies. The data lent support to all hypotheses.

3.1 Theoretical Background and Hypotheses Development

In the following sections, I will explain the concepts of commitment-based HR practices and TFL climate in greater detail to provide a solid base for the development of the hypotheses. I will then generate the notion that HR practices and TFL can complement each other in their positive influence on POE and that they are thus important aspects in its long term sustainment.

3.1.1 Commitment-Based HR Practices and Transformational Leadership Climate as Complementing Aspects

In the HR literature, the concept of HPWS has gained ample attention over the past one and a half decades (e.g. Beltran-Martín, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008; Datta et al., 2005; Huselid, 1995). HPWS are a bundle of HR activities that are driven from a common philosophy and that operate as a system to increase the productivity and commitment on behalf of the employees and therewith, the performance of the entire organization (Datta et al., 2005). The underlying philosophy grounds in an organic as opposed to a mechanistic management style: Expertise and knowledge are widely spread in the organization and high performance is achieved through high employee capability and involvement (Datta et al., 2005). These integrated systems of HR practices can be found in the fields of recruitment and

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\(^4\) This chapter is based on the working paper “Facilitating productive energy in organizations: The role of HRM and transformational leadership”. Paper accepted for presentation at the 2012 Academy of Management Conference; Boston, USA.
selection, training and development, pay and reward schemes, and performance management and aim to increase employees’ productivity and effectiveness in such a way that they become a source of competitive advantage (Beltran-Martin et al., 2008; Boselie, Dietz, & Boon, 2005; Datta et al., 2005).

However, HPWS go beyond a positive effect on organizational performance. In fact, HR practices that are all driven from a common philosophy send signals to employees about appropriate behaviors and responses and therewith help in forming a collective sense of what is expected and rewarded (Bowen & Ostroff, 2004; Nishii, Lepak, & Schneider, 2008). Scholars have argued that, by sending these signals, HR systems create certain organizational climates which serve as mediating mechanism in the link between HRM and organizational outcomes (Bowen & Ostroff, 2004).

Researchers have differentiated between transaction-based and commitment-based HR approaches (Collins & Smith, 2006). Whereas the first approach focuses on a short-term exchange relationship between the employee and the organization, the latter approach is based on a mutual, long term relationship. As with HPWS, the latter concept demonstrates a long term investment in the employee which results in for example training programs and performance appraisals that emphasize long term growth, team-building, and the development of company-specific knowledge (Collins & Smith, 2006). The underlying philosophy is based on a social exchange perspective where the employer focuses on the employee’s well-being and his long term career within the firm and the employee exceeds formal job requirements (Gittell, Seidner, & Wimbush, 2010; Tsui, Pearce, Porter, & Tripoli, 1997). Research has demonstrated that this so-called mutual-investment approach significantly relates to individual performance and affective commitment (Tsui et al., 1997).

In the upcoming paragraphs, I will develop the argument that commitment-based HR practices, as a form of HPWS, positively influence POE by establishing a climate of TFL in the organization. Walter and Bruch (2010) were the first to investigate the construct of TFL climate, therewith combining the two research streams on social climates and TFL. According to Podsakoff, MacKenzie, Moorman, and Fetter (1990), behaviors that are associated with TFL include articulating a captivating vision, acting as a charismatic role model, fostering the acceptance of common goals, setting high performance expectations, and providing individual support and intellectual stimulation for followers (see also Bass, 1985). Scholars have defined social climates as consisting of shared beliefs regarding norms and
values that govern interactions (Collins & Smith, 2006). To work in the same social climate means sharing perceptions with regard to the types of behavior that are rewarded and supported in this work setting (Reichers & Schneider, 1990). TFL climate originates from the behaviors of individual leaders that all act in a similarly transformational way and that cause followers to perceive them in similar terms (Walter & Bruch, 2010). Building on previous studies which found that follower ratings of TFL behaviors within an organization are similar (Bommer et al., 2004), Walter and Bruch (2010) demonstrated that TFL climate is a meaningful construct on the organizational level that exerts a significant effect on POE.

On a very general level, scholars have argued that coordinating structures and systems – as for example HR systems - gain in importance when face-to-face leadership is less possible, as is the case for leaders at the strategic apex of organizations (Hooijberg, Hunt, Antonakis, Boal, & Lane, 2007). However, Walter and Bruch (2010) demonstrated that formalization positively influences TFL climate, both as antecedent and as moderator, thus showing that the existence of rules and procedures does not have to exert a diminishing effect on this leadership behavior. Similarly, Yukl (2008) argued that prevalent programs and systems on the one hand and leadership behaviors on the other hand can be complementary and support each other. I aim at further advancing research on the interplay between structure-giving elements, here represented by HR practices, and leadership by investigating their joint effect on POE.

3.1.2 Commitment-Based HR Practices and Productive Organizational Energy

The main argument that I will develop in the following paragraph is that organizations which establish commitment-based HR practices demonstrate higher levels of POE than organizations which do not exert these practices. The reason for proposing this relationship is that commitment-based HR practices foster the emergence of collective phenomena, reinforce homogenization of a company’s workforce, and positively influence interactions, the effort, and the motivation of employees (Collins & Smith, 2006). This, in sum, should lead to POE and help sustain it in the long term. Bruch and colleagues (2009a) have already developed a theoretical reasoning for the relationship between HPWS and POE. Although some arguments are similar, my argumentation below will somewhat differ from theirs.
because I concentrate on commitment-based approaches as one specific form of HPWS.

A precondition for POE to arise is that contagion processes among employees take place – otherwise, collective states cannot emerge because cognitions, emotions, and behaviors are not spread and shared among organizational members (Kozlowski & Klein, 2000). Emotional, cognitive, and behavioral contagion only takes place when members of an organization interact with one another (Barsade, 2002; Thompson & Fine, 1999). Scholars have argued that HPWS help to establish relationships (Tomer, 2001) and bridge network ties among employees (Evans & Davis, 2005). Moreover, HR systems have been linked to relational climates and helping behavior in organizations (Mossholder, Richardson, & Settoon, 2011). Against this background, commitment-based HR practices, which aim at fostering a mutual, long-term relationship between organization and employees and which are comprised of interactive practices as for example teambuilding activities, get-togethers, and mentoring programs (Collins & Smith, 2006), should enhance interaction and foster relationships among employees and thus, positively influence a collective state like POE.

The process of developing shared norms and behaviors, which is a prerequisite for high collective energy, is facilitated by homogenization (Schneider, 1987) and organization-specific socialization practices (Schneider & Reichers, 1983). Commitment-based HR practices are likely to enhance homogeneity among employees through selective staffing (Huselid, 1995) and socialization procedures like trainings, social events, and orientation programs (Collins & Smith, 2006). In addition to selective staffing, the selection policies also give internal candidates consideration over external candidates for job openings, therewith again reducing heterogeneity in the workforce (Collins & Smith, 2006). Moreover, the use of HPWS enhances the retention of quality employees and encourages nonperformers to leave the firm (Huselid, 1995). As these procedures all in all lead to higher similarity and less discrepancy among employees, shared cognitions, emotions and behaviors can be developed more easily.

The cognitive dimension of POE comprises a shared mental state and a collective understanding of common goals in the organization (Cole et al., 2011). Helping employees to identify with organizational goals and working hard to accomplish these goals is a central aim of HPWS (Beltran-Martin et al., 2008;
Whitener, 2001). Consistent performance appraisals allow a common understanding of the behaviors and outcomes that are considered important in the organization. The targeted use of job rotation fosters knowledge exchange among employees and thus positively influences a shared mental state and common goals (Collins & Smith, 2006). In orientation programs new employees are systematically introduced to the history and the processes of the organization. Consequently, it should be easier to establish a common understanding of organizational goals and processes. Basing incentive plans and bonuses on business unit or company performance also helps in aligning individual and organizational goals and reduces self-interest (Schuster, 1984). Bowen and Ostroff (2004) argued that a bundle of consistent HR practices helps in developing shared mental models (Cannon-Bowers & Salas, 2001) because HR practices are a means of communicating certain messages to the employees. Eisenberger, Fasolo and Davislamastro (1990) have shown that an organization’s commitment to its employees can lead to greater creativity at work in the form of constructive suggestions that would help the organization. Such being the case, the use of commitment-based HR practices should facilitate cognitive POE in the organization.

Concerning the affective dimension of POE, it is important that employees have the possibility to experience positive emotions collectively. Social events and get-togethers on a regular basis and trainings for teamwork and teambuilding are integral components of commitment-based HR practices (Collins & Smith, 2006). As these events provide opportunities for common experiences, they have the potential to generate collective positive emotions among the employees and thus, foster productive affective energy. A greater homogeneity among the employees as it is achieved through selective staffing and socialization practices also fosters positive affective experiences because similarity may validate individuals’ beliefs and attitudes and thus lead to more reinforcing interactions (Barsade, Ward, Turner, & Sonnenfeld, 2000; Byrne, Griffitt, & Stefania.D, 1967). Consequently, affective POE can be positively influenced by certain HR practices that foster interaction and similarity.

Behavioral POE comprises collective action, a high degree of focused effort, and elevated social interactions (Cole et al., 2011). Commitment-based HR practices consist of performance appraisals that define desirable behaviors and outcomes and thus provide a base for collective targeted action (Collins & Smith, 2006). By
basing incentive policies on organizational performance, HR practices communicate to the employees that their collective effort in service of company goals is expected and gets rewarded (Bowen & Ostroff, 2004). Moreover, interactions between employees are fostered through social events, teambuilding activities, and trainings (Collins & Smith, 2006). Interactions and social relationships are a prerequisite for collective action (Ghoshal & Moran, 1996; Lin & Shih, 2008). Furthermore, studies have shown that an organization’s commitment to its employees stimulates company citizenship such that employees more readily exceed their job requirements (Wayne, Shore, & Liden, 1997). Consequently, organizations that systematically make use of commitment-based HR practices should have more behavioral POE.

In sum, these considerations lead me to the following hypothesis:

\[ H1: \text{Commitment-based HR practices positively affect POE.} \]

### 3.1.3 The Effect of Commitment-Based HR Practices on Transformational Leadership Climate

The identification of process variables in the relationship between HPWS and outcome variables has been considered as crucial for further theoretical advancement of the field (Delaney & Huselid, 1996; Delery, 1998). Although diverse mechanisms have been investigated (cf. Katou & Budhwar, 2006), scholars have not focused on the potential mediating influence of leadership so far. Bowen and Ostroff (2004) have conceptualized HR practices as means to send messages to employees, thereby helping them to define the psychological meaning of their work situation. They argued that leaders can thereby serve as interpretive filters who, when implementing practices or promoting high-quality interactions between employees, can introduce a common interpretation among organizational members. In the following, I will follow up on this contention and argue that commitment-based HR practices exert their effect on POE partly by fostering TFL behavior in the entire organization.

If HR systems convey certain messages to employees and represent the organization’s philosophy (Bowen & Ostroff, 2004; Tzafrir, 2005), which general messages and philosophy are conveyed by commitment-based HR practices? In contrast to transaction-based approaches, commitment-based approaches focus on a long-term, mutual social exchange relationship between employer and employee (Blau, 1964; Collins & Smith, 2006; Tsui et al., 1997). By fostering high-quality social
relationships among employees (Sun, Aryee, & Law, 2007) these HR systems convey the message that all organizational members are part of a greater collective. Employees typically react to these approaches by spending more time doing things that are useful for the organization and less time doing things that are just in their own self-interest (Leana & Van Buren, 1999), thereby reciprocating with behaviors that benefit the organization (Blau, 1964).

A similar distinction can be made regarding leadership behaviors: Whereas transactional behaviors are based on an exchange process in which rewards are provided for efforts, transformational leaders activate higher-order needs in followers and induce them to transcend self-interest for organizational goals (Bass, 1985; Burns, 1978; Podsakoff et al., 1990), thus taking on a much more long-dated perspective. Thus, HR practices that are based on commitment and motivate employees to act in the best interest of the organization (Gittell et al., 2010) match very well to a leadership style that goes beyond a short-term rational exchange process and with which followers’ self interest is transcended for the good of the organization (Avolio, Walumbwa, & Weber, 2009).

But how exactly can HR practices in general foster a TFL climate in the organization? Acting in a transformational manner comprises many different behaviors that require a lot of time-consuming and resource-intensive interactions (Podsakoff et al., 1990). Scholars have found a positive relationship between ratings of formalization, as indicated in the existence of rules and procedures, and ratings of TFL behaviors (Podsakoff, MacKenzie, & Bommer, 1996; Walter & Bruch, 2010). The rules, procedures, and regulations that are inherent in HR practices and processes can contribute to efficiency by facilitating work processes and improving coordination and communication (Hetherington, 1991; Organ & Greene, 1981). A potential explanation for the relationship between TFL and formalization thus is that formalized settings (as for example settings with clearly defined HR processes) can release leaders and therewith free their capacities for engaging in transformational, more far-reaching behaviors like considering employees individually or articulating a captivating vision.

Additionally, specific transformational behaviors can be fostered by certain aspects of commitment-based HR practices. Articulating a vision convincingly is only possible if there is a long-term perspective in the employer-employee relationship and if employees share an understanding of organizational goals. The intention of the
organization to establish a long-term relationship to the employees is generally signaled by commitment-based HR practices (Collins & Smith, 2006). Candidates are selected according to general fit to the organization and the selection system focuses on the candidates’ potential to learn and grow with the company. Internal promotion opportunities are established and communicated and company-specific knowledge is trained (Collins & Smith, 2006). Moreover, overarching goals are conveyed in orientation programs and gatherings on a regular basis so that an understanding of these goals can be developed. Additionally, compensation based on group performance should help to align employees’ actions with organizational goals and stress the prevalence of shared goals (Collins & Smith, 2006). Consequently, commitment-based HR practices should exert a positive influence on the articulation of a vision. Another central TFL behavior is setting high performance standards (Podsakoff et al., 1990). Within a commitment-based HR approach, this behavior is facilitated by the existence and importance of performance appraisals and the philosophy that advancement within the organization must be based on performance (Collins & Smith, 2006). Besides considering employees individually, leading in a transformational way also implies the active fostering of group goals (Podsakoff et al., 1990). Whereas individual consideration can be ensured through extensive mentoring activities, group goals are supported by the incentive practices which are based on business unit or company performance. In addition, group goals can be strengthened in teambuilding activities. The intellectual stimulation of followers as another transformational behavior can be fostered via training activities. All in all there exist multiple ways how the systematic use of commitment-based HR practices can positively influence TFL behaviors.

Consequently, I propose the following hypothesis:

H2: Commitment-based HR practices positively affect TFL climate.

It should be noted that Zhu et al. (2005) proposed and tested this effect in the opposite direction – a positive influence of TFL on HRM. However, they studied TFL behavior of CEOs whereas my study focuses on TFL behaviors that are carried out by multiple organizational leaders across all hierarchical levels. The theoretical reasoning of these two studies can be combined by arguing that CEOs’ TFL behavior determines the way HRM is carried out and this in turn influences the TFL climate in the entire organization.
3.1.4 Transformational Leadership Climate and Productive Organizational Energy

The following paragraphs deal with the relationship between TFL climate and POE. As this relationship has already been discussed in detail by Walter and Bruch (2010), I will refer to their work and only present the main arguments.

Like Walter and Bruch (2010), I argue that TFL climate exerts a positive effect on the cognitive, affective, and behavioral dimensions of POE, thus positively influencing its overall level. Concerning the cognitive component of POE, TFL behavior across the entire organization should enhance followers’ creativity and their critical-independent thinking (Dvir, Eden, Avolio, & Shamir, 2002; Sosik, Kahai, & Avolio, 1999). Moreover, scholars have demonstrated that charismatic leadership is associated with an organization’s readiness to innovate (Koene, Vogelaar, & Soeters, 2002). Transformational leaders convey a vision of the future, promote common goals, and strengthen certain expectations of their followers (Podsakoff et al., 1990). If followers’ cognitions are directed toward common goals and a vision and they are encouraged to try out new ways of thinking, cognitive POE is likely to be fostered (Cole et al., 2011).

Additionally, transformational leaders are likely to exert a positive influence on the emotional dimension of POE in the organization. Transformational leaders frequently express positive feelings and can transfer these emotions to followers (Bono & Ilies, 2006; Gardner & Avolio, 1998). In fact, research has demonstrated that TFL behavior positively affects work groups’ and individuals’ positive affect (Bono, Foldes, Vinson, & Muros, 2007; Pirola-Merlo, Hartel, Mann, & Hirst, 2002) or the affective tone within a work group (Chi, Chung, & Tsai, 2011). If this linkage also holds on the organizational level, it can be assumed that TFL climate is positively related to emotional POE, i.e. to the degree of enthusiasm and positive shared feelings regarding work-related issues in the organization (Cole et al., 2011).

As Walter and Bruch (2010) suggested, TFL climate in an organization should also be connected to its behavioral POE. Followers could be encouraged to emulate their leader’s actions when they perceive when the leader communicates the vision or demonstrates active role-modeling (Shamir, House, & Arthur, 1993). Scholars argued that transformational leaders guide followers’ behaviors to the pursuit of collective aspirations and strengthen their efforts (Dvir et al., 2002; Sosik, 2005). By emphasizing followers’ ties to the collective group, transformational leaders foster
team potency and efficacy (cf. Wang, Oh, Courtright, & Colbert, 2011). Consequently, TFL behavior throughout the organization should strengthen employees’ collective efforts and thus, behavioral POE (Cole et al., 2011).

The following hypothesis summarizes the above arguments:

*H3: TFL climate positively affects POE.*

Thus far, I have developed the hypotheses that commitment-based HR practices positively affect both TFL climate and POE and that TFL climate positively relates to POE. I now pull the strands together by hypothesizing that TFL climate mediates the effect of commitment-based HR practices on POE. Consequently, I developed the following hypothesis:

*H4. TFL climate mediates the relationship between commitment-based HR practices and POE.*

An overview of the conceptual model for study 2 is depicted in figure 3.

**Figure 3. Overall Model of Research Question 2**
3.2 Method

In the subsequent chapters, the methodological approach underlying this study will be presented. This includes information on the data collection process and a sample description as well as a description of the applied measures and data analyses procedures.

3.2.1 Data Collection and Sample Description

The data gathering for the present study was conducted in cooperation with a German agency specialized in benchmarking of small- and medium-sized companies. The data were collected in early summer 2010 in a large employee survey that was conducted online. Companies could take part in the study if they were a) located in Germany and b) had a company size of between 20 and 5,000 employees. In sum, a total of 77 companies participated in the study, resulting in a total sample size of 20,607 employees. Of the 77 firms, one failed to provide sufficient data and was dropped from the study. The average participating organization employed 539 employees. 37% had less than 100 employees, 34% consisted of between 101 and 500 employees and 29% had between 501 and 5,000 employees. Participating companies were active in different industries, including service (54%), manufacturing (24%), banking and finance (12%), retailing (8%) and wholesaling (6%). In line with the split-sample design (Rousseau, 1985) respondents were randomly directed to one out of four different surveys. To avoid the problem of common source bias (Podsakoff et al., 2003), the independent and dependent variables were incorporated in different versions of the survey (out of which three were used for the present study). The scales that were originally published in English were translated into German following a double-blind back-translation procedure (Schaffer & Riordan, 2003). Respondents were assured that their answers are treated anonymously.

Data were collected from four sources. General information (e.g. organizations’ size or information about the organizations’ HR practices) was collected through a key informant survey which was completed by the organizations’ HR executives or a member of the top management team.

The samples of the three survey versions that were used for the present analyses consisted of $n = 5,100$ employees (commitment-based HR practices), $n =$...
5,067 employees (TFL climate) and $n = 5,087$ employees (POE). 48% of the respondents were male, 34% were female and 18% did not state their sex. Most respondents were 31-51 years of age (38%), as opposed to 16% in the younger age group (16-30) and 10% with an age of over 50 years. 36% did not state their age. The average tenure at the companies was 13.5 years and all major divisions and hierarchy levels were covered.

3.2.2 Measures

The entire item sets are depicted in Appendix 6.2.

**Commitment-based HR practices.** The extent to which a company employs commitment-based HR practices was captured with a measure developed by Collins and Smith (2006). The authors developed 16 items to measure three different dimensions of commitment-based HR practices, including selection policies based on overall fit to the company (four items), group- and organization-based incentive policies (four items), and training and development policies based on long-term growth, teambuilding, and development of firm-specific knowledge (eight items). Responses were given on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). One item of the incentive component was excluded from the questionnaire because it assessed the availability of shares of stock to core employees which was not applicable to most companies in the present sample as they were private, family-run businesses and no stock companies. Exemplary items are “We select employees based on an overall fit to the company” (selection dimension), “Goals for incentive plans are based on business-unit or company performance” (incentive dimension), and “We provide training focused on teambuilding and teamwork skills training” (development dimension). Collins and Smith (2006) developed this scale for the purpose of studying knowledge-intensive firms, however, it should be transferable to other research settings quite well because knowledge creation and exchange is an important capability and activity in all firms (Grant, 1996; Smith, Collins, & Clark, 2005). The different dimensions were averaged to form an overall index of commitment-based HR practices (Collins & Smith, 2006). The aggregation of the individual responses to the company level needs to be justified empirically. Therefore, intraclass correlation coefficients, ICC[1] and ICC[2] (Bliese, 2000), and interrater agreement statistics, $r_{wg}$ (James et al., 1984), have been calculated.
Although there do not exist absolute standards for these values, James (1982) recommends a minimal value of .60 for the $r_{wg}$ to justify an aggregation on the group level. The ICC[1] can be evaluated with a one-way analysis of variance where the group membership is the independent and the analyzed construct the dependent variable. If the F-value is significant, the differences between the groups are large enough to conceptualize the respective construct as a collective construct. Considering the ICC[2], a value > .70 should be achieved (Chen et al., 2004). Based on these recommendations, aggregation statistics justified the aggregation of individual responses to the organizational level (ICC[1] = .11; $p < .001$; ICC[2] = .88; and $r_{wg} = .62$). Cronbach’s alpha of the scale was .94. Besides being assessed by the employees, this scale was also integrated in the key informant survey where it achieved a Cronbach’s alpha of .80.

**TFL climate.** I used the scale developed by Podsakoff and colleagues (1996; 1990) to assess TFL climate. This scale has been proven to have a good psychometric quality (Agle et al., 2006; Bommer et al., 2004). It consists of 22 items assessing the six dimensions providing a role model (total of 3 items), articulating a vision (total of 5 items), communicating high performance expectations (total of 3 items), fostering the acceptance of common goals (total of 4 items), providing intellectual stimulation (total of 3 items), and providing individualized support (total of 4 items). In line with the recent study by Walter and Bruch (2010) I used a direct consensus model (Chan, 1998) in which employees answered how frequent their direct leaders exhibit TFL behaviors on a scale ranging from 1 (never) to 5 (extremely often/always). The different dimensions were averaged to form an overall score of TFL climate (Walter & Bruch, 2010). Aggregation of the individual responses to the organizational level was justified for TFL climate (ICC[1] = .05; $p < .001$; ICC[2] = .77; and $r_{wg} = .77$). Cronbach’s alpha was .98.

**Productive organizational energy.** POE was measured with a 14-item measure developed by Cole, Bruch, and Vogel (2011). A sample item for the emotional dimension (total of 5 items) is “The employees of my company are enthusiastic in their job”. Responses were given on a 5-point frequency scale ranging from 1 (never) to 5 (extremely often / always). Exemplary items that tap the cognitive (5 items) and behavioral (4 items) dimension are “The employees in my company have a collective desire to make something happen” (cognitive) and “The employees in my company will go out of their way to ensure the company succeeds”
(behavioral). These items were answered on a 5-point response scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Aggregation of the individual responses was justified for POE (ICC[1] = .10; p < .001; ICC[2] = .87; and $r_{wg} = .83$). Cronbach’s alpha was .97.

**Control variables.** In organization-level research *organization size* is frequently employed as a control variable to obtain results that are free from bias (e.g. Agle et al., 2006). In the present study, it was captured by the key informant survey by asking for the number of employees (converted to full-time equivalents). As done by other researchers, the variable was log-transformed to reduce skewness (Schminke et al., 2002). Furthermore, the companies’ affiliations with the *manufacturing industry* and the *services industry* were assessed in the key informant survey. Since studies have shown industry-specific effects of HR practices (e.g. MacDuffie, 1995), these two industries – as they were significantly related to the study variables - were included as controls in the analyses.

### 3.2.3 Data Analyses

Hypotheses 1, 2 and 3 were tested by various hierarchical regression analyses, entering organization size, manufacturing industry and services industry in the first step to control for these variables. To test for a mediation (hypothesis 4), I followed the causal steps approach introduced by Baron & Kenny (1986). According to this approach, three regression equations need to be estimated to test for mediation: The mediator has to be regressed on the independent variable, the dependent variable needs to be regressed on the independent variable, and, in a third step, on both the independent variable and the mediator. For a mediating influence to exist, the effect of the independent variable on the dependent variable must be weaker in the third equation than in the second. Importantly, the path between the independent and the dependent variable should be reduced significantly in equation three, when the effects of the mediating and the independent variables are taken into account simultaneously. If the influence of the independent variable is reduced to an influence of no significance in the third equation, then the mediation is perfect; otherwise, it is partial in nature.

There are various possibilities to test for a significant reduction in beta weights from the second to the third equation; the most common approach (which has also
been recommended by Baron & Kenny, 1986) is the Sobel (1982) test. Scholars have repeatedly stated that the Sobel test only works well in large samples because it imposes distributional assumptions on the raw data (Preacher & Hayes, 2004, 2008). They recommend using the bootstrapping technique instead, because this technique does not impose a certain distribution on the data. Consequently, I used both the Sobel (1982) test as well as bootstrapping to test for the significance of the indirect effect.

3.3 Results

Table 4 presents the means, standard deviations, reliabilities and bivariate correlations for the study and control variables. As can be inferred from table 4, the employee ratings and the HR key informant ratings of commitment-based HR practices correlate significantly and positively with each other ($r = .36$, $p < .01$, two-tailed). Moreover, the employee ratings of commitment-based HR practices relate stronger to TFL climate and POE than the HR key informant ratings.
Table 4. Means, Standard Deviations, Bivariate Correlations, and Reliabilities for Study and Control Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment-based HR practices (source: employees)</td>
<td>4.52</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.94)</td>
</tr>
<tr>
<td>2. Commitment-based HR practices (source: key informant)</td>
<td>5.88</td>
<td>.64</td>
<td>.36**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.80)</td>
</tr>
<tr>
<td>3. TFL climate</td>
<td>3.58</td>
<td>.31</td>
<td>.72**</td>
<td>.29**</td>
<td></td>
<td></td>
<td></td>
<td>(.98)</td>
</tr>
<tr>
<td>4. POE</td>
<td>3.71</td>
<td>.31</td>
<td>.63**</td>
<td>.23*</td>
<td>.67**</td>
<td></td>
<td></td>
<td>(.97)</td>
</tr>
<tr>
<td>5. Organization size (log)</td>
<td>2.34</td>
<td>.60</td>
<td>-.22</td>
<td>.06</td>
<td>-.33**</td>
<td>-.41**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Manufacturing</td>
<td>23.71</td>
<td>37.95</td>
<td>-.24*</td>
<td>-.30**</td>
<td>-.39**</td>
<td>-.04</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>7. Services</td>
<td>50.87</td>
<td>45.18</td>
<td>.29*</td>
<td>.42**</td>
<td>.27*</td>
<td>.14</td>
<td>-.09</td>
<td>-.55**</td>
</tr>
</tbody>
</table>

Note. n = 76 organizations. Reliabilities are reported in the diagonal. *p < .05, ** p < .01 (two-tailed). POE = productive organizational energy. log = common logarithm. All scales ranged from 1 to 5, except commitment-based HR practices that ranged from 1 to 7. Participating firms indicated the percentage to which they were engaged in different industries as for example manufacturing and services.

Hypothesis 1 stated a positive effect of commitment-based HR practices on POE. As can be inferred from Table 5, commitment-based HR practices significantly and positively affect POE (β = .59; p < .01), even after controlling for organization size and manufacturing and services industries.
Table 5. Causal Steps Mediation Results with Productive Organizational Energy as Dependent Variable

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Transformational leadership climate</th>
<th>Productive organizational energy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
</tr>
<tr>
<td>Organization size (log)</td>
<td>-.27*</td>
<td>-.15</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-.29*</td>
<td>-.24*</td>
</tr>
<tr>
<td>Services</td>
<td>.08</td>
<td>-.07</td>
</tr>
<tr>
<td>Commitment-based HR practices (employees)</td>
<td>.65**</td>
<td>.59**</td>
</tr>
<tr>
<td>Transformational leadership climate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \Delta R^2 \] \begin{align*} \Delta R^2 & = .36** \quad \text{Step 1} \\ & = .30** \quad \text{Step 2} \\ & = .11** \quad \text{Step 3} \end{align*}

\[ R^2 \text{ (adjusted } R^2) \] \begin{align*} R^2 & = .22 (.19)** \quad \text{Step 1} \\ & = .59 (.56)** \quad \text{Step 2} \\ & = .20 (.16)** \quad \text{Step 3} \\ & = .50 (.47)** \quad \text{Step 3} \\ & = .61 (.58)** \quad \text{Step 3} \end{align*}

Note. \( n = 76 \) organizations. *\( p < .05 \), **\( p < .01 \) (two-tailed). log = common logarithm. Standardized beta weights are depicted.

After entering the control variables, commitment-based HR practices were significantly and positively related to TFL climate (\( \beta = .65; p < .01 \)) (see table 5). Thus, hypothesis 2 is supported.

Hypothesis 3 predicted a positive effect of TFL climate on POE. A hierarchical regression analysis with organization size and manufacturing and services entered in step one as control variables supports this assumption (\( \beta = .70; p < .01 \)).

Table 6 depicts the results of the regression analyses, Sobel (1982) test, and bootstrapping technique (Preacher & Hayes, 2008) for testing the significance of the indirect effect of commitment-based HR practices on POE.
Table 6. Regression, Bootstrapping (n = 5000), and Sobel (1982) Test Results with POE as Dependent Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>$b$ (s.e.)</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ComHR $\rightarrow$ TFL</td>
<td>.36 (.05)</td>
<td>7.91</td>
<td>.000</td>
</tr>
<tr>
<td>TFL $\rightarrow$ POE</td>
<td>.51 (.12)</td>
<td>4.34</td>
<td>.000</td>
</tr>
<tr>
<td>ComHR $\rightarrow$ POE</td>
<td>.33 (.05)</td>
<td>6.54</td>
<td>.000</td>
</tr>
<tr>
<td>ComHR $\rightarrow$ POE (controlling for TFL)</td>
<td>.15 (.06)</td>
<td>2.36</td>
<td>.021</td>
</tr>
<tr>
<td>Organizational size (log) $\rightarrow$ POE</td>
<td>-.13 (.04)</td>
<td>-3.02</td>
<td>.004</td>
</tr>
<tr>
<td>Manufacturing $\rightarrow$ POE</td>
<td>.003 (.00)</td>
<td>3.29</td>
<td>.002</td>
</tr>
<tr>
<td>Services $\rightarrow$ POE</td>
<td>.00 (.00)</td>
<td>.91</td>
<td>.366</td>
</tr>
</tbody>
</table>

**Bootstrap effect ComHR (s.e.)**

<table>
<thead>
<tr>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
<th>Sobel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>.09</td>
<td>.30</td>
<td>3.61**</td>
</tr>
</tbody>
</table>

*Note.* $n = 76$ organizations. *$p < .05$, **$p < .01$ (two-tailed). LL = lower limit. UL = upper limit. CI = confidence interval. ComHR = commitment-based HR practices (source: employees). TFL = transformational leadership climate. POE = productive organizational energy. log = common logarithm. Reported total effects of the independent variables have been corrected for the effects of the covariates.

As can be inferred from the above tables, all conditions of the causal steps approach were met (see table 5), the indirect effect proved to be significant, and bootstrapping demonstrated a positive indirect effect with corresponding 95% confidence intervals not containing zero (see table 6). Consequently, the relationship between commitment-based HR practices and POE is mediated by TFL climate and hypothesis 4 is supported. Importantly, I found the same result pattern for the above hypotheses using the key informant ratings of HR practices in the analyses.
3.4 Discussion

3.4.1 Summary and Discussion of Findings

The purpose of this study was to investigate the joint effect of HRM and leadership on POE, thereby combining two phenomena that have been researched in isolation so far. With regard to my overall research question, this study aimed to explore how leadership can help to foster POE in the long term and how this can be supported by the effective use of HR practices.

The first hypothesis predicted a positive effect of commitment-based HR practices on POE. I based theoretical reasoning on research on contagion and homogenization processes and functions of HR practices like socialization and the development of a common understanding among employees. The positive effect of HR practices on POE was supported: Organizations that executed an HR philosophy based on commitment demonstrated significantly higher levels of POE.

My second prediction consisted of a positive relationship between commitment-based HR practices and TFL climate and was based on TFL theory and research on effects of HR practices. The data lent support to this hypothesis as well – employees in high-commitment organizations ascribed more TFL behaviors to their supervisors than employees in organizations with a rather transaction-based HR approach.

The third hypothesis, which was also confirmed, stated a positive effect of TFL climate on POE. Thus, organizations with a strong TFL climate were characterized by higher levels of POE in the workforce. The theoretical argumentation for this hypothesis was mainly based on Walter and Bruch (2010).

The fourth hypothesis stated a mediating effect in the relation between commitment-based HR practices and POE by TFL climate and was supported as well. Consequently, organizations can establish and maintain a high level of POE through the systematic use of high-commitment HR practices, partly because these foster a TFL climate in the organization.

In the past years, HR researchers discussed intensely if there was a difference between intended and perceived HR practices, how the existence and intensity of HR practices should be measured and if making this difference mattered at all (Liao et al., 2009; Paauwe, 2009; Qiao et al., 2009). My study can potentially contribute to this debate. Not only had the employees, but also the key informants (who were
mainly HR executives) provided ratings concerning commitment-based HR practices in their respective organizations. I discovered that the overall mean ratings of HR practices differed between the two groups ($M_{HR} = 5.88$ vs. $M_{employees} = 4.52$; see table 4), meaning that HR key informants rated commitment-based HR practices higher than did employees. However, their ratings correlated significantly and positively with each other ($r = .36, p < .01$, two-tailed). Moreover, I found the same result pattern for the above hypotheses using the key informant ratings of HR practices in the analyses. Hence, although the perceptions of these two groups differ, they still relate to each other and the difference does not cause a change in results. TFL climate is a robust mediator between HR practices and POE, independent of the target group that evaluated the HR practices.

### 3.4.2 Contributions

This study contributes to existing research in various ways. Besides combining research on HRM and leadership (cf. Zhu et al., 2005), this study contributes to research on energy in organizations by integrating previous empirical findings on antecedents of POE in an overall model (Bruch et al., 2009a; Walter & Bruch, 2010).

With regard to the literature on HPWS, scholars have identified three major methodological flaws (e.g. Qiao et al., 2009): The restriction to the differentiation if a certain HR practice is either absent or present at the organizational level, the use of single-respondent data and the reliance on the views of HR managers or decision makers. My study was aimed to overcome these methodological deficiencies. I relied on employee perceptions regarding existing HR practices. Instead of indicating if a certain practice was absent or present, employees’ agreements concerning statements about the HR philosophy and according practices were assessed on a 7-point Likert scale. Before aggregating their responses to an overall index for each organization, I checked if this aggregation was justified empirically, meaning that the variance in answers within organizations had to be smaller than the variance between organizations.

By including TFL climate and POE in the model, I investigated the effect of HR practices on process and outcome variables that have not been in the focus of past studies. Many studies have used distal, financial performance indicators to demonstrate a relationship between HPWS and organizational outcomes (e.g. Evans
Study 2 - HRM and Leadership Climate as Complementing Antecedents of Productive Org. Energy

& Davis, 2005; Katou & Budhwar, 2006). Recently however, researchers have pleaded for the use of more proximal outcome measures and the investigation of subsequent changes on the organizational level (Paauwe, 2009). TFL climate and POE as organizational-level, proximal outcomes seem to be well suited for this purpose. Hence, I extended the nomological network around HPWS and broadened the scope of relevant mediating mechanisms and outcome variables (Paauwe, 2009).

Next, this study explored the effect of HR practices on the development of a TFL climate. Takeuchi et al. (2009) investigated the effect of HPWS on global employee climate and called for more research on how HRM affects other types of climates in organizations. Other researchers have advocated more research on the conditions that facilitate the development of certain social climates (Schneider, 2000). My study revealed that, for the development of a TFL climate, a commitment-based HR approach seems to be a useful condition.

Concerning the TFL literature, my study contributed to the investigation of more distal, contextual antecedents of TFL at the organizational level which has been called for by Bommer et al. (2004). Moreover, I took research on the relatively new concept of TFL climate one step further by demonstrating that it can be fostered through the systematic design of HR practices around a common philosophy.

3.4.3 Limitations and Future Research Directions

Each study has certain limitations which then bring about potential directions for future research. First, the applied cross-sectional survey design implies that no causal inferences concerning the relationship between HR practices, TFL climate and POE can be drawn (Cohen et al., 2003). Thus, future studies could test the proposed model using longitudinal data and methods.

Another methodological disadvantage is that the study sample consisted only of small- and medium-sized companies located in Germany. Although equally endorsed in different cultural contexts, studies have shown that TFL exerts varying effects in different cultural settings (e.g. Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999). Consequently, the results might not be completely transferable to companies within other national cultures. With regard to the external validity of the study within Germany, however, it should be mentioned that small- and medium-sized companies are by far the largest group of organizations in Germany.
Moreover, the applied sample consisted of very diverse organizations and employee groups. Nevertheless, future studies should replicate the findings with different samples that also contain larger organizations from multiple cultural settings.

In the present study I solely concentrated on the broad effect that commitment-based HR practices and TFL climate exert on outcome variables like POE. A promising avenue for future studies would be to investigate the differential effects of the underlying sub-dimensions of these concepts. It would certainly be interesting to explore if commitment-based selection practices exert different influences than commitment-based training practices or if some TFL components, as for instance individualized consideration or fostering group goals, differ in their effects on other phenomena (see also Podsakoff et al., 1996; Podsakoff et al., 1990). Taking this one step further, future studies could also investigate if the different facets interact with one another in their influence on other variables.

Although called for by different scholars (Collins & Smith, 2006; Datta et al., 2005), the relatively small sample size in the present study (N = 76) went along with low power and hampered the exploration of moderators in the investigated relationships. Similarly, another shortcoming of this study certainly is the missing link to organizational performance: The assumption that commitment-based HR practices and TFL climate exert an influence on performance has not been explicitly tested. Both deficiencies should be partly compensated by study 3 in which a summary of findings, based on qualitative data, is derived and ideas for potential boundary conditions are generated.

To conclude, study 2 has demonstrated that the development of a climate of TFL can be an effective means to maintain high levels of POE and that this can be achieved by an HR approach based on commitment between employer and employees.

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5 Statistic retrieved from www.ifm-bonn.org on February 1, 2012
4 Study 3: Productive Organizational Energy, Collective Behavioral Patterns, HRM and Leadership: Boundary Conditions and Interrelations – the Case of Phoenix Contact

We know from study 1 that POE mediates the relationship between collective behavioral patterns that can be described in terms of the big five factors of personality and organizational performance. Study 2 established TFL climate as a linking mechanism between commitment-based HR practices and POE. Based on these results, aims of study 3 are (a) deriving ideas for potential moderator variables in fostering POE, (b) deriving an overall conceptual model that can serve as a summary of findings and in which the relationships between all study variables are depicted and (c) investigating the sustainment of POE from a different angle, thereby triangulating so-far collected evidence and gaining a fresh perspective on this phenomenon. Scholars have remarked that studies which examine the simultaneous effects and the interplay of leadership, organizational culture, and HRM on performance criteria are still rare (Jung & Takeuchi, 2010). In study 3, I aim at simultaneously investigating these effects in a natural setting and stimulating future research to test the entire model and the developed propositions.

4.1 Method

In the following, the reasons for choosing Phoenix Contact as a research case are presented. Next, I describe the process of data collection. Finally, the data analysis procedures are presented.

4.1.1 Case Selection

I selected the company Phoenix Contact as a suitable case. The manufacturer of industrial electrical and electronic technology employs more than 11,000 employees worldwide, over 5,500 working in Germany. Against the background of a theoretical sampling approach (Eisenhardt & Graebner, 2007), I chose this company because it represents an extreme case (Flyvbjerg, 2006) and is particularly suitable for illuminating relationships among the constructs of interest. We know from two quantitative investigations that Phoenix Contact managed to maintain high levels of
POE during a time span of four years (2007-2010) although the company experienced phases of high-speed growth, change and a severe crisis.

4.1.2 Data Collection

**Quality standards.** To ensure certain quality standards in the data collection and analysis process, various measures have been taken. First, the use of multiple data sources (quantitative data from surveys, qualitative data from interviews, documents) helped to triangulate the evidence and increased confidence in findings (Eisenhardt, 1989). When conducting the interviews, we used various knowledgeable informants who viewed the phenomena from different perspectives in order to limit bias and control for retrospective sensemaking and/or impression management (Eisenhardt & Graebner, 2007). Moreover, we used multiple investigators by conducting the site visits and most of the interviews in teams of two (Eisenhardt, 1989).

**Employee surveys.** The two employee surveys at Phoenix Contact have been conducted in 2007 and 2010 in the realm of larger benchmarking studies which have been coordinated by a German agency that is specialized in benchmarking of small- and medium-sized companies. The surveys were conducted online and the procedures were the same as in the described surveys in studies 1 and 2. While the response rate in 2007 was 65%, it rose to 74% in 2010. Among other topics, the level of POE was measured in the surveys. Therefore, the same measurement scale as in studies 1 and 2 was applied. The relatively high levels of POE in both surveys also led to the decision to choose this company as a study example.

**Documents.** During the data collection process our contact person at Phoenix Contact provided us with several printed and digital documents about the organization. These documents gave us insights on the development of the company in general, its structure, its HR strategy, processes and instruments and its culture. I will refer to the most important of these documents in the narrative that is included in Appendix 6.3.

**Interviews.** We conducted in sum eleven interviews with nine different interview partners, thereby following the principles of theoretical saturation and pragmatic considerations (Eisenhardt, 1989) (for an overview of the interview partners and other details see table 7).
### Table 7. Some Basic Data on the Conducted Interviews

<table>
<thead>
<tr>
<th>Position of interviewee</th>
<th>Interviewers</th>
<th>Date</th>
<th>Mode of interview</th>
<th>Duration (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO HR, IT, and law</td>
<td>Bruch / Lampert</td>
<td>November 2009</td>
<td>face to face</td>
<td>116</td>
</tr>
<tr>
<td>(1st interview)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive shareholder</td>
<td>Bruch / Lampert</td>
<td>November 2009</td>
<td>face to face</td>
<td>64</td>
</tr>
<tr>
<td>Head of leadership and</td>
<td>Bruch / Lampert</td>
<td>November 2009</td>
<td>face to face</td>
<td>60</td>
</tr>
<tr>
<td>organization development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division manager HR</td>
<td>Bruch / Lampert</td>
<td>November 2009</td>
<td>face to face</td>
<td>66</td>
</tr>
<tr>
<td>(1st interview)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division manager HR</td>
<td>Bruch / Dolle</td>
<td>October 2010</td>
<td>face to face</td>
<td>68</td>
</tr>
<tr>
<td>(2nd interview)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of industry</td>
<td>Bruch / Dolle</td>
<td>October 2010</td>
<td>face to face</td>
<td>19</td>
</tr>
<tr>
<td>management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO HR, IT, and law</td>
<td>Bruch / Dolle</td>
<td>October 2010</td>
<td>phone</td>
<td>52</td>
</tr>
<tr>
<td>(2nd interview)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO marketing and</td>
<td>Bruch / Dolle</td>
<td>April 2011</td>
<td>phone</td>
<td>45</td>
</tr>
<tr>
<td>development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief information</td>
<td>Bruch / Dolle</td>
<td>April 2011</td>
<td>phone</td>
<td>42</td>
</tr>
<tr>
<td>officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director manufacturing</td>
<td>Dolle</td>
<td>May 2011</td>
<td>phone</td>
<td>63</td>
</tr>
<tr>
<td>solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of leadership and</td>
<td>Dolle</td>
<td>June 2011</td>
<td>phone</td>
<td>46</td>
</tr>
<tr>
<td>organization development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The interviewees were selected because of their key informant status that stemmed from long-lasting careers within Phoenix Contact and/or key positions.
within the company. The interview partners were either members of the executive board, HR managers and/or had a leading function within the organization. The interviews were conducted either face to face or via phone in the time span between November 2009 and June 2011. They lasted between 19 and 116 minutes ($M = 58.3$). To ensure that no information got lost, the interviews were recorded (the interviewees agreed in advance with the recording). The interviews were semi-structured in the sense that we had a rough interview guideline in which some key questions and topics were formulated. In the beginning, we asked some open questions about how Phoenix Contact handled difficult situations like the economic crisis or other challenges and how the leaders managed to mobilize their employees. At a later stage, we asked more specifically about cultural instruments and processes within the organization. We conducted the interviews in a rather open manner that resembled an informal dialogue. This allowed us to stay flexible during data collection, thereby taking advantage of emergent themes (Eisenhardt, 1989).

### 4.1.3 Data Analyses

When preparing the data for the analyses, I transcribed the existing interviews. Additionally, we developed write-ups for every site visit (Eisenhardt, 1989). Then I developed a chronological narrative of the case in order to structure the developments that had taken place at Phoenix Contact and to present the story that we had identified (Yin, 2009). As advocated by Flyvbjerg (2006), this narrative will be presented in full length in Appendix 6.3. In chapter 4.2, I will provide a short overview of the case narrative.

In order to derive an overall conceptual framework, I conducted a content analysis (Miles & Huberman, 1994). Therefore, I developed a codebook that consisted of detailed construct definitions that allowed me to apply consistent criteria in the interpretation of the textual data (Sonpar & Golden-Biddle, 2008). I then followed a theme-based coding process (Lee, Mitchell, & Sablynski, 1999) and used broadly articulated ideas or concepts as units of analysis. As will become clear throughout the next paragraphs, I also coded passages as indicative of the constructs in question when they represented the construct on a very broad level or when they indicated only a facet of the construct. A text passage was for instance
coded as “transformational leadership” when it revealed behaviors that had a conceptual similarity with one or several of the TFL dimensions.

I coded a textual passage as reflecting facets of POE when it indicated that (a) employees had positive feelings towards the organization / their work or when there existed a positive collective atmosphere, (b) employees were mentally alert and their attention focused on a common goal, (c) employees engaged in a collective effort to achieve a common goal or (d) there existed a general positive dynamic and enthusiasm in the company (Cole et al., 2011).

Concerning collective behavioral patterns, I considered text passages to be representative when they indicated that there existed an agreed-upon, experienced way of interacting and working that was carried out collectively (Hofmann & Jones, 2005). These behavioral routines could for example consist of sociable, cooperative, reliable, secure and creative patterns.

For commitment-based HR practices I marked passages as indicative when they conveyed that the HR philosophy and strategy was aimed at building long-lasting, trustful relationships to the employees instead of bonding them via a short-term, purely rational exchange relationship that is primarily based on monetary rewards. This also implied selection policies that are based on overall fit to the company, long-term development perspectives that include building organization-specific know-how and competencies, reward systems that are based on collective (team, company) performance, and feedback instruments that aim primarily at developing employees further (Collins & Smith, 2006).

Passages that represented the existence of a TFL climate either included TFL behaviors that were carried out by multiple leaders (e.g. articulating a compelling vision or acting as a role model; Podsakoff et al., 1990) or the existence of instruments or processes that aimed at harmonizing leadership behaviors and activities within the organization, thereby creating a TFL climate (cf. Walter & Bruch, 2010).

In order to investigate the relationships between the study variables and to derive an overall model, I analyzed the qualitative data by using spoken language as a heuristic for causal relationships (Flick, 2004) and by relying on prior theoretical knowledge (e.g. in the fields of HPWS or TFL). In the analysis of the data, keywords like “because” were treated as indicative of causal conditions and words such as
“consequently” as indicators of consequences. The rather marginal amount of textual data did not allow for frequency counts or pattern matching as analytical strategies (Sonpar & Golden-Biddle, 2008).

When searching for potential boundary conditions in the proposed relationships, I tried to identify emerging themes and context variables that were present (or absent) in the given situation at Phoenix Contact and that had a potential influence on the model. I went back and forth between theory and data to iteratively identify potential conditions that could influence the relationships between the variables of interest and that would allow me to derive propositions on boundary conditions for the sustainment of POE.

4.2 Sustaining Productive Organizational Energy during the Economic Crisis: The Role of Leadership and Corporate Culture Development

In the following, I will present a short overview of the case narrative and some additional background information on developments that took place at Phoenix Contact.

The case depicts developments at Phoenix Contact, a medium-sized, international manufacturer with headquarters in Germany. The main focus lies on developments that took place between 2000 and 2011. The world’s market leader of industrial electrical and electronic technology managed to digest high-speed growth phases and overcome a severe economic crisis by intentionally developing, implementing and shaping its corporate culture and leadership within the company. The case describes these organizational developments and focuses on the challenges Phoenix Contact was facing and how the company leaders managed to overcome these successfully.

The narrative starts off with a presentation of the major steps in the company’s history. Then, I explain how the company leaders developed and communicated a long-term vision and strategic goal and how they managed to actively shape their corporate culture. In the next part, the key aspect is the economic and financial crisis – how it affected Phoenix Contact and what measures the management took to

overcome it. Finally, I concentrate on upcoming challenges that the company will face.

Within the organizational development process, the company leaders developed cultural guidelines that defined the right way of doing business and that stated with which ways of working and interacting they identified. These cultural guidelines included elements that are conceptually close to the collective personality traits agreeableness and openness to experience. Consequently, results and conclusions within the field of organizational personality mainly refer to these behavioral patterns.

4.3 Results

4.3.1 Construct Illustrations

In the course of this chapter, I will present the results concerning the conceptual model and the identification of moderators. A necessary precondition for the analyses was the identification of the respective constructs in the textual data. Accordingly, I will in a first step present the evidence for the existence of these concepts in the investigated setting. For this purpose, I will use a construct table as illustrative device (Eisenhardt & Graebner, 2007). Table 8 illustrates the various constructs and gives an overview of their quantitative occurrence in the data (see “number of sequences”).
Table 8. Illustrations of the Study Variables in the Interview Data

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Number of sequences</th>
<th>Representative examples</th>
</tr>
</thead>
</table>
| **Productive organizational energy**                                      | POE  | 23                 | Head of leadership and organization development: “Everybody is looking forward to January when you can speed up again. That’s great, I also think it is very important for the team that we can then all work together again. You can notice quite clearly that a lot of dynamic is evolving.”

Talks about the effect of the executive board’s plans to intermit short-time work in January 2010 to set a positive signal.

Division manager HR: “What I notice in this company – and I can say that of good cheer – is that there exists a very positive prevailing mood in the workforce.”

Director manufacturing solutions: “It’s something that we have to go through with altogether (...) and the employees develop a sort of euphoria that they want to accomplish that.”

Reflects on overcoming of the economic crisis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| **Collective behavioral patterns (organizational personality): Agreeableness and openness to experience** | BP   | 11                 | Division manager HR: “I experience it myself when dealing with colleagues and we have the impression that something does not fit to the topic of “dealing with each other on a partnership-like basis” (...), then you say “ok, listen, we have defined trustful interaction as most important principle, but what I hear now does not fit to this, so may I remind you of that”.”

Talks about the cultural guidelines that have been developed in order to provide an orientation on how to behave in daily interactions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
### Table 8. (continued)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Number of sequences</th>
<th>Representative examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collective behavioral patterns (organizational personality):</strong></td>
<td></td>
<td></td>
<td><strong>Agreeableness and openness to experience</strong></td>
</tr>
<tr>
<td></td>
<td>BP</td>
<td>11</td>
<td>Director manufacturing solutions: “The guiding principles are like the constitution or the Ten Commandments. (…) They are the basis for our actions – how we deal with each other, with clients, suppliers, colleagues and employees.”</td>
</tr>
<tr>
<td><strong>Commitment-based HR practices</strong></td>
<td>CHR</td>
<td>16</td>
<td>Division manager HR: “If you lost your Phoenix Contact contract this would be comparable to psychologically giving up a livelihood that had actually already been assured.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Implies that the psychological contract between Phoenix Contact and the employees is long-lasting and binding.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Division manager HR: “They [the employees] should simply know that Phoenix Contact as employer is a reliable partner because we are convinced that they will then also get more involved with us.”</td>
</tr>
<tr>
<td><strong>Transformational leadership climate</strong></td>
<td>TFL</td>
<td>16</td>
<td>CEO marketing and development: “We tried to convey the idea of this goal to all employees. (…) We have traveled half the world to communicate the strategic objective and to explain what is behind it, why we are doing this, and what makes this so unique.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Explains how the Phoenix Contact leaders engaged in articulating the goal / the vision to the employees.</em></td>
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<td>Chief information officer: “What we can do is actively live this culture and exemplify it through our own behavior so that many of the especially younger employees experience this culture and adapt to it themselves.”</td>
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<td><em>Reflects on the role model function of the leaders at Phoenix Contact with regard to organizational culture and behavioral routines.</em></td>
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</tbody>
</table>
### Table 8. (continued)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Number of sequences</th>
<th>Representative examples</th>
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| Transformational leadership climate | TFL  | 16                  | Director manufacturing solutions: “The big challenge is to allocate this role model function to many, many persons. And it cannot only be 5 or 10, but you need 100 or 200 who internalize this.”  
Explains the need to develop consistent role model behaviors in a wider circle of leaders within the company.  
CEO HR, IT and law: "We began very early to establish a leadership culture within this company that grounds on leading by articulating a vision and active involvement of employees."  
Shows how consistent leadership behaviors have been fostered. |

#### 4.3.2 Overall Conceptual Model

Although it was only a secondary objective of the case study, the textual data, in conjunction with existing literature, allowed me to tentatively relate all study variables with each other and to derive a summary of findings. Figure 4 illustrates the derived conceptual model which depicts the relationships between the study variables. All relationships that have been established quantitatively in studies 1 and 2 could be replicated in the textual data (depicted with black arrows). Additionally, I could draw tentative inferences about the nature of the relationships that have not been in the focus of the first two studies (depicted with blue arrows). In the following, I will briefly describe these additional relationships and try to connect them to existing literature and research.
As depicted in the above model, I could tentatively infer from the textual data that commitment-based HR practices exert a positive influence on organizational performance. The positive performance effect of bundles of HR practices has repeatedly been demonstrated in the literature (e.g. Combs, Liu, Hall, & Ketchen, 2006; Datta et al., 2005; Delaney & Huselid, 1996; Katou & Budhwar, 2006) and research has shown that practices which convey organizations' commitment to the employees are linked to increased financial performance (Miller & Lee, 2001). Thus, I suggest that HR bundles that ground on long-term commitment between organization and employees positively influence organizational performance.

The positive effect of TFL climate on organizational performance, which could be identified in the interview transcripts, can also be partly rooted in the literature. While numerous studies have demonstrated the positive effect of TFL on performance on various levels of analysis (for meta-analytic evidence, see Wang et al., 2011), it can be assumed that this effect will also occur when all leaders within a company act in a similarly transformational manner, thus producing a climate of TFL. A recent study has demonstrated the positive effect TFL climate exerts on aggregated individual-level performance indicators (Menges, Walter, Vogel, & Bruch, 2011).

The relationship between collective behavioral patterns and commitment-based HR practices supposedly is more complex. “Within human resource management, the corporate principles are our basis for everything”, stated the head of leadership and organization development at Phoenix Contact. As can be inferred from this quotation, recurring agreeable and creative behavioral patterns within the
organization determine how HRM is carried out. However, HRM also influences employees’ behaviors in the workplace (e.g. Liao et al., 2009). Consequently, these variables potentially affect one another. Possibly, agreeable and open-minded behavioral patterns and underlying values of the company leaders affect the way HR practices are designed and carried out and this in turn influences the collective behavioral patterns of the employees. Thus, I propose a bidirectional relationship between commitment-based HR practices and collective behavioral patterns.

Likewise, the relationship between collective behavioral patterns and TFL climate is not straightforward and there potentially exists a bidirectional relationship between these two phenomena as well. There has been an ongoing debate in the literature “as to whether ‘leadership creates organizational culture´ (Quick, 1992) or ‘leadership is molded by organizational culture´ (Bass & Avolio, 1993)” (Jung & Takeuchi, 2010:1937). The textual data suggest that the corporate principles at Phoenix Contact determine how leadership within the organization is understood and shaped. As such, agreeable and open-minded behavioral routines could facilitate a TFL style which for example implies considering the individual needs of employees and stimulating them intellectually. However, Hofmann & Jones (2005) argued for a positive influence of leadership - especially TFL behaviors - on collective behavioral patterns like agreeable and open-minded behaviors.

The view of a bidirectional influence is also in line with Waldman and Yammarino (1999) who argued that adaptive cultures in the terms of Kotter and Heskett (1992) foster the emergence of charismatic leadership and that charismatic leadership, in a feedback loop, fosters the behaviors that are associated with adaptive cultures (e.g. innovation, candid communication and integrity). Schein (1992) stated that leadership and culture were closely intertwined and that the causality depended on the organizational life cycle with leaders shaping the organization´s culture in early stages and culture influencing the actions of leaders at later stages. In a similar vein, Avolio and Bass (1995) suggested that leadership behaviors will over time evolve into cultural norms within the organization. Thus, I assume that there exists a bidirectional influence between collective agreeable and open-minded behavioral patterns and TFL climate.
4.3.3 Boundary Conditions

The phenomenon of POE has been quite pronounced in the investigated setting at Phoenix Contact. Consequently, the question arises which specific conditions were present that potentially fostered the emergence and strength of relationships between the study variables. Two themes appeared very clearly and dominantly in the data.

Uncertainty. First, managers and employees at Phoenix Contact were confronted with a certain level of uncertainty in their workplaces. This was, for one thing, due to the business the company is engaged in. Electrical and electronic technology is a fast moving industry that is to large degrees dominated by short product life cycles and high innovation rates. Moreover, Phoenix Contact suffered greatly under the financial and economic crisis that hit the company at the end of 2008. “All declines we ever had taken together only result in 50% of the decline we are facing now. We already had minus 4% or minus 6%, but minus 29% - never!” the executive shareholder described the situation. The uncertainty that was induced by the crisis becomes clear in the following metaphor that a member of the executive board provided us with: “During the last years the boat Phoenix Contact sailed quite well. Nice wind, you could always see the harbor, the management team could steer the boat well. Everybody can do this. But now we are facing storm. Fog makes easy management and reliable forecasts impossible.” Taken together, it can be assumed that the company was confronted with uncertainty in its daily business as well as in the rather extraordinary crisis situation. A construct that captures this phenomenon is environmental uncertainty. In situations with high environmental uncertainty the perceived risk of organizational failure is higher and changes in the organization’s external environment are less predictable (Agle et al., 2006). This can lead to increased uncertainty and, potentially, to anxiety and stress (Waldman, Ramirez, House, & Puranam, 2001). Uncertain environments are oftentimes characterized by fast changes in technology, in customer and product demands and in supply materials (Jansen, Vera, & Crossan, 2009).

The Phoenix Contact company leaders identified possibilities of dealing with and thereby potentially reducing the uncertainty. For one thing, they intentionally developed a strong corporate culture that gave orientation and stability during daily business. Furthermore, they made transparent and systematic communication to
their number one priority during the crisis: “To me, the most important human resource strategy in the crisis is first, to inform, second, to inform and third, to inform. Nothing is worse than not informing the employees” stated a member of the executive board. All in all, the externally induced uncertainty, combined with internal actions aimed at reducing this uncertainty potentially led to moderate overall levels of uncertainty in the organization.

The dominant role of uncertainty in this specific setting leads me to assume that it can facilitate the effects of HRM and leadership on POE. These factors provide guidance and orientation and have a reassuring function in times of uncertainty. With regard to HR practices, this view can be complemented by a slightly different reasoning from the literature. Authors have suggested that HPWS will be more effective in firms that operate in a dynamic and competitive environment (e.g. Datta et al., 2005; Miller & Lee, 2001). The reasoning behind this is that a flexible, committed and high-skilled workforce can create more of a competitive advantage under dynamic conditions where an “organic” rather than “mechanistic” approach to management is indicated (Datta et al., 2005). With regard to commitment-based HR practices, Miller and Lee (2001) demonstrated that organizations’ commitment to their employees exerts stronger effects in uncertain environments where aspects like collaboration and initiative were more important. Although there have been mixed results (e.g. Martin-Tapia, Aragon-Corra, & Guthrie, 2009), the above mentioned finding and the case of Phoenix Contact lead me to propose that environmental uncertainty might be a facilitating boundary condition in the effect that commitment-based HR practices exert on outcome variables like TFL climate, POE and organizational performance.

Future studies should closely investigate the associated underlying processes, thereby differentiating between uncertainty as primary characteristic of the market or as induced state within an organization: Whereas the latter would imply that HR practices can have a reassuring function and thus a stronger influence in uncertain times, the first mechanism would imply that the immediate effects of HR practices are generally of more use in unstable environments than in other settings – possibly independent of the reactions that these environments produce within the organization. Leaving this issue open for now, I propose the following:
P1a. Environmental uncertainty moderates the relationship between commitment-based HR practices and TFL climate.

P1b. Environmental uncertainty moderates the relationship between commitment-based HR practices and POE.

P1c. Environmental uncertainty moderates the relationship between commitment-based HR practices and organizational performance.

When environmental uncertainty is moderate to high, commitment-based HR practices will exert a stronger effect on these outcome variables than when environmental uncertainty is low.

Concerning TFL climate, researchers have suggested that this leadership behavior exerts especially strong effects in weak situations (Shamir & Howell, 1999). Perceived uncertainty, as induced by weak situations, is stressful to organizational members who are then more receptive for guidance and charismatic leadership (Waldman & Yammarino, 1999). Leaders who are able to turn a potential threat into an opportunity for success can be more effective when a potential threat actually exists. Importantly, empirical evidence has shown that uncertainty does not lead to the emergence of charismatic leadership (as depicted by higher ratings of charismatic leadership) (Pillai & Meindl, 1998; Waldman & Yammarino, 1999; Waldman, 1994), but rather serves as a facilitating condition for the effects charismatic leadership can exert on the emotions, cognitions, and behaviors of followers and, as a consequence, on performance (Agle et al., 2006; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004; Waldman et al., 2001). Based on this and on my observations at Phoenix Contact, I propose the following:

P2a. Environmental uncertainty moderates the relationship between TFL climate and POE.

P2b. Environmental uncertainty moderates the relationship between TFL climate and organizational performance.

When environmental uncertainty is moderate to high, TFL climate will exert a stronger effect on these outcome variables than when environmental uncertainty is low.
Trust. A second topic that appeared very consistently in the data is trust. Phoenix’s Contact strategic goal for 2020 was to become the most trusted brand in the entire industry, meaning that trustful relationships should be established to all relevant stakeholders like clients, employees, and suppliers. The reasoning of the company leaders was that clients can only trust Phoenix Contact and its products if the company succeeded in developing a climate of trust internally. The statement of an executive board member reflects this reasoning: “If we want to be trusted externally, by our clients, we have to establish a culture of trust internally.” This led to an organizational development process in which trust in the leaders and in the company was strengthened by the use of active communication, leadership and symbolic management (an example being that the management team cut their own salaries to declare solidarity with the employees during short-time work). As the executive shareholder stated, trust was a success factor to cope with the crisis: “This is nothing you can solve within the situation itself. Certain preconditions need to be fulfilled. To cope with such a crisis, you already need a high level of trust in the workforce.” According to Rousseau et al. (1998), trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations about the intentions or behavior of another. Trust can exist at various levels as for example at the leadership or the organizational (between employees and organization) level (Burke, Sims, Lazzara, & Salas, 2007). Under conditions of high trust, an individual believes that a partner is willing to cooperate (Dirks & Ferrin, 2001) and, as a consequence, certain actions of that partner (e.g. leadership behavior) are interpreted and reacted to differently than under conditions of low trust.

Based on the observation that trust was a very dominant topic at Phoenix Contact and that there existed high levels of trust within the organization, I reason that trust in leaders and in the employer could be another relevant boundary condition for the effects of HR practices and leadership on POE. Dirks and Ferrin (2001) discussed the role of trust in organizational settings and proposed two possible ways how trust can exert an influence. Specifically, they proposed a main effect of trust in situations that are weak and in which no behavioral guidelines exist. In midrange situations which are characterized by a certain level of uncertainty and ambiguity, but which also provide securing cues, trust is most likely to facilitate the effects of other factors that are present and dominant in the specific setting. Given that Phoenix Contact experienced a severe crisis but at the same time had a strong
corporate culture and a very open and reassuring internal communication, the organization was supposedly in such a midrange situation. Thus, trust could possibly exert an influence by strengthening existing relationships in this context.

The role of trust in the effect of HR practices has been discussed in the literature (e.g. Gould-Williams, 2003; Searle et al., 2011; Whitener, 1997). While it has been acknowledged that trust is a determinant of success or failure of HR, these authors argued especially for a main effect of trust or even for a positive effect of HR practices on trust (see also Collins & Smith, 2006). Only more recently researchers started to follow the notion that trust might also serve as a precondition that can facilitate the positive effect of commitment-based HR practices on outcomes (Farndale et al., 2011; Innocenti, Pilati, & Peluso, 2011). Thus, employees only then work harder, smarter and accept more responsibility if they can trust in the positive intentions of their employer (cf. Gould-Williams, 2003). Following Dirks and Ferrin (2001), I extend this line of reasoning by arguing that this is especially true for conditions of moderate uncertainty and ambiguity. This, in combination with the observations at Phoenix Contact, leads me to propose the following:

**P3a. Trust in the organization moderates the relationship between commitment-based HR practices and TFL climate.**

**P3b. Trust in the organization moderates the relationship between commitment-based HR practices and POE.**

**P3c. Trust in the organization moderates the relationship between commitment-based HR practices and organizational performance.**

*When trust in the organization is high, commitment-based HR practices will exert a stronger effect on these outcome variables than when trust in the organization is low.*

A similar line of reasoning can be applied to the effects of TFL climate. Employees might more readily go out of their way and carry out extra-role performance if they can trust their transformational leaders that they will receive appropriate rewards for their efforts (Dirks & Ferrin, 2001). Applying a similar logic, Menges et al. (2011) demonstrated that TFL climate was indirectly related to certain outcome variables (e.g. aggregate task performance) only under conditions of a high trust climate, but not under conditions of a low trust climate. Accordingly, I developed the following propositions:
P4a. Trust in leadership moderates the relationship between TFL climate and POE.

P4b. Trust in leadership moderates the relationship between TFL climate and organizational performance.

When trust in leadership is high, TFL climate will exert a stronger effect on these outcome variables than when trust in leadership is low.

To sum up, I discovered that trust helped Phoenix Contact to overcome the crisis by supposedly providing conditions under which HR practices or leadership can exert a stronger influence on POE and performance. This was possibly facilitated by a moderate level of uncertainty in the organization which also strengthened the effects of HR practices and leadership on outcome variables. Following this line of reasoning, I developed testable propositions which imply that POE can be fostered and sustained better if there is a high level of trust in the organization. Above this, the facilitating function of trust should work best if the environmental circumstances in which the organization operates lead to a moderate level of uncertainty within the organization.

The entire model with the proposed moderator variables and effects is depicted in figure 5. While the moderated relationships are depicted with red arrows, the arrows representing the moderating influences are depicted with dotted black arrows. To avoid complexity and enhance readability, the two moderators are depicted in one box.
4.4 Discussion

The purpose of this study was to (a) generate ideas for potential moderating influences in the studied relationships, (b) derive a summary of findings in which all study variables are incorporated and (c) investigate the sustainment of POE from another angle by studying it in a natural setting. By deriving an overall conceptual model with all study variables, I contribute to the growing body of literature that deals with the simultaneous investigation of aspects of organizational culture, leadership and HRM (Jung & Takeuchi, 2010). I also follow the call of various scholars to explore boundary conditions for the effects of HR practices and leadership (e.g. Collins & Smith, 2006; Datta et al., 2005).

This case study revealed that commitment-based HRM, TFL climate and POE are meaningful constructs that can be identified in a natural setting by analyzing spoken language. Phoenix Contact had a long-term HR strategy based on commitment to the employees, fostered facets of TFL behavior (e.g. articulating a vision or acting as a role model) in the entire organization, and demonstrated high levels of this strong collective positive force that we have coined POE. A central finding was that the effects that HR practices or leadership exert on POE and,
subsequently, on performance are potentially enhanced by moderate levels of uncertainty in the workforce and by a climate of trust in leaders and in the organization.

Future research could test the derived moderator propositions and the entire model fit. Concerning collective behavioral patterns, my analysis mainly focused on agreeable and open-minded routines. Hence, future studies could test if the relationships also hold for other behavioral patterns and organizational personality facets (e.g. extraverted or conscientious patterns).

The results of study 3 should be interpreted against the background of certain constraints. They are built on a single case and a rather small amount of qualitative data. Since the small amount of data did not allow for the application of pattern matching when analyzing interrelations between the concepts, I used spoken language as a heuristic for causal relationships (Flick, 2004). Although we applied several measures to ensure a high quality in the data collection and analysis process (e.g. multiple data sources and triangulation), this analysis strategy bears the risk of detecting and interpreting implicit theories (cf. Philips & Lord, 1986) and illusory correlations in the minds of the interviewees. Readers should consequently interpret the presented results as a cautious summary of findings of this dissertation and not as an elaborated theoretical model. Since we merely conducted eleven interviews I could only tentatively derive a conceptual model which will require further testing before strong inferences can be drawn.
5 Overall Discussion and Conclusion

In the following chapter, I will discuss the findings of this dissertation on a more general level. This overall discussion is supposed to go beyond the discussion sections of the several studies (chapters 2.4, 3.4, 4.4) by providing an integration of findings, lifting the discussion on a broader level and laying out implications for practitioners. The main contributions of this dissertation project will be presented in the upcoming section. Then, implications for practitioners will be discussed and recommendations for HR managers, leaders, and senior executives derived. Next, I will present some ideas for future studies that are partly an outcome of the limitations that go along with this dissertation and that I will also refer to. Finally, I will draw a general conclusion for this research project.

5.1 Contributions

This dissertation investigated how organizations can foster POE over extended periods of time. I aimed at identifying practical measures and strategies in the fields of organizational culture and leadership that can help organizations to sustain POE in the long term. In three consecutive studies I demonstrated that, for the successful sustainment of a collective positive drive in organizations, the systematic management of culture and leadership is a key aspect. Study 1 focused on cultural aspects and showed that certain collective behavioral patterns in organizations – i.e. a certain organizational personality - help to foster high POE and that this positively affects firm performance. Beneficial behavioral patterns can be meaningfully described in terms that are derived from the big five factors of personality – namely extraverted, agreeable, conscientious, emotionally stable and open-minded behavioral patterns. In study 2 I investigated how leadership can help to foster POE and how this can be supported by an effective use of HR practices. The results demonstrated that a TFL climate within organizations is an important driver of POE and that the development of such a leadership climate can be achieved by aligning the existing HR system around a commitment-based, long term philosophy. Study 3 aimed at developing ideas for potential moderating influences and at deriving a summary of findings. Main results of this study were that the sustainment of POE by HR practices and leadership might be easier in settings that are characterized by
high levels of trust in the organization and in leaders and that this might additionally be facilitated by a moderate level of uncertainty within the organization.

The main contribution of this dissertation is taking research on the concept of POE one step further by investigating stable, intra-organizational conditions that are beneficial in fostering POE over longer periods of time. Within the research field of energy at work, scholars advocated taking into account the conditions under which vitality among employees may be sustained over a longer period of time (Quinn & Dutton, 2005). Similarly, Bruch et al. (2009b) suggested the investigation of intra-organizational factors that can help to maintain POE in the long-term.

My dissertation explored the effects and interplay of HR practices, leadership and culture on POE and organizational performance. I thereby investigated what companies can do to maintain higher-than average performance and to foster the ability and willingness of their workforce to adapt constantly to a changing environment. As the introductory example of the company Google demonstrated, maintaining high levels of POE seems to be especially challenging for organizations that are spoiled with long-term success. This dissertation showed that the systematic management of cultural aspects and leadership should help these organizations to deal with this challenge. The effective management of soft factors like POE is, today more than ever, essential for the success of organizations: Human resources and how organizations manage them are less imitable than technological or financial resources and thus, of greater importance for an organization’s competitive advantage (Barney, 1991; Pfeffer, 1994).

Studying means to ensure long-term success implies exploring positive aspects of organizational life. The need for more positivity in organizational studies has been acknowledged by the research stream of POS which focuses on positive dynamics within the workplace that lead to extraordinary organizational performance (Cameron & Caza, 2004). Although this research stream has flourished over the past decade, researchers have remarked some astonishing gaps – among them being the paucity of studies investigating organizational-level positive phenomena (Gable & Haidt, 2005; Roberts, 2006) and the lack of reliable measurement devices for positive constructs on the organizational level (Cameron & Caza, 2004). By investigating the long term fostering of POE, I made a step towards closing these gaps within the broader field of POS.
Moreover, I contributed to the literature on organizational personality, HPWS and TFL. Concerning organizational personality, the main contribution of this dissertation was the identification of linking mechanisms and theoretical explanations for the relationships between organizational personality and performance. With regard to the HR literature, Becker and Huselid (2006:900) have stressed that more work is needed on the “black box” between the HR architecture and firm performance and less emphasis on the ‘black box’ within the HR architecture”. This dissertation contributed to the “between-black box” debate by identifying mediating mechanisms between HRM and performance (Farndale et al., 2011). Moreover, my dissertation provides part of the answer to the question of “how and why HR practices work” (cf. Bowen & Ostroff, 2004) by studying HR practices from a specific theoretical angle and by linking them to meaningful outcomes. Concerning research on TFL, this dissertation shed light on contextual antecedents of TFL besides personal characteristics and behaviors (Bommer et al., 2004) and its effect on group-level phenomena like POE (cf. Hiller et al., 2011). Finally, I continued linking the literatures on HR and leadership which has been considered an important step in the further research process (e.g. Zhu et al., 2005).

5.2 Practical Implications

In the upcoming paragraphs I will focus on the benefits of my research for practitioners. As I demonstrated in study 1 and as has been shown before (e.g. Cole et al., 2011), the phenomenon of POE is performance-relevant. This implies that practitioners should care about enhancing and maintaining POE in their organizations. Authors have remarked that the sole emphasis on statistical significance in scientific studies is confusing to practitioners because results are not presented in meaningful units and thus do not provide a direct validity check (Becker & Huselid, 2006). In order to convey the practical significance of my research, I will present some additional results from descriptive analyses. In study 1, employees rated the level of POE in the organization and CEOs provided us with performance ratings of their organizations. Based on these data, I divided the sample in extreme groups that consisted of firms with high levels of POE (one standard deviation above the mean; N = 20) and low levels of POE (one standard deviation below the mean; N = 18). Splitting up the sample yielded it possible to compare these groups with regard to their mean subjective performance ratings. Results demonstrated a mean increase
Overall Discussion and Conclusion

of 17% in performance – meaning that organizations with high levels of POE in the workforce had a 17% higher performance rating than organizations that were characterized by low POE. Whereas operational performance increased by 16%, organizational performance increased by 18% (cf. Combs et al., 2005). Figure 6 depicts the detailed results of the descriptive analyses.

Figure 6. Performance Differences between Companies with Low and High Productive Organizational Energy (1 Standard Deviation below/above Mean)

The above illustration demonstrates that it is worthwhile for practitioners to strive for a high level of POE in their organizations. But what can they do to foster and maintain POE in the long term? Figure 7 gives an overview of the different practical implications and associated recommendations. In the following, I will separately refer to these different action fields and lay out possible practical measures.
5.2.1 Diagnosis of Status Quo as Basis for Further Activities

In a first step, the status quo concerning the different fields of action should be assessed. The level of POE within the organization can be monitored on a regular basis through short “pulse checks” that are administered to all or to randomly selected employees. Relevant input factors like the perception of the HR approach or organizational personality can be assessed in employee surveys. The quality of certain HR practices can be evaluated by an internally applied customer satisfaction survey where the employees are the customers of the HR system. Accordingly, the topic of leadership can be monitored by the application of leadership feedbacks. Importantly, measurement activities always imply that the results need to be communicated broadly and that the process of crafting measures based on these results needs to be made transparent for all employees.
Functions of this diagnosis phase are the generation of knowledge on the status quo of the different topics within the organization and the creation of awareness among managers and company leaders on how far certain topics are developed and where things need to be changed or pressed ahead. After a first assessment has been conducted, according measures and project plans can be developed. Splitting up the results for different target groups and organizational units – as for instance hierarchies, departments, facilities, employee groups – allows a fine-grained analysis of the dispersion of results and gives hints as to how diversified and target group-specific according action plans need to be. A formative evaluation in the form of a continuous assessment allows for a success tracking of realized activities and provides the possibility to intervene immediately if negative developments occur (e.g. leadership ratings decrease severely in certain departments).

5.2.2 Laying the Ground by Fostering a Beneficial Organizational Personality

The main implication of study 1 is that the way employees interact and address each other has consequences for the degree of POE in the workforce and, subsequently, for firm performance. Whereas introverted, hostile, careless, anxious and disinterested behaviors negatively affect POE and performance, outgoing, trustful, reliable, secure and open-minded behaviors boost POE and performance. Consequently, managers should systematically foster certain behavioral patterns in organizations.

In a first step, the behavioral routines that best fit with the organization’s norms and values need to be identified. The big five factors of personality can provide guidance as to which behaviors can be considered as beneficial. When the ways of working and interacting have been agreed upon, a necessary next step would be to develop a common understanding among organizational members concerning desirable and undesirable behaviors in the workplace. Importantly, a discourse on how exactly these behaviors affect daily processes and interactions with each other and with clients should be initiated and moderated. Existing norms and behavioral routines need to be partly changed. Phoenix Contact offers a best practice example on how to accomplish such a cultural change (for detailed descriptions see the case narrative in Appendix 6.3): After the management team had developed the corporate principles, the executive board trained employees in workshops about their
background, development, and content, thereby demonstrating the strategic importance and high priority of this topic. Since Phoenix Contact also intended to represent the principles outward, the main target group consisted of employees with a lot of contact to external clients. In sum, executive board members engaged in 39 of these workshops in which they trained 522 employees, 260 of them being leaders. After the workshops had been conducted, it was the job of the leaders to explain the corporate principles to their employees. All in all, important measures that the Phoenix Contact management team took to establish the behavioral guidelines in the organization were workshops with employees and leaders in which they provided platforms for collective sense-making (cf. Weick & Roberts, 1993), the integration of all relevant stakeholders in the communication process, and the systematic assignment of outstanding personalities and well-liked employees as multipliers.

Next, the establishment of these collective behaviors could be encouraged through a systematic incorporation in existing management systems and HR practices. A code of conduct could be developed and existing selection procedures, reward systems and training and development programs for leaders, teams and employees could be aligned according to the behavioral guidelines. This would for example imply that advancement within the organization is partly dependent on living up to the established code of conduct or that employees’ role model behaviors are regularly evaluated by their colleagues, subordinates and supervisors. Finally, Hofmann & Jones (2005) demonstrated that TFL relates to behavioral routines of followers that can be described in terms of the big five factors of personality. Thus, this leadership strategy is also a promising way of fostering certain behavioral patterns in organizations.

When organizational members have agreed upon an organizational personality and according ways of interacting and working, this can also be systematically used in the war for talent (Michaels, Handfield-Jones, & Axelrod, 2001). Studies have demonstrated that applicants can ascribe traits to organizations and that the ascribed traits account for incremental variance in organizational attractiveness over job and organizational attributes (Lievens & Highhouse, 2003; Rentsch & McEwen, 2002; Slaughter et al., 2004). Consequently, the developed organizational personality can authentically be incorporated in an employer value proposition (Trost, 2009) to attract employees with similar individual personalities who can identify with the prevailing behavioral routines (Kristof, 1996), thus resulting in supplementary fit between
employees and employer (Muchinsky & Monahan, 1987). Employees who internalize the existing behavioral patterns can serve as “brand ambassadors” and represent their company outwardly. Moreover, the recruitment of employees with similar personalities potentially facilitates their socialization and strengthens the existing organizational personality. Whereas the consideration of personality factors in personnel selection is still discussed controversially by some authors (Morgeson et al., 2007), other scholars have debilitated these concerns (Ones et al., 2007). The importance of personality as selection criterion is undeniable; however, especially self-reports have been criticized as valid selection instrument. Thus, practitioners should aim at finding ways to assess candidates’ personalities in other ways – for instance by applying behavioral interview techniques or role plays.

5.2.3 Establishing a Long-Term HR Philosophy

The implications of study 2 are that a commitment-based HR approach is an effective means to foster consistent TFL behaviors in the entire organization and that this, in turn, has an impact on the level of POE. What do the results of this study imply for practitioners? First of all, managers should aim at establishing a HR philosophy that comprises a long term, mutual commitment approach to the employees. HR instruments and processes should be aligned accordingly – including selection practices, reward practices, and training and development procedures. Such an open-ended investment in each other would, on behalf of the employer, imply a consideration of the employee’s well-being and an investment in his long-term career within the firm. On behalf of the employee, his contributions would include working on job assignments that fall outside of prior agreement (e.g. assisting junior colleagues) and considering the organization’s interests as important as core job duties (Tsui et al., 1997).

For organizations, such an approach could for example imply that highly qualified and skilled employees do not get hired if they do not fit into the organizational culture and could thus not pursue a long-term career within the company. Other examples are that employees are encouraged to persecute long term goals within the company or that needed skills are trained even if the training is time-consuming and implies a high investment in the employees. Long term career perspectives should also be offered within the company, including multiple career
models (e.g. project career, expert career) and a career development that is aligned with personal needs and goals.

Besides integrating the HR practices in an overall system and aligning them internally, research has shown that for the success of a HR system, it also needs to be aligned externally, meaning that HR practices should be adapted to organizational strategy (Evans & Davis, 2005; Liao et al., 2009). Furthermore, scholars have demonstrated that there can be discrepancies between intended HR practices – how senior management and the HR department planned them – and actual or implemented HR practices (Khilji & Wang, 2006), also leading to varying perceptions of these practices by different employee groups (Liao et al., 2009). Consistent implementation of HR practices leads to more similar perceptions and an increased overall satisfaction with HRM (Khilji & Wang, 2006). Consequently, when evaluating HR practices, the evaluation should go beyond assessing the “input perspective” (the intended practices). It should also take into account the “output perspective” (perception of practices) in order to diagnose the satisfaction with these practices and differences in the perceptions of employee groups.

Phoenix Contact provides an example for a long-term HR philosophy: Leaders are primarily recruited from within the company and employees are selected according to their fit to the organizational culture. Even during the economic crisis, when many other companies fell into short-term thinking and decision making, the primary goal of Phoenix Contact was not to maximize short-term profit (or minimize short-term loss), but to hold on to every single employee. They took several measures to stay true to this goal, among them being temporary short-time work, cost saving measures, and the stimulation of creative thinking and innovation. This strategy paid off: When orders heavily increased after the crisis, Phoenix Contact had every employee on board to simultaneously increase capacities. Furthermore, their innovation rate augmented to a maximum level.

5.2.4 Developing a Climate of Transformational Leadership in the Entire Organization

The above described HR approach fosters POE and helps to establish TFL behaviors among organizational leaders by sending signals about which behaviors are expected and by directly fostering specific transformational behaviors.
Furthermore, the level of TFL in organizations can be enhanced by applying according selection and promotion criteria. When leaders from within or outside the organization are recruited, their potential to act in a transformational manner should be a central criterion in the selection decision. This can for instance be achieved by considering certain personality criteria in the selection process which have been shown to predict TFL behavior (e.g. extraversion, cf. Bono & Judge, 2004; e.g. proactive personality, cf. Crant & Bateman, 2000).

Another possibility to foster TFL is by influencing the organizational context in which leaders operate. Theorists have suggested that complex and challenging tasks should facilitate the emergence of TFL (Shamir & Howell, 1999). In terms of organizational structure, Walter and Bruch (2010) demonstrated that while centralization diminishes TFL climate, formalization has a positive effect on TFL climate. Consequently, the design of organizational structural elements and working tasks is an important starting point for positively influencing the level of TFL in organizations.

Moreover, evaluation studies have demonstrated that TFL behaviors can be trained effectively (Barling, Weber, & Kelloway, 1996; Frese, Beimel, & Schoenborn, 2003). Thus, single leaders or groups of leaders can be developed with regard to leading in an inspirational manner. Barling et al. (1996) applied a pretest-posttest control-group design and held a 1-day group-based training in which the managers were first asked to name characteristics of the best and worst leaders they had ever encountered. These characteristics were sorted according to different leadership styles (e.g. laissez-faire, transactional) and subsequently, the participants were introduced to these concepts. Then they applied the concepts to their own work situations and practiced their application in role plays that were followed by plenary discussion sessions. Next, each participant took part in four subsequent individual booster sessions. In these sessions, the participants received feedback on their leadership style based on self-evaluation and subordinates’ ratings. Then, they designed action plans to modify their daily leadership behaviors. The remaining individual sessions were used to reflect on the realization of the action plan. Frese et al. (2003), using a “nonequivalent dependent variable design”\(^7\), successfully applied

\(^7\) This design additionally controls for Hawthorne and testing effects. Behaviors that are not in the focus of the training but that are nevertheless evaluated serve as control variables at this.
action training in order to teach managers to improve their skills to charismatically communicate a vision which is a key dimension of TFL.

Importantly, fostering a TFL climate in the organization implies ensuring a consistent understanding of leadership throughout the organization. Practitioners should keep in mind that besides achieving an overall high level of TFL, the leadership behaviors should also be perceived consistently within a team and across different leaders (Cole, Bedeian, & Bruch, 2011a; Sanders et al., 2011). Single outliers, i.e. individual leaders who exert completely different leadership behaviors (e.g. laissez-faire) or who demonstrate low levels of TFL, can lead to a low consensus within the group and can thus have detrimental effects on outcomes like team psychological well-being (Bliese & Halverson, 1998) or the team’s social climate (Cole & Bedeian, 2007). Consequently, when conducting leadership feedbacks, individual leaders should be evaluated according to the mean and the dispersion of their followers’ ratings. Furthermore, instruments like collegial consulting and leadership trainings can help to foster a common understanding of how to lead. Finally, because single outliers can have such detrimental effects, decision makers in organizations need to be consequent and eventually dismiss “bad” leaders - even if they perform well on other tasks.

5.2.5 Fostering Trust in the Employer and in Leaders

In study 3, I developed the reasoning that POE can be better fostered and sustained under conditions of moderate uncertainty in the workforce and trust in the organization and in leaders. Although the developed propositions still need to be tested in further studies, I will deduce some tentative recommendations for the management of organizations. While the level of uncertainty in the workforce depends on contextual factors like environmental dynamism and cannot and should not be manipulated, managers and leaders can influence the level of trust employees have in the organization and in leaders. Possible ways to foster trust are for example frequent interactions between leaders and employees and the demonstration of reliable and upright behaviors (Mayer, Davis, & Schoorman, 1995; McAllister, 1995). Leaders can for example step into a role model function and exemplify prevailing values and expected behaviors through their own actions. Moreover, they can
demonstrate reliability and integrity by “walking the talk” and fostering a consistency between what they say and what they do.

Phoenix Contact managed to establish an internal climate of trust by orchestrating all activities in the organization towards their strategic goal to become the most trusted brand in the entire industry by 2020. The company leaders initiated a culture development process in which trustworthiness and interactions based on partnership played a central role. Moreover, they defended their strategic goal against the challenges the economic crisis imposed and managed to exploit the severe situation to strengthen trust in Phoenix Contact. Central elements were transparent and reliable information and communication policies, symbolic management and - as an explicit leap of faith - a high degree of freedom for the employees with regard to cost-saving activities. Consequently, there exist multiple ways for leaders and managers to establish a climate of trust and thus facilitate the effect HR practices and leadership exert on POE.

Figure 8 summarizes the main recommendations for practitioners and separates them for the target groups of HR managers, leaders and top management.
Figure 8. Practical Recommendations for the Target Groups of HR Managers, Leaders and Senior Management

### Recommendations for HR managers

- Conduct regular measurements of the status quo and use the results as a baseline for action plans and formative evaluation.
- Initiate and moderate a discourse to create a common understanding among organizational members concerning desirable and undesirable behaviors in the workplace.
- Incorporate these behavioral patterns in existing management systems and HR practices.
- Use the developed organizational personality in employer branding and personnel selection.
- Establish a HR philosophy that comprises a long term commitment approach to the employees.
- Make sure that HR practices are implemented as intended and applied consistently across different employee groups.
- Develop a consistent understanding of leadership throughout the organization that comprises a TFL approach.
- Apply TFL selection and promotion criteria.
- Offer TFL trainings and coaching and collegial consulting among leaders.
- Conduct leadership feedbacks on a regular basis and evaluate individual leaders according to the mean and the dispersion of their followers’ ratings.

### Recommendations for leaders

- Direct TFL behavior towards followers:
  - Articulate a compelling vision.
  - Lead by example and behave according to organizational values and agreed-upon ways of interacting and working.
  - Stimulate your employees intellectually, foster their creative thinking.
  - Show interest in the personal needs and feelings of your employees.
  - Foster group goals and collaboration.
  - Set high performance expectations.
- Be sure to show these leadership behaviors towards all of your followers.
- Design complex and challenging tasks.
- Interact frequently with your employees and behave in a reliable and upright way.
Figure 8. (continued)

<table>
<thead>
<tr>
<th>Recommendations for senior management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage in the development and communication of an organizational personality</td>
</tr>
<tr>
<td>Make sure the existing HR system is aligned with (HR) strategy</td>
</tr>
<tr>
<td>Minimize centralized decision-making</td>
</tr>
<tr>
<td>Foster formalized rules and procedures to a certain degree</td>
</tr>
<tr>
<td>Behave in a transformational manner by articulating a strategic vision and strategically using symbolic activities</td>
</tr>
<tr>
<td>Do not tolerate “bad” leadership, not even in conjunction with excellent task performance</td>
</tr>
<tr>
<td>Follow a transparent and reliable communication policy</td>
</tr>
<tr>
<td>Enable high degrees of freedom for leaders and employees</td>
</tr>
<tr>
<td>“Walk the talk”</td>
</tr>
<tr>
<td>Apply a long-term and sustainable perspective whenever possible, also in times of crises</td>
</tr>
</tbody>
</table>

5.3 Limitations and Future Research Directions

Besides the limitations I already discussed in the discussion parts of the different studies (see chapters 2.4, 3.4, 4.4) there also exist more general limitations and associated future research suggestions that apply to the overall research project. Methodologically, I applied in two of the three studies a survey approach which goes along with certain risks and drawbacks. First, translation problems and associated misunderstandings are likely to appear if measurement scales need to be adapted to another language, in this case German. To establish meaning conformity, I applied a double-blind back-translation procedure as recommended by Schaffer and Riordan (2003). Another risk in applying a survey method lies in potential common source and common method problems, meaning that relationships between concepts do not emerge because they actually interrelate but instead because they have been rated by the same person (common source) or assessed by the same method (common method) (Podsakoff et al., 2003). However, I took several measures to minimize the risks of artificial variance. To avoid common source problems, I applied the split-sample design recommended by Rousseau (1985). Respondents are directed to
different survey versions and the independent and dependent organizational-level constructs are rated by different groups of employees. The use of well-established scales in the assessment of the different constructs hopefully reduced the risk of a common method bias to occur. Moreover, common method variance cannot account for the pattern or the direction of findings (Carless, 2005). Finally, I also studied the variables and their interrelations using qualitative data and methods which allowed me to triangulate the findings.

Although my overall research question – how POE can be fostered over longer periods of time – calls for a longitudinal research design, practical constraints made the collection of longitudinal data impossible. With regard to studies 1 and 2, I employed a cross-sectional survey design to test the hypotheses. Thus, no causal inferences can be drawn (Cohen et al., 2003) and it cannot be tested if time is a relevant moderator in the development of POE. Threats to the proposed causal linkage $X \rightarrow M \rightarrow Y$ have been described as the biggest Achilles heel for mediation designs (Mathieu, DeShon, & Bergh, 2008). However, there exist conceptual arguments for an influence of organizational personality and leadership on POE (and not vice versa). Once collective phenomena like organizational personality and leadership behaviors have emerged through social interaction and sense making, they are rather stable and tend to persist even if individuals leave the collective (Morgeson & Hofmann, 1999). As opposed to these more enduring phenomena, POE is a temporary state that is dynamic and can vary according to inputs (Cole, Bruch, & Vogel, 2011; Marks et al., 2001). The higher plausibility for a stable trait to affect a dynamic state could be a conceptual argument for the proposed causal direction. Nevertheless, future research should test the proposed relationships using longitudinal data and methods. Alternatively, instead of a “measurement-of-mediation design” in which all relevant variables are measured, an “experimental-causal chain design” in which the independent and the mediator variables are manipulated could be applied. According to Spencer, Zanna, and Fong (2005), this design is more appropriate to test theoretical mediation hypotheses and to demonstrate causality and thus, internal validity.

Another methodological limitation of all three studies is that I only studied samples of small- and medium-sized enterprises located in Germany to test my hypotheses. Although around 40% of the studied organizations employed more than 249 employees and can, strictly speaking, not be classified as small- and medium-
sized companies, there were no organizations in the samples that consisted of more than 5,000 employees. Thus, although I statistically controlled for organization size, the homogeneous samples might constrict the generalizability of the results to other company sizes or cultural settings. Consequently, future studies might want to replicate the present findings using different, more heterogeneous samples.

It would in my view also be worthwhile to test the derived propositions of study 3 in a quantitative study in order to gain more confidence in the suggested model and to further examine the boundary conditions that facilitate or hamper the sustainment of POE. Furthermore, this dissertation investigated performance from a very broad perspective by accumulating the different dimensions of organizational and operational performance into an overall performance index. Future studies could conceptualize performance in a more differentiated way to empirically and theoretically explore which aspects of performance are most likely to be affected by POE. Moreover, other consequences of POE besides organizational performance could be explored by future research. An interesting avenue would for example be to apply multilevel methods and investigate the effect of POE on employee health and well-being.

With regard to the antecedent side, I examined cultural (behavioral patterns), structural (HR practices), and leadership (TFL climate) antecedents of POE. Future studies could add to this line of research by investigating other aspects within these content fields that potentially contribute to high levels of POE. Organizational norms and values, that precede the emergence of behavioral patterns in collectives (Barker, 1993) and are also an integral part of organizational culture (Schein, 1996), could be taken into account.

Moreover, it would certainly be interesting to study other leadership styles besides TFL in their effect on POE. Scholars could for instance explore how a TFL climate and a climate of transactional leadership interact in predicting POE. Numerous studies have shown that these two leadership styles can co-exist and that they have different effects on outcomes (e.g. Judge & Piccolo, 2004; Wang et al., 2011). It would in my view also be worthwhile to investigate if these leadership patterns exert different effects on the sub-dimensions of POE: TFL, as a leadership style that primarily influences followers’ emotions, could potentially exert a stronger

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effect on the emotional dimension of POE whereas transactional leadership, as a more rational leadership strategy, could foster cognitive energy to a greater extent. Certainly, this would be an exciting avenue for future studies.

This line of research could also be extended by the investigation of strategic factors that can contribute to high levels of POE in the long term (see Bruch & Vogel, 2011 for the differentiation between culture, leadership and strategy in integrated management systems). Bruch and Vogel (2011) have suggested that with regard to strategy, the internal process of how strategy is created, reviewed and adapted in organizations should be interesting for sustaining POE. Studying strategy from this angle would be in line with the “strategy-as-practice approach” in which strategy is regarded as a social process rather than as a stable organizational property (Johnson, Langley, Melin, & Whittington, 2007).

Although the concepts investigated in this research project all have a positive focus, it should not be denied that they can nevertheless have negative consequences. Just like the “dark sides” of TFL have been discussed - for example an overly dependence on the leader which can hinder the development and independent thinking of employees (e.g. Conger, 1990; Khoo & Burch, 2008; Yukl, 2010) -, authors suggested possible negative impacts of high-involvement or high-commitment HR practices. These so-called labor process models state that HPWS, instead of enhancing employees’ commitment and involvement, rather lead to work intensification and, as a consequence, to insecurity and stress (cf. Ramsay, Scholarios, & Harley, 2000). These models argue that the positive performance consequences of HPWS result from work intensification which helps to maximize labor input. Ramsay et al. (2000) found no empirical support for the labor process model and I, in this dissertation, identified substantial positive relationships between TFL climate, commitment-based HR practices and POE. I thus demonstrated that employees in organizations which are characterized by a TFL climate and the existence of respective HR practices do not only show higher cognitive activation and behavioral effort, but also share more positive feelings concerning their work (affective dimension of POE). However, it can be assumed that even the phenomenon of POE can have negative effects. Recent observations in rather practical contexts demonstrated that organizations with initially high levels of POE can “burn out” by using this positive force of their employees too excessively – launching too many projects at a time, failing to prioritize and focus and neglecting
Overall Discussion and Conclusion

the need for recovery after intense work phases (Bruch & Menges, 2010). Consequently, future studies should account for the possibility of a negative impact of these phenomena and explore which strategies and measures are most effective in preventing these negative effects to occur. Phoenix Contact for instance managed to prevent collective burnout by applying a worldwide ABC-analysis and strictly prioritizing projects and activities (for a more detailed description see the case narrative in Appendix 6.3).

All in all, promising and exciting future research directions are in my opinion (a) testing the proposed model with a more heterogeneous sample and a longitudinal or semi-experimental research design, (b) testing the influence of POE on differential performance measures and other outcome variables besides performance, (c) investigating the effects that other cultural, structural, strategic or leadership aspects have on POE and develop a hierarchy of relevant antecedents to sustain POE, and (d) exploring possible negative consequences of the studied phenomena and examining the conditions under which these negative effects can be prevented.

5.4 Conclusion

The central aim of this dissertation was to investigate intra-organizational stable conditions that are beneficial for fostering the performance-enhancing phenomenon of POE over longer periods of time. I revealed that the effective management of collective emotions, cognitions, and behaviors – i.e. the successful management of POE – is highly relevant for practitioners and researchers alike. In order to structure my dissertation project I separated the different studies according to managerial fields of action in which POE can be systematically influenced. Within the fields of organizational culture and leadership I identified organizational personality, commitment-based HR practices, and TFL climate as important antecedents of POE. These aspects and their interrelations have been studied quantitatively in studies 1 and 2. In study 3, I investigated the practical interplay between these variables and examined potential boundary conditions for these relationships. I thereby took a closer look at a specific company and identified uncertainty and trust as potential moderating influences. With my dissertation I hope to contribute to the research fields of energy in organizations, organizational personality and culture, HRM, and leadership and to a better overall understanding on how to sustain POE. Finally, I
hope that my recommendations and derived best practices assist practitioners in successfully and sustainably managing the collective energy in their organizations, thereby making a contribution to organizational performance and long-term success.
6 Appendix

6.1 Survey Items for Study 1

<table>
<thead>
<tr>
<th>Item</th>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational extraversion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>... are reserved.*</td>
<td>... sind eher zurückhaltend, reserviert.*</td>
</tr>
<tr>
<td>2.</td>
<td>... are outgoing, sociable.</td>
<td>... gehen aus sich heraus, sind gesellig.</td>
</tr>
<tr>
<td><strong>Organizational agreeableness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>... are generally trusting.</td>
<td>... schenken anderen leicht Vertrauen, glauben an das Gute im Menschen.</td>
</tr>
<tr>
<td>2.</td>
<td>... tend to find fault with others.*</td>
<td>... neigen dazu, andere zu kritisieren.*</td>
</tr>
<tr>
<td><strong>Organizational conscientiousness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>... tend to be lazy.*</td>
<td>... sind bequem, neigen zur Faulheit.*</td>
</tr>
<tr>
<td>2.</td>
<td>... do a thorough job.</td>
<td>... erledigen Aufgaben gründlich.</td>
</tr>
<tr>
<td><strong>Organizational emotional stability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>... are relaxed, handle stress well.</td>
<td>... sind entspannt, lassen sich durch Stress nicht aus der Ruhe bringen.</td>
</tr>
<tr>
<td>2.</td>
<td>... get nervous easily.*</td>
<td>... werden leicht nervös und unsicher.*</td>
</tr>
<tr>
<td><strong>Organizational openness to experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>... have few artistic interests.*</td>
<td>... haben nur wenig künstlerisches Interesse.*</td>
</tr>
<tr>
<td>2.</td>
<td>... have an active imagination.</td>
<td>... haben eine aktive Vorstellungskraft, sind phantasievoll.</td>
</tr>
</tbody>
</table>

*Note. *Item is reversed-coded.*
### Productive organizational energy – Source: Employees

*(based on Cole, Bruch, & Vogel, 2011)*

- these items have also been used for studies 2 and 3 -

**Introduction:** How well do the following statements describe the employees in your organization?

*Employees in our organization …*

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

**Affective POE***

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

**Behavioral POE***

<table>
<thead>
<tr>
<th>Item</th>
<th>English</th>
<th>German</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>… have been very active lately.</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.* POE = productive organizational energy.
Firm performance – Source: Top management team members
(based on Combs et al., 2005)

Introduction: How do you evaluate the performance of your organization in comparison to other organizations of the same industry?

<table>
<thead>
<tr>
<th>Item</th>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Operational performance</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Employee retention</td>
<td>Mitarbeiterbindung</td>
</tr>
<tr>
<td>2.</td>
<td>Employee productivity</td>
<td>Mitarbeiterproduktivität</td>
</tr>
<tr>
<td>3.</td>
<td>Efficiency of business processes</td>
<td>Effizienz der Geschäftsabläufe</td>
</tr>
<tr>
<td></td>
<td>Organizational performance</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Company growth</td>
<td>Wachstum</td>
</tr>
<tr>
<td>2.</td>
<td>Financial situation</td>
<td>Finanzlage</td>
</tr>
<tr>
<td>3.</td>
<td>Return on assets</td>
<td>Gesamtkapitalrendite</td>
</tr>
</tbody>
</table>
# 6.2 Survey Items for Study 2

## Commitment-based HR practices – Sources: Employees and key informant
(based on Collins & Smith, 2006)

*Introduction: How well do the following statements describe existing HR practices in your organization?*

<table>
<thead>
<tr>
<th>Item</th>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selection policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Internal candidates are given consideration over external candidates for job openings.</td>
<td>In unserem Unternehmen werden interne Kandidaten bei freien Stellen externen Kandidaten vorgezogen.</td>
</tr>
<tr>
<td>2.</td>
<td>We select employees based on overall fit to the company.</td>
<td>Mitarbeiter werden in unserem Unternehmen nach genereller Passung zum Unternehmen ausgewählt.</td>
</tr>
<tr>
<td>3.</td>
<td>Our selection system focuses on the potential of the candidate to learn and grow with the organization.</td>
<td>Bei der Personalauswahl wird auf das Potential von Kandidaten geachtet, zu lernen und mit dem Unternehmen zu wachsen.</td>
</tr>
<tr>
<td>4.</td>
<td>We ensure that all employees are made aware of internal promotion opportunities.</td>
<td>In unserem Unternehmen werden alle Mitarbeiter von ihren internen Beförderungsmöglichkeiten in Kenntnis gesetzt.</td>
</tr>
<tr>
<td><strong>Incentive policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Employee bonuses or incentive plans are based primarily on the performance of the organization.</td>
<td>Bonus- und Anreizsysteme für Mitarbeiter in unserem Unternehmen basieren in erster Linie auf der Unternehmensleistung.</td>
</tr>
<tr>
<td>2.</td>
<td>Salaries for employees in our organization are higher than those of our competitors.</td>
<td>Die Gehälter der Mitarbeiter in unserem Unternehmen sind höher als die bei unseren Wettbewerbern.</td>
</tr>
<tr>
<td>3.</td>
<td>Goals for incentive plans are based on business-unit or company performance.</td>
<td>In unserem Unternehmen basieren die Ziele von Anreizsystemen auf der Leistung von Geschäftsbereichen oder des Gesamtunternehmens.</td>
</tr>
<tr>
<td><strong>Training and development policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>We provide multiple career path opportunities for employees to move across multiple functional areas of the company.</td>
<td>Unser Unternehmen bietet Mitarbeitern vielfältige Karrierewege in mehreren Fachbereichen.</td>
</tr>
<tr>
<td>2.</td>
<td>We provide training focused on team-building and teamwork skills training.</td>
<td>Unser Unternehmen bietet Trainings in den Bereichen Teambuilding und Teamarbeit an.</td>
</tr>
<tr>
<td>Training and development policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. We sponsor company social events for employees to get to know each other.</td>
<td>In unserem Unternehmen werden Veranstaltungen zum gegenseitigen Kennenlernen der Mitarbeiter finanziert.</td>
<td></td>
</tr>
<tr>
<td>4. We offer an orientation program that trains employees on the history and processes of the organization.</td>
<td>In unserem Unternehmen werden die Mitarbeiter über die Geschichte und die Prozesse des Unternehmens in einem Einführungstraining informiert.</td>
<td></td>
</tr>
<tr>
<td>5. We use job rotation to expand the skills of employees.</td>
<td>In unserem Unternehmen wird Arbeitsplatzwechsel zur Ausweitung der Fertigkeiten der Mitarbeiter genutzt.</td>
<td></td>
</tr>
<tr>
<td>6. We have a mentoring system to help develop the employees.</td>
<td>In unserem Unternehmen wird ein Mentoring-Programm zur Weiterentwicklung der Mitarbeiter eingesetzt.</td>
<td></td>
</tr>
<tr>
<td>7. Performance appraisals are used primarily to set goals for personal development.</td>
<td>Leistungsbeurteilungen werden in unserem Unternehmen primär eingesetzt, um persönliche Entwicklungsziele zu bestimmen.</td>
<td></td>
</tr>
<tr>
<td>8. Performance appraisals are used to plan skill development and training for future advancement within the company.</td>
<td>Leistungsbeurteilungen werden in unserem Unternehmen eingesetzt, um die Entwicklung von Fertigkeiten für ein Vorwärtskommen im Unternehmen zu planen.</td>
<td></td>
</tr>
</tbody>
</table>
Transformational leadership climate – Source: Employees
(based on Podsakoff et al., 1990; 1996)

*Introduction:* In the following, we would like to know how you perceive the leadership style of your direct superior. If you have more than one direct superior, please evaluate the one with whom you work together most frequently.

*My direct superior …*

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<tr>
<th>Item</th>
<th>English</th>
<th>German</th>
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**Intellectual stimulation**

1. … provides me with new ways of looking at things. … bringt mir neue Sichtweisen auf Dinge nahe.
2. … forces me to rethink some of my own ideas. … bringt mich durch seine / ihre Ansichten dazu, einige meiner Vorstellungen zu überdenken.
3. … stimulates me to think about old problems in new ways. … regt mich dazu an, auf neue Weise über Probleme nachzudenken.

**Articulating vision**

1. … is always seeking new opportunities for the organization. … sucht stets nach neuen Chancen für das Unternehmen.
2. … paints an interesting picture of the future for our company. … zeichnet für unser Unternehmen ein interessantes Bild von der Zukunft.
3. … has a clear understanding of where we are going. … hat ein klares Verständnis davon, wohin wir gehen.
4. … inspires others with his / her plans for the future. … inspiriert andere mit seinen / ihren Plänen für die Zukunft.
5. … is able to get others committed to his / her plans of the future. … bringt andere dazu, sich für seine / ihre Träume von der Zukunft voll einzusetzen.

**High performance expectations**

1. … shows us that he / she expects a lot from us. … zeigt uns, dass er / sie viel von uns erwartet.
2. … insists on only the best performance. … besteht ausschließlich auf Bestleistungen.
3. … will not settle for second best. … wird sich mit einem zweiten Platz nicht zufrieden geben.

**Fostering group goals**

1. … fosters collaboration among work groups. … fördert die Zusammenarbeit zwischen den Arbeitsgruppen.
### Fostering group goals

<table>
<thead>
<tr>
<th></th>
<th>Encourages employees to be “team players”.</th>
<th>Encourages employees to be “team players”.</th>
<th>Ermuntert die Mitarbeiter, „Teamspieler“ zu sein.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>... gets employees to work together for the same goal.</td>
<td>... gets employees to work together for the same goal.</td>
<td>... schafft es, dass die Mitarbeiter gemeinsam für das gleiche Ziel arbeiten.</td>
</tr>
<tr>
<td>3.</td>
<td>... develops a team attitude and spirit among his / her employees.</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>
</tbody>
</table>

### Providing role model

<table>
<thead>
<tr>
<th></th>
<th>Leads by role modeling.</th>
<th>Leads by role modeling.</th>
<th>Führt durch Vorbildhandeln.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... provides a good model to follow.</td>
<td>... provides a good model to follow.</td>
<td>... ist ein gutes Vorbild.</td>
</tr>
<tr>
<td>2.</td>
<td>... leads by example.</td>
<td>... leads by example.</td>
<td>... führt als Vorbild.</td>
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### Individualized support

<table>
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<tr>
<th></th>
<th>Acts without considering my feelings.*</th>
<th>Acts without considering my feelings.*</th>
<th>Handelt, ohne meine Gefühle zu berücksichtigen.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>... shows respect for my feelings.</td>
<td>... shows respect for my feelings.</td>
<td>... zeigt Respekt für meine Gefühle.</td>
</tr>
<tr>
<td>2.</td>
<td>... behaves in a manner that is thoughtful of my personal needs.</td>
<td>... behaves in a manner that is thoughtful of my personal needs.</td>
<td>... beachtet meine persönlichen Bedürfnisse.</td>
</tr>
<tr>
<td>3.</td>
<td>... treats me without considering my feelings.*</td>
<td>... treats me without considering my feelings.*</td>
<td>... behandelt mich, ohne meine Gefühle zu berücksichtigen.*</td>
</tr>
</tbody>
</table>

*Item is reversed-coded.

Note.
6.3 Phoenix Contact 2011. Sustaining Productive Organizational Energy during the Economic Crisis: The Role of Leadership and Corporate Culture Development

This case depicts developments at Phoenix Contact, a medium-sized, international manufacturer of industrial electrical and electronic technology with headquarters in Germany. The main focus lies on developments that took place from 2000 until 2011. The world’s market leader managed to digest high-speed growth phases and overcome a severe economic crisis by intentionally developing, implementing and shaping its corporate culture and leadership within the company. The case depicts these organizational developments and focuses on the challenges Phoenix Contact was facing and how the company leaders managed to overcome these successfully.

Starting out in Essen, Germany, in 1923 as a small family-run business under Hugo Knümann, Phoenix Contact grew to over 11,000 employees in over 70 countries worldwide in 2011, generating a turnover of over 1.3 billion Euros. In 80 years, the manufacturer of industrial electrical and electronic technology advanced to the world’s market leader, constantly digesting high-speed growth phases and increasing internationalization.

In the late 1990s, the company leaders developed a more and more decentralized structure with high responsibility and scope of action in the units. In 2000, the Phoenix Contact management team decided to establish corporate principles that included a mission, a vision, and cultural guidelines. For 2020, the overall strategic company goal was to become excellent in all parts of the business and thus, to become the most trusted brand in the industry.

In the course of the economic crisis in 2009, Phoenix Contact faced a 19% decline in turnover. In order to reduce capacities and save costs, the company leaders introduced short-time work. They managed to overcome the crisis in a

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healthy manner. As a result, the management team could confirm its commitment to the overall strategic goal for 2020 and did not dismiss a single employee. In 2010, the turnover growth rates came to 40%.

In 2011, Phoenix Contact was facing various major challenges that included coping with ongoing exceptional growth rates of about 40%, maintaining a medium-sized culture despite increasing internationalization, and attracting and retaining qualified and motivated employees against the background of the ongoing war for talents.

6.3.1 Phoenix Contact`s Way to the World Market Leader

6.3.1.1 Extension of Production Base and Increasing Internationalization

In 1923, Hugo Knümann founded today`s Phoenix Contact as a trade mission of overhead line fittings for trams in Essen. Besides the development of the first modular terminal in cooperation with RWE (Rheinisch-Westfälische Elektrizitätswerke), so-called Phönix Elektrizitätsgesellschaft benefited strongly from the boom of electrical means of transport. Since the company`s headquarter in Essen was bombed in Second World War, the production plant and stock were moved to Blomberg, North Rhine-Westphalia, Germany. At that time, the company counted in total around 30 employees.

In 1949, Hugo Knümann got in touch with Josef Eisert who owned a range of patents for terminals. Josef Eisert became technical director and, after Knümann´s death in 1953, took on the corporate management. The three sons of Josef Eisert, Klaus, Jörg, and Gerd, entered the company in the sixties and in 1975 took on the corporate management. At this time, the company focused more and more on expanding in international markets which resulted in the foundation of numerous foreign subsidiaries. In 1982, the management team decided on a new company name – Phoenix Contact – which was globally understandable and consistent. In the eighties, Phoenix Contact grew to 2,400 employees and a portfolio of over 20,000 products.

After the German reunification, a distribution network was also established in East Germany. In 1996, the subsidiary Phoenix Contact Electronics was founded and began to develop and produce high-tech electronics. Thus, the product portfolio
became even wider and Phoenix Contact continued its course for growth in the nineties.

Production plants were built in China and Russia and the employee count grew to 5,000 worldwide. In the year 2000, Phoenix Contact generated a record turnover of 1.2 billion Deutsche Mark\(^{10}\). The turnover distribution was divided in thirds – one third was generated in Germany, another third in the rest of Europe, and the residual turnover in the rest of the world. Phoenix Contact had developed to an internationally reputable company whose products were known worldwide. It was the number one in its market.

### 6.3.1.2 The One Billion Euros Turnover Rate was Accomplished

After the death of Gerd Eisert in 2001, Klaus Eisert was the only remaining son of Josef Eisert in the company. In 2005, he appointed five other company members to associates whose areas of responsibility were (1) marketing and development, (2) finances and controlling, (3) HR, IT, and law, (4) sales, and (5) technics. This was the first executive board that consisted of non-family members.

In 2003, the executive board decided to restructure the company in business and support units. The five business units Cuple, Pluscon & Combicon, Trabtech, Interface, and Automationworx operated as independent profit centers and were divided into product categories. Internationalization further increased so that the number of international sales companies grew to 38 in 2004. This led to a sale of Phoenix Contact products in 70 different countries.

In 2007, due to further expansion and growth, the turnover rate of one billion Euros was exceeded. By that time, Phoenix Contact already counted over 9,000 employees worldwide, almost 50% of them working in Germany (see attachment 1 for an overview of the development of employee count and turnover in the years 2001 to 2010).

\(^{10}\) = 613,548,000 Euros
6.3.2 Mobilizing Energy: Developing a Vision and a Strong Corporate Culture

6.3.2.1 Corporate Principles

In 2000, the Phoenix Contact management team started a process of internal cultural development and strategic goal setting. This process aimed at giving the employees a “big picture” for the following years and at involving them actively in the further development of the company. Beyond achieving more revenue, the company leaders wanted to create overarching guidelines that gave a long-term orientation and provided answers to the questions “What do we want to achieve next and how do we want to achieve it?”

Since 1997, every two years the executive management team of Phoenix Contact was conducting a strategy workshop to discuss the current and future position of the company. In 2000, they defined the overarching framework for Phoenix Contact in one of these strategy workshops. In a systematic process, they developed corporate principles that consisted of three pillars. First, they comprised a vision which implied the following: "Phoenix Contact is a group that is worldwide significant and technologically leading in every business unit in which it operates". Second, they consisted of an associated mission "Inspiring innovations" with which Phoenix Contact expressed that the corporation aimed at creating progress with innovative solutions that inspire. The third pillar included corporate guidelines that defined how the vision should be achieved: “Phoenix is acting independent to ensure entrepreneurial freedom, innovative creating to build the company anticipatory and faithful on a partnership-like basis. Decisions are thereby based on mutual spirit, kindliness and honesty to create a sustainable benefit in relationships with customers, partners and employees.” These corporate principles were the basis for action for every employee at Phoenix Contact (see attachment 2 for an overview of the corporate principles).

“The guiding principles are like a constitution. They are the basis for our actions and determine how we deal with each other and with our customers and suppliers”, Ferdinand Hasse, director manufacturing solutions, explained the principles.
6.3.2.2 From the First Turnover Billion to the Trust Concept

The strategic goal to achieve the first turnover billion had been set for 2010, but was already achieved in 2007. The company leaders thus wanted to develop a new strategic goal. Although Phoenix Contact had until then only had financial strategic goals, the company leaders knew that another financial number would not be sufficient to mobilize the employees and help achieve the set vision. Consequently, in 2007, they developed a soft long-term strategic goal which was called the trust concept. Spanning over 13 years, the qualitative goal of the trust concept was to become the most trusted brand in the industry until 2020.

“Without trust, the vision can’t be achieved. If there is trust, all other things will follow”, Gunther Olesch, member of the executive board, explained the qualitative goal of Phoenix Contact. “Why did we choose trust as strategic goal? The answer is that from now on, our products will be so complex, so versatile that clients will not be able to understand them entirely. Thus, you have to simply trust that this Phoenix Contact product is of high quality.”

“Trust is the most important thing … our concept for the future”, Klaus Eisert, executive shareholder of Phoenix Contact, described the long-term goal. “Trust is something you cannot measure, you cannot buy, and you cannot copy.”

Contrasting the two strategic goals first turnover billion and trust concept, one Phoenix Contact employee stated “the billion was a nice goal, but in the end it was only a number and not a path”.

“The goal – be it the first billion, be it trust - is only a means to an end. It is great when you have achieved it, but it is much more important how you achieved it, because this determines what the company has learnt from it and how it has advanced”, Roland Bent, member of the executive board, explained.

Similar to the corporate principles, the trust concept was created in a strategy workshop by the management team in 2007. Beforehand, Phoenix Contact had learnt in rather informal dialogues and through a survey how they were perceived by clients. The results had demonstrated consistently that Phoenix Contact was seen as an innovative company delivering high quality in a broad product portfolio and that clients liked to invest in a long-term partnership and collaboration with the company.
Besides achieving the vision, the trust concept also served the goals of making the company more independent of single charismatic leaders and of preserving its medium-sized character.

“It was important to develop an overall concept that is independent of single persons and thus endures over time. We wanted to build trust in the brand, in the company Phoenix Contact. This trust should continue to exist also when single charismatic persons leave the company someday”, Ferdinand Hasse, director manufacturing solutions, stated.

“The first turnover billion was a signal for us that we have now reached a certain dimension. However, we have always considered our medium-sized culture as very important. The trust concept will help us in growing further while at the same time staying true to our medium-sized identity”, Nina Mrugalla, head of leadership and organization development (2008-2010), explained.

To keep the overview of the strategic performance of Phoenix Contact, the management team divided the general goal – to be the most trusted brand within the industry – into subsections. In order to establish trust as differentiating attribute Phoenix Contact had to be excellent in every part of their business. Therefore, the trust concept was split into 12 to 15 short-term milestones, one for every relevant factor that contributed to a stepwise achievement of the overall strategic goal.

In 2011, the entire set of milestones for the future was not yet completely developed by the management team. However, the management team regarded excellence in areas like innovation, efficiency, investments, personnel, and administration as crucial (see attachment 3 for an overview of current and planned excellence subsections). The first milestone was “leadership and communication”. By 2010, Phoenix Contact should have achieved excellence in this area.

At the end of each milestone period the progress and results were evaluated and a new area for the next milestone was set to place. Every division at Phoenix Contact was expected to focus on the overall goal for 2020, but especially on the relevant milestones for the particular period. The time horizon for each milestone was two years during which excellence in the relevant area was to be achieved. Besides excellence in various areas, Phoenix Contact was aiming at a continuous and stable annual growth rate of more than 10% until 2020.
While the strategic goal trust was established to help achieve the long-term vision, the excellence milestones were supposed to enable trust in Phoenix Contact.

“Excellence in specific areas is the prerequisite to achieve the strategic goal to be the most trusted brand in our industry”, Nina Mrugalla, head of leadership and organization development, explained the purpose of the excellence milestones.

6.3.2.3 Communication of Corporate Principles and Trust Concept

The management team and the executive board put great effort into the communication of the principles and the trust concept. In 2000, after the corporate principles had been developed, the executive board trained employees about the background, development, and content of these principles. Since Phoenix Contact also intended to represent the principles outward, the main target group consisted of employees with a lot of contact to external clients. In sum, executive board members engaged in 39 of these workshops in which they trained 522 employees, 260 of them being leaders. After the workshops had been conducted, it was the job of the leaders to explain the corporate principles to their employees.

“In these workshops the management board explained why the corporate guidelines exist, why they have been developed, where they come from, and why they are important. (…) I think it is safe to say that everybody in this company knows these guidelines”, Bernd Richter, division manager HR, explained the purpose of these workshops.

The communication of the trust concept which took place in 2008 was even more intense. The company leaders engaged in an intensive dialogue and discussion with the employees and thereby also systematically addressed opinion leaders (see attachment 4 for an overview of the communication concept for the topic of trust). 31 four-hour trainings with in total 470 leaders were conducted to enable all Phoenix Contact leaders to understand and communicate the corporate principles and the trust concept. After an executive board member had presented the concepts, the participating leaders could practice the communication of these concepts in small groups.
"If we want to be trusted externally, by our clients, we have to establish a culture of trust internally. You as leaders have to make a substantial contribution to this", Gunter Olesch, member of the executive board, addressed the leaders.

In a second step, in small working groups of 18 people each, the management team trained so-called multipliers, which were team members of various business units. In these workshops, the managers presented the concepts and everybody actively participated and could express his opinion.

In total about 700 employees, who were appointed as multipliers, were trained and educated about the corporate principles worldwide via about 40 of these so-called guideline workshops. The workshops were held twice a week during a time span of around four months and lasted four hours each. The strong involvement of the executive management, which took part in each of these workshops, demonstrated the commitment to and the great importance of these principles and the trust concept.

“We have traveled half the world to communicate the strategic objective and to explain what is behind it, why we are doing this and what makes this so unique”, Roland Bent, member of the executive board, stated.

After the workshops had been completed, it was the job of the 700 multipliers to spread the knowledge they gained through the workshops in their business units, so all employees could learn about the new concepts. As the multipliers actively participated in the workshops, they were able to pass on the knowledge and handle possible questions from their coworkers. It was left to the multipliers how to convey the trust concept to their team.

Additionally, one internal facilitator per business unit (in total 25) was selected whose task was to support the multipliers in the communication.

“Every business unit has an internal facilitator for the topic of trust. His role is to support the communication of the trust concept and to give regular feedback to the management on this topic”, Nina Mrugalla, head of leadership and organization development, explained this role.

Furthermore, the facilitators illustrated the relationships between the trust concept and other processes and instruments. In 2011, the corporate principles were
omnipresent everywhere at Phoenix Contact; a copy of them was hung up in every office or meeting room.

Executives informed all employees regularly during large employee gatherings about the current situation, further steps and what had been achieved so far in terms of the company strategy. As the attainment of the “excellence milestones” was of great importance to reach the final goal of the trust strategy, informing the employees about the achievement of these sub-goals was also a key aspect for keeping up their motivation. When parts of a milestone had been achieved, it confirmed to them that their efforts to reach the final goal were paying off.

6.3.2.4 Process Monitoring through Measurement of Soft Goal and Support by HR Instruments

To be able to monitor the attainment of the overall goal, the company leaders regarded reliable measurement of soft goals as crucial. The executive team decided to measure the strategic core with the help of a so called “trust index”. For this purpose, they conducted a customer and employee survey that measured the level of trust in Phoenix Contact on a biannual basis starting in 2007.

For the employee survey, the goal was to improve by at least 2% in each round (average across all participating countries). The participation rate increased from 52% in 2007 to 75% in 2009 and the trust index rose from 68% to 71%. Whereas the level of trust in Phoenix Contact increased in 2009, the industry average declined by 6%.

The customer survey evaluated factors like information and communication, product description and documentation and the handling of complaints. It revealed that Phoenix’s Contact performance is considered to be better than that of their competitors.

In the field of “leadership and communication”, two other instruments assisted in monitoring the strategic progress. First, a 360° leadership feedback was used systematically to assess progress in this area. So far, Phoenix Contact had exclusively conducted top-down performance appraisals. In 2010 to 2011, the HR department introduced 360° feedback. Declared goals were to monitor if leaders fulfilled their target agreements and to give them an orientation on the quality of their leadership. The feedback instrument was first introduced as a pilot project in two
divisions, then, in 2011, in a complete rollout. The content of the feedback was partly derived from the corporate principles and the trust concept.

Moreover, Phoenix Contact regularly took part in TOP JOB, a survey that assessed employees’ perceptions regarding employer quality and evaluated the respective HR instruments and processes. One content area being leadership, Phoenix Contact drew on these results to evaluate its leadership quality.

The corporate principles and the trust concept were also supported by an alignment of the Phoenix Contact HR system. As such, the principles and the trust concept were incorporated in the recruiting process, in trainings, and in leadership instruments.

“Within human resource management, the corporate principles are our basis for everything”, Martin Grosser, head of leadership and organization development (since 2010), stated.

The guided principles and the trust concept were as well incorporated in the so-called “target card”. This instrument was comparable to a Balanced Scorecard and served as a leading and controlling instrument. The executive board divided the target card in five subsections that had been derived from the strategy – processes, client, innovation, costs, and employee (see attachment 5 for an overview of the subsections and contents of the target card). Once a year, the board members defined five strategic goals per dimension which were communicated to the workforce in so-called “target communications”. In a next step, the leaders within the business and support units derived unit goals with which they could support the attainment of the company goals.

“The activities and measures that we define within the IO (support unit IT and organization) ideally directly support the achievement of the strategic company goals that are incorporated in the target card”, Helmut Karnath, chief information officer, explained.

In the subsection “employee” for example declared goals were building trust, leading actively, and living up to the corporate principles. Additionally, the goals were, where possible, also included in the target agreements of the individual leaders and employees.
“The target card has not been developed as a consequence of the trust concept. Nevertheless, the agreement on and adherence to goals supports the establishment of a culture of mutual trust”, Helmut Karnath, chief information officer, explained the connection between the trust concept and the target card.

6.3.3 The Economic and Financial Crisis Put the Principles and Trust Concept to the Test

6.3.3.1 Challenges Imposed by the Economic Crisis

Only five years after the development of the trust concept, the entire framework was put to the test: The outbreak of the financial and economic crisis hit Phoenix Contact at the beginning of 2009.

“At first, we thought that the crisis is not going to affect us. But then, by the end of 2008, the crisis had hit us. We realized that we now have to accept this state. Like an earthquake. We have to cope with this situation“, Klaus Eisert, executive shareholder, explained.

Starting in November 2008, Phoenix Contact was confronted with declining monthly turnovers. In the time span from February to April 2009 the expected revenue of plus 9% decreased to -19%. The company experienced the severest decreases in the months of June and July with a turnover of -29% compared to 2008. At no point in time in the history of the company turnover had decreased so extensively.

“All declines we ever had taken together only result in 50% of the decline we are facing now. We already had minus 4% or minus 6%, but minus 29% - never!” Klaus Eisert, executive shareholder, stated.

“During the last years the boat Phoenix Contact sailed quite well. Nice wind, you could always see the harbor, the management team could steer the boat well. Everybody can do this. But now we are facing storm. Fog makes easy management and reliable forecasts impossible”, Gunther Olesch, member of the executive board, reflected on the severe situation.
However, the company leaders were able to react quickly and flexibly. The executive board designed action plans, according to which large proportions of the staff were required to work short time (that means not working one or two days per week) starting in April 2009. This implied a significant reduction of capacities by about 20%.

Although Phoenix Contact had to handle the ongoing business with 20% less working capacity, the management team planned to develop more groundbreaking innovations than ever.

"We want to stand in a pole position after the crisis. This means that we have to stand there ready to shoot when the race starts again and this is only possible if we invest in innovation and prevent collective overload", Gunther Olesch, member of the executive board, explained the challenges Phoenix Contact was facing.

### 6.3.3.2 Measures Taken to Deal with the Challenges

Despite of the crisis the Phoenix Contact managers wanted to stay true to the principles and the strategic goal of enhancing trust in the company.

"To cope with such a crisis, you already need a high level of trust in the workforce", Klaus Eisert, executive shareholder, said.

"We had better possibilities to deal with the crisis than other companies that did not foster their organizational culture so intensively beforehand. Employees that do not trust their company in good times will do so less than ever in bad times", explained Martin Grosser, head of leadership and organization development.

An important measure in this respect was a strengthening of communication and openness throughout the company. Besides regular board meetings or workshops for the management team, the extended management team, consisting of about 35 people, started a weekly meeting in early 2009, when the downturn hit the company. These regular and formalized information exchanges led to a constant flow of information between the executive managers and the heads of business units. Starting in February 2009, the executive board initiated a general meeting for all employees that took place every two months to inform about the current situation, outlook, and Phoenix’s Contact plans and future steps. The purpose of this general
meeting was not only to keep the employees updated, but also to engage in a dialogue with them.

“To me, the most important human resource strategy in the crisis is first, to inform, second, to inform, and third, to inform. Nothing is worse than not informing the employees”, Gunther Olesch, member of the executive board, stated.

Already in February 2009, the executive board explicitly promised “we will not dismiss a single employee”.

“Just because we are in a crisis we will not let go of a single employee, not even of our apprentices or students that we have developed over three years. They are our future”, said Gunther Olesch, member of the executive board.

Due to short-time work, the employees had to accept salaries that were 6 to 8% below their normal salaries. Consequently, starting in April 2009, members of the executive board decided to cut their own salaries by 8.7% (the maximum percentage that an employee had to expect as salary loss through short-time work).

“By also cutting their own salary, the executive board demonstrated that they would not ask the employees for something which they weren’t willing to give themselves”, Helmut Karnath, chief information officer, explained.

“Faithful on a partnership-like basis – what does this mean in a crisis? Clear example – before reducing employees’ salaries through measures like short-time work we, as management team, cut our own salaries. This is mutual. If we have to reduce – we’ll do it altogether“, Gunther Olesch, member of the executive board, illustrated.

The above described trust survey was conducted in the middle of the crisis in 2009. Thus, the employees’ perceptions regarding trust in Phoenix Contact and the management team were assessed, notwithstanding the fact that the measurement itself is costly and that the company faced one of the toughest situations ever.

“While the paychecks that included six to eight percent salary reduction arrived on a Friday, the trust survey started on the following Monday”, Nina Mrugalla, head of leadership and organization development, stated.

Employees included a lot of positive comments in the survey, one being “The way they handle this crisis demonstrates that the management team really takes the topic of trust serious”. Furthermore, the survey revealed that Phoenix Contact could
increase the overall satisfaction of its employees from 91% to 92% within two years until 2009. During this time span, the trust index rose from 68% to 71%. The positive signals that were sent with the increased trust index during the worst recession for Phoenix Contact motivated employees even more.

Even though the final goal for 2020 stayed the same, the executive management adapted the subsections and set new priorities for the short term period in 2009 and 2010 (i.e. liquidity more important than growth during the recession). Any changes made to the strategy were immediately communicated to all employees.

Next, the management team knew that stimulating and fostering innovations was even more crucial during the crisis than in “good” times. This meant staying true to their set mission “Inspiring innovations” as one of the three elements of the corporate principles. In order to inspire innovations, Phoenix Contact emphasized its internal best practice workshop that gave employees the opportunity to point out and present their ideas in front of the management team and other staff members. The workshop normally took place once a year. Teams had to apply for it and a council chose the best ideas which were to be presented in the workshop. During the crisis in 2009, however, it was held twice in order to attach even more importance to it. About nine new ideas were presented in these two workshops, the number of applicants that wanted to present an idea being twice as high. Furthermore, as opposed to other areas, no cost-cutting measures and no short-time work were conducted in the areas of research and development and sales. The budget for innovations was not reduced and stayed on the same level as before the crisis in November 2008, when a 9% growth rate had been planned.

In the middle of the crisis in 2009, the Phoenix Contact managers sensed the beginning overload in the company. Accordingly, in April 2009, Phoenix Contact started a worldwide ABC-analysis with all 46 affiliates. The company aimed to reduce the workload by 20% and to prioritize tasks and projects. A, B, and C represented three categories, with A stating a necessary activity, B an important activity that will be postponed for a period of time and C indicating an activity that can be delayed for two years or cancelled. Each manager was asked to classify all present and future activities of the individual business units and countries. Decisions were made according to the relevance of each project for the entire corporation. In the leadership and organization development department, e.g. setting up a learning management
system would have been an important task for the division, but still was categorized as C due to its relatively low impact on the overall performance of Phoenix Contact. In fact, no project with a large influence on the entire company was classified as C.

"At first people mentioned concerns and said 'we have only A-tasks' and I answered 'then classify your tasks in A1, A2, and A3. We have to move and cancel activities, otherwise we burn out and we do not manage to come out of the crisis in fit shape'", said Gunter Olesch, member of the executive board.

Another project introduced during the crisis was BITE (Business Improvement and Technology Excellence), which had a similar approach as the ABC-analysis. BITE was an internal process to increase efficiency within the organization and to improve ongoing workflows. The economic crisis and the resulting reduced capacities represented a good base to initialize the project at the beginning of 2009. The goal of BITE was to outline ideas for rationalization within the separate business units and divisions.

"This is not about ensuring liquidity in the short term. This is about activating a process that enables us to reflect on how we can facilitate internal processes and make them leaner each year", Bernd Richter, division manager HR, described the purpose of BITE.

Each department was required to mention three processes out of its own division which should be improved, in a way that they are measurable and comparable. Similar to the ABC-analysis, BITE was not an initiative that intended to reduce costs but to create a higher efficiency for work processes. The corporation tried to establish a high benchmark with respect to projects and workflows, and therefore BITE was not just a one-time process, but was planned to migrate into a regular permanent process. From the beginning of each year until September the individual divisions were given to develop their ideas. The deadline needed to be set in autumn, as the expectations for the upcoming year were all compiled at that time and the results of the BITE process should be part of this.

"The focus of the ABC-analysis was on how to deal with the available time and resources. BITE, on the other hand, concentrates on creative and meaningful activities that can not only help us to save costs in the short term, but to set free
capabilities in the middle and long term”, Bernd Richter, division manager HR, differentiated the ABC-analysis and BITE.

Moreover, the Phoenix Contact management team decided to further take off the pressure of the staff members and announced to intermit short time work during January 2010. All of these measures taken together, the company effectively managed to prevent collective exhaustion and thereby prepared to come out of the crisis in a healthy manner.

6.3.3.3 Results of the Crisis Management

Having overcome the severest downturn ever, 2010 was the most profitable year in the history of Phoenix Contact. Thanks to the difficult time during the crisis, a lot of measures to increase efficiency had been initiated, some of which were kept after the crisis was over. This helped Phoenix Contact to eliminate unnecessary costs and increase overall efficiency sustainably. Although the management team had communicated the overall sum that should be saved during the crisis, they had not explicitly defined how much the single business units or employees should contribute to the saving. This high freedom of action resulted in an increased motivation and effort to save costs on the side of the employees, resulting in a total sum of savings that exceeded the planned overall sum by 30%.

“By informing the employees openly about the severe decrease in turnover during the crisis the executive board strengthened trust and mobilized energy in the workforce. As a result, the employees saved even more costs than expected”, stated Martin Grosser, head of leadership and organization development.

Against the background of the crisis, the management team could prove that they take the trust concept seriously and that they act reliably and trustworthy also in difficult times. Consequently, Phoenix Contact could use the crisis as an opportunity to advance on the softer topic of trust.

“At first, it felt strange to have such a qualitative goal, but this has been the positive thing about the economic crisis. We could demonstrate that the trust concept is robust and we commit to it also in the crisis. As a result, it has gained even more in importance because we had to pay close attention to our own values and principles”, Nina Mrugalla, head of leadership and organization development, elucidated.
In the first quarter of 2010, the company continued its course for growth which had been intercepted due to the crisis. Incoming orders increased by 33%, so that short-time work could be terminated and in some divisions even seven-day-weeks had to be temporarily introduced. Being the most profitable year in the history of the company, the 2010 turnover growth rates came to 40% in comparison to 2009 and 13% in comparison to 2008.

In the area of green technology turnover rates even increased by 88%, the entire industry growing by 22%. Phoenix Contact hired already over 1200 new employees in 2010. Additionally, the fact that the company had not dismissed a single employee during the crisis paid off: With everybody on board, they were able to increase their capacities to 130% in order to meet the incoming orders.

In March 2010, on Messe Hannover, the most important trade show of the industry that takes place once a year, Phoenix Contact presented a record number of 1,500 new products. 30 out of the 1,500 new products were basic innovations. Normally, the company presented around 600 to 700 new products and 12 to 16 basic innovations at Messe Hannover.

6.3.4 Challenges for Phoenix Contact in 2011

6.3.4.1 Overloading and Continuous Growth / Internationalization

In 2011, coping with fast growth remained a challenge for Phoenix Contact. If the company stayed on this successful course, it needed to constantly pay attention to the energy and possible exhaustion of its employees. In 2010, Phoenix Contact was starting into a phase of high-speed growth again. Because of the increasing number of orders, the company had to work with 130% of its capacities from February until October 2010. This also included six- to seven-day-shifts. Although the burden had since then decreased a little bit, the company still had to cope with a workload of over 100% in the middle of 2011.

Within 2010 and 2011, the management team took several measures to cope with the overload. First, they invested heavily in new machines and new hires, so that over 1200 new employees had been recruited. Staying flexible and establishing a buffer was more important for the company than maximizing return in the short term. To use special discounts, Phoenix Contact already had started ordering machines
during the crisis. The recruitment of new employees was also explicitly incorporated in the business unit targets to support the company target of further growth. Moreover, the management team thanked the employees with a large and very costly Christmas event in December 2010. This was a clear signal to the employees that the management team appreciated their commitment and did not take it for granted. In order to monitor the overload of the company, leaders paid close attention to key figures like the status of employee’s illness or the number of overtime hours per employee.

“All in all, Phoenix Contact employees identify with the company and are proud to work for it. But the owners identify as well with the employees. This mutual identification has helped us through difficult and intense times”, Ferdinand Hasse, director manufacturing solutions, explained the handling of the crisis and the company overload.

Against the background of continuous growth, Phoenix Contact became more and more international, but at the same time wanted to preserve its spirit of a medium-sized, family-run company because many employees identified with this spirit. Combining these seemingly contradicting demands remained a challenge also for the future.

“I think that one of our major challenges is to preserve our medium-sized culture and identity despite further growth and internationalization”, said Helmut Karnath, chief information officer.

Strategically, the biggest challenge for Phoenix Contact in 2011 was the permanent need to create innovations and new technologies. Since Asian markets copied their products within two to three years of time, the company always had to stay ahead and be a few steps further than their competitors. Putting a lot of pressure on the company on the one hand, this also had a positive side: The fast pace of the market and the high dynamic with which it operated did not allow inertia to arise. Phoenix Contact needed to be alert and ready to act at any given time. In order to be in an even better position to serve the needs of the different markets, Phoenix Contact introduced a new corporate structure in 2011. The so-called “Corporate Profile 2.0” divided the existing business units additionally in sales units that could react faster and more flexible to local market demands.
6.3.4.2 War for Talents, Demographic Change and Future Planning

Another central challenge was the war for talents and, closely related to this, the demographic change.

“One major challenge will be to recruit enough qualified employees who can contribute to technological progress. These employees need to be bonded and enthused”, stated Ferdinand Hasse, director manufacturing solutions.

As the war for talent became tougher with regard to their target employee group of engineers, Phoenix Contact was already conducting specific activities: For one thing, the company had developed own talents since 1957. Phoenix Contact had since then qualified its own specialists in apprenticeship programs and integrated degree programs. In total, over 1,800 employees had been yielded via these programs within 50 years. Next, Phoenix Contact tried to elate young people over technical jobs. This was for example achieved through the regularly conducted “Woman Power” day where Phoenix Contact invited girls and their parents to learn more about job opportunities at Phoenix Contact and in technical fields in general. Furthermore, about 20 students, mainly with migration background, were tutored yearly by employees. This allowed them to graduate from school and then maybe start a technical apprenticeship. Phoenix Contact was also involved in an initiative with the ministry of education where employees systematically trained school teachers in the field of engineering so that they could get the pupils better into technical jobs. In 2011, the activities in talent management and employer branding were paying off – Phoenix Contact could fill 80% of its vacancies which is significantly better than the industry average (64%).

Dealing with the demographic change, Phoenix Contact attempted to extend the working lifetime through systematic workplace health management. Moreover, they also hired “older” employees (over 50 years of age) and trained 25 elderly employees in technical jobs, namely in industrial mechanics or mechatronics. Therewith, they systematically used the potential of all employees and, at the same time, worked against the skilled worker shortage.

In 2010 to 2011, the management team (in total 14 people) worked on the creation of the next vision and strategy.
“We reflected on what the world will be like. While drawing this picture in our minds, we asked ourselves what this means for Phoenix Contact. What do we have to do and which strategic decisions do we have to make to be perceived as an excellent company in this year?” Roland Bent, member of the executive board, described the process of creating a new vision and strategy.

Having identified the most probable trends for 2020 to 2030, in a next step the management team had to decide which trends Phoenix Contact wanted to shape and what the company had to do in order to stay successful under different determining factors.

Consequently, Phoenix Contact was likely to stay ahead and continue its course for continuous growth and further development.
Attachment 1: Development of Employee Count and Turnover in the Years 2001-2010
Attachment 2: The Corporate Principles Containing the Mission, Vision, and the Cultural Guidelines
Attachment 3: Overview of Current and Planned Excellence Subsections

Excellence in All Processes

- **2008**
  - Focus on management and communication

- **2009**
  - “Measuring” via survey
  - Internationalized Target Card introduced in pilot application

- **2010**
  - Excellence in management and communication
  - Uniform control instrument for excellence: Target Card
  - In our industry, Phoenix Contact is the most reliable supplier

- **2020**
  - Excellence in
    - Administration
    - Efficiency
    - Flexibility
    - Internationality
    - Innovation
    - Investment
    - Culture
    - Supply capability
    - Management
    - Organization
    - Personal
    - Quality
    - Service
    - ...

The average percentage growth rate is higher than 10% by 2015
Attachment 4: Communication Process for the Trust Concept

Communication process

Presentation of the trust concept by the executive management and the leaders

Multipliers could choose the best suitable way to teach the employees

Board of top management

31 trainings: 15 leaders

40 workshops: 18 multipliers of various business units

Individual coaching of their team members

+ 1 internal facilitator per business unit
## Attachment 5: Target Card 2010

### Corporate Target Card 2010

<table>
<thead>
<tr>
<th>Processes</th>
<th>Target Success Factor</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Contact consequently stands for customer-oriented quality of products and processes worldwide.</td>
<td>Degree of delivery (1st acknowledged date)</td>
<td>&gt; 90% every month  Number of technical complaints &gt; 2008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer/Market</th>
<th>Target Success Factor</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Contact acts globally as a group. We strive for a leading market position in key markets of industrial electrical engineering.</td>
<td>Growth external sales</td>
<td>&gt; 7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Innovation &amp; Development</th>
<th>Target Success Factor</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Contact categorically pursues a strategy of performance differentiation with all products and services.</td>
<td>Phocus-Market-Campaigns</td>
<td>80% of the Phocus-Market-Campaigns are successfully implemented</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finances</th>
<th>Target Success Factor</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Contact pursues a strategy of sustainable growth while achieving profit targets in order to secure financial independence at the same time.</td>
<td>General cost development</td>
<td>Reduction of the general cost ratio by at least 1 percentage points in comparison to 2006</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employees</th>
<th>Target Success Factor</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our company culture encourages trust and supports employees’ development for achieving agreed targets.</td>
<td>Excellence in leadership and communication</td>
<td>GFTW Trust Index 2011 on average &gt; 2 percentage points better than in 2006</td>
</tr>
</tbody>
</table>
References


References


Bruch, H., Vogel, B., & Raes, A. M. L. 2009b. Productive organizational energy as a mediator between strategic leadership and performance. Paper accepted for presentation at the 2009 Academy of Management Conference; Chicago, IL, USA.


References


References


Curriculum Vitae

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Education
2009-2012 University of St. Gallen, Switzerland
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2002-2008 University of Mannheim, Germany
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1999-2000 Harbor Creek High School, Erie, PA, USA
   Exchange student
1991-2002 Paul-Schneider-Gymnasium, Meisenheim am Glan, Germany
   German Abitur (equivalent to high school diploma)

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Since 2012 ZEPPELIN GmbH, Munich, Germany
   Referent HR Group Management
2009-2012 University of St. Gallen, Switzerland
   Research associate, Institute for Leadership and HR Management
2009-2012 energy factory St. Gallen AG, Switzerland
   Consultant and project manager, topics: leadership, strategic HRM,
   employer attractiveness
2007-2008 psychonomics AG, Cologne, Germany
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2007 Deutsche Lufthansa AG, Frankfort, Germany
   Diplomate
2005-2006 DaimlerChrysler AG, Mannheim, Germany
   Intern and freelancer
2004-2005 Zentralinstitut für Seelische Gesundheit, Mannheim, Germany
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2002 Karl Otto Braun KG, Wolfstein, Germany
   Temporary job in controlling