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**How top management interaction and role characteristics can influence middle managers' commitment to change**

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**List of Abbreviations**

AGFI	Adjusted goodness-of-fit index
A-levels	Advanced levels
AMOS	Analysis of moment structures
BMDP	Bio medical data package
BRIC	Brazil, Russia, India, China
$\chi^2$	Chi-square
$\chi^2/df$	Chi-square/degrees of freedom ratio
CA	California
C.B.B.D.C.	Conference Board Business Diversity Council
CEO	Chief executive officer
Cf.	confer ( <i>compare</i> )
CFA	Confirmatory factor analyses
CFI	Comparative fit index
CR	Composite reliability
Df	Degrees of freedom
EFA	Exploratory factor analysis
E.g.	Exempli gratia ( <i>for example</i> )
Eds.	Editors
EQS	Structural equation modeling software
Et al.	Et alii ( <i>and others</i> )
GFI	Goodness-of-fit index
HR	Human resources
HRM	Human resources management
I.e.	Id est ( <i>that is</i> )

IEEE	Institute of electrical and electronics engineers
MNC	Multinational company
NJ	New Jersey
NY	New York
P.	Page
Ph.D.	Philosophiae doctor ( <i>Doctor of Philosophy</i> )
RMSEA	Root mean square error of approximation
SEM	Structural equation modeling
TLI	Tucker-Lewis index
U.S.	United States
Vol.	Volume



## **1. Introduction**

Strategic renewal and organizational change are rooted in the activities of middle managers. Recent middle management research describes middle managers' role in change processes as to ensure the link between the conceptual strategic ideas of top management and the operational reality of employees (Paton and Boddy, 2007, Pappas and Wooldridge, 2007, Huy, 2011). In this way, middle managers ensure that the impact of a change unfolds its full potential in the operational reality of the organization.

At the same time, a number of studies provide evidence for a pattern of middle managers' reluctance to change. They find evidence of middle managers attached to existing policies and practices, picturing them as impediments to change (Agócs, 1997, Guth and MacMillan, 1986, Stanley et al., 2005).

Despite middle managers' influence on the success or failure of strategic change, the factors motivating middle managers to either support or resist organizational change are not yet well understood. The existing strategy literature so far has largely focused on top managers and their role in shaping corporate strategies and change (Wiersema and Bantel, 1992, Boeker, 1997, Zhang and Rajagopalan, 2010, Chatterjee and Hambrick, 2007). Research on what influences middle managers to either support or resist strategic change, and the role of the top management-middle management interaction in this, has just begun to gain momentum (Hill et al., 2011, Sonenshein and Dholakia, 2011).

What has been largely ignored in past research is that a perceived lack of commitment to change may not be a one-sided phenomenon. It can also be a consequence of the behavior of those trying to promote the change (Dent et al.,

1999; Ford et al., 2008). Top managers might contribute to reluctant reactions of middle managers through their own behavior. One notable advance in this direction has been made by Raes et al. (2011), who put forward a conceptual analysis on how top managers' behavior might modify middle managers' opinion and outlook, even though the authors did not link their framework to change-related behavior.

The growing research concerned with role characteristics of middle managers (Currie and Procter, 2005, Mantere, 2008, Rouleau and Balogun, 2011, Dopson and Stewart, 1990) has also not yet been linked to middle managers' commitment to change. Role characteristics comprise expectations, norms and behaviors an individual faces (Biddle, 1986), including concrete rights and duties. As role theory (Kahn et al., 1964, Brewer and Gardner, 1996) predicts, role characteristics are likely to shape an individual's attitude and performance (Parker, 2007, Currie and Procter, 2005). Role characteristics are hence also likely to influence a middle manager's position towards change.

The present thesis aspires to contribute towards closing this research gap by addressing the following research question:

Which influence do top management interaction and the design of the middle management role exert on middle managers' commitment to change?

Research models for both the field of direct top management influence on middle managers (*top management interaction*) and indirect influence (*middle managers' role characteristics*) are developed and concrete hypotheses derived (cf. Figure 1).

In order to test the validity of the hypotheses, a large-scale survey is conducted among the middle managers of the U.S. and the German subsidiaries of a Fortune Global 500 company <sup>1</sup> with approximately 50.000 employees worldwide. A second validation survey is issued to top managers in order to triangulate the measurement across hierarchical levels. Structural equation modeling is applied to analyze the survey answers of the participating 317 middle managers and 45 top managers.

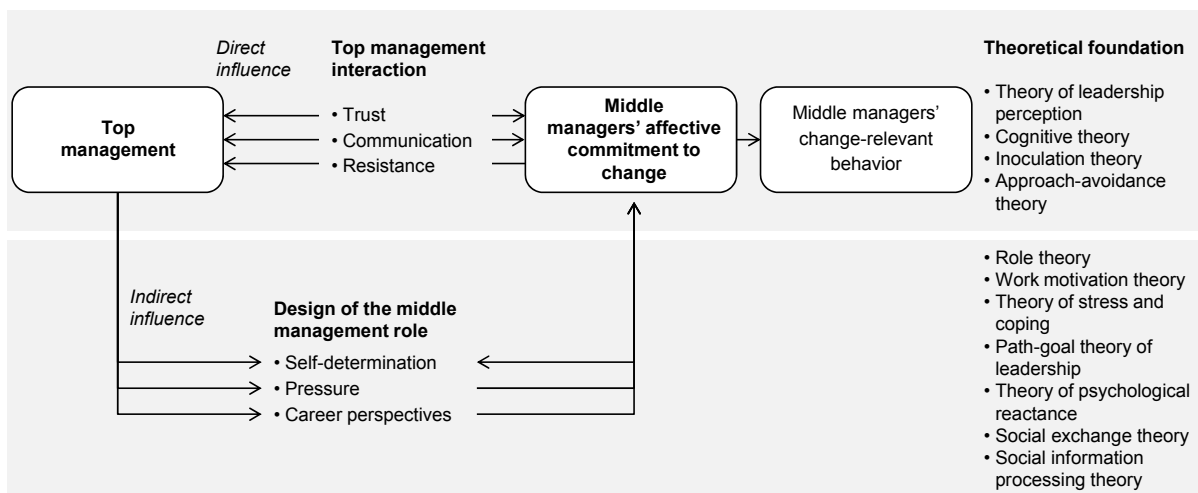


Figure 1: Direct and indirect top management influence on middle managers' affective commitment to change and change-relevant behavior

The composition of this thesis is quasi-cumulative in nature. It consolidates three standalone academic journal contributions.

Subsequent to this introduction, Chapter 2 examines the influence of top management interaction on middle managers' commitment to change. A research model is developed based on a framework introduced by Ford, Ford and D'Amelio (2008), comprising trust-related facets, communication-related facets, and resistance-related facets in the interaction between top and middle

<sup>1</sup> The company preferred to remain unidentified

management. Tangible hypotheses are derived from the research model, tested empirically, and the results are discussed.

Chapter 3 draws on role theory to build a framework of middle managers' role characteristics, linking self-determination, pressure, and career perspectives to middle managers' commitment to change. Concrete role attributes, such as middle managers' autonomy and promotion prospects, are subsequently allocated to the categories of the framework to build a concrete research model. The hypotheses formulated based on this newly developed model are tested empirically and the findings are discussed.

Chapter 4 focuses on managerial implications of direct and indirect top management influencing behaviors. Behaviors that common-place knowledge judges to be appropriate for top managers during the implementation of change are examined in detail and shown to be ineffective or even detrimental to middle managers' commitment to change. Additionally, behaviors that truly help to build middle managers' commitment to change are presented, linking the academic findings to the reality of practitioners.

The thesis concludes with Chapter 5, summarizing the overarching key insights and academic contributions and providing an outlook on potential future research avenues.

## **2. How top management interaction influences middle managers' strategy implementation behavior**

### **2.1. Introduction**

A strategy can only be considered successful if it is effectively implemented across the concerned organization (Mintzberg and Waters, 1985, Wooldridge et al., 2008, Gioia and Chittipeddi, 1991). The critical link between strategy formulation and implementation frequently needs to be created by the organization's middle managers (Floyd and Wooldridge, 1997, Huy, 2002), who need to serve as change advocates (Luescher and Lewis, 2008, Currie and Procter, 2005). It is their task to break down the executive mandate into operational activities, convince and motivate their teams, identify relevant skills and talent individual employees bring to bear on the change, and orchestrate the move toward the new strategy (Paton and Boddy, 2007, Balogun and Johnson, 2004). Thus, if middle managers are reluctant to promote strategic change in the organization, such initiatives are frequently doomed to failure because the activities on the operational level are not effectively coordinated and motivated (Guth and MacMillan, 1986, Agócs, 1997, Giangreco and Peccei, 2005).

Despite the increasing acknowledgement of middle managers' influence on the success of strategic change, the existing strategy literature thus far has focused more strongly on top management and its role in formulating (rather than implementing) corporate strategies (Wiersema and Bantel, 1992, Boeker, 1997, Zhang and Rajagopalan, 2010, Chatterjee and Hambrick, 2007). Research on what drives middle managers to either support or resist strategic change, and on the role of top management–middle management interaction as an influence, has just begun to gain momentum (Hill et al., 2011, Huy, 2011). Dent and

Goldberg (1999) and Ford *et al.* (2008) suggest that rather than being a one-sided phenomenon, commitment or reluctance to change may be to a certain degree a consequence of the ineffective behavior of those trying to promote the change.

We delve further into this line of thinking, investigating the question of how different facets of top management–middle management interaction influence middle managers' commitment to change. In particular, we build on the conceptual framework developed by Ford, Ford, and D'Amelio (2008), proposing that three behavioral patterns of top management may be detrimental to middle managers' commitment to change: (1) broken agreements and the violation of trust; (2) communication breakdowns, such as the failure to legitimize change, the misrepresentation of change motives, or no call for action; and (3) ignoring counter-reasons (i.e., being unwilling to incorporate or legitimate critical feedback in the course taken).

We use this general framework to derive a testable model, proposing constructs for each of the three categories that describe specific top management behavior and that we expect to relate to middle managers' commitment to change. Concerning trust-related facets, we include top management respect of agreements and top management decision track record (i.e., the perceived quality of past top management decisions). For communication-related facets, we investigate top management communication of change reasons, top management operational guidance, and cost of information seeking for the middle manager. Looking at resistance-related facets, we include the construct of top management acknowledgement of counter-reasons. We test the resulting research model through a large-scale empirical survey among 317 middle

managers and 45 top managers in a multinational consumer and industrial goods company located in the United States and Germany.

In this study, our research aims to contribute to the literature in two ways. First, this paper contributes to the strategic change literature by translating Ford et al.'s framework into a testable model. Second, by empirically testing the model, we aim to shed light on which specific top management behaviors in each of the three dimensions proposed by Ford et al. have positive or negative effects, or no effect, on middle managers' commitment to change. Choosing a single, yet diversified, multinational company (MNC) as our empirical setting allows us to conduct various tests to establish confidence in our measurement.

The remainder of this paper is structured as follows: In the next section, we introduce our research model by showing why middle managers' commitment to change is a strategic asset and why we expect top management behavior to be an influential factor in this regard. We then derive our hypotheses before we provide a detailed description of the data sample and methods used. After presenting and discussing our results, we conclude by deriving practical implications and avenues for further research.

## **2.2. Theory and hypotheses**

### **2.2.1. Middle managers' affective commitment to change as a strategic asset**

Commitment to change can be defined as 'a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative' (Herscovitch and Meyer, 2002, p. 475). In having this effect, middle managers' commitment to change can represent a critical strategic asset for the firm (Huy, 2002) that can mean the difference

between success or failure in implementing strategic change. It does so in the following three ways.

First, commitment to change can raise the motivation to invest the effort necessary to manage change-related issues. Unanticipated challenges often arise in transition periods, requiring additional time and energy beyond what is needed in more stable settings (Cullen et al., 2000).

Second, commitment to change can help overcome tensions in the organization. Conflict often arises during transition periods (Gioia and Chittipeddi, 1991), originating from differing perspectives within and between hierarchical levels on the best approach to effect change. These conflicts risk delaying or even obviating strategic change (Goodstein et al., 1994). If middle managers display a strong commitment to change, this creates a foundation from which they can work on mutually acceptable solutions instead of taking refuge in organizational inertia (Cullen et al., 2000, Dooley and Fryxell, 1999).

Third, the open exchange of information between members of the organization is also fostered through the commitment to change. If middle managers are unified or have come together in their will to implement the new course of action, individual opportunistic behavior is likely to diminish. The common goal of change can enable a climate for mutual learning and cooperation (Slater and Narver, 1995), which further strengthens the strategic change initiative as a whole (Cullen et al., 2000, Huy, 2002).

Previous research has identified three different types of commitment to change: affective, continuance, and normative commitment (Herscovitch and Meyer, 2002, Meyer et al., 2007). Middle managers displaying affective commitment to



change want to support change because they see its inherent benefits. Middle managers with continuance commitment embrace change not necessarily because they inherently want to, but because they expect negative consequences in case of non-compliance with strategic directions. Middle managers bound by normative commitment comply with change because they feel a general sense of duty to do so. (Herscovitch and Meyer, 2002, Meyer and Herscovitch, 2001). In this study, we focus on middle managers' affective commitment to change because previous research has shown that this type of commitment is the strongest predictor of change-relevant behavior, both within and across time, as well as in different cultural contexts (Meyer et al., 2007, Herscovitch and Meyer, 2002, Parish et al., 2008). The extra effort necessary to support change is more likely mobilized when an individual truly believes in the inherent benefits of change, than when the individual is forced to support a change or feels obliged to comply (Herold et al., 2008, Conway and Monks, 2008).

### **2.2.2. Top management interaction behavior as antecedent to middle managers' affective commitment to change**

The way in which top managers interact with middle managers during strategic change can be disaggregated along the three lines of trust-related facets, communication-related facets, and resistance-related facets. First, the interaction between top management and middle managers is facilitated by an atmosphere of trust. Top managers confront problems that are more complex and less structured than the tasks carried out on most other organizational levels (Edmondson et al., 2003, Chatterjee and Hambrick, 2007). As a consequence, top managers often do not assign a clearly specified task to middle managers, as is common at other organizational levels (Edmondson et al., 2003, Raes et al., 2011). Instead, they rely on middle managers' assistance to make sense of often

nonspecific, ambiguous, and even contradicting information (Geletkanycz, 1997, Raes et al., 2011). A trust-based relationship between middle managers and top managers facilitates these crucial interactions (Zand, 1972, McAllister, 1995) and helps both top managers and middle managers decide which of all possible tasks are the most critical to carry out to successfully implement the change.

Second, direct communication by top management shapes the interaction with middle managers. During change, established organizational patterns are interrupted, and members of the organization have to enact new patterns. This process, in which deliberate and emergent elements are combined to form a new organizational structure or behavior, can be highly ambiguous (Mintzberg and Waters, 1985, Ford et al., 2008). Both top managers and middle managers have to rely on communication to construct and validate their perspective. Some authors even consider communication to be the essence of change, picturing change as 'a communication-based and communication-driven phenomenon' (Ford and Ford, 1995, p.541), with communication as key to initiation, generation, and perpetuation of change (Beckhard and Pritchard, 1992, Sonenshein, 2010, Donnellon et al., 1986). While top management is trying to determine how change can be implemented effectively, middle managers try to derive the implications of the change for their own field of responsibility (Gioia and Chittipeddi, 1991, Gioia and Thomas, 1996). When top managers achieve clear and effective change communication, they can build middle managers' understanding and clarify ambiguous topics, even when interaction time is limited (Raes *et al.*, 2011).

Third, resistance-related facets shape the interaction between top managers and middle managers during strategic change. Middle managers have to enact a double role: They are expected to support top management while also representing the interests of their subordinates (Sims, 2003, Rouleau, 2005, Ketokivi and Castañer, 2004, Raes et al., 2011). In these different roles, middle managers may perceive different signals about the value and objectives of the change and suitable implementation methods, leading to a state of disorientation or confusion (Gallivan, 2001, Balogun and Johnson, 2004) that potentially hinders change implementation. However, when top management communication respects different perspectives and clearly addresses and incorporates the counter-arguments of middle managers' subordinates, it may be able to help middle managers overcome their role conflict and advance the change implementation.

### **2.3. Research model**

Our research model links trust-related facets, communication-related facets, and resistance-related facets in the interaction between top and middle management with middle managers' affective commitment to change. We conceptualize trust-related facets as *top management respect of agreements* and *top management decision track record*. Communication-related facets comprise *top management communication of change reasons*, *top management operational guidance*, and *cost of information seeking*. Resistance-related facets are represented by the construct, *top management acknowledgement of counter-reasons*.

### **2.3.1. Trust-related facets**

#### **Top management respect of agreements**

Top management respect of agreements describes the degree to which middle managers perceive top management to adhere to explicitly or implicitly stated promises and expected patterns of cooperation.

If agreements are broken (i.e., top managers knowingly or unknowingly fail to uphold these promises or meet these expectations), the trust between top managers and middle managers is likely to decline severely (Ford et al., 2008, Morrison and Robinson, 1997). The consequence can be decreased work quality and a diminishing degree of cooperation (Shapiro and Kirkman, 1999) if middle managers neglect their job duties, such as working toward a targeted strategic change (Robinson, 1996, Turnley and Feldman, 2000). On the other hand, if top managers respect their agreements, they can help to establish a trustful relationship with middle managers. Reliability in previous interactions encourages a positive view by middle managers of the intentions of top management (Rousseau *et al.*, 1998), so that a top management-initiated change is likely to be seen in a more favorable way. The reasons for and objectives of the change are more likely to be considered in an open way when middle managers perceive that top managers respect the agreements between them. This is likely to increase middle managers' acceptance of change, and their commitment to change thus is likely to be higher than it would be in a situation where top management is perceived to break agreements. We therefore offer Hypothesis 1:

*Hypothesis 1: Top management respect of agreements is positively associated with middle managers' affective commitment to change.*

### **Top management decision track record**

The top management decision track record describes middle managers' perception of the quality, or correctness, of past decisions made by top management.

According to the theory of leadership perception, leadership has been characterized as a process that is fundamentally cognitive (Lord and Maher, 1993, Hogg, 2001). Leadership schemas, which are 'the dynamic, cognitive knowledge structures used by individuals to encode and represent incoming information regarding managerial leadership' (Epitropaki and Martin, 2005, p. 659), provide individuals with a frame of reference for understanding and responding to the behavior of their supervisors (Poole et al., 1990, Bargh, 1982). These schemas are learned through experience and may serve as guidelines for the evaluation of future behavior of supervisors (Lord and Emrich, 2000). By setting a positive example through their own behavior (i.e., building up a decision track record), top managers can contribute to building a positive leadership schema and earn the respect of middle managers (Rich, 1997).

As cognitive theory predicts, a middle manager is likely to use a previously developed schema as a frame of reference when evaluating a new initiative of top management (Lord and Emrich, 2000), including strategic change. If the frame of reference is positive because of the track record in decision-making by top management, middle managers are more likely to be convinced of the validity of top management's decision to initiate and implement a change and thus to be committed to the change. We thus put forward the second hypothesis:

*Hypothesis 2: A strong top management decision track record is positively associated with middle managers' affective commitment to change.*

### **2.3.2. Communication-related facets**

#### **Top management communication of change reasons**

Top management communication of change reasons describes the perceptions of middle managers regarding the adequacy of top management's explanations about the rationales behind a change effort.

Change is not a clearly defined tangible object, but rather a phenomenon consisting of ideas, plans, conversations, and discourses. Thus, the advantages of a specific change (and the disadvantages of not changing) often do not present themselves as self-evident (Ford et al., 2008, Gioia and Chittipeddi, 1991, Sonenshein and Dholakia, 2011). Top managers instead must provide justification for a change, establishing the usefulness, significance, and purpose of the change initiative among their middle managers.

According to inoculation theory (McGuier, 1962), preexisting attitudes, beliefs, or opinions are strengthened by persuasion attempts that are not strong enough to change an individuals' position, rendering a later persuasion attempt even more difficult, if not impossible (Ford et al., 2008). Thus, top managers' justification of change, when perceived as inadequate or inaccurate by middle managers (e.g. because of inherent ambiguity) may serve as a form of inoculation and prompt middle managers to build a stronger defense of and rationale for a change-rejecting perspective (Larson and Tompkins, 2005).

A clear and unambiguous presentation of the change reasons can persuade middle managers that the proposed change is the best option, increasing the

likelihood of change support (Armenakis et al., 1993, Green, 2004b, Rousseau and Tijoriwala, 1999). Following this logic, a clear representation of the reasons for the change is also likely to convey the inherent benefits of the change, appealing to middle managers' affective commitment to the change. We thus offer hypothesis 3:

*Hypothesis 3: Clear top management communication of the change reasons is positively associated with middle managers' affective commitment to change.*

### **Cost of information seeking**

We conceptualize middle managers' perceived cost of information seeking as the negative consequences or secondary effects that middle managers anticipate in relation to asking top management for information or advice concerning the change.

To gain a clear understanding of the change, including its details and implications, and to overcome the uncertainty and the diffuse feeling of threat that can accompany it (Schweiger and DeNisi, 1991), middle managers might need to actively seek more information. But as Borgatti and Cross point out (2003), asking others for information and advice entails a cost. The middle manager admits a lack of knowledge when asking openly for change-related information, which may induce a loss of esteem and reputation (Lee, 1997). Also, obligations might result from the middle managers' information-seeking activity, such as the obligation to act according to the advice given or the obligation to pay back the time and effort that a top manager invests in addressing the questions (Borgatti and Cross, 2003).

If the cost of information seeking is low, the middle manager is likely to interact more often and more openly with top managers. The open interaction with top management is likely to help the middle manager gain a more realistic view of the change and its positive and negative consequences. This knowledge, in turn, reduces middle managers' uncertainty and is likely to increase their capacity to accept and foster change and to help overcome the diffuse feeling of threat (Schweiger and DeNisi, 1991) that keeps them from committing to the change. We hence put forward the fourth hypothesis:

*Hypothesis 4: High costs of information seeking are negatively associated with middle managers' affective commitment to change.*

### **Top management operational guidance**

Top management operational guidance describes the degree to which middle managers perceive they can obtain guidance and instructions on the activities necessary to implement the change.

Even when middle managers come to an understanding of the reasons for the change, they might not fully realize their role in the change and how they need to act to implement it. Thus, they might be unable to determine which behavior and concrete action is best (Ford *et al.*, 2008). As the trade-off avoidance hypothesis predicts, an increase in selection difficulty promotes the choice of status quo options (Anderson, 2003): If middle managers have difficulty determining the optimal behavior, the tendency is to stick with the current course of action (Beer *et al.*, 1990, Meyer, 2006, Anderson and Paine, 1975).

If top managers' communication with middle managers provides detailed operational guidance, middle managers know more about what is expected,



decreasing the selection difficulty that can bias them toward staying with the status quo (Bordia et al., 2004, Anderson, 2003). Instead, top-down operational guidance can lay out a concrete picture of proposed action, convincing middle managers to depart from the status quo and hence to increase their commitment to the change. Accordingly, we offer Hypothesis 5:

*Hypothesis 5: Strong top management operational guidance is positively associated with middle managers' affective commitment to change.*

### **2.3.3. Resistance-related facets**

#### **Top management acknowledgement of counter-reasons**

Top management acknowledgement of counter-reasons describes the degree to which top managers incorporate middle managers' suggestions during the change's implementation process.

Middle managers are likely to express ideas, proposals, or counter-suggestions in response to the initial change plans as they seek to translate the strategic vision into operational activities (Balogun and Johnson, 2004, Luescher and Lewis, 2008). The way top management reacts to these ideas and proposals is crucial in its influence of the position of the middle managers toward the change: As the concept of procedural and interactional justice predicts, top managers may be perceived as reluctant by middle managers and thus set a negative example if they fail to acknowledge arguments or counterpoints brought up by middle managers (Powell and Posner, 1978, Whitener et al., 1998).

According to approach-avoidance theory, a persuasive message (e.g., the call for change) naturally induces both positive and negative reactions. Approach

motives (i.e., the positive target outcomes of the change) encourage middle managers to work toward the change, while avoidance motives (e.g., greater workloads and other negative consequences) hinder their acceptance of the change (Tormala and Petty, 2004a). Even if approach motives are numerous and compelling, avoidance motives, providing arguments against the change, are also likely.

If avoidance motives, such as the increased workload for middle managers, are simply ignored by top management, the middle managers might perceive this as a lack of respect and consideration, thus declining middle managers' support for top management and its change initiative. A vicious circle might develop, as top management ignores the input of middle managers, who ignore the change benefits, perpetuating the circle as mutual respect vanishes (Powell and Posner, 1978, Ford et al., 2008). On the other hand, if top management acknowledges middle managers' arguments against the change in an open way, this move has the paradoxical effect of derogating the arguments' power, as approach-avoidance theory predicts (Tormala and Petty, 2004b, Ford et al., 2008). Top management shows respect for middle managers and their opinions. Respected in this way, the middle manager is more likely to support the change and develop affective commitment. We thus put forward Hypothesis 6:

*Hypothesis 6: Top management acknowledgement of middle managers' counter-reasons is positively associated with middle managers' affective commitment to change.*

## **2.4. Methodology**

### **2.4.1. Sampling and data collection**

#### **Empirical approach**

To test our hypotheses, we examine the U.S. and German subsidiaries of a global consumer and industrial goods company that has approximately 50,000 employees worldwide. We chose to conduct our empirical validation as a one-company investigation for three reasons.

First, we are examining a very sensitive topic, and establishing a trust-based relationship between the research team and sample organization is critical. The perceived fear that information might leak to other organizations can be minimized, and company-specific preferences in the execution of the data collection can be incorporated in a flexible manner. Second, by focusing on a single company and offering in-depth assistance and support, we can achieve very high response rates and approach not only middle managers, but also top managers to validate our data. Third, the one-company sample enables us to exclude distortions of the results caused by different organizational cultures (Pothukuchi et al., 2002).

We defined several criteria for the selection process of our sample company: The sample organization had to be a large MNC to allow for a broad data collection process at both middle and top management levels. In addition, the organization had to comprise distinctive business units and different functional areas to enable a cross-unit and cross-functional validation and to increase the generalizability of our results.

The selected organization met each of these criteria. The two subsidiaries involved, located in the United States and Germany, had both been facing discontinuous transitions that required intense middle management involvement. For example, in recent years, the organization had established shared service centers, acquired and integrated new businesses, and adapted new, leaner processes.

### **Procedures**

We randomly selected 450 middle managers (222 U.S. and 228 German participants) from diverse functional backgrounds, including finance, marketing, and logistics (cf. Tables 1 and 2). We intentionally included different functions within one company because doing so provides the opportunity to secure the transferability of results while preventing the distortion of results stemming from structural differences, such as those caused by divergent definitions of matrix organizations (Ford and Randolph, 1992). In addition, drawing the sample from both U.S. and German subsidiaries within one company allows us to test the stability of our hypotheses across different cultural and institutional environments while avoiding the distortion of results caused by different organizational cultures (Pothukuchi et al., 2002, Hofstede et al., 1990).

For purposes of this study, we defined middle managers as leading 'non-top management professionals' (Pappas and Wooldridge, 2007, p. 330), 'entrusted by the firm with significant responsibilities, who have access to top management and who possess significant operating know-how' (Floyd and Wooldridge, 2000, p. 158). Depending on the organizational structure of each

function, the managers selected were two or three hierarchical levels below the management board.

The selected middle managers received an initial, information-only e-mail, sent internally to introduce the purpose of the study and to encourage participation. In a subsequent e-mail sent by the academic research team, participants received a link that granted them access to the online survey and asked them to provide answers over a period of two weeks.

Table 1: Demographic characteristics of top management interaction sample

Age	Share in Sample <sup>a</sup>
under 30 years	1.9%
30 to 35 years	13.9%
36 to 39 years	17.0%
40 to 45 years	31.9%
46 to 50 years	21.1%
51 to 55 years	10.1%
older than 55 years	4.1%
Gender	Share in Sample
Male	68.5%
Female	31.5%
Education	Share in Sample
None	0.6%
Vocational training	3.8%
A-levels	3.5%
Bachelor degree	22.4%
Master degree/Diploma	47.6%
Ph.D.	22.1%

<sup>a</sup> n = 317

All survey participants received identical English language questionnaires to avoid translation-based conceptual dissonance. The non-native English speakers participating in the survey were accustomed to English as the company's language of correspondence, allowing for the assumption that they would not encounter comprehension problems.

Table 2: Career characteristics of top management interaction study participants

Functional background	Share in Sample <sup>a</sup>
Accounting	2.5%
Finance	10.7%
Marketing/Sales	30.9%
Research and development	24.0%
Operations/Production/Logistics	13.6%
Purchasing/Supply management	4.4%
Personnel/Human resources	1.9%
Law	2.5%
General management	9.5%
Tenure in company	Share in Sample
up to 6 months	1.3%
7 months to 2 years	4.7%
3 to 5 years	16.7%
6 to 10 years	24.0%
11 to 15 years	22.1%
16 to 20 years	11.4%
more than 20 years	19.9%
Tenure in position	Share in Sample
up to 6 months	12.3%
7 months to 2 years	31.9%
3 to 5 years	29.7%
6 to 10 years	16.7%
11 to 15 years	5.7%
16 to 20 years	1.9%
more than 20 years	1.9%

<sup>a</sup> n = 317

To evaluate face validity, as well as to confirm the comprehensibility of the questions for non-native English speakers, we conducted a pre-test with four top-level managers and four middle-level managers. Half of each group was from the U.S. subsidiary, and half was from the German subsidiary.

We received answers from 388 middle managers, 71 of which had to be dropped because of item non-response. The final sample thus consisted of 317 middle managers (136 from the United States, 181 from Germany), for an effective response rate of 70.4 percent.

#### **2.4.2. Measures**

##### *Top management respect of agreements*

To measure top management respect of agreements, we developed a new scale based on an instrument measuring supervisory role effectiveness, introduced by Wanous et al. (2000). The three-item construct reflects middle managers' perception of the degree to which top management adheres to explicitly or implicitly stated promises and expected patterns of cooperation.

##### *Top management decision track record*

The three-item construct measures the middle managers' overall perception of the validity of past decisions made by top management. We developed this new scale following the procedure recommended by DeVellis (2011).

##### *Top management communication of change reasons*

This four-item measure was developed based on the 'quality of change communication' construct introduced by Bordia et al. (2004). It was adapted to reflect a specific facet of change communication - the perceived adequacy with



which the reasons for the change were communicated to middle managers by top management.

*Cost of information seeking*

This three-item construct reflects the perceived negative consequences and secondary effects middle managers anticipated experiencing when asking top management for information or advice concerning the change initiative. We adapted this scale based on Borgatti and Cross (2003).

*Top management operational guidance*

We developed this three-item measure based on the concept of the 'call for action' delineated by Ford et al. (2008). It describes the degree to which middle managers perceive to obtain guidance and instructions on the activities necessary to implement the change.

*Top management acknowledgement of counter-reasons*

The three-item measure reflects the degree to which top managers incorporate middle managers' suggestions during the change in the implementation process. We developed the construct based on the corresponding concept introduced by Ford et al. (2008).

*Affective commitment to change*

This construct was developed by Herscovitch and Meyer (2002) and reflects the 'desire to provide support for the change based on a belief in its inherent benefits' (Herscovitch and Meyer, 2002, p. 475). As a result of high internal correlation, we had to eliminate three of the six items for the purpose of this study.

For a full list of all measurement items and their validity assessments, please see Appendix A.

## **2.5. Analyses and results**

We tested our hypotheses through structural equation modeling (SEM) using the AMOS 19 software. Although our data set of 317 middle managers is above established thresholds for the application of SEM (Hair et al., 1992, Anderson and Gerbing, 1988, Bagozzi and Yi, 1988a), we also conducted a power analysis to further validate the adequacy of our sample size (Shah and Goldstein, 2006). We applied the procedure recommended by MacCallum *et al.* (1996) for both our measurement and structural models, finding a power for close fit of 1.000 for both (at  $\alpha = 0.05$  and alternate RMSEA = 0.08 and with underlying degrees of freedom  $df = 180$  for both models). These values are above the commonly accepted 0.8 threshold (MacCallum *et al.*, 1996) and indicate that we have sufficient statistical power to detect potential model misspecification.

Before calculating the structural model, we performed exploratory factor analyses (EFA) and confirmatory factor analyses (CFA) to ensure that the questionnaire items used to measure the study's constructs were valid indicators of the same. After scale purification, the measurement model met the thresholds established in the literature and thus indicated a good fit with the data (cf. Appendix A). The  $\chi^2$ /degrees of freedom ratio ( $\chi^2/df$  ratio) of 2.222; the Bentler's (1989) comparative fit index (CFI) of 0.963; the Tucker-Lewis index (TLI) of 0.955; the goodness-of-fit index (GFI) of 0.903; the adjusted goodness-of-fit index (AGFI) of 0.87; the composite reliability (CR) all of which were greater than or equal to 0.88; and the root mean square error of approximation (RMSEA) of 0.062

(Steiger, 1990) all indicated an appropriate fit (Bollen and Long, 1993, Browne and Cudeck, 1989, Hu and Bentler, 1999, Bagozzi and Yi, 1988a). Further, each scale item had a factor loading of at least 0.50. All factor loadings were highly significant ( $p < 0.0001$ ), suggesting that convergent validity exists for the indicators (Anderson and Gerbing, 1988).

Table 3: Top management interaction model-correlations and descriptive statistics

n = 213	1	2	3	4	5	6	7	8
1 Top management respect of agreements	1.00							
2 Top management decision track record	.717	1.00						
3 Top management communication of change reasons	.455	.492	1.00					
4 Top management operational guidance	.479	.518	.530	1.00				
5 Cost of information seeking	-.350	-.317	-.375	-.329	1.00			
6 Top management acknowledgement of counter-reasons	.506	.539	.445	.480	-.252	1.00		
7 Change significance	.013	.090	.171	.082	-.002	.092	1.00	
8 Personal change consequences	-.065	-.005	-.038	-.058	.078	-.030	.144	1.00

We assessed discriminant validity (Kaplan, 1994, Grewal et al., 2004) by examining the average variance extracted for each construct and ensuring it exceeded the squared correlations with all other constructs (Fornell and Larcker, 1981). The criterion was met in all cases. Further, we performed  $\chi^2$  difference tests between the original unrestricted CFA model and a model in which a factor correlation parameter was fixed at 1.0 (Bagozzi and Phillips, 1982, Anderson and

Gerbing, 1988). A significantly worse fit was evident for the study's restricted versus unrestricted models, also providing strong evidence of discriminant validity. The correlations among the study's latent constructs are displayed in Table 3.

Overall, the structural model shows highly satisfactory values for all global fit criteria, with  $\chi^2/df$  (2.222), CFI (0.963), TLI (0.955), GFI (0.903), AGFI (0.870), and RMSEA (0.062) meeting the proposed thresholds.

The results from the hypothesis testing are displayed in Figure 2, where solid lines represent significant relationships ( $p < 0.05$ ) between constructs and dashed lines indicate the lack of statistically significant relationships.

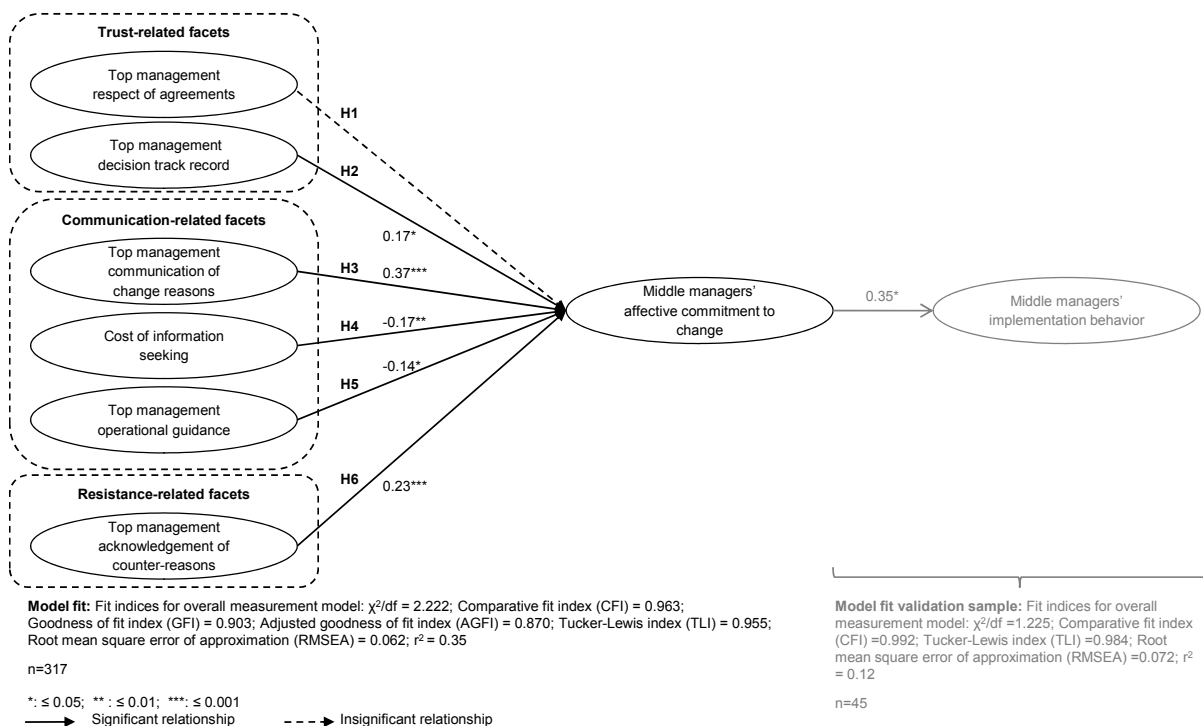


Figure 2: Top management interaction-research model and results of structural equation model

Hypotheses 2, 3, 4, and 6 are supported. Hypothesis 1 is rejected because it lacks a statistically significant relationship. Hypothesis 5 is also rejected, but contrary to the supposedly positive relationship, we find a significant negative relationship.

#### *Inter-rater reliability*

The empirical set-up of our survey entailed the assessment of the interaction behavior of 47 top managers by more than one middle manager. This set-up allows for the assessment of inter-rater reliability to validate middle managers' responses to all our study's exogenous constructs. (For the validation approach used on the study's endogenous construct, see the next section, 'Common method bias') We used single-measure intraclass correlation (Shrout and Fleiss, 1979, McGraw and Wong, 1996) to assess the pair-wise correlation between two middle managers' ratings of their common top manager, taking into account the absolute differences in ratings (Fleenor et al., 1996, Lebreton et al., 2003). The single-measure intraclass correlation of 0.75 demonstrates high inter-rater reliability (Lee et al., 1989) and thus supports the validity of the study's measurements of the exogenous constructs.

#### *Common method bias*

To mitigate the risk of common method bias, we assessed the validity of the measurement of the outcome construct—middle managers' affective commitment to change—by issuing a second validation questionnaire to a random sample of 55 (26 U.S. and 29 German) top management supervisors of the middle managers participating in the main survey. The top managers were asked to evaluate their subordinate's support for the change project on a three-

item scale. We asked for the support of the respective middle manager rather than her or his commitment to change for two reasons: First, commitment to change is an internal state of mind and cannot be directly observed by the top manager, while actions and behavior (showing support) can be observed. Second, by assessing the relationship between the (self-evaluated) commitment to change and the (other-evaluated) support of the change, we can further confirm the relevance of the commitment to change construct in that it translates into actual behavior by the middle manager.

We received 45 (21 U.S. and 24 German) usable responses from the top managers, giving an effective response rate of 81.8%. In an approach similar to procedures in studies with surrogate endpoints (Pepe, 1992, Chen et al., 2003), we put the middle and top managers in pairs and analyzed the correlation between the self-reported middle manager's affective commitment to change and the top management-reported, implementation behavior of the middle manager. We found the relationship to be statistically significant and positive (0.35) at a p-level of 0.026 (see also Appendix B). These results show that middle managers' self-assessments and the external assessments by the top managers are generally aligned, providing evidence for the validity of the middle managers' commitment to change measure and the robustness of the statistical findings.

We also took the following measures to mitigate the risk of common method bias: In the design of the middle managers' questionnaire, the items related to the presumed antecedents (e.g., 'top management respect of agreements') were placed in the first section of the questionnaire, and the items related to expected outcomes were put in the last section (Podsakoff and Organ, 1986, Schilling and

Steensma, 2002). In addition, we used the single-method-factor approach suggested by Podsakoff *et al.* (2003) to test the obtained data for common method bias. To this end, we added a latent construct to the structural model, to which all items in the model were connected as indicators. Adding this construct did not make any previously significant paths insignificant or any previously insignificant paths significant. Thus, the test found no indication of common method bias.

#### *Non-response bias*

To ensure the robustness of the results against non-response bias, we performed two different tests. First, we conducted a  $\chi^2$  difference test to compare the answers of early respondents with those of late respondents. We found no difference between early and late respondents ( $p = 0.201$ ).

Second, we approached again those who did not initially respond, encouraging them to participate (Lambert and Harrington, 1990). In this way, we obtained 43 new responses and compared them with the original sample by calculating another  $\chi^2$  difference test. No significant differences emerged between initial respondents and non-respondents ( $p = 0.074$ ). Thus, no adjustments to the responses in the sample were necessary (Armstrong and Overton, 1977).

#### *Social desirability bias*

Social desirability bias can occur if respondents inaccurately answer questions to conform to social norms or to the expectations of the researcher, or to present themselves in a more favorable light (Nunnally, 1978). To solicit candid responses, all respondents were guaranteed anonymity (Darnall *et al.*, 2008).

In addition, we mitigated social desirability bias by asking middle managers to assess their supervisors instead of asking for a top management self-assessment. Concerning the study's outcome factor, a top management validation sample shows that middle managers with a self-reported high degree of affective commitment to change were also rated as displaying high levels of implementation behavior by their supervisors.

In the pre-test, as well as in the final data, we found adequate variations in responses, indicating that no consistent over-reporting occurred. The average score for the affective commitment to change construct was 4.67 on the seven-point scale, in line with the average of all scales in the survey (4.29). The standard deviation of 1.54 was also close to the average standard deviation of all constructs (1.32).

#### *Control variables*

We tested the robustness of the structural model by introducing the following control variables: age (Kirton and Mulligan, 1973), gender (Wanberg and Banas, 2000), education (Kirton and Mulligan, 1973, Iverson, 1996), tenure in company and position (Iverson, 1996, Wanberg and Banas, 2000), functional affiliation and business unit (Geletkanycz and Black, 2001), type of change, change significance, start date, project duration, and personal change consequences (see the following paragraphs). These variables have been suggested in the change literature as potentially influencing the observed relationships. Including these variables made no previously significant paths insignificant and no previously insignificant paths significant. Thus, we believe that our findings are consistent across a range of different settings.



Type of change and change significance. Taking into account that the participants of the study had in mind different change projects to which they personally had been exposed (Jaros, 2010), we included a single-item measure to assess the type of change initiative. Answering options included reorganization; work process change; leadership change; implementation of new technology; strategy change; quality program; merger/acquisition; and other (please specify). Following Herscovitch and Meyer (2002), we also included a five-item construct measuring the significance of the change, with sample items that included 'How significant was the change for the company from your perspective?' and 'How significant was the change compared to other organizational changes you know of?'

Start date and project duration. When the start date of the change initiative goes back several years, the risk of a 'rosy retrospective increases (Carter et al., 2007), which is a more positive view of events in the past than was experienced while those events were occurring. A long project duration might lead to similar effects. Both variables were assessed as single-item constructs.

Personal change consequences. Whether or not the change had a negative effect on the participant might alter his or her commitment to the change (Herscovitch and Meyer, 2002). We thus included a four-item construct measuring the personal change consequences. The construct included the sample items, 'As a result of the change, I find greater demands placed on me at work' and 'As a result of the change, I am expected to do more work than I used to.'

### *Measurement equivalence*

To ensure consistency of our measurement across the U.S. and German contexts, we performed a multi-group confirmatory factor analysis with all

factor loadings constrained to be equal across the two groups (Kaufmann and Carter, 2006, Hult et al., 2008). Comparing the results of the constrained model to the unconstrained model, we found that the  $\chi^2$  difference between the two models was insignificant ( $p = .343$ ), indicating measurement equivalence across the two countries included in the sample.

#### *Control for institutional environment*

To ensure the robustness of our results across cultural and institutional environments, we tested for potential differences between the answers of U.S. and German middle managers. Such differences might arise from variations in the national cultures of the United States and Europe. We again used a multi-group analysis, with all paths constrained to be equal across samples. The  $\chi^2$  difference between the unconstrained and constrained models was insignificant ( $p = 0.267$ ), suggesting no difference in the results between U.S. and German respondents. We next discuss the implications of these findings.

### **2.6. Summary and discussion**

In this study, we tested a model of top management influence on middle managers' commitment to change, derived from the conceptual work of Ford *et al.* (2008). Top managers' influencing factors on middle managers are divided into the three groups of trust-related facets, communication-related facets, and resistance-related facets. We find that the interaction behavior of top managers with middle managers clearly influences middle managers' commitment to change and therewith find the framework to be confirmed. Nevertheless, a detailed examination of the constructs embedded in our framework is needed to determine their specific influence.

In the first group of trust-related facets, we looked at top management's respect of agreements and its decision track record. We found that the decision track record of top managers positively relates to middle managers' affective commitment to change, while their respect of agreements does not have a significant influence on middle managers' commitment to change. Apparently, top managers demonstrate professional competence and expertise through their decision track record, reflecting their underlying cognitive capacities (Nadkarni and Barr, 2008). If past decisions were generally of high quality (i.e., top management cognition seems to be reliable), middle managers are more likely to have a positive view of change decisions by top management and to be encouraged to commit to them. Adherence by top management to previous decisions, on the other hand, is not enough to positively influence middle managers' commitment to change. The likely reason is that, although respecting previous agreements can strengthen middle managers' trust in top management (McAllister, 1995, McEvily et al., 2003), rigid adherence without flexibility can also have an adverse effect. Top managers who strictly follow previous decisions under all circumstances might be perceived as unwilling to change (Amburgey et al., 1993). Thus, top managers in this way can unconsciously act as a role model of inertia and of an unwillingness to accept or embrace change. These two effects—*increase in trust in top management and potential role-modeling of inertia*—might compete against each other, so that the overall relationship between top managers' respect of previous agreements and middle managers' commitment to change becomes insignificant.

In the second group, communication-related facets, we researched the influence of top managers' communication of the reasons for the change, their operational guidance, and the cost of information seeking on middle managers'

commitment to change. As expected, we found that if middle managers perceive top management's communication of the change reasons to be plausible and transparent, their commitment to the change is significantly higher. Clear communication of the reasons for the change respects existing explicit or implicit communication routines within the organization (Allatta and Singh, 2011) and helps to establish the usefulness, significance, and purpose of the change, thereby increasing the likelihood of approval (Armenakis et al., 1993, Green, 2004b, Rousseau and Tijoriwala, 1999), which is manifested in a higher commitment to change.

As predicted, middle managers' perceptions of the cost of information seeking are negatively correlated to their commitment to change. When middle managers do not have to fear reputation issues (Lee, 1997) or obligations (Borgatti and Cross, 2003) when asking for information or advice concerning the change, they are likely to interact more often and in a more open way with top management; in doing so, they form a more complete picture of the change, which is associated with a decreased feeling of diffuse threat and an increased commitment.

Contrary to our expectations, we found a significant negative relationship between operational guidance by top management and middle managers' commitment to change. One explanation is that middle managers might feel overly constrained in their freedom to act if top managers delineate all activities in detail. In a narrowly defined job, individuals are more likely to follow the path of least resistance and to follow instructions line-by-line, refraining from personal initiative and seeking to avoid potential penalization (Sharon et al., 1997). Increased autonomy, by contrast, can promote the development of

proactive behavior and thus facilitate the acceptance of change (Hornung and Rousseau, 2007, Morgeson et al., 2005). These effects appear to outweigh possible benefits of operational guidance, such as a reduced ambiguity.

In the third group, resistance-related facets, we looked at top managers' acknowledgement of counter-reasons. We found that a significant positive relationship exists between the acknowledgement of counter-reasons by top management and middle managers' commitment to change. As the concept of procedural and interactional justice predicts, top managers themselves might be perceived as reluctant by middle managers if they fail to acknowledge arguments brought up by middle managers (Powell and Posner, 1978, Whitener et al., 1998); if, in contrast, top managers take counter-reasons seriously, the effect on middle managers' commitment to change is positive.

In articulating these findings, this research paper contributes to the strategic management literature in two ways: First, we expand the strategic change literature by developing a model of top management's contribution to middle managers' commitment to change, predicated on the conceptual work of Ford et al. (2008). Despite its crucial importance for successful implementation of strategic change (Raes et al., 2011), the top management–middle management interface has been largely neglected in the past, which renders our model even more relevant.

Second, by empirically testing the model in an international context, we shed light on which specific behaviors by top management in each of the three categories of the model exert a positive or negative effect, or have no effect, on middle managers' commitment to change.

## **2.7. Managerial implications**

When top managers break previous agreements or deviate from past decisions, that action does not necessarily de-motivate middle management. Middle managers apparently understand well that circumstances can change and that courses of action sometimes need to be altered, especially during times of high economic volatility. If the reasons for such a change of course are explained well and the new decision is seen as justified, middle managers' commitment might rise in response, rather than drop.

Top managers should also actively seek to establish a risk-free discussion environment with middle managers to enable and encourage acceptance of change, for example, by making clear that all questions or comments concerning a change initiative are valuable. Top managers should establish an implementation dialogue with middle managers and take their perspective and feedback into account for strategic revisions. Of course, for these efforts to yield positive results, middle managers must perceive top managers' efforts to integrate their viewpoint as authentic.

Another key insight is that close operational guidance can destroy commitment rather than spur it on. Top managers must avoid micro-managing middle managers; instead, middle managers should be engaged as active partners for shaping the change. In this context, they should be given space and encouraged to autonomously map their part of the change roll-out.

## **2.8. Limitations and avenues for further research**

Our study has certain limitations that represent worthwhile avenues for further research in the field.

The first of these limitations concerns the relevance of influencing factors in addition to those named in the categories of our framework. Top managers' influence on middle managers' commitment to change might take place not only through direct top management interaction with middle managers, but also in a more indirect way. For example, top managers might unconsciously influence middle managers' commitment to change in the specific surrounding conditions they create and the role attributes they assign. The research of these indirect influencing factors might be a promising complement to our findings from the research of direct influencing factors.

Second, middle managers' commitment to change might vary on the basis of their long-term exposure to change programs. A middle manager experiencing the fifth strategic reorganization might respond differently to top management impulses than he or she did during the first round of change. Further research should address this question of dynamic perception using a longitudinal study.

The focus on one particular MNC might represent another limitation, although the breadth of the different business units, functions, and country organizations involved suggest a higher degree of generalizability than is usual with one-company samples. Assessment of generalizability can follow three different paths: theoretical, probabilistic, and empirical (Blair and Zinkhan, 2006). From a theoretical point of view, we developed hypotheses in this study on the basis of renowned theoretical concepts and reasoning by following a model derived from an acknowledged framework. From a probabilistic perspective, generalizability of our results is also supported. Both the sampling process and the questionnaire administration we used followed established recommendations from the literature (Podsakoff and Organ, 1986, Schilling and

Steensma, 2002). Furthermore, statistical significance testing, various means to control common method bias (e.g., Podsakoff and Organ, 1986, Schilling and Steensma, 2002), and two different approaches to test for non-response bias (e.g., Lambert and Harrington, 1990) all indicate generalizability. Finally, empirical generalizability can be further assessed after our study has been advanced and replicated with additional data sets and in different settings—including organizations in transitional and developing economies.



### **3. The influence of middle management role characteristics on middle managers' commitment to change**

#### **3.1. Introduction**

Middle managers' responsibility during change implementation has been described as to ensure the link between conceptual strategic ideas of top management and the operational reality of employees, identifying and using existing skills within the organization, and putting these skills to work to enable organizational change (Paton and Boddy, 2007, Floyd and Wooldridge, 1992). At the same time, a number of studies describe middle managers as challenged by an attachment to existing policies and practices, and by failing to perceive a need to adjust, even when confronted with major shifts in the organizational environment (Guth and MacMillan, 1986, Agócs, 1997, Stanley et al., 2005).

Although this research provides a helpful beginning, the factors motivating middle managers to either support or resist organizational change still are not well understood. Inroads that have been made have started to highlight the importance of middle managers' commitment to change (Huy, 2002, Hill et al., 2011, Sonenshein and Dholakia, 2011) and potential reasons for middle managers' resistance (Giangreco and Peccei, 2005). But interestingly, the growing research concerned with role characteristics of middle managers (Currie and Procter, 2005, Mantere, 2008, Rouleau and Balogun, 2011, Dopson and Stewart, 1990, McCann et al., 2008) has not yet been linked to middle managers' commitment to change. We aspire to contribute toward closing this research gap with our present paper.

In our reasoning, we follow the commonly applied perspective of role theory (Kahn et al., 1964, Brewer and Gardner, 1996), suggesting that individuals' behavior is context-specific and influenced—if not determined—by their socially defined role. Role characteristics comprise expectations, norms, and behaviors an individual faces (Biddle, 1986), including concrete rights and duties, and are likely to shape an individual's attitude and performance (Parker, 2007, Currie and Procter, 2005).

We build on this rationale and investigate how three crucial characteristics of middle managers' role influence their commitment to change: (1) Self-determination of middle managers, representing their autonomy and opportunities for participating in decision-making (Child and McGrath, 2001, Mantere, 2008); (2) pressures perceived by middle managers, taking into account the tendencies that “*performance is monitored more closely, [and] hours and intensity of work are increasing*” for middle managers (McCann et al., 2008, p. 343); and (3) career perspectives of middle managers, combining middle managers' promotion prospects (McCann et al., 2008) and their potentially threatened job security (Newell and Dopson, 1996).

In this effort, our research aims to contribute to the literature in two ways. First, this paper expands existing middle management research by developing a framework, based on role theory, that incorporates middle managers' role characteristics and their influence on middle managers' commitment to change. Second, this newly developed framework is empirically tested in a cross-functional and cross-cultural empirical setting.

The structure of the paper is as follows: The next section provides a short overview of the literature on middle managers' contribution to change

implementation and the relevance of commitment to change. We then introduce our framework and, arguing that certain role characteristics may represent antecedents to middle managers' commitment to change, we derive testable hypotheses. Next, we describe the methods used and present and discuss the results of the empirical test. We conclude our paper by outlining practical implications and avenues for further research.

### **3.2. Theoretical considerations and hypotheses development**

#### **3.2.1. The contribution of middle managers to change implementation**

A growing body of research has recognized middle managers as important actors during organizational change, having a decisive effect on the success or failure of change initiatives (e.g., Pappas and Wooldridge, 2007, Wooldridge et al., 2008, Mantere, 2008, Rouleau and Balogun, 2011). A distinctive factor that underlines middle managers' importance is the double function they have to fulfill during organizational change: Middle managers are often positioned as "change agents" by top management, "*expected to behave in a proactive and strategic manner to realize policy intentions*" (Currie and Procter, 2005, p. 1346). At the same time, they also have to represent the operational interests of their subordinates (Sims, 2003, Rouleau, 2005, Ketokivi and Castañer, 2004, Raes et al., 2011).

As a result, a lack of commitment to change among middle managers can have severe consequences: First, top management cannot rely on middle managers' assistance to refine the often nonspecific, ambiguous, and even contradicting information that evolves from the change (Geletkanycz, 1997, Raes et al., 2011). This lack of support has a potentially weakening consequence for top

management and the organization as a whole: Even when supported by cooperating middle managers, top managers already face an immense workload (Tengblad, 2006, McCann et al., 2008). Left without middle managers' support to structure complex problems (Edmondson et al., 2003, Chatterjee and Hambrick, 2007), top managers likely face a diminished capacity to prioritize activities and make the right decision based on factual grounds, which has a negative effect on the quality of decisions made in the organization and the implementation of change.

Second, a middle manager unsupportive of organizational change is likely to fail to engage in pro-change behavior and might leave his or her subordinates without guidance in the implementation process (Giangreco and Peccei, 2005). Middle managers are responsible during change implementation for drawing their subordinates into the change (Rouleau and Balogun, 2011), and if they fail to do so, employees will not be coordinated in their implementation efforts. Accordingly, the activities carried out at the lower levels of the organization will have only a limited effect (Paton and Boddy, 2007), decelerating or even fundamentally undermining the change implementation (Guth and MacMillan, 1986, Kim and Mauborgne, 1998).

### **3.2.2. Commitment to change as a driving force of change implementation**

Commitment to change can be defined as “a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative” (Herscovitch and Meyer, 2002, p. 475). In this respect, middle managers' commitment to change can be the decisive element determining whether a change implementation becomes a success or a

failure: First, unanticipated issues are a common phenomenon during change implementation, and they require additional time and energy (Cullen et al., 2000). Commitment to change may inspire middle managers to a broader job definition (Morrison, 1994) and can thus provide a foundation for acting, despite ambiguous surroundings, and may thus be “vital to keep people moving forward” (Maitlis and Sonenshein, 2010, p. 562), enabling middle managers to better handle the change.

Second, in transitional periods, conflict on how to best implement change often occurs because of differing perspectives within and between hierarchical levels (Gioia and Chittipeddi, 1991, Goodstein et al., 1994). As conflict draws the focus away from the change itself, it bears the risk of slowing down the change or even impeding it (Goodstein et al., 1994). A strong commitment from middle managers to the change may help to overcome the tensions by providing a common goal and encouraging work on mutually acceptable solutions to advance the change (Cullen et al., 2000, Dooley and Fryxell, 1999).

Third, goal congruence concerning the implementation of change is likely to decrease the occurrence of individual opportunistic behavior of middle managers. Aligned interests (i.e. the common commitment to change) can enable exchange, mutual learning, and cooperation (Slater and Narver, 1995), which is likely to have a positive effect on the success of the change implementation (Cullen et al., 2000, Huy, 2002).

Previous research on commitment to change has identified three different types of commitment to change: affective, continuance, and normative commitment (Herscovitch and Meyer, 2002, Meyer et al., 2007). Affective commitment to change refers to the wish to support a change because of the belief in its

inherent benefits. Continuance commitment to change describes the conviction to support a change because of the anticipation of negative consequences if non-compliance is chosen. Normative commitment to change refers to the wish to comply with a change because of the perception of a general sense of duty to do so (Herscovitch and Meyer, 2002, Meyer and Herscovitch, 2001). For the purpose of this study, we focus on middle managers' affective commitment to change. The effort necessary to constructively support change implementation is more likely mobilized when an individual truly believes in the inherent benefits of the change, rather than when the individual's support stems from the fear of negative consequences or a sense of obligation to comply (Herold et al., 2008, Conway and Monks, 2008). Previous research has strengthened this perspective by showing affective commitment to change to be the strongest predictor of change-relevant behavior (Meyer et al., 2007, Herscovitch and Meyer, 2002, Parish et al., 2008).

### **3.2.3. Role characteristics and their influence on middle managers' commitment to change**

According to role theory (Kahn et al., 1964, Brewer and Gardner, 1996), individuals behave in different and, to a certain degree, predictable ways, depending on the role they are enacting. Characteristics that shape a role comprise expected behaviors, norms, and experienced behaviors of others (Biddle, 1986), which translate into rights and duties for the individual (Parker, 2007).

Three commonly cited categories that we identified to characterize a middle manager's role are self-determination, pressure, and career perspectives (Mantere, 2008, Floyd and Lane, 2000, Currie and Procter, 2005). The first

category, self-determination, describes the extent to which an individual middle manager is able to act autonomously and to shape his or her course of action. In our framework, we conceptualize self-determination as the role autonomy of middle managers and their participation in implementation-related decision-making. Role autonomy describes the freedom to select their own approaches, methods, and activities. Because of an ongoing trend toward lean structures, middle managers often possess substantial autonomy (Mantere, 2008, Currie and Procter, 2005). In some organizations, however, middle managers' autonomy is being reduced in favor of greater centralized control (Ogbonna and Wilkinson, 2003). Implementation-related decision-making describes the influence of a middle manager on the decisions accompanying a given change. Top managers are often discerned as “‘ghosts’ [..], rather than being active directors of change” (Balogun and Johnson, 2004, p. 524), so that middle managers often have to rely on themselves (Gioia and Chittipeddi, 1991) concerning the implementation of change.

The second category, pressure, conceptualizes the burden of physical or mental stress experienced by middle managers. High levels of responsibility and autonomy can lead to high expectations, self-imposed and top management-imposed, and thus cause pressure (Mantere, 2008, Currie and Procter, 2005). Arbitrating between top management's objectives and the organizational reality of their subordinates during organizational change may impose additional pressure on middle managers (Floyd and Lane, 2000). In our framework, we use as indicators of pressure both the workload middle managers actually experience and the performance monitoring imposed on them. Workload describes the subjective level of work effort individuals perceive they face. High workload has come to be characteristic of the middle managers' role, as

widespread downsizing and reorganization have led to a decreased number of hierarchical levels (Thomas and Dunkerley, 1999, McCann et al., 2008). “Doing more with less” (Van Dyne and Ellis, 2004, p. 181) became a common mantra, resulting in an increased workload and greater pressures on middle managers (Van Dyne and Ellis, 2004, Barnes and Van Dyne, 2009). Performance monitoring describes the observation of middle managers’ activities and results by top management. Top managers are likely to be holding their middle managers accountable for their performance, measuring it in terms of economy, efficiency, or effectiveness, and linking it to appraisal systems (Dopson and Stewart, 1990, Ogbonna and Wilkinson, 2003), and thus increasing the pressure middle managers perceive.

The third category of our framework encompasses middle managers’ career perspectives. In the traditional business environment, the prospect of a future career in an organization provided a certain structure and security for the individual middle manager (Egeberg, 2003). This reassurance now seldom exists because flattened hierarchies and job cuts have become prevalent (McCann et al., 2008). We conceptualize middle managers’ career perspectives as promotion prospects and job security. Promotion prospects depict an individual’s anticipation of advancement in the organization. The prospect of advancement used to convey a certain stability and order and a major reward for middle managers, encouraging them “to adopt autonomously to role expectations and codes of conduct” (Egeberg, 2003, p. 117). Good career prospects can represent a major incentive for middle managers to sustain their work effort (Goffee and Scase, 1992). Job security describes the middle manager’s feeling about the likelihood of involuntary job loss. Widespread organizational de-layering and volatility during the past few decades has caused



the number of middle management positions to decrease, rendering job loss a very tangible danger for middle managers. When further organizational change is announced, the fear of new job cuts often surfaces again, leading to decreased feelings of job security (Newell and Dopson, 1996) and worsening career perspectives.

### **Self-determination**

#### *Role Autonomy*

Role autonomy is defined as “the extent to which a job allows the freedom, independence, and discretion to schedule work, make decisions, and select the methods used to perform tasks” (Morgeson et al., 2005, p. 399-400) in the assigned role. During change, individuals need to modify or rebuild existing psychological schemata (Rousseau, 2001, Robinson et al., 1994). The job characteristics model in work motivation theory (Hackman and Oldham, 1976) predicts that autonomy influences in crucial ways the motivating potential of a job. Greater autonomy is likely to encourage employees to develop a more flexible attitude (Morgeson et al., 2005), exceeding a mentality that merely focuses on compliance with rules and the fulfillment of formal orders (Hornung and Rousseau, 2007).

If middle managers are used to a proactive and flexible approach, encouraged by autonomy, they are more likely to be able to embrace change and commit themselves to its implementation. Middle managers' ownership of problems is likely to increase (Sharon et al., 1997), as well as their job performance (Joo et al., 2010). Middle managers with a low level of autonomy, on the other hand, are more likely to follow the path of least resistance, refraining from the use of

personal initiative and extra skills to avoid potential penalization (Sharon et al., 1997). We hence put forth our first hypothesis:

*Hypothesis 1: The degree of perceived autonomy is positively associated with middle managers' affective commitment to change.*

#### *Participation in implementation-related decision-making*

Participation in implementation-related decision-making describes the influence of a middle manager on decisions concerning the implementation of a given change (see Bordia et al., 2004). The theory of stress and coping (Walinga, 2008) suggests that an individual who perceives a lack of control (e.g., by not being able to participate in the decision-making process related to change) makes this lack of control his or her focal point. This focus is likely to divert energy and resources from the original impulse (i.e., the change implementation). In contrast, when individuals have a feeling of control, they also are more likely to be willing to contribute to or invest in a particular decision. This increased effort occurs even if the perceived control is illusory. For example, even an involvement in a random game of luck is likely to be perceived as controlled if the lucky numbers are chosen personally, and hence an illusory feeling of control is constructed (Goodman and Irwin, 2006, Presson and Benassi, 1996).

During the implementation of change, participation in decision-making is likely to increase the perceived control of middle managers, making the change seem less external and ungovernable. Potential fears attached to the oncoming course of action (i.e., the change) are likely to decrease, encouraging a positive view of the implementation (Walinga, 2008, Cunningham et al., 2002). But an

involvement in general strategic issues does not necessarily strongly affect a middle manager's position toward change. In their interpretation of the path-goal theory of leadership, Sagie and Koslowsky (1994) differentiate between participation in strategic decisions (i.e., the decision about whether to change) and participation in tactical decisions (i.e., implementation-related), which are generally characterized by a lower level of ambiguity. The theory suggests that participation in tactical rather than strategic decisions has a stronger immediate effect on an individual's position towards a change. We thus focus on middle managers' participation in tactical decision-making. Hypothesis 2 follows:

*Hypothesis 2: The degree of perceived participation in implementation-related decision-making is positively associated with middle managers' affective commitment to change.*

## **Pressure**

### *Workload*

Workload describes the subjective level of work effort individuals perceive they face to fulfill their responsibilities in the organization (*Green, 2004a, Green and McIntosh, 2001*). A high workload can affect middle managers' commitment to change in two ways: First, a high imposed workload is likely to have a direct negative effect on physical health and psychological well-being (*Barnes and Van Dyne, 2009, Sauter and Murphy, 1995*). Exhaustion, the "feeling[s] of being overextended and depleted of one's emotional and physical resources" (*Maslach and Leiter, 2008, p. 498*), is likely to consume the energy a middle manager would otherwise be able to commit to change.

Second, a high workload often prevents sufficient sleep time, as well as recreation, which otherwise could offset the effects of the physical demands, and antagonize the effects of stress (Barnes and Van Dyne, 2009, Barnes and Hollenbeck, 2009). Neuropsychological research on sleep deprivation supports the interrelation of high workload and low work performance (Belenky et al., 2003), including an impairment of decision making (Harrison and Horne, 2000). The prevention of recreation is likely to render change-related work and commitment to change even more difficult. We hence put forward the following hypothesis:

*Hypothesis 3: The perceived workload is negatively associated with middle managers' affective commitment to change.*

#### *Performance Monitoring*

Performance monitoring generally describes “the gathering of information about the work effectiveness and productivity of individuals, groups, and larger organizational units” (Larson and Callahan, 1990, p. 530). In the context of this study, performance monitoring is used to depict the observation of a middle manager’s behavior and accomplishments by top management concerning the change implementation and the magnitude of potential consequences (i.e., both rewards and penalties) (Holman, 2002, Van De Voorde et al., 2010). Monitoring not only grants the supervisor insight into the organization and work behavior of the middle manager, but also affects the individual’s work behavior. Previous research has revealed two opposing effects on the behavior of the monitored person: First, the perceived importance of the monitored task increases (Larson and Callahan, 1990). This perception might significantly influence the interest and amount of effort a middle manager is willing to devote to a given task to be

seen as active and capable (*Stanton, 2000, Larson and Callahan, 1990, Brewer and Ridgway, 1998*).

Second, performance monitoring may induce a feeling of pressure for the person monitored. It reduces the individual's level of self-determination, as studies with employees showed (*Niehoff and Moorman, 1993*), and instead sets an external measuring standard for performance. As the theory of psychological reactance (*Brehm, 1966*) predicts, an individual who perceives a reduction in his or her behavioral freedom (e.g., through performance monitoring) is likely to experience a negative motivational arousal (i.e., a counterforce targeted at re-establishing behavioral freedom). This reactance could manifest itself in poor job attitudes or minimum levels of effort and would likely obviate any discretionary behavior exceeding the required norm (*Niehoff and Moorman, 1993*), such as commitment to change. Empirical studies have provided evidence for this negative effect of performance monitoring, associating it with decreased levels of employee motivation (*Likert, 1961, McGregor, 1967*), a negative direct influence on citizenship (*Niehoff and Moorman, 1993*), and emotional exhaustion and decreased well-being (*Holman et al., 2002*).

As *Walker (2000)* points out, the negative effects of monitoring tend to outweigh the positive effects in situations where considerable aspects of the task are not amenable to measurement. This condition is likely to be met in cases requiring middle managers' contribution to change implementation: Because the implementation of change usually consists of a multitude of different activities, tasks, and conversations (*Ford et al., 2008, Gioia and Chittipeddi, 1991*), top managers are not likely to find an exhaustive approach to monitor all aspects of

middle managers' contribution to change implementation. We therefore tentatively put forth this fourth hypothesis:

*Hypothesis 4: The perceived intensity of change performance monitoring is negatively associated with middle managers' affective commitment to change.*

### **Career perspectives**

#### *Promotion prospects*

Promotion prospects describe the individual's expectation for advancement opportunities within the organizational hierarchy. Given the volatile economic environment and changing work patterns, the expectation of being continually developed within an organization and rewarded for continuous efforts is becoming increasingly unrealistic for middle managers, even more so in the context of organizational change. This deprivation of the perspective of hierarchical career progression may cause a bitter work attitude, leading to diminished work commitment and performance (Thomas and Dunkerley, 1999, Newell and Dopson, 1996). A "ceiling position" without a perceived chance of advancement is likely to lead to early turnover (Zhao and Zhou, 2008) and to divert attention from organizational goals, such as the implementation of change.

When middle managers in the difficult situation of organizational change are reassured about the chance of promotion, despite potentially unfavorable conditions, such reassurance is likely to have a motivating effect and encourage middle managers to commit themselves to the organizational tasks they face in the midst of the implementation of change. We hence put forward the following hypothesis:

*Hypothesis 5: The perceived career prospects are positively associated with middle managers' affective commitment to change.*

#### *Job security*

Job security describes the middle manager's perception about the likelihood of involuntary job loss at his or her current organization (see Wittekind et al., 2010). As the concept of psychological contract (*Turnley et al., 2003, Rousseau, 2001*) and social exchange theory (Blau, 1986) suggest, both top managers and middle managers engage in voluntary actions that they expect will be reciprocated. If middle managers perceive that their organization over-fulfills its psychological contract by providing more than expected (e.g., a reassurance of job security during organizational change), this perception will likely cause a positive imbalance in the social exchange agreement (*Turnley et al., 2003, Rousseau, 2001*). As a consequence, middle managers are likely to try to reciprocate (*Wayne et al., 1997, Turnley et al., 2003*), exerting a positive effect on their contribution (*Turnley et al., 2003, Tsui et al., 1997*) and potentially leading to a stronger commitment to organizational goals, such as change.

In stark contrast to this scenario, perceived job security might also have a demotivational effect and lead to a decreased level of effort. Decreased job security might cause individuals to feel obliged to "protect" their position by over-fulfilling or exceeding the demands of their job, with the intention to signal commitment and loyalty to their supervisors (Van Dyne and Ellis, 2004). Given a secure job, this extra motivation and superior effort for the organization might vanish.

However, as previous research has confirmed, individuals perceiving a lack of job security have been found to experience a decrease of general well-being and to react with a more negative attitude and behavior toward the organization, including decreased effort (Goffee and Scase, 1992, Sverke et al., 2002, De Witte, 1999). Reassurance for a middle manager that his or her job is not in danger of elimination (i.e., perceived job security) is likely to be especially important during organizational change. Based on this discussion, we put forth Hypothesis 6:

*Hypothesis 6: The perceived job security is positively associated with middle managers' affective commitment to change.*

### **3.3. Methodology**

#### **3.3.1. Sampling and data collection**

##### *The organization*

To test our hypotheses, we examine the U.S. and the German subsidiaries of a global consumer and industrial goods company with approximately 50.000 employees worldwide. We chose to conduct our empirical validation as a one-company investigation for three reasons: First, because we are examining a very sensitive topic, establishing a trust-based relationship between research team and sample organization is of utmost importance. The perceived fear that information might leak to other organizations can be minimized, and company-specific preferences in the execution of the data collection can be incorporated in a flexible manner. Second, by focusing on a single company and offering in-depth assistance and support, we are able to achieve very high response rates and to approach not only middle managers but also top managers to validate our



data. Third, the one company sample enables us to exclude distortions of the results caused by different organizational cultures (Pothukuchi *et al.*, 2002).

We defined several criteria for the selection process of our sample company: The sample organization had to be a large multinational to enable a broad data collection process on middle and top management levels. In addition, the organization had to be structured according to distinct business units and to include different functional areas to enable a cross-unit and cross-functional validation and to increase the generalisability of our results.

The organization selected met each of the defined criteria. The two country subsidiaries involved, located in the United States and Germany, both had been facing discontinuous transitions that required intense middle management involvement. For example, in recent years, they had established shared service centers, integrated newly acquired businesses, and adapted new, leaner processes.

### *Study Procedures*

All survey participants received identical English language questionnaires to avoid translation-based conceptual dissonance. The non-native English speakers participating in the survey were accustomed to using English as the company's corresponding language and could thus be assumed to encounter no comprehension problems.

To evaluate face validity, as well as to confirm the comprehensibility of the questions for non-native English speakers, we conducted a pre-test with four top managers and four middle-level managers. Two of each group were from the U.S. subsidiary and two were from the German subsidiary.

Table 4: Demographic characteristics of role characteristics sample

Age	Share in Sample <sup>a</sup>
under 30 years	1.9%
30 to 35 years	13.9%
36 to 39 years	17.0%
40 to 45 years	31.9%
46 to 50 years	21.1%
51 to 55 years	10.1%
older than 55 years	4.1%
Gender	Share in Sample
Male	68.5%
Female	31.5%
Education	Share in Sample
None	0.6%
Vocational training	3.8%
A-levels	3.5%
Bachelor degree	22.4%
Master degree/ Diploma	47.6%
Ph.D.	22.1%

<sup>a</sup> n = 317

Table 5: Career characteristics of role characteristics study participants

Functional background	Share in Sample <sup>a</sup>
Accounting	2.5%
Finance	10.7%
Marketing/Sales	30.9%
Research and development	24.0%
Operations/Production/Logistics	13.6%
Purchasing/Supply management	4.4%
Personnel/Human resources	1.9%
Law	2.5%
General management	9.5%
Tenure in company	Share in Sample
up to 6 months	1.3%
7 months to 2 years	4.7%
3 to 5 years	16.7%
6 to 10 years	24.0%
11 to 15 years	22.1%
16 to 20 years	11.4%
more than 20 years	19.9%

Tenure in position	Share in Sample
up to 6 months	12.3%
7 months to 2 years	31.9%
3 to 5 years	29.7%
6 to 10 years	16.7%
11 to 15 years	5.7%
16 to 20 years	1.9%
more than 20 years	1.9%

<sup>a</sup> n = 317

### *Participants*

We randomly selected 450 middle managers as participants (222 U.S. and 228 German participants) from diverse functional backgrounds, including finance, marketing, and logistics, to increase generalisability of results (cf. Tables I and II). For the purpose of this study, we defined middle managers as leading, non-top management professionals” (Pappas and Wooldridge, 2007, p. 330), “entrusted by the firm with significant responsibilities who have access to top management and who possess significant operating know-how” (Floyd and Wooldridge, 2000, p. 158). Depending on the organizational structure of each function, the managers selected were two or three hierarchical levels below the management board. By drawing the sample from the two country subsidiaries, we could test for stability of our hypotheses across different cultural and institutional environments. The selected middle managers received an initial, information-only e-mail, sent internally to introduce the purpose of the study

and to encourage participation. In a subsequent e-mail sent by the academic research team, participants received a link that granted them access to the online survey and allowed them to provide answers over a period of two weeks.

We received answers from 388 middle managers, of which 71 had to be dropped because of item non-response. The final sample thus consists of 317 middle managers (136 from the United States and 181 from Germany) for an effective response rate of 70.4 percent.

We use structural equation modeling (SEM) to test our theoretical model. While our data set of 317 middle managers is above established thresholds for the application of SEM (Hair et al., 1992, Anderson and Gerbing, 1988, Bagozzi and Yi, 1988b), we also conducted a power analysis to further validate the adequacy of our sample size (Shah and Goldstein, 2006). We applied the procedure recommended by MacCallum et al. (1996) for both our measurement and structural models, finding a power for close fit of 1.000 for the measurement model and 1.000 for the structural model (at  $\alpha = 0.05$  and alternate RMSEA = 0.08, and with underlying degrees of freedom (df) = 260 for both the structural model and the measurement model). These values exceed the commonly accepted 0.8 threshold (MacCallum *et al.*, 1996) and indicate that we have sufficient statistical power to detect potential model misspecification.

### **3.3.2. Measures**

Role autonomy. The four-item construct measures the extent to which a middle manager is free to organize her or his own work, to make relevant decisions, and to independently adjust methods in performing tasks. We adapted this scale from Noble and Mokwa (1999) and Conway and Monks (2008).

Participation in implementation-related decision-making. The four-item construct measures the influence of a middle manager on decisions of top management concerning change implementation. The construct, developed by Bordia et al. (2004), was amended for the purposes of this study.

Workload. The three-item construct measures the subjective level of work effort a middle manager faces when fulfilling his or her tasks within the organization. The construct, derived from the labor-oriented “work effort” measure introduced by Green (2004a), was amended for the purpose of this study.

Performance monitoring. The three-item construct measures the degree to which the middle manager perceives his or her behavior and work output to be observed and examined by top management. We developed the construct based on Holman, Chissick, and Totterdell (2002).

Promotion prospects. The four-item construct measures the chance that a middle manager perceives he or she has to advance within the organizational hierarchy. It was developed based on a measure introduced by Conway and Monks (2008).

Job security. The four-item construct measures the middle manager's perceived certainty about being able to work at the current organization in the future. We developed this new measure for the purpose of this study, based on the conceptual work of Boselie, Dietz, and Boon (2005).

Affective Commitment to Change. This construct reflects the “desire to provide support for the change based on a belief in its inherent benefits” (Herscovitch and Meyer, 2002, p. 475) and was developed by Herscovitch and Meyer (2002).

For a full list of all measurement items and their validity assessments, please see Appendix A.

### **3.4. Analytical overview and results**

We tested our hypotheses through SEM using the AMOS 19 software. Before calculating the structural model, we performed EFA and CFA to ensure that the questionnaire items used to measure the study's constructs were valid indicators of the same. After scale purification, the measurement model met all the thresholds established in the literature and thus indicated a good fit with the data (cf. Appendix A). The values of the  $\chi^2$ /degrees of freedom ratio ( $\chi^2$ /df ratio, 1.650), Bentler's (1989) comparative fit index (CFI, 0.97), the Tucker-Lewis index (TLI, 0.97), the goodness-of-fit index (GFI, 0.91), the adjusted goodness-of-fit index (AGFI, 0.88), composite reliability (CR, all greater than or equal to 0.69), and root mean square error of approximation (RMSEA; 0.045; Steiger, 1990) all indicated an appropriate fit (Bollen and Long, 1993, Browne and Cudeck, 1989, Hu and Bentler, 1999, Bagozzi and Yi, 1988b). Further, each scale item had a factor loading of at least 0.50. All factor loadings were highly significant ( $p < 0.0001$ ), suggesting that convergent validity exists for the indicators (Gerbing and Anderson, 1988).

We assessed discriminant validity (Grewal et al., 2004) by examining the average variance extracted for each construct and ensuring it exceeded the squared correlations with all other constructs (Fornell and Larcker, 1981). The criterion of discriminant validity was met in all cases. Further, we performed  $\chi^2$  difference tests between the original unrestricted CFA model and a model in which a factor correlation parameter was fixed at 1.0 (Bagozzi and Phillips, 1982, Anderson and Gerbing, 1988). A significantly worse fit was evident for

the study's restricted vs. unrestricted models, also providing strong evidence of discriminant validity. The correlations among the study's latent constructs are displayed in Table III.

Table 6: Role characteristics model-correlations and descriptive statistics

n = 317	1	2	3	4	5	6	7	8	9
1 Role autonomy	1,000								
2 Participation in decision-making	0,492	1,000							
3 Workload	-0,191	-0,045	1,000						
4 Intensity of performance monitoring	-0,125	0,067	0,451	1,000					
5 Promotion prospects	0,470	0,419	-0,148	0,105	1,000				
6 Job security	0,439	0,309	-0,275	-0,093	0,425	1,000			
7 AC2C	0,431	0,437	-0,190	0,076	0,322	0,370	1,000		
8 Change significance	-0,070	0,126	0,209	0,303	-0,027	-0,006	0,146	1,000	
9 Personal change consequences	-0,263	-0,075	0,621	0,303	-0,160	-0,288	-0,251	0,137	1,000

Overall, the structural model shows highly satisfactory values for all global fit criteria, with  $\chi^2/df$  (1.650), CFI (0.969), TLI (0.965), GFI (0.905), AGFI (0.882), and RMSEA (0.045) meeting the proposed thresholds.

The results from the testing of the hypotheses are displayed in Figure 1, where solid lines represent significant relationships ( $p < 0.05$ ) between constructs and dashed lines indicate the lack of statistically significant relationships.

Hypotheses 1, 2, 3, and 6 are supported. Hypothesis 5 is rejected because of a lack of a statistically significant relationship. Hypothesis 4 is also rejected, but



contrary to the supposedly negative relationship, we find a significant positive relationship.

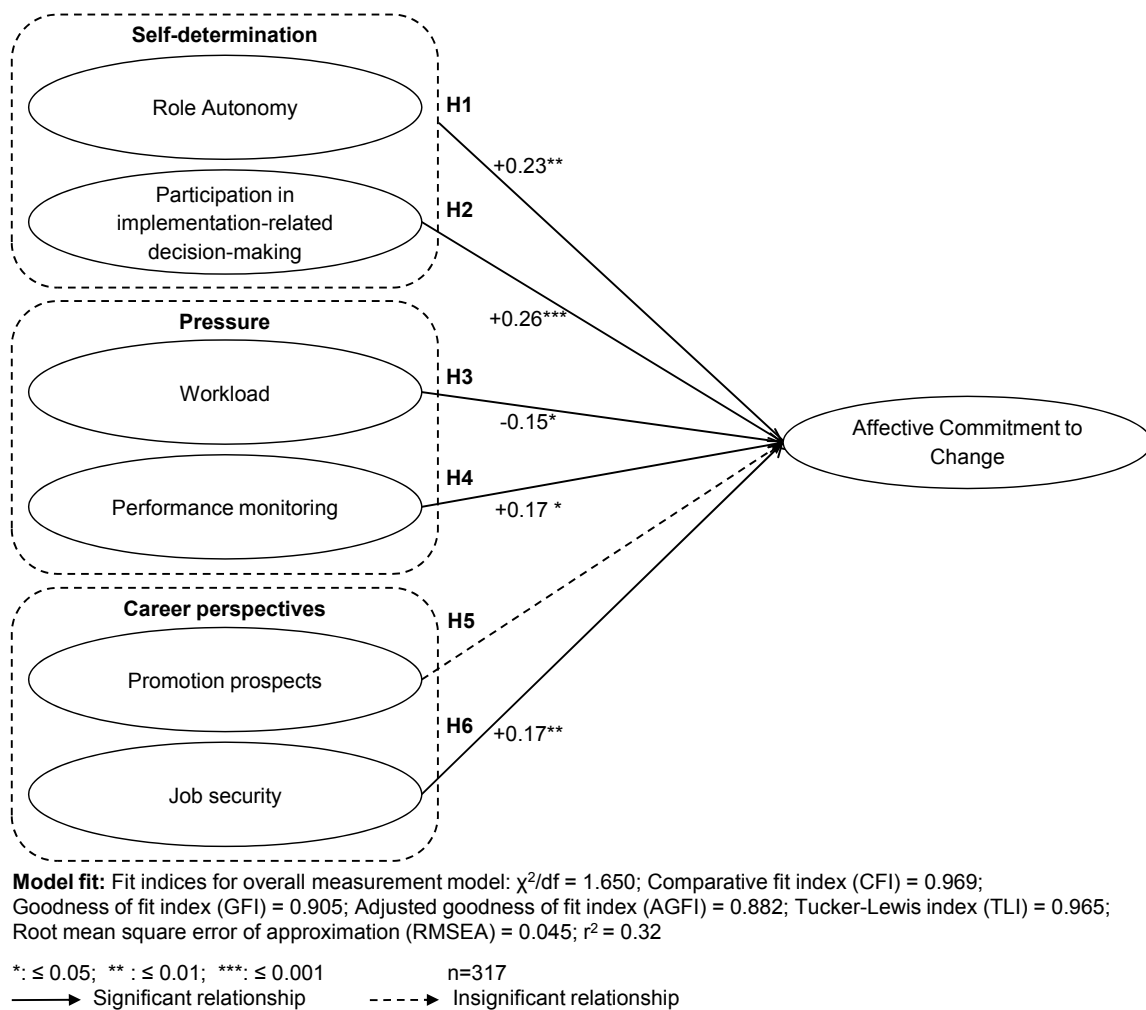


Figure 3: Role characteristics-research model and results of structural equation model

### Common method bias

To mitigate the risk of common method bias, we assessed the validity of the measurement of the outcome construct—middle managers' affective commitment to change—by issuing a second validation questionnaire to a

random sample of 55 (26 U.S. and 29 German) top management supervisors of the middle managers participating in the main survey. The supervisors were asked to evaluate their subordinate's support for the change project on a three-item scale. Participation in this study was voluntary but was encouraged in an e-mail sent by the global head of human resources. We asked about the support of the respective middle manager, rather than his or her commitment to change, for two reasons: First, commitment to change is an internal state of mind and cannot be directly observed by the top manager, while actions and behavior (perceived as support) can be observed. Second, by assessing the relationship between a self-evaluated commitment to change and an externally evaluated support of change, we can further confirm the relevance of the commitment to change construct in that it translates into and is apparent in the actual behavior of the middle manager.

We received 45 (21 U.S. and 24 German) usable responses from top managers, yielding an effective response rate of 81.8%. In an approach similar to procedures in studies with surrogate endpoints (Pepe, 1992, Chen et al., 2003), we matched the middle managers' answers with their top managers' answers and analyzed the correlation between the middle managers' self-reported affective commitment to change and the top managers' report of the middle managers' implementation behavior (cf. Appendix B). We found the relationship to be statistically significant and positive (0.35) at a p-level of 0.026. This result shows that middle managers' self assessment and the external assessment are overall aligned, providing further evidence for the validity of the middle managers' commitment to change measure and the robustness of the statistical findings.

We also took the following measures to mitigate the risk of common method bias: In the design of the questionnaire for middle managers, the items related to the presumed antecedents (e.g., “role autonomy”) were placed in the first section of the questionnaire, and the items related to expected outcomes were put last (Podsakoff and Organ, 1986, Schilling and Steensma, 2002). In addition, we used the single-method-factor approach suggested by Podsakoff et al. (2003) to test the data for common method bias. To this end, we added an additional latent construct to the structural model, to which all items in the model were connected as indicators. Adding this construct did not make any previously significant paths insignificant or any previously insignificant paths significant. Thus, the test found no indication for common method bias.

#### *Non-response bias*

To ensure the robustness of the results against non-response bias, we performed two different tests. First, we conducted a  $\chi^2$  difference test to compare the answers of early respondents with those of late respondents. We found no difference between the two ( $p = 0.278$ ).

Second, we contacted initial non-respondents again to encourage them to participate (Lambert and Harrington, 1990). In total, we obtained 43 new responses and compared these with the original sample by calculating another  $\chi^2$  difference test. No significant differences emerged between initial respondents and initial non-respondents ( $p = 0.173$ ). Thus, no adjustments to the responses in the sample were necessary (Armstrong and Overton, 1977, Wright and Armstrong, 2008).

### *Social desirability bias*

Social desirability bias can occur if respondents inaccurately answer questions to conform to social norms or to the expectations of the researcher, or to present themselves in a more favorable light (Nunnally, 1978). To solicit candid responses, all respondents were guaranteed anonymity (Darnall et al., 2008). Concerning the study's outcome factor, our validation sample from top managers shows that middle managers reporting a high degree of affective commitment to change were also rated as displaying strong implementation behavior by their supervisors, indicating a valid measurement.

In the pre-test, as well as in the final data, we found adequate variations in responses, indicating that no consistent over-reporting occurred. The average score for the affective commitment to change construct was 4.67 on the seven-point scale, in line with the average of all other scales in the survey (4.56). The standard deviation of 1.54 was also close to the average standard deviation of all the constructs (1.38).

### *Control variables*

We tested the robustness of the structural model by introducing the following control variables: age (Kirton and Mulligan, 1973), gender (Wanberg and Banas, 2000), education (Kirton and Mulligan, 1973, Iverson, 1996), tenure in company and in position (Iverson, 1996, Wanberg and Banas, 2000), functional affiliation and business unit (Geletkanycz and Black, 2001), type of change, change significance, start date, project duration, and personal change consequences. The change literature has suggested that these variables potentially influence the observed relationships. However, including these

variables made no previously significant paths insignificant and no previously insignificant paths significant. Thus, we believe that our findings are consistent across a range of different settings.

Type of change and change significance. Taking into account that study participants offered their responses in light of a particular change project to which they personally had been exposed (Jaros, 2010), we included a single-item measure to assess the type of change initiative. (The answering options were reorganization; work process change; leadership change; implementation of new technology; strategy change; quality program; merger/acquisition; other (please specify).) Following Herscovitch and Meyer (2002), we also included a five-item construct measuring the significance of the change; sample items included “How significant was the change for the company from your perspective?” and “How significant was the change compared to other organizational changes you know of?”

Start date and project duration. When the start date of the relevant change initiative was several years in the past, the risk of a “rosy retrospective” increases (Carter et al., 2007), leading to a more positive view of the past events than was experienced when those events were happening. A long project duration might lead to similar effects. Both variables were assessed as single-item constructs.

Personal change consequences. Whether the change had a negative effect on participants might alter their commitment to the change (Herscovitch and Meyer, 2002). We hence included a four-item construct measuring the personal change consequences. The construct included the sample items, “As a result of

the change, I find greater demands placed on me at work” and “As a result of the change, I am expected to do more work than I used to.”

#### *Measurement equivalence*

To ensure consistency of our measurement across the United States and Germany, we performed a multi-group confirmatory factor analysis, with all factor loadings constrained to be equal across the two groups (Kaufmann and Carter, 2006, Hult et al., 2008). Comparing the results of the constrained model to those of the unconstrained model, we found that the  $\chi^2$  difference between the two models was insignificant ( $p = .867$ ), indicating measurement equivalence across the two countries included in the sample.

#### *Control for institutional environment*

To ensure the robustness of our results across institutional environments, we tested for potential differences between the answers of the U.S. middle managers and those of their German counterparts. We again used a multi-group analysis, with all paths constrained to be equal across samples. The  $\chi^2$  difference between the unconstrained and constrained models was insignificant ( $p = 0.080$ ), suggesting no difference in the results between U.S. and German respondents. We next discuss the implications of these findings.

### **3.5. Discussion**

This study aims to advance the middle management and change literature by showing how middle managers' role characteristics can influence their commitment to change. Building on previous analyses in both fields of research, we develop a framework for middle managers' role characteristics that incorporates the categories of self-determination, pressure, and career

perspectives, and we relate it to middle managers' affective commitment to change.

Analyzing the first category of our framework, self-determination, we found that both constructs—role autonomy and participation in implementation-related decision-making—had a significant and positive influence on middle managers' affective commitment to change. These findings are in line with our hypotheses; both increased autonomy (Hornung and Rousseau, 2007) and participation in implementation-relevant decision-making (Wanberg and Banas, 2000) encourage proactive behavior and the acceptance of a new organizational role and thus are likely to support the development of commitment to change.

Our analysis of the second category, pressure, revealed mixed results and one finding that contradicts our previous assumptions. As expected, workload was found to be significant and negatively related to middle managers' affective commitment to change. A high workload contributes to middle managers' exhaustion and interferes with recreation (Barnes and Van Dyne, 2009, Barnes and Hollenbeck, 2009), which may prevent them from actively committing to yet another new and potentially stressful organizational change project.

Interestingly, our analysis also revealed a significant positive effect of performance monitoring on middle managers' commitment to change, although we had expected a negative effect caused by the additional pressure. Identifying the mechanics behind this finding requires further research. One possible explanation is that the anticipated evaluation consequences (e.g., incentives tied to the attainment of implementation goals) could directly motivate middle managers to increase their commitment to the implementation (Schmidt and DeShon, 2007, Brewer and Ridgway, 1998). However, as previous researchers

have noted, positive incentive effects usually apply only to the activities that are directly monitored, causing a reallocation of resources toward these activities (Northcraft et al., 2011); but monitoring all facets of middle managers' change implementation or commitment is hardly possible. Another explanation might be that, as social information processing theory (Salancik and Pfeffer, 1978) predicts, monitoring may influence role priorities and the perceived importance of tasks and projects (Stanton, 2000). An increase in the perceived importance of the change might alter a middle managers' belief in its inherent benefits (i.e., in his or her affective commitment to the change). Larson and Callahan (1990) provided empirical evidence for this relation by showing that the perceived importance of a task or project can increase in accordance with its degree of monitoring.

The third category of our framework—career perspectives—includes the two constructs of promotion prospects and job security. Contrary to our expectations, we did not find a significant relationship between promotion prospects and middle managers' commitment to change, whereas the assumed positive association of job security with commitment to change could be empirically validated.

Even though promotion prospects in general may have a motivating effect and encourage middle managers to invest greater effort in their work (Egeberg, 2003, Goffee and Scase, 1992), a positive relationship toward middle managers' commitment to change does not seem to exist. In our empirical findings, we could not detect any significant association between promotion prospects and middle managers' commitment to change. One reason might be that the positive motivational effect caused by promotion prospects (Egeberg, 2003, Goffee and



Scase, 1992) are offset by the general fear of job loss during times of organizational change. Even if a middle manager's promotion prospects are promising, the question of more immediate concern might be whether he or she will still have a job in the same organization in the future (Ogbonna and Wilkinson, 2003), increasing the relative importance of job security over promotion prospects and rendering insignificant the influence of promotion prospects on commitment to change.

Our research revealed a positive effect concerning job security: The level of job security middle managers perceived influenced their commitment to change in a significant and positive way. This finding is in line with the predictions of social exchange theory (Blau, 1986) and the concept of psychological contract (Turnley et al., 2003, Rousseau, 2001), which state that if an individual perceives his or her organization to provide more than expected—for example, reassurance of job security during an organizational change—this perception will likely cause a positive imbalance in the social exchange agreement, causing a longing to reciprocate—for example, by showing increased support for organizational goals related to the change.

Our paper contributes to the literature in two ways. First, it advances the middle management literature that investigates the changing role of middle managers and their importance for the organization. We develop and operationalize a framework that describes the effect of middle managers' role characteristics on their commitment to change, thus also contributing to the research stream concerned with commitment to change. We show how the changing role of middle managers affects the implementation of change, given that they are key actors in the implementation (Balogun, 2003, Huy, 2002).

Second, the paper empirically tests the newly developed framework in an international setting. By investigating the influence of role characteristics on middle managers' commitment to change across functional and cultural boundaries, we assess the validity of our framework and enable an understanding of antecedents to commitment to change at the specific hierarchical level of middle managers.

### **3.6. Practical Implications**

Our study shows that the way middle managers' role is crafted in an organization can influence the degree to which middle managers commit themselves to change. Three important implications for the conception of middle managers' role can be derived from this study. First, instead of being seen as mere recipients of information on how to best implement a change, middle managers should rather be treated as active partners in making decisions on how to best implement the change. Top managers should help to establish the goals of the implementation effort, but specific implementation-related decisions (e.g., which concrete activities to carry out and which lower-level managers to involve) should remain within the autonomy of the middle manager.

Second, top managers should explicitly point out to the middle managers whose support is crucial to the change implementation that their jobs will be secure, if they are. As the discussions of our results with the global head of human resources at our sample company revealed, top management had been unaware that many middle managers did not perceive their job as secure during change, even though the importance of their contribution and hence the need for them in their job had been clear to top management.

Third, top management should follow up on the results of middle managers' implementation activities. Such follow-up could be achieved through an implementation dialogue. While permitting middle managers to make decisions about how to implement the change, top managers also should closely monitor the outcomes of these implementation decisions. Rewards could be offered to successful middle managers as an incentive so that the perceived importance of the change implementation is increased.

### **3.7. Limitations and Directions for Future Research**

In the present research paper, we sought to include the most prevalent role characteristics of middle managers using the three categories of self-determination, pressure, and career perspectives. However, as in all studies, some limitations should be considered.

First, one limitation might be that the study focuses on middle managers' perception of the characteristics of their role and does not research which antecedents influence this perception. Further research is needed to shed light on the influencing factors in middle managers' role perception.

Second, middle managers' commitment to change might be influenced not only by indirect antecedents, such as role attributes, but also by direct influences, such as the interaction of top managers and middle managers. E.g., the change communication provided or the relationship between top managers and middle managers might influence middle managers' openness and also commitment to change.

Third, the framework includes performance monitoring as an antecedent to middle managers' commitment to change—but without further researching the

incentive structures and anticipated consequences tied to performance monitoring. Additional research should specifically investigate the reaction of middle managers to performance feedback and to different incentive scopes and structures.

The focus on two cultural contexts in the Western hemisphere might represent a fourth limitation. An extension of the study to a broader cultural context (e.g., including Asian economies) might increase empirical generalisability, in addition to the given theoretical and probabilistic generalisability (Blair and Zinkhan, 2006).

We hope to prompt future research that examines further and disaggregates further the conditions that serve as enablers of middle managers' commitment to change.

## **4. Change myths revisited: Surprising findings on how to spur middle managers' commitment for change projects**

### **4.1. Six myths about middle managers' commitment to change**

Strategic change projects frequently do not deliver on the expectations: studies claim that only about a third of projects really achieve the desired objectives (Meaney and Pung, 2008, Kotter, 1995). One of the most common reasons for failure is a halfhearted implementation that prevents the full potential from being captured. Middle managers play a crucial role in this implementation process of change projects, as they are the ones to translate a new strategic vision into operational activities – and innovative ideas and change programs can only be successful if implemented successfully. The degree to which middle managers live up to their role as enablers of change varies greatly between organizations and change projects. In fact, evidence suggests that more often than not top managers perceive middle managers as barriers rather than active agents in change projects (Giangreco and Peccei, 2005, Fenton-O'Creevy, 1998, Womack, 2007, C.B.B.D.C., 2007). What is often overlooked in discussions concerning middle managers' weak commitment is that top managers' own actions are a prime driver of middle managers' commitment in times of change.

We tie in with this point by taking a closer look at six common-place top management approaches in promoting change. We label these approaches as “myths”, since they are often spread without much evidence of their effectiveness. Surprisingly, we found a lot of these approaches not to be helpful in building middle managers' commitment in change projects, and some of them to be even detrimental to middle managers' motivation. Instead, we

present some less intuitive approaches that work well in ensuring middle managers' active engagement in change projects (cf. Figure 4).

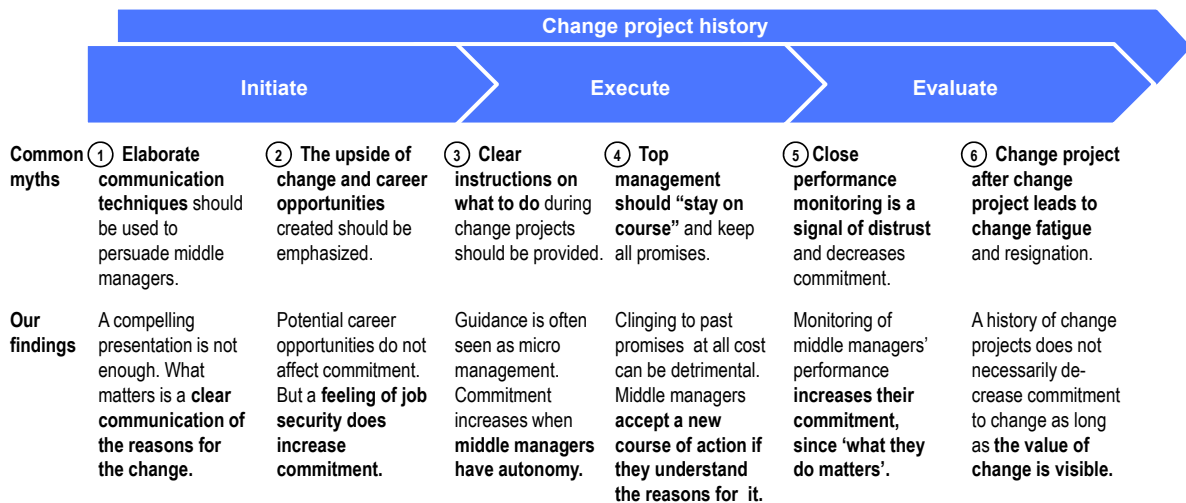


Figure 4: Six myths on how to spur middle managers' commitment for change projects – how they are perceived by middle managers and which actions really have a positive impact

**Myth #1: It is critical that top managers use metaphors, compelling stories, and symbolic language to win the “hearts” of middle managers when communicating change projects.**

Top managers frequently feel that they should emotionalize and bring their communication to life by using metaphoric language and creative presentation techniques. A compelling presentation can indeed create a temporary buzz and increase the awareness for the change, but it does not necessarily influence middle managers' commitment and hence inherent support for the change: colorful representations catch the eye and ear, but they don't make up for incomprehensible motives – especially from the point of view of middle

managers, who usually know the reality of their business all too well (Roberto and Levesque, 2005, Ready and Conger, 2008).

To enable middle managers' commitment, top managers need to thoroughly explain the reasons and details of the change in a way that is perceived as candid, honest and comprehensible to middle managers. Middle managers want to be taken seriously, what really matters to them is what exactly is going on, why it is going on, and how it will affect them. The necessity of change and the factors making it impossible to continue as-is are often not self-evident, especially for middle managers, who might predominantly have 'their' part of the company in mind. A realistic picture of why the change has to happen helps to establish a sense of urgency and to mobilize middle managers.

**Myth #2: Top management should emphasize the upside of change and make middle managers aware of career opportunities created with the change project.**

Top managers often think that it is motivating for middle managers to emphasize career opportunities that are created with organizational change. But even though promotion prospects in general may have a motivating effect and encourage middle managers to invest greater effort in their work (Goffee and Scase, 1992), we found middle managers' commitment in change projects not to be affected by potential career opportunities. Even if a middle manager's promotion prospects resulting from a change project are promising, the question of more immediate concern is whether he or she will still have a job in the same organization in the future. Middle managers who cannot be sure that they will be part of the organization in the future are less likely to invest the additional resources needed to commit themselves to the change implementation.

By contrast, a feeling of job security does increase middle managers' commitment in change projects. Interestingly, the global head of HR of a Fortune Global 500 company had not been aware that a great number of middle managers did not perceive their jobs as secure during change, as our discussions revealed. Top management relied on these middle managers' contributions to make change happen, while the middle managers themselves could not be sure whether they would still be part of the company after the change project. This perceived job insecurity lowered middle managers' commitment and the overall change success. When top managers speak with key change agents in the middle echelons, they are well advised to create confidence that the firm will continue to depend on them after the change - if this truly is the case (Mangelsdorf, 2009).

**Myth #3: Top Management should give middle managers clear instructions on what to do during change projects.**

Lending a helping hand when sailing through rough waters, or, less prosaic, providing guidance for middle managers in times of changing processes and goals, might be seen as good leadership by top managers. Middle managers, on the other hand, often perceive detailed guidance as unproductive or even as an unjustified interference into their area of responsibility. The problem of micro-management is well known in the context of day-to-day line functions. But it can also impose a mortal threat to middle managers' commitment during the implementation phase of a new strategy. If this is happening, middle managers are likely to follow the line of least resistance, refraining from personal initiative and extra skills to prevent conflicts with the pre-defined course of action (Sharon et al., 1997, Hornung and Rousseau, 2007).



By contrast, commitment in change projects increases when middle managers have wide authority and independence on how to implement change in their field of responsibility. Middle managers should be involved as active partners for shaping the change and encouraged to largely map their part of the change roll-out in an autonomous way. For top managers, it becomes important to put themselves in the shoes of the middle managers. Middle managers do not want to be mere recipients of orders, but actively participate. Delegating responsibilities will enrich middle managers' work and thus help to create intrinsic motivation for change.

**Myth #4: Top Management should “stay on course” and keep what has been promised.**

Always following the communicated path can strengthen middle managers' trust in top management (McAllister, 1995, McEvily et al., 2003), but it does not directly cause stronger commitment on the middle management level. Rigid adherence to previous decisions can also have an adverse effect. Middle managers can perceive top managers who strictly follow previous decisions under all circumstances as unwilling to change themselves - and thus as a role model of inertia. If a previous agreement turns out to be misguided or ineffective, it should rather be amended by top management than blindly pursued. As our findings show, new top management decisions perceived as right and justified increase middle managers' commitment in change projects even if they contradict previous agreements.

Middle managers understand that things can change and that promises sometimes cannot be kept. What matters is that middle managers understand the new course of action and the reasons why corrections were necessary. When

deviating from a previously agreed course it is crucial for top managers to clearly and openly explain their reasons. This should be outlined already at the outset of change initiatives. Top managers should point out that they cannot know how things will play out in detail similarly as a chess player can only make assumptions at the beginning of a game what move #28 will be.

**Myth #5: Close performance monitoring is a signal of distrust towards middle management and decreases commitment.**

Top managers often hesitate to closely monitor middle managers' performance in change projects, as middle managers might feel overly controlled and react in a negative way. Interestingly, our analysis revealed the opposite reaction: performance monitoring actually enhances middle managers' commitment in change projects. It is not the carrot-or-stick approach that drives commitment, but rather the notion that middle managers' contribution to the change is valued and truly matters. If change results are monitored, their perceived importance increases. This can significantly influence the interest and amount of effort a middle manager is willing to invest into the change project, not only to be perceived as active and capable, but also because his or her genuine interest in the project increases.

Monitoring middle managers' performance in change projects does not mean to micro-manage middle managers' activities, but rather to recognize achievements and responsibilities taken. Top managers should actively check the results (not individual activities!) middle managers achieve during the change implementation, follow-up on targets, and reward accomplishments (Worley and Lawler III, 2006).

**Myth #6: Change project after change project leads to change fatigue and middle managers react with inner resignation.**

Conventional wisdom might suggest that the more change projects a middle manager has undergone, the greater the extent of exhaustion and skepticism, and the less he or she will be willing to engage in yet another demanding new change project. In contrast to this belief, our findings show that a history of many consecutive change projects does not necessarily decrease middle managers' commitment in change projects.

Middle managers are able to understand the constant demand for adaptation a company faces today, and they are willing to support change as long as the need and value is clear to them. It is crucial for middle managers to be respected as active partners. This implies being involved in implementation-related decisions and being taken seriously when raising concerns or contributing suggestions. Behavioral studies show that lottery participants who chose their own lucky numbers had to be paid a significantly higher amount of money to give up their numbers than participants who received random numbers (Langer, 1975, Goodman and Irwin, 2006). Because of their own involvement, participants became attached to their numbers - even though the chances of winning remained the same. An active role of middle managers in the change roll-out can have a similar effect: Actively shaping the change increases middle managers' perception of change ownership and encourages the notion of responsibility for the success of the change, making the change a more tangible or even personal project.

#### **4.2. The verdict: What top managers can take away**

Middle managers want to be taken seriously and to be accepted as leaders. Exuberant discourses of top managers in praise of change don't work, if they are not backed by solid substance. Middle managers are also well aware that change projects may leave their ranks decimated, so that an artificial focus on a purely upside-themed story is unlikely to succeed.

Instead,

- Realistic and non-prosaic elements should be part of the top management communication to provide a good view of the reasons for the change and of what is really going to happen.
- Top management should make it clear to the middle managers central to the change initiative that their jobs are safe and their contribution very valuable.
- Middle managers should be provided with substantial autonomy during the change rollout to strengthen their perception of being in charge.
- Middle managers should be encouraged to participate in the decision-making process to develop a stronger sense of responsibility for the change, including an ongoing implementation dialogue for feedback and suggestions.
- Top managers should regularly monitor change results achieved by middle managers to underline the top management relevance of their change-related work and pay due respect to results achieved.

Unfortunately, most top managers picture their own commitment-building performance in a significantly better light in these dimensions than their respective middle managers do, as we could confirm when cross-checking self-evaluated and externally evaluated ratings (cf. Figure 5).

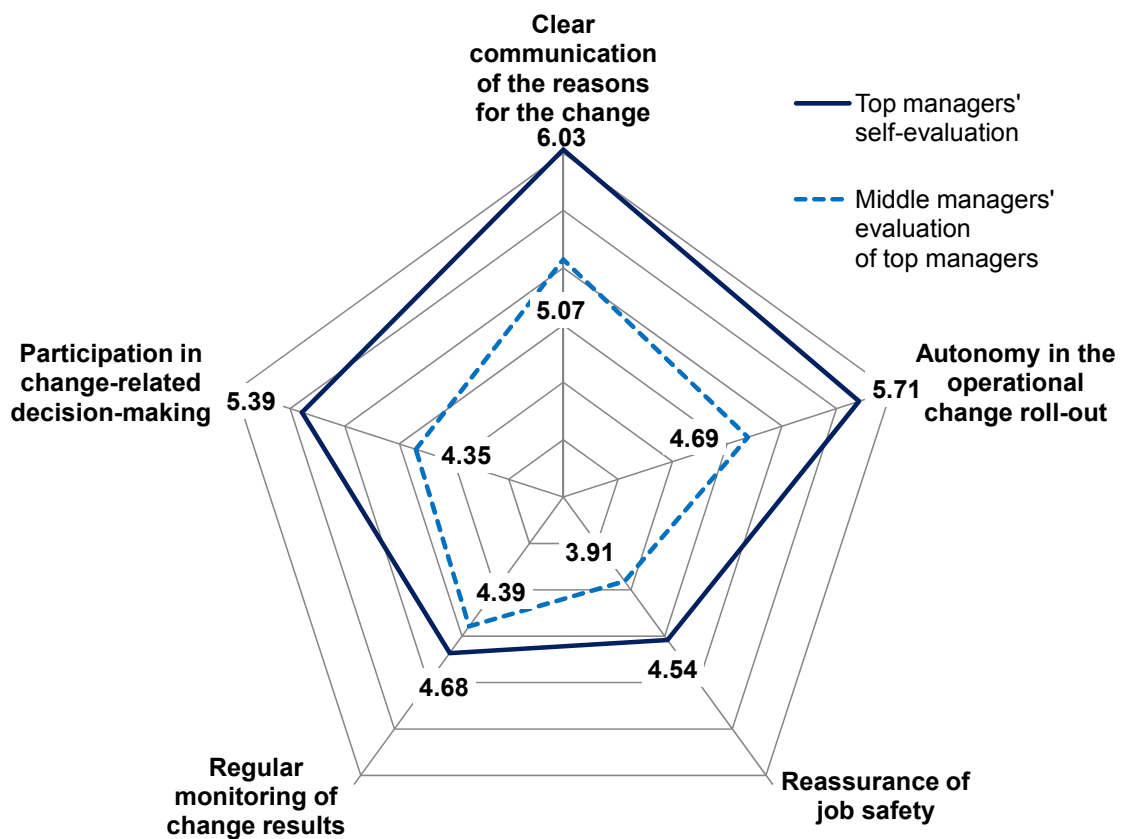


Figure 5: How top managers consistently overrate themselves concerning their enabling actions for middle managers' commitment in change projects

It is within the responsibility of top managers to enable middle managers' commitment in change projects by respecting them as leaders. To strengthen the commitment of their middle managers and improve the likelihood of successful change, top managers should pay more attention to enabling actions. Taking middle managers, their concerns, activities and achievements seriously helps to reframe middle managers' role from obstacles to promoters of change.

### **4.3. About the research**

We conducted a large-scale survey on how top managers can influence middle managers' commitment in change projects, examining the U.S. and German subsidiaries of a Fortune Global 500 company specialized in consumer goods with approximately 50.000 employees worldwide. After a thorough review of the managerial and academic literature, first interviews were conducted with top managers and middle managers from both countries in order to confirm and expand on the factors relevant in the top management-middle management interaction in change projects. Subsequently, a detailed questionnaire was answered by 317 middle managers and 45 top managers from different business units and functions. The participating middle managers were in the fields of marketing and sales (31%), research and development (24%), purchasing, production and logistics (18%), finance and accounting (13%), general administration (9%) and law and human resources (5%).

Using the obtained data, we applied structural equation modeling to test our hypotheses. Additionally, we matched the answers of middle and top managers to pairs and analyzed the relationship between self-reported and top management-reported commitment of middle managers in change projects. We found the relationship to be statistically significant and positive, which provides

evidence for the validity of the commitment measure and the robustness of our statistical findings.

## 5. Closing remarks

### 5.1. Summary of findings

This thesis intends to address the prevailing need for research to better understand how top managers influence middle managers' commitment to change. Examining a sample of 317 middle managers and 45 top managers, the initial research question addressed is:

*Which influence do top management interaction and the design of the middle management role exert on middle managers' commitment to change?*

In answering this question, this thesis enhances extant literature in multiple ways. The following academic contributions are specifically highlighted:

In Chapter 2, the thesis contributes to the strategic change literature by translating the theoretical framework of Ford et al. into a testable model along the categories of trust, communication and resistance (cf. Figure 1). By empirically testing the model, light is shed on which specific top management interaction behaviors in each of the three categories have positive, negative, or no effects on middle managers' commitment to change. In the first category, trust, the results show that a top management decision track record has a positive impact on middle managers' commitment to change, whereas pure top management adherence to previous decisions is not sufficient to exert a positive influence. Concerning the second category, communication, a transparent communication of change reasons and low cost of information seeking positively influence middle managers' commitment to change, whereas too much operational guidance has a negative effect. Concerning the third category,



resistance, the results show that there is a significant positive relationship between the acknowledgement of counter-reasons by top management and middle managers' commitment to change.

Chapter 3 expands existing middle management research by developing a framework of middle managers' role characteristics and their influence on middle managers' commitment to change based on role theory (Kahn et al., 1964, Brewer and Gardner, 1996). The newly developed framework, comprising the three categories of self-determination, pressure, and career perspectives (cf. Figure 1), is translated into a research model and tested empirically in a cross-functional and cross-cultural setting. The results show that role characteristics can influence middle managers' commitment to change: Concerning the first category, self-determination, the two constructs role autonomy and participation in implementation-related decision making are both positively associated with middle managers' commitment to change. Concerning the second category, pressure, findings are mixed. High workload exerts a negative influence on middle managers' commitment to change, whereas performance monitoring is positively associated to commitment to change. In the third category, career perspectives, findings are also mixed: whereas job security has a positive association to middle managers' commitment to change, promotion prospects show no significant association with middle managers' commitment to change.

In Chapter 4, the thesis outlines managerial implications of direct and indirect top management influencing behaviors. The chapter contributes to the empirically grounded and substantiated practitioners' management literature, offering a link between academic findings and practitioner's management reality. It is highlighted that many common-place and often-read myths on what

creates middle managers' commitment to change are ineffective or even detrimental. These myths include presumed positive effects of a catchy communication style, reassurance about career opportunities, clear instructions and always following the communicated path, as well as close performance monitoring, and fatigue because of numerous change projects. Instead, behaviors that truly help to build middle managers' commitment to change are a clear communication of the reasons for the change, autonomy in the operational change roll-out, a reassurance of job safety paired with regular monitoring of results and participation in change-related decision-making. As the thesis reveals, most top managers picture themselves in a significantly better light in these dimensions than their respective middle managers do, as could be confirmed when cross-checking self-evaluated and externally evaluated ratings of top managers' behavior.

## **5.2. Recommendations for future research**

In each chapter of this thesis several worthwhile areas for further advancements in academic inquiry are identified. As a part of the concluding section, a broader, more general view is taken and suggestions for further future research avenues with regard to top managers' influence on middle managers' commitment to change are proposed.

In particular, this section focuses on: (1) antecedents that shape middle managers' perception, (2) the disaggregation of interaction behavior and role characteristics, (3) the relation in other cultural contexts, namely countries in economic transition, and (4) a dynamic view of the evolution of interaction and role characteristics.

First, a limitation of this thesis may be the fact that it focuses on middle managers' perception, and does not take into account which factors and cognitive processes influence this perception. It might be the case that one middle manager perceives a given level of explanation or autonomy as high (i.e. sufficient to positively influence commitment to change), whereas another middle manager might rate the same given level as low (i.e. insufficient to positively influence commitment to change). Further research will be needed to shed light on influencing factors of middle managers' cognitive processes and resulting perception.

Second, a limitation might be that the study considers interaction behaviors and middle managers' role attributes without further disaggregating the individual characteristics of the behavior or attributes in question. An individual characteristic, e.g. performance monitoring, might cause different reactions concerning middle managers' commitment to change depending on the concrete principles applied. Concerning the example of performance monitoring, it might not only be relevant to which degree it takes place, but also how the incentive structures and anticipated consequences are designed and which attributes are monitored, how often they are monitored and in which way the monitoring takes place. Further research could specifically disaggregate the interaction behaviors and role characteristics named in this study to determine potential differences caused by different types of embodiment.

A third limitation could be the focus on two cultural contexts in the Western hemisphere. An extension of the study to a broader cultural context, e.g. including companies from BRIC countries, might increase empirical generalisability in addition to the given theoretical and probabilistic generalisability (Blair and Zinkhan, 2006).

Fourth, the dynamic interplay and potential reciprocity of different elements concerning interaction behavior and role characteristics remain an interesting field for further research. The thesis underlines that the way middle managers are treated and the way their role in the organization is crafted can influence the degree to which they commit themselves to change. The overall experience middle managers face is thereby comprised of a multitude of direct interactions and indirect signals over time. The impact of behavioral changes of top managers on middle managers, the time it takes for behavioral changes to take effect, and the required magnitude of behavioral change to create an impact are all enthralling subjects awaiting further research. A dynamic view over time of the evolution of different interaction characteristics and role attributes and their consecutive influence on middle managers' commitment to change might hence yield interesting results.

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